

The Role of Agrobased Firms in Urban Development.
A Case of SONY Sugar Factory at Awendo Town: //

By

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B.A. (Hons.) 1985

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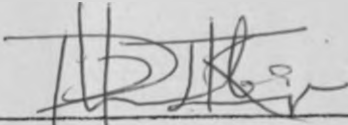
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DECLARATION

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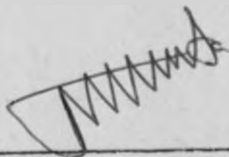
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(iii)

Devoted: To My Father, Mother, Brothers and
Sisters.

ACKNOWLEDGEMENT

In so far as the statement expressed in this report are based on the field facts, they are the common property of all the folks living and operating in Awendo town. This group thus deserves special thanks for their willingful cooperation with a fellow national seeking to know about an aspect amidst them, not so a common cooperation among many populations. But for the Academic organisation of the entire work I hereby place special credit at the courtyard of the project supervisor Mr. J.M. Kiamba, whose role was the provision of guidelines for the study. I shall not shut out Mzee I. Owiro Akoko for his excellent memories about the past events with respect to Awendo centre. Much of the historical information herein is his contribution. Mr. Fred Obala, then a personnel officer with SONY Company, was profoundly useful in the field, having organised for the procurement of much of the data about what the industry was doing. Many more contributors deserve acknowledgement but for lack of space I hereby choose to express my gratitude to them all in a general fashion.

Then the disclaimer of course lies here : for all the shortcomings and errors that be I am solely to blame.

P. Lumumba Jobando.

ABSTRACT

The concern of this study has been an examination of the changes that have occurred in Awendo town as a result of the establishment of SONY sugar industry in the region with its manufacturing plant at the town. In a sense it has delved into the question of the extent to which an agro-based industry can contribute to the development of an urban system.

The analyses thereof have presented the level of development so far attained in this town and the magnitude of this development ascribable to the industry. The magnitude has been shown to be quite substantial. It had been presumed that much of the town's development has been as a result of the establishment of the industry and this has been shown to be the case by the analysis. The development itself consists in the establishment of new urban physico-economic and physico-social structures; expansion in the gainful economic opportunities in the form of employments and income; and improvement on some of the facilities that were established earlier. It has however, been accompanied by undesirable results in the form of uncontrolled development in terms of urban arrangement and quality of the structures; deficiencies in a number of provisions, and a main limitation to the town's long term expansion.

These have been shown to have implications on the physical, economic, social and administrative aspects of the town which has called for a planning view.

On the basis of strength of these implications the study has presented some recommendations which upon their implementation the functioning of the town will greatly be improved. It has been suggested that due to the greater need for planning, implementation and development control arising out of the recent changes in the region, and more specifically the town, the government should consider the formation of an urban authority to relieve the South Nyanza County Council for a closer and hence a more effective urban management. It has been further suggested that because of the sugar plantations which enclave the town, which limits its long term expansion and tend to 'cut it off' from the surrounding rural population, development efforts should not be concentrated just within Awendo but should leap over to the other centres within the sugar-belt which are 'more' close to the rural people and can serve as Awendo's satellites. This would also check any over-growth tendency in the town that might threaten the sugar plantations. It has also been suggested all that need be done to solve the problem of deficiencies identified in various aspects of the town.

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CHAPTER ONE

1.0 INTRODUCTION AND POLICY BACKGROUND

The developing countries, i.e. those countries that are undergoing basic structural changes in their subsystems, have in the recent past been experiencing a significantly high rate of urbanisation, such that for instance, the Population Reference Bureau (1982) has shown that the developing world nations have a higher rate of urbanisation compared to the more developed ones : 14% and 7% per annum respectively. (This rate is however a less comprehensive measure of urbanisation process for it focuses specifically on the movement of people into urban areas and does not, by that fact, represent the other changes such as physical growth of the urban centres, employment and income trends therein, all being indicators of positive urbanisation. Notwithstanding that, many urban centres have in the process sprung up in various parts of their countryside thereby giving rise to a new hierarchical pattern in the urban system of such countries : a pattern where the old established towns are giving the hitherto mere rural centres or 'periodic markets', a chance also to develop. In Kenya, this trend in urbanisation is given impetus by the post-independence rural development policies, amongst of which involves giving some big push to smaller towns or rural centres by directing basic infrastructural investments therein and encouraging localisation of other change factors such as industries.

Kenya's development history is a history of changing policy approaches depending on the prevailing circumstances including political thinking. The introduction of market economic system into the young economy associated with the process of western colonisation using a selective development approach-commonly known as the centre down approach - led to a development trend which focussed mainly on specific sectors of the economy resulting in a situation whereby development concentrated only in these selected sectors. By this approach it was presumed that development would trickle down to the other areas in due course from the investment ones as it occurred in the developed economies. Accordingly the development factors such as industries were concentrated mainly in the major urban centres where much of the basic infrastructural facilities were simultaneously established. While in the countryside investments were (consciously) undertaken mainly in those areas whose natural resources could be immediately extracted for either exportation or local industrial input. Such specific resource rural zones became imbued with basic infrastructure much as were the major urban centres. It is these selected areas exemplified by the former white highlands and the major towns like Nairobi, Nakuru and Mombasa that by such big push approach got a thrust into modernisation with incomes therein rising, employment opportunities created and general living standards improved. At the

same time much of the countryside remained in an enclave of backwardness, stagnating subsistence economy and the populations there assuming a general feeling of hopelessness and neglected.

Kenya's economy was thus assuming a highly dualistic pattern characterised by regional inequalities in terms of incomes, employment and infrastructural embedment; in fact Ikiara and Killick (1979) reviewing Kenya's economic performance using some welfare indicators became convinced that Kenya is a one country that has achieved considerable growth but the benefits of that growth have been very much unequally distributed'. For instance, income estimates of various classes between 1969 and 1976 indicate that the poorest 25% of the population received 4.1% of the total GDP while the richest 10% received 56.3% of the GDP. The inequality is itself pertinent between the incomes earned in the rural and urban sectors. And Bigsten (1976) found out that the average per capita incomes in Nairobi were 8 times those earned elsewhere in the economy; and regionally he statistically showed that the Central, Coast and Rift Valley provinces enjoyed far larger average incomes than the Eastern, North-eastern, Nyanza and Western provinces. Even within the rural areas inequalities among families in terms of incomes and poverty levels existed. In view of these indications,

the centre down approach, as Friedman (1979) concludes, has failed to develop the country uniformly, instead it has worsened it on accounts that those already developed pockets have developed even further at the expense of other areas as development attracts more development'.

Beset with these problems of unbalanced development, there has been a concern even at the time just after independence within the policy making circles regarding the plight of the poor majority of Kenyans, some 85% of whom dwell in the rural areas. This concern has its root in the 'mutual social responsibility', better expressed as 'African socialism', inherent in almost all the communities which constitute the Kenyan nation. In fact in 1965 the government drew up a policy document - the Sessional Paper No.10 on African socialism and its application to planning in Kenya - which was purported to provide planning guidelines that would correct the imbalances that had been engendered by the growth strategies of the colonial government. The focus was rural development. In the realm of rural industrialisation as a strategy for rural development, the policy approach here initially was a one based on import-substitution. Although the strategy brought some contribution to overall national output it never created employment to the indigenous Kenyans as would have been wished for, neither did it reduce the income

inequalities mainly because it was a strategy whereby the industries were capital-intensive requiring high managerial skills which most natives never possessed. So even whenever the factories were located in the rural areas they never contributed significantly to the improvement of living standards of the people there. The government's concern to develop the rural areas was thus not being given effect as yet.

The 1966 Kericho Conference came up with another approach in the package of the Special Rural Development Programmes (SRDPs) as a response to the slow rate at which such strategies as rural industrialisation via import-substitution, were carrying the process of rural development. The SRDP's were however, just experimentation on how the government could stimulate rural development by consciously drawing up integrated infrastructural programmes in specific areas with possible replication elsewhere if they proved successful. Alas, experience soon revealed that not much fruit was being 'born' by the SRDPs as confirmed by studies conducted by scholars such as Oyugi (1970).

As attempts to develop the rural areas continued in earnest, there was also an inherent need to evolve a balanced urban system in the entire country so as to correct problems associated with urban primacy, where certain large old established towns dominated the smaller and emerging ones thereby inhibiting their growth to

serve the surrounding communities, at the same time these old towns experienced problems associated with overgrowth. This need, in fact, resulted into the incorporation of the Growth Centre Policy, whereby a hierarchical order system of urban centres of varying levels all over the country was drawn under five categories, viz. local centres, market centres, rural centres, urban centres and principal town. This was to allow infrastructural and economic investments to be injected into the centres according to their designated order. The centres where such investments were to be undertaken were referred to as growth centres. They would in due course, by the laying of the basic infrastructure attract other urban activities therein that would contribute to their growth and thus create employment opportunities and serve their designed population catchment.

To help marshall the rural resources which have hitherto been either untapped or underutilised has come the industrial decentralisation policy whose approach involves encouragement of deconcentration of industries from the major towns to the smaller towns, which have direct touch with the rural sector. The government itself has undertaken the establishment of industrial estates in the rural centres and directing localisation of industrial plants elsewhere in the

country. Some of these are agrobased industries which have been directed to the agricultural resource zones so as to stimulate the production of such agricultural enterprises. At the same time such industries have had to be localised so judiciously so as to have some close link with the growth centres. Awendo town is such a centre that in 1978 received the SONY sugar factory. The industry was established here to stimulate more economic utilisation of the rich agricultural resources in this region as an integral part of the broad strategy for rural development. At the same time it is here to effect the the growth centre policy,

Ever since the industry was established several structural changes have occurred in the area. Only a few studies have recently been done seeking to ascertain and measure the effects that the industry has had on the development fronts of the communities around justifying its existence amidst them as a tool for rural transformation. One aspect that has proved of particular interest and would be one way of viewing the role of the industry in development is its urbanisation . effects, The study, therefore, aims at projecting the extent to which the industry has influenced the development of Awendo town as a growth centre,

1.2 Statement of the Problem

The rural communities need to develop alongside the others. They need employment from diverse sources, they need their incomes to rise. They need to be provided with the welfare services such as health, education and administrative services etc. which get concentrated at a central place accessible to all the surrounding populations. In real sense rural development will be stimulated by rising urbanisation, not just in the major towns, but more effectively in the more local centres". Such rural growth centres thus become foci of trade, social services and communications which serve the surrounding farm areas. As a matter of policy such centres need to be given impetus or big push to grow to perform their function. If the SONY sugar industry is conceived of as such an impetus the concern of this study is thus the extent to which the industry has made an impact on the growth of Awendo town. We explore into basic questions such as what has been happening to the functional form of the town since the inception of the industry? What with the level of activities therein, is business accentuated? Are the infrastructural services and other urban provisions expanding? Have incomes levels and employment opportunities increased? Has there been a stimulus for private investments? What new prospects for urban growth have come by the establishment of the industry? All these and similar issues constitute the object of the study.

1.3 The Null-hypothesis

This study views the industry and the Awendo town within the context of Growth Centre Policy, where growth factors such as industries are deemed capable of promoting the development of the centres within which they are located. We accordingly, therefore, set our null-hypothesis broadly as follows: "Agrobased industries do not effect the growth centre policy." The pre-analysis belief is that much of the changes in this designated urban area are associated with the establishment of SONY sugar industry.

1.4 Objectives of the study

For this study to be an effective investigation on the development process engendered by the SONY sugar industry within the presumptive framework of the Growth Centre Policy the following have been set as the basic study objectives:-

1. To investigate the historical changes of the town before the inception of the industry and after, so as to be able to recognise those factors behind its development process other than the Sony Sugar Industry;
2. To examine the role that SONY sugar industry has played in the development of Awendo town with

respect to infrastructural underpinning, economic and social status.

Other Objectives are:

3. i) To find out the major problems of urbanisation attributable to the industry,
ii) To identify the prospects for the town's growth.
4. To suggest policy options about the functioning of the town and its development path and a siting criterion for such industrial plants.

1.5 Study Assumption:

For the study to remain a theoretically valid work assumption(s) are inevitable : while there will be numerous specific assumptions for assertions to be made in the course of analysis, our study assumptions at a broad level are:

- 1, That, in the course of the study period there would be no any other major investment commensurable with the SONY industry in scale and impact.
- 2, That, there would be no change in government policies related to industrialisation and urbanisation;
3. That population changes are primarily caused by inmigration.

1.6 Scope of the study:

In view of the fact that the factory's establishment is in the context of both growth centre policy and industrial decentralisation policy, the study on the resultant effects can be looked in two viewpoints:

1. the industry in relation to rural development and;
2. the industry in relation to the centre in question.

Since the focus of this particular study is the urbanisation impacts of the industry, it is thus the second viewpoint that has been pursued, i.e. the industry's influence on the growth of Awendo town. It is here noted that urbanisation effects of the project is, however, widespread in the region and it would have been a more comprehensive impact study to cover all such centres that have received the effects of the project. But then, this study covers only the Awendo (Sare) town for the following reasons:

1. the factory is located here where it appears as an integral part of the town;
2. Awendo is the largest of all the centres within the region and has a population of over 10,000 people.

It is therefore, conceivable that it receives the maximum effects of the factory and to capture all these effects it is judicious to focus on Awendo and the belief here is that 'seeing Awendo is seeing all the other centres'

within the sugar belt region.

Secondly, since a main objective is to examine the extent to which the factory has contributed to the development of the town : its structure and the level of activities therein, to have a clear assessment, the study covers the situation before and after the factory's establishment which covers the period from 1922 upto now.

Thirdly, besides the structural aspects (i.e. the physical make-up and the spatial spread), the study covers social and economic characteristics of the town.

1.7 Research Methods:

Concerning data collection the study employed five methods namely

- a) Library search, field surveys involving
- b) administering household questionnaires
- c) personal interviews
- d) physical observations, including traffic counts.

In effect these methods yielded both primary and secondary data that was latter subjected to various methods of analysis and presentation.

A total of 100 households responded to a fairly comprehensive questionnaire covering social and economic

conditions within the study area. This was 1% of the total population. Before administering the questionnaires the major task was determination of the total population (as no count has ever been done at this centre before). The method of estimating the population involved counting the households that are within the town's boundary. The total number of households thereof was multiplied by an average of a household size taken to be 5. The number of households within the urban was 987 and those in the company's residence were 900 - bringing the total number of households to 1887. When multiplied by the average household size the total population within Awendo town was put at 10,335 people. Household sampling was done at three levels. 45% of all the households selected came from the high density residential area, 35% from the medium density residence while 20% : came from the low density residence. That order was based on the estimated number of households within each type of residence, such that the high density residential areas which had majority of the people (according to the counting results) had the largest sample while the low density residence with the least population had the lowest quota of sample.

To ensure that the cluster samples were randomly effected we took every fourth household after the preceding one. In cases where there was no-one in the selected household we visited the next household.

Concerning personal interviews a number of officials, of both the government and the company, were contacted on issues related to urban development. These were : the factory manager in charge of personnel and development, the local surveyors, transport officer, community development officer, agricultural officer, County Council treasurer and markets superintendent; the physical planner was also contacted as well as the company's agronomist. Also interviewed were two elderly members who, fortunately, saw the Awendo centre start, and grow upto the present and for their good memories of the historical changes the folk-tale method of historical enquiry was conducted. To guide all these interviews a number of issues were accordingly drawn (see the appendix). Traders and industrialists were also interviewed with respect to their businesses by randomly sampling them so as to obtain information on their level of business, problems and the changes they have experienced.

Physical observation involving counting and location was carried out on a number of aspects concerning the existing pattern of landuse. Commercial and industrial premises were actually counted while at the same time noting their time of start. Location of various urban features - such as telephone and electricity transmission lines, on top of the commercial,

industrial, residential and transportation - was inserted on the base map through physical observation - where necessary.

Finally, for the conceptualisation of the whole problem of study various literal works were reviewed (see below - section 1.6) and so the field data in most cases has been used to verify their findings elsewhere and possibly add to what those findings are. Such field data have been subjected to a number of analytical tools (as the case may be), and the various assertions or conclusions presented later at diverse stages have been made on the basis of such analyses.

1.8 Review of Related Literature and Conceptual Framework

So far little literal work has been done on SONY sugar industry owing partly to its tender age; particularly with respect to its impact on the development of the surrounding community. However, a number of related literature are herebelow reviewed so as to compound a conceptual background to this research work. Such works focus mainly on the urbanisation process, urban/rural development approaches in Kenya, and role of industries in development.

A commonly held definition of the concept

urbanisation is that it is a "process of population concentration in which the ratio of urban" people to the total population in a territory increases"¹. This definition however, refers merely to the number of people that are changing their frames of operation from that of rural to that of urban. Reiss on his part stresses that urbanisation occurs "only when a larger proportion of the inhabitants in an area come to live in the 'cities'"². But then if people are 'crossing the floor' what happens to where they are going to i.e. those urban centres? Obviously, whenever a subtraction is done from one side the side receiving the addition must change its characteristics, at least, form and content. In essence therefore, urbanisation process goes beyond mere movement of people from rural to the urban centres so as to cover even the new modes of life that the people involved acquire by such change of sectors. They leave behind the rural activities and become engaged in the urban activities. At the same time, the urban centre itself experiences internal changes as a response to the new/additional population and their activities. It is for this reason that I adopt Wirth's conception of urbanisation as referring to " the cumulative accentuation of characteristics distinctive of the mode of life associated with the growth of cities"³. In this sense therefore, there are three implicit aspects of urbanisation process viz; (1) physical

- i) physical urbanisation referring to where people live (its changing form),
- ii) Social urbanisation, referring to the provision of social amenities that only the urban sector offers and,
- iii) economic urbanisation which refers to those economic activities that the people being urbanised get engaged in as participants in the national output production.

Before considering the role that an industry can have on the development of the system of which it is its integral part it is appropriate to examine first, the need to develop the smaller rural centres. The rural centre as the name suggests, is geographically in the midst of the rural area that we seek to develop. By such physical closeness the centre serves its immediate rural hinterland. It brings together all the lower order services that the immediate rural folks would wish for and by its central location the people are served equally. The relationship that the centre establishes with its hinterland is emphasised by A.N. Ligale when he laments that "the hierarchy of service centres which normally develops in a mature rural economy to provide for the commercial, administrative and social needs of the farming community and which forms a network of economic catalysts throughout the agricultural regions has developed

defectively in Kenya, particularly in the African trustland areas. Although the total amount of such areas might be quite considerable the fact that it is not gathered into rural towns and villages has resulted in the loss of the economic multiplier effect brought about by the concentration of employment and thus of consumer purchasing power"⁴.

These small centres as Taylor notes "could be vital cogs in rural development. In addition to performing important services and residential functions, they could serve as the nodes for introducing innovations and stimulating socio-economic growth"⁵. Urbanisation especially at the lower rungs of the hierarchy, is thus one way of improving the quality of life in the immediate rural populations; as they get served with the basic needs that the rural sector does not offer. Such basic needs must be made available and accessible to the people. Since the people are spatially scattered it is really advantageous and convenient to concentrate them at single central places. This concentration of services at one place is valuable and as Taylor puts it "it facilitates interaction between the services and makes it more likely that a visiting farmer would use more than one service. When commercial and industrial services are added a multiplier effect should occur"⁶.

While stressing the need to give such rural central places a big push within the framework of growth centre concept, some Kenyan urban scholars have attempted to consider the growth process of urban centres in Kenya. One such scholar R.A. Obudho in examining the growth stages of rural centres have grown to varying stages out of periodic market places; and "as the periodic markets acquired more business and a higher threshold, they acquired permanency and an improved infrastructure. They began to convene twice or three times a week and then daily----- so that as the urbanisation process continues periodic markets change into daily markets and the itinerant trade changes to fixed facilities-----such as retail or wholesale outlets",⁷ as more of the fixed facilities increase and expand the central place changes its status. The stages involved herein are "village-cum-forestaller markets, the periodic markets, daily markets, trading centres, minor townships and major townships"⁸. These offer services at different levels or scale. Due to their closeness to the rural people the urban services are got at minimum transport cost. It is on such a background that there has been a call by such urban scholars as Obudho for a 'bottom-up' approach to regional planning focusing investment priorities to these small rural centres as in doing that the rural development would be stimulated by the interaction of the urban set-up and the rural sector.

Growth of urban centres - physically, socially, economically and demographically can be attributed to several factors. Traditionally such factors have been established as including administration, commerce and industry, service, transportation etc.. For a given centre specific factor(s) command a dominant explanation. Such factor(s) can thus be seen as urbanisation engine. For example, Adolwa, P.S. (1985) found out that Webuye town in Western Province of Kenya owes much of its economic, social, demographic and physical growth to the Pan Paper Mills whose establishment nearly a decade ago had so profoundly transformed that town.

Khaguli, H. (1981) has in her study of Mumias town in the same region been particularly impressed by the impact of the Mumias Sugar factory on the development of that town, and to her the factory's establishment has led to a 'sharp increase in total population, created employment opportunities, and rather unfortunately enhanced the scattered nature of the town's development ----- and a considerable pressure has been exerted on the provision of various infrastructural services and facilities. It is worth noting that the magnitude of the impact engendered by a factory such as the one Adolwa and Khaguli examined is partly influenced by the siting of the factories. A town like Mumias is a distant away from the factory's location, while the

Pan Paper Mills in Webuye are an integral part of the town. Webuye town therefore is likely to feel the impact of the mills more than Mumias does from the Mumias factory. And of course Khaguli regrets that 'the impacts of the factory are only partly felt in Mumias town'. The size of the impact would have been a lot different had the factory been sited in the town. It is thus expected that Awendo town with the SONY sugar factory sited close to the town does realise much of the effects of urbanisation that such a factory would engender.

All these impacts and hence their studies merely confirm what Perroux (1955) and all who followed his footsteps had theorised on under the concept of growth poles. A development space is a centre, pole or foci from which centrifugal forces emanate and to which centripetal forces are attracted. Each centre being a centre of attraction and repulsion has its proper field which is set in the field of other centres' (1950 b). It is in these growth poles which economic growth occurs and is spread throughout the rest of the economy. To Perroux, a development pole simply means a clustering or concentration of development elements in abstract and so polarisation is the process by which poles are created and enlarged. It should be noted that the creation of one pole may imply stagnation and even the decline of other existing

poles. However, he recognises that "development does not appear everywhere and all at once, it appears in points or development poles with variable intensities, and it spreads along diverse channels and has varying terminal effects for the whole economy'. Such a development pole or focus could consist of one single dominant propulsive firm or a core of them forming an industrial complex. As these leading and propulsive firms grow, they induce the polarisation of other economic units into the already existing pole of growth. These other units are attracted here for the simple reason that they want to enjoy the agglomeration economies that exist around that growth pole. As the pole expands its effects radiate or spread to the surrounding economic space. It is thus conceivable that development of an area can be induced by consciously localising an identified 'leading' industrial activity. However, as scholars like Christaller (1966) have found there are specific factors which govern the localisation of an industrial unit. Such factors include, natural resource base, infrastructural capital, market etc. Although the government's direction is also a determining role, it does so after ensuring that the other determining conditions exist.

It is on the strength of the growth pole theory that the developing nations have coined the growth centre

policy as one of the strategies for speeding up the development and reducing interregional imbalances. Such growth centres are according to Hansen H.M. (1972) 'designed to promote the growth of lagging regions by concentrating investment so as to reap scale and agglomeration economies and that they were also conceived as points for attracting migrants who otherwise would go to large congested urban areas'.

Strategy based on the growth pole concept has been designed and implemented elsewhere in the world, with proven performance. In Japan, for instance, the growth of the Okayama regional economy proved so profound after an initial heavy wave of public investment in industrial and urban infrastructure followed by private manufacturing investment, generating an increase in the amount of product and employment in Mizushima (the growth centre). The impact studies and analyses thereof undertaken by the United Nations Centre for Regional Development, Nagoya Japan, shows the resultant development of the region in the following sequence _ there was an inducement of several key industries to Mizushima which thence generated a cluster of related industries. Subsequent to the growth of the industrial complex, there was significant structural changes in the region resulting in an increase manufacturing product and employment in the whole Okayama prefecture (region). At the same

time growth in the tertiary sector, especially production oriented service sectors, was induced to serve the manufacturing sector. Further, the increase of production in Mizushima region and Okayama prefecture as a whole ultimately raised the income and consumption. This increase of consumption generated a further round of increase in production and employment. Also, spatial distribution of population showed high density around the location of the Mizushima industrial complex. This polarisation of population to the growth pole suggests the strong urbanisation forces are at work.

But then that is Okayama in Japan with high level of technology, skills and mechanised systems, that have developed over a long time and structural responses are likely to be different from that in the Awendo rural community.

The impact inter-relationships between industrial sector and other sectors can be categorised as backward linkages and forward linkages. Back-ward linkage industries are those which are related to say agriculture by way of providing agriculture with inputs and consumer goods, in which case agriculture is less developed while such industries are developed and have a pulling effect on the agriculture which is trailing behind. For example, chemical industry,

farm implements manufacture, both supply agriculture with its necessary inputs. Their presence is triggered by the demand for their output in the trailing sector, and not availability of raw materials. Forward linkage industries are mainly based on locally available physical and human resources. Sugar industry has such a linkage with a locality. It seeks to take advantage of existing input factors. Its location depends on the supplies in the locality. Such an industry may on surface appear parasitic - where the host sector gives it a pushing effect - by what it feeds it with. But then there are on the middle of the road situations where two sectors feed each other so that they propel each other forward and in such a case the linkages involved are forward and backward. This is what is likely to be the situation between Sony sugar factory and the locality around it. The study seeks to identify the development effects that the factory has on the local community. Similar impact studies have been carried out elsewhere in Kenya. For instance a manual on Industrial Project Analysis in Developing Countries (1968) has shown that the 'establishment of a sugar industry entails considerable upheaval in the region concerned : for example, there would be transfer and regrouping of population, temporary and permanent importation of manpower, establishment of lines of communication and construction

of houses, and the development of other related economic activities". This assertion has also been echoed by Khaguli, H. (1980) in her findings on Mumias Sugar factory as it impacts on the development of Mumias town. Although the factory is located some distance away from the town, its establishment in 1971, has so profoundly changed the physical, economic, social and demographic structures of that town - as already been referred to earlier.

It is therefore the humble academic conviction of this study to investigate and thereupon establish the urbanisation effects that SONY sugar Industry has on the rural and market centres around it.

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CHAPTER TWO

AWENDO IN ITS REGIONAL CONTEXT

2.0 INTRODUCTION

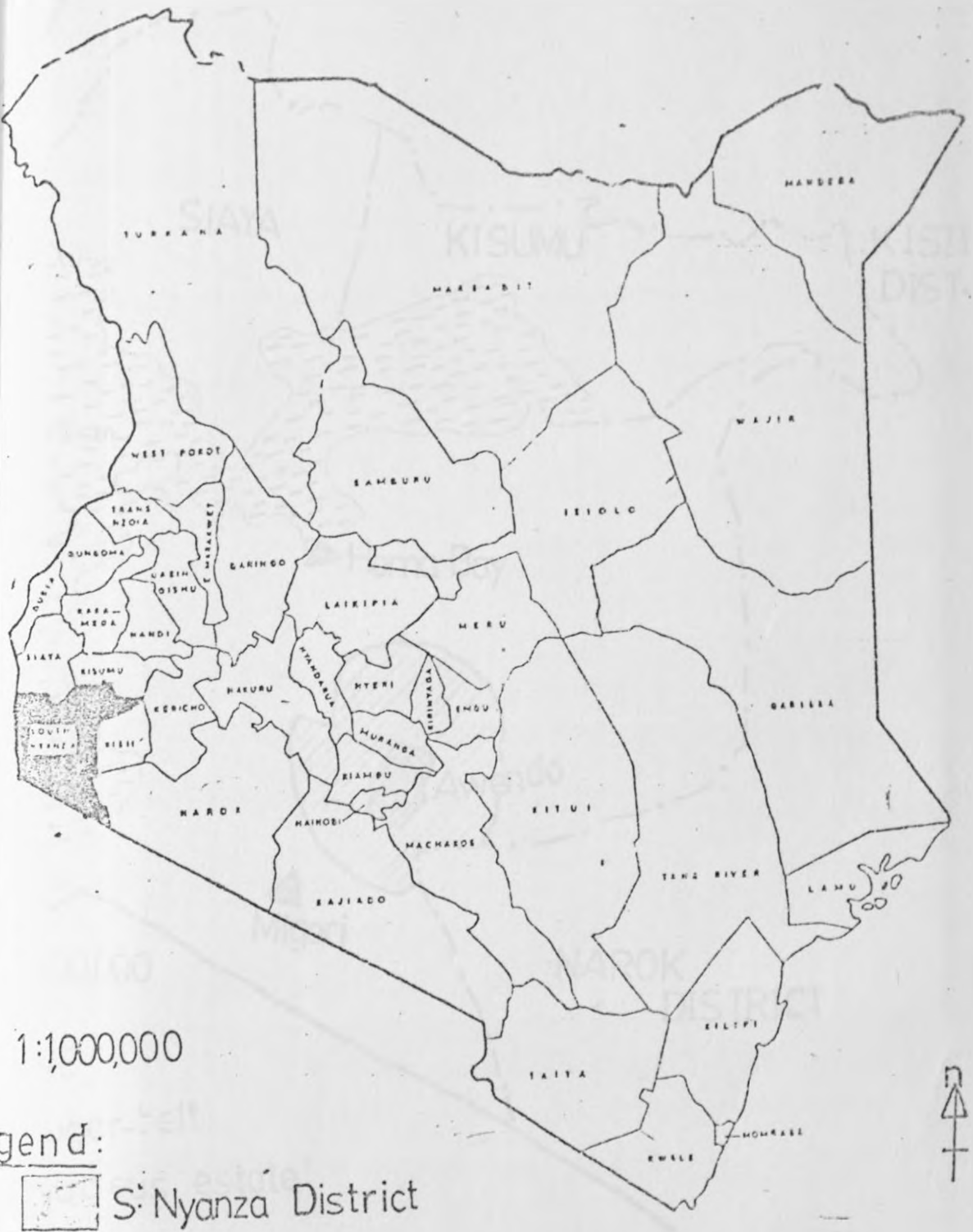
The following chapter is a presentation of the regional perspectives of Awendo. It provides knowledge about the region within which Awendo town has over the years developed, so as to identify all those regional flows and background factors that have all these years influenced that development process in one way or another. The point is that Awendo town as a functional unit does interact with other functional units within the region in a determinative manner of relations. Such regional issues as regional communication, regional economy, physical background are examined.

2.1 Location, Size and Extent

Awendo town is located on the Eastern part of South Nyanza District at about $34^{\circ}32''$ E and $0^{\circ}.49''$ S. South Nyanza District is bordered by Tanzania to the South, Uganda to the West, part of it which is covered by Lake Victoria. It also borders Kisumu, Kisii and Narok Districts - to the North, Northeast and South-east respectively. (see Maps 1/2(a). It is one of the districts comprising Nyanza Province and occupies 48% of the Province's lands area. The district measures some 7778 sq. km. of area. 5,714 sq.km. of this area is land and 2064 sq.km. is covered by water.


SOUTH NYANZA DISTRICT

(NATIONAL CONTEXT) MAP NO. 1



1:1,000,000

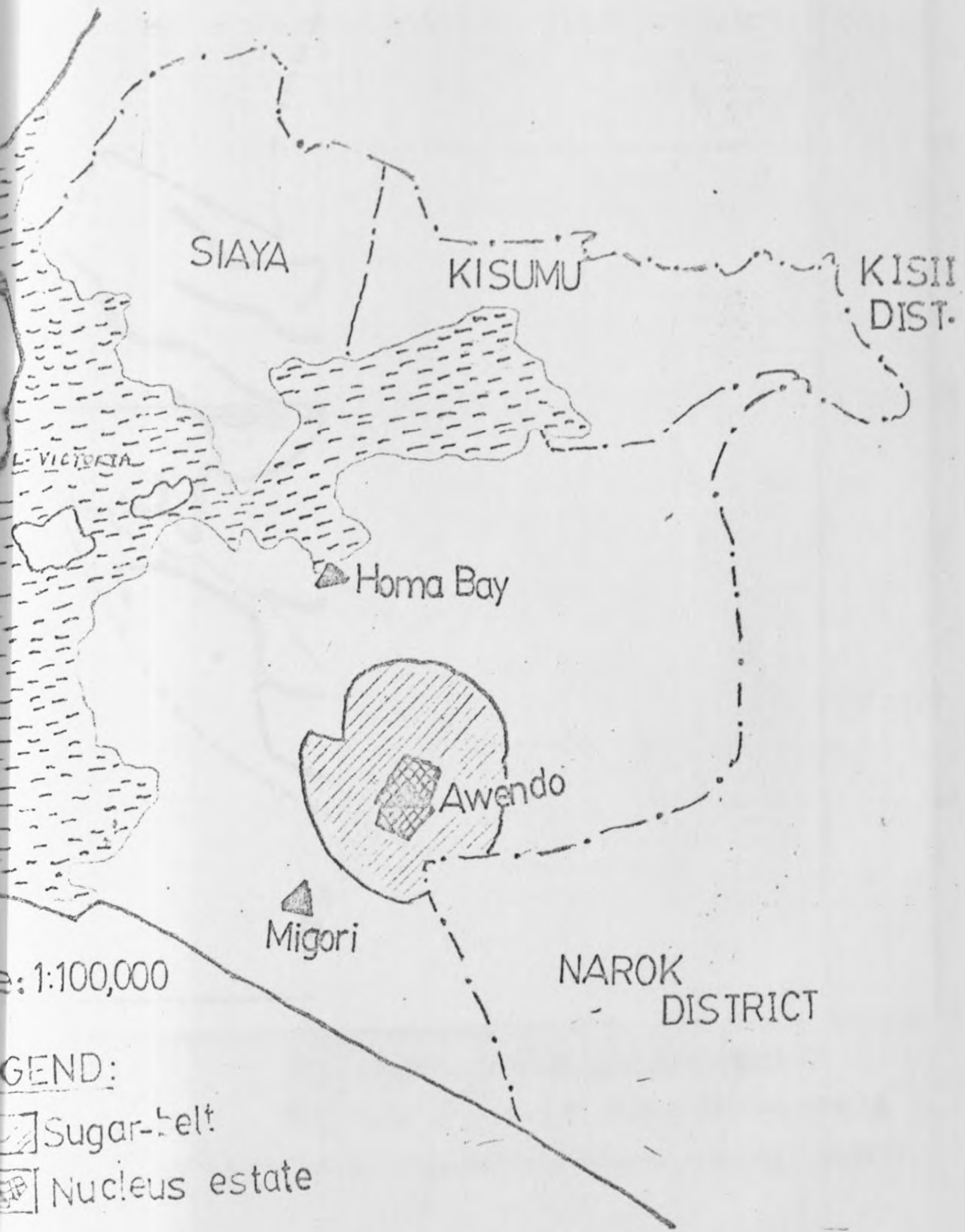
Legend:

 S. Nyanza District

AWENDO URBAN STUDY

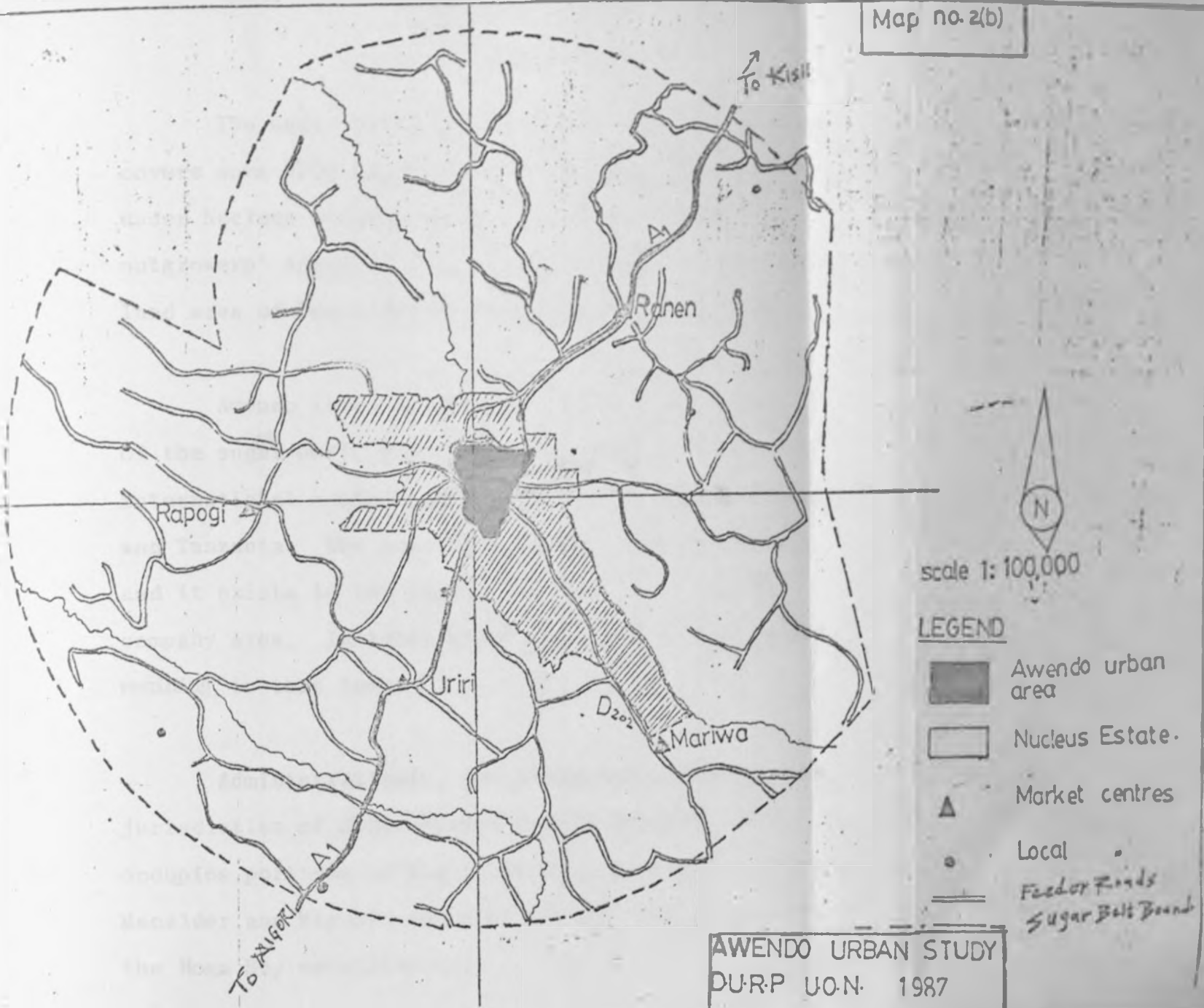
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THE SUGAR BELT WITHIN SOUTH NYANZA



map 2(a)

Map no. 2(b)



AWENDO URBAN STUDY
D.U.R.P U.O.N. 1987

Topography, Geology and Drainage:

The whole district of South Nyanza can be divided into two principle relief regions: namely:

The sugar-belt, within which Awendo town lies covers some 9200 ha. of land with 2,200 hectares under Nucleus estates while 7,000 hectares under outgrowers' scheme. This represents 10% of the total land area of South Nyanza District (See Map 2 b):

Awendo town, is located right in the middle of the sugar belt, along the main road of class A - international - standard which connects Kisumu, Kisii and Tanzania. The town area measures upto 1.2 km²; and it exists in two parts: the main town and the company area. In total there are some 10,335 people residing in this town.

Administratively, the study area is under the jurisdiction of South Nyanza County Council. It occupies portions of the following divisions: Central, Macalder and Migori; and much of its area cross-cuts the Homa Bay constituency.

2.2 Physical Background

Topography, Geology and Drainage:

The whole district of South Nyanza can be divided into two principle relief regions: namely:

- (a) Lakeshore lowlands - these range from 1163-1219 m. above sea level and are marked by plains that form flooding ground to some of the major rivers such as Kuja, and occasional lake water invasion. This lowland dominates almost half of the district on its western parts. This lowland gradually increases in altitude and finally gives way to;
- (b) Inland plateau towards the East. This starts at about 1219 m. of altitude and comprises an undulating surface formed by subaerial erosion with remnants of African plantation exposed at one of two levels as a result of erosion. On its western portions the land is a gently rolling plateau with well drained slopes in most parts. It is marked by low height hills with valleys on some cases occupied by rivers and streams. These features become more pronounced towards the north east as one approaches the Kisii highlands. The Sugar Belt lies within this topography. The topography has so significantly influenced the ecological conditions in this region that have given rise to the various activities (examined later) which are a backbone to Awendo town.

Soils:

The districts soils are more localised. The sugar belt accordingly has its distinct soil characteristics. According to a World Bank Report the soils within the sugarbelt can be categorised into eleven units - on the basis of their acidity or alkalinity, drainage and sugarcane productivity. All these eleven subcategories of sugarbelt soils although have varying characteristics are generally suitable for cane production in the district. There are only minor pockets in the whole belt with marrum out-crops and are very infertile. It is therefore for this reason of suitability of the soils for cane production that the region was selected for the sugar production scheme. While the site where the factory is located is basically marrum underlain by more stable rocks. This was considered a stable land area where construction work could be easily undertaken. Moreover it was infertile and by constructing the factory here would be saving the richer agricultural land.

Climate

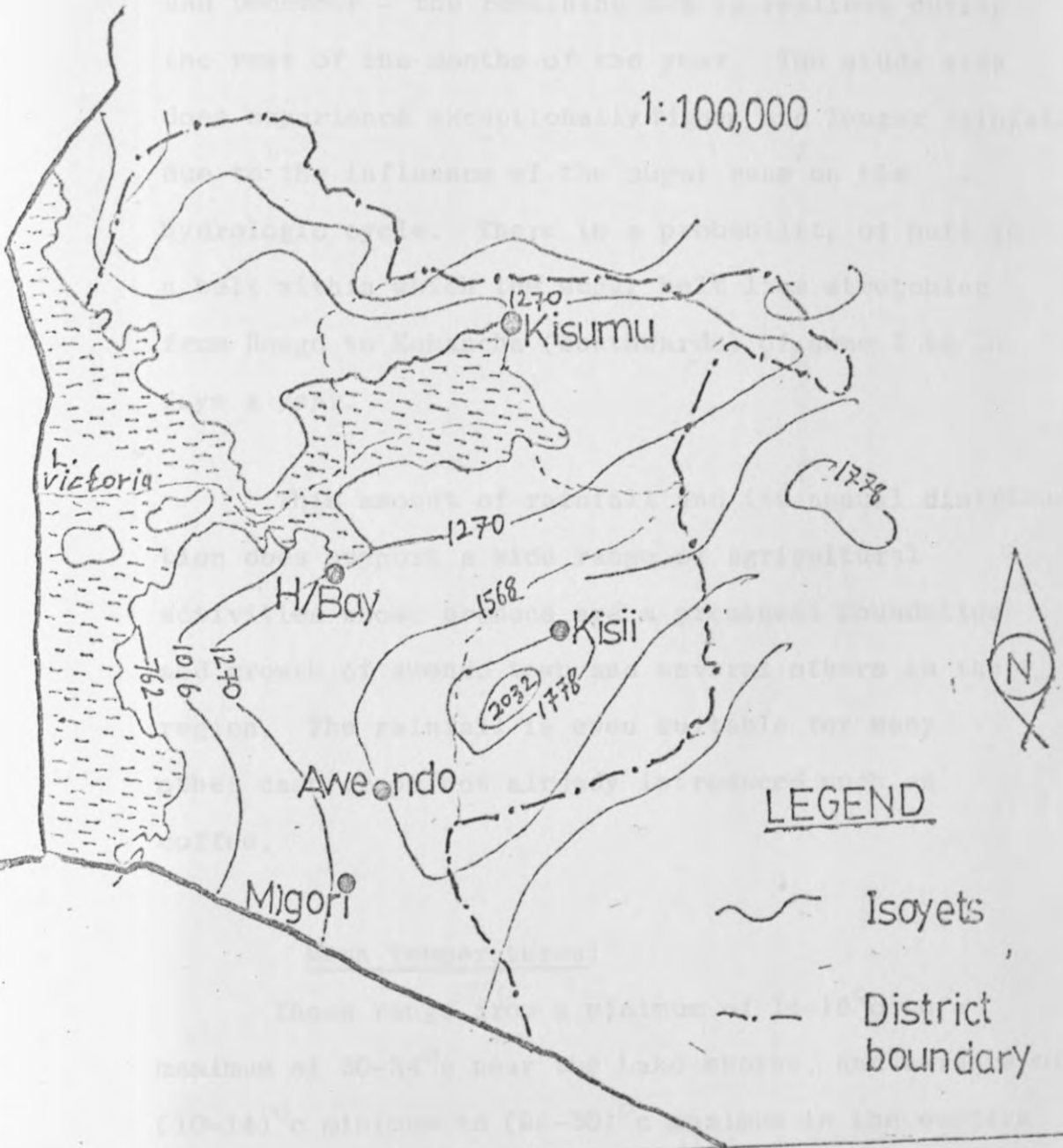
Rainfall:

Over the entire district rainfall varies from 700-800 mm. near the lake shore to 1400-1500 mm.

SOUTH NYANZA: Mean Annual Rainfall (mm)

MAP No.3

1:100,000



LEGEND

- ~ Isoyets
- - - District boundary

Awendo urban study
DURP U.O.N.1987

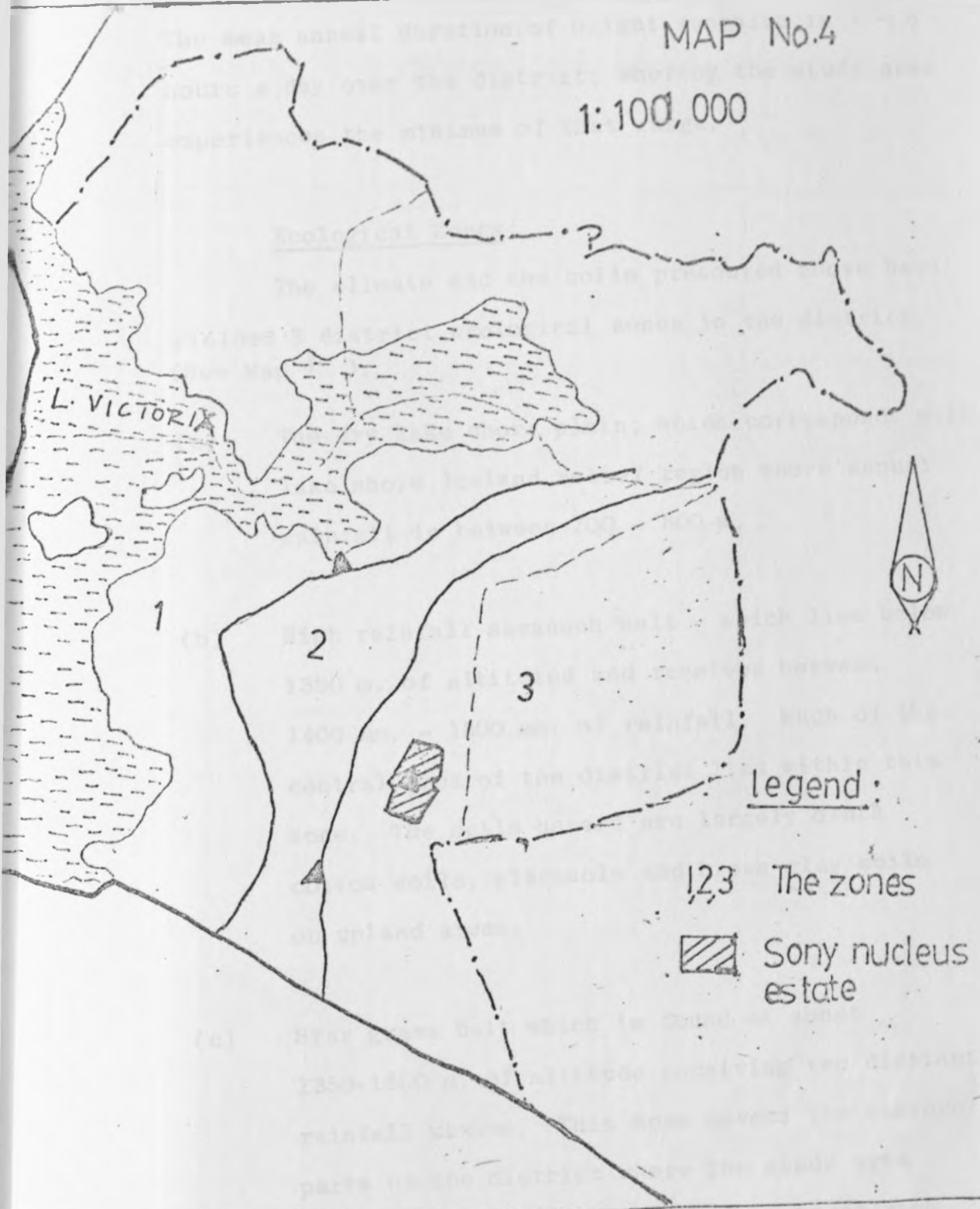
in the higher eastern areas towards the east. The sugar belt belongs to the latter category. About 40% of the total annual rainfall occurs during the long rains between March and July and about 28% in the short rains during the months of October, November and December - the remaining 32% is realised during the rest of the months of the year. The study area does experience exceptionally higher and longer rainfall due to the influence of the sugar cane on the hydrologic cycle. There is a probability of hail in a belt within which the sugar belt lies stretching from Rongo to Kehancha (southwards) of some 3 to 15 days a year.

This amount of rainfall and its annual distribution does support a wide range of agricultural activities whose produce are a prominent foundation and growth of Awendo town and several others in the region. The rainfall is even suitable for many other cash crops not already introduced such as coffee.

Mean Temperatures:

These range from a minimum of 14-18^oc to a maximum of 30-34^oc near the Lake shores, and a range of (10-14)^oc minimum to (26-30)^oc maximum in the eastern areas. The sugar-belt lies within the latter category.

SOUTH NYANZA: AGRO-ECOLOGICAL ZONES



MAP No.4

1:100,000

L. VICTORIA


1

2

3

Legend:

1,2,3 The zones

 Sony nucleus estate

AWENDO URBAN STUDY,

D.U.R.P. U.O.N. 1987

The mean annual duration of bright sunshine is 7 - 8 hours a day over the district; whereby the study area experiences the minimum of that range.

Ecological Zones:

The climate and the soils presented above have yielded 3 district ecological zones in the district. (See Map 4).

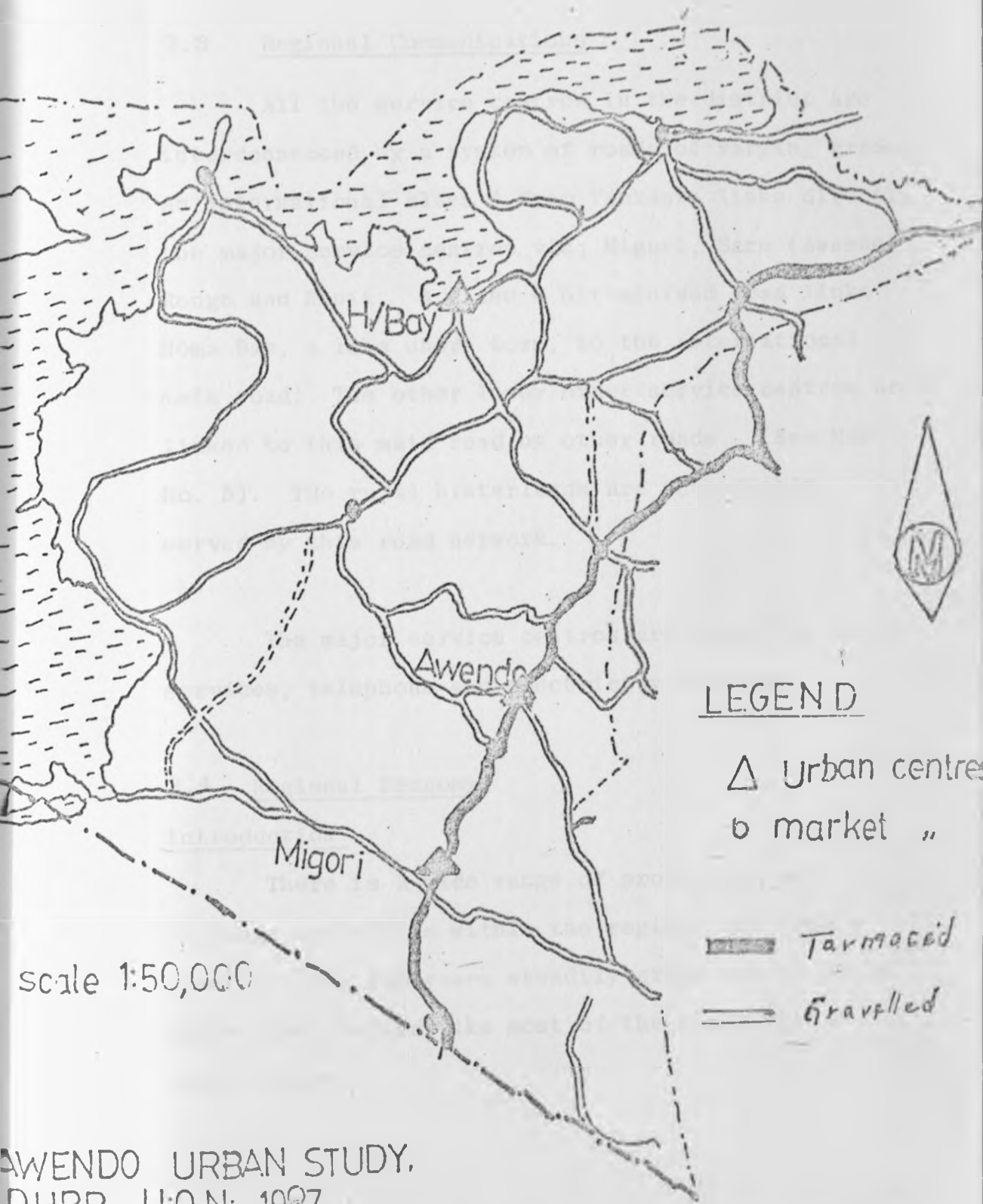
- (a) The dry lake shore plain; which corresponds with lake shore lowland relief region where annual rainfall is between 700 -- 800 m.

- (b) High rainfall savannah belt - which lies below 1350 m. of altituted and receives between 1400 mm. - 1500 mm. of rainfall. Much of the central area of the district lies within this zone. The soils herein are largely black cotton soils, planasols and brown clay soils on upland areas.

- (c) Star grass belt which is found at about 1350-1800 m. of altitude receiving two distinct rainfall maxima. This zone covers the eastern parts of the district where the study area lies wholly. Endowed with a variety of rich soils (see sub-section 2.2.2. above), the zone ha

SOUTH NYANZA: Regional communication: roads

Map no-5



scale 1:50,000

LEGEND

△ Urban centres
○ market "

— Tarmac

— Gravelled

the highest agricultural potentials and does support a wide range of crops and livestock (see section 4.1 below, on agriculture).

2.3 Regional Communications

All the service centres in the district are interconnected by a system of roads of varying grades. An international class A from Tanzania links directly the major service centres viz; Migori, Sare (Awendo) Rongo and Kisii. A class C bituminised road links Homa Bay, a lake shore town, to the international main road. The other lower order service centres are linked to this main road by other roads. (See Map No. 5). The rural hinterlands are accordingly served by this road network.

The major service centres are served by postal services, telephone and electricity supplies.

2.4 Regional Economy

Introduction

There is a wide range of production and exchange activities within the region, and Awendo town has over the years steadily grown out of these activities, indeed like most of the towns within South Nyanza.

Agriculture:

Agricultural activities within the region consist in mixed arable and livestock farming predominantly at a subsistence level. Approximately 18% of the land area is under cultivation and this proportion rises to nearly 40% in the high rainfall (1500-1600 mm.) areas and falls to 10% in areas where the rainfall is low and erratic.

The principle food crops are maize, cassava and wimbi. Others are sorghum, sweetpotatoes and vegetables. Cash crops are being grown on an increasing scale. They include sugar cane, tobacco, groundnuts, rice, cotton and coffee. There is also sisal which according to a study by Jobando (1985) is being driven out of stage. Agriculture provides over 95% of the employment in the region and some 85% of the total incomes. (C.B.S report).

There is a marked decline in the food crop production in favour of the cash crops especially in the upland areas where the two main cash crops are now being given more attention by the farmers which in the case of sugar cane is due to the establishment of the SONY sugar industry at Awendo. This trend is reflected in the cropped area estimates done in 1974 and 1980 on a number of crop types:

Table 1:

Crop	<u>Crop Hectarages</u>	
	Hactorage 1974	1980
Maize	36,000	32,200
Millet	25,100	26,240
Roof crops	21,000	29,160
Legumes	10,200	8,360
Cash crops	7,900	20,100
Others	2,600	5,760
	102,800	121,820

After V.I.A.K.

Although the total acreage had increased, it had simultaneously declined for some of the common food crops such as maize and legumes. While acreage under cashcrop had increased by over 50%. (See Table 1)

The central places within the region owe much of the growth to the exchange activities on these crops.

Cattle keeping:

Is also a major economic activity that has been carried along side the crop cultivations. In 1974 the district had about 500,000 cattle. There were

fewer goats and sheep than cattle. But the number of these is going down due to land use competition posed by expanding cash crop production and population growth. The significance of these activities to the growth of central places is that centres like Awendo sprang from exchange activities of livestock between various communities to the extent that many central places in the region still retain spaces for animal exchange activities as a part of the entire urban function.

Fishing:

Traditional fishing undertaken by nylon nets and hooks occur in the lake and rivers and small fish-ponds at diverse locations. Exchange of fish occurs in the central places and is one of the commercial activities in almost all the centres within the region.

Other activities of very limited significance in the region include forestry which is the source of fuelwood and building material.

Conclusions

We have presented a number of regional factors which in one way or another has had and continue to have influence on the development process of Awendo town. Due to the interrelationships that exist

amongst various operating units in the region what happens to these regional factors has a direct or indirect bearing on Awendo through the element of the relationship. It can also be argued that the level of potency of these factors determines the rate of development in the town. This explains the significance attached to the foregoing chapter as it sets the general operative framework within which our unit of analysis - the town - thrives.

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Plate 1: The Factory. The Nucleus of all activities.

CHAPTER THREE

AWENDO TOWN: ITS HISTORICAL DEVELOPMENT

3.0 INTRODUCTION:

In order to have a clearer measure of the development role - as the main theme of this study - of the SONY Industry there must be some yard-sticks. A historical analysis of the town's development process provides the trend of changes within. This chapter presents such historical perspectives of the town prior to the establishment of the industry covering the physical changes, population trends and economic changes simultaneously revealing the rates of such dynamics with their magnitudes and the underlying factors. This analysis will provide a basis against which to assess the contribution of the industry.

The history of development of Awendo town before 1978 has been a history of slow but steady process. That slow rate is itself a reflection of the development speed of the entire region which, as has been seen in the previous chapter of regional context, has predominantly been dependent on subsistence economic activities, only transforming into modern economy very slowly. The growth rate of the whole district according to CBS is 2.9% per year compared

with 5.6% per year of the country. Ever since it was started in 1923, Awendo has not experienced any exceptional change until 1978 when the SONY industry was established in the region with its factory located at the town. Hitherto that it had owed its growth to exchange activities of the local produce, and the demand provided by the surrounding populations for the light household goods - Awendo acting as the central place. It thus has grown out of commercial activities during much of its period in existence. With commerce at the core of its growth, its population has grown presenting a demand for other activities and services; to which the private sector has tended to respond accordingly, apparently ahead of the public sector. The history of the town is here presented in phases of a decade's period upto the time the industry was established and this will give a basis upon which to start assessing changes ascribeable to the industry.

3.1 1920s:

Interregional besides intercommunal trade had long been done in the Lake Victoria region (Nyanza). The Kuria people and some of their Luo allies from as far as Tanzania mainland (then Tanganyika) exchanged cattle for goats, sheep and food crops with the Luos from as far as Kisumu. This barter exchange activity

gave rise to certain routes across the Nyanza land. In 1923, a large tree along one of the major trade routes presented a comfortable brief resting place for the traders, and that it was more-or-less in-between the trading regions it became a naturally convenient site. The traders from either directions along the routes met, haggled and swapped their items here and soon this large tree with its shade thereof point - the main tree itself has been felled to give way for other developments. (see plates 2 and 3).



Plate 2: Now it is wood. In 1923 it was recognised through out the region as an exchange site: the shade.



Plate 3: The 1923 important 'parent' tree is now dead, but the 'offspring' thrives.

There were such other points elsewhere at Wath-Onger, Ndhiwa, and Migori. At this time much of the surrounding areas were under short forests and the population herein was scarce and sparsely distributed in nucleated clusters, undertaking basically subsistence activities.

One year later, the colonial government, out of its zeal to control African activities and generate revenues, instituted a temporary structure next to the exchange ground to act as an office where registration of animals and taxation were done. The 'office' consisted of four grass-thatched houses and thus became the first physical construction to be done at this site. As the exchange of animals continued it became necessary that the people involved be provided with certain support services. The local population responded to this by bringing foodstuffs such as bananas, 'uji' (gruel), cooked sweet potatoes, cooked maize and beans etc. which they sold to the traders. Money was already being used, after all, especially in their exchange of commodities which could not render themselves easily to the principles of barter trade, although the latter was still popular especially in the cases of animals.

In the same year, some Indian businessmen arrived at the site, assessed the 'market situation' and having been satisfied with that which pertained to commerce they set up some six temporary structures where they carried out the first ever retail business. It is not established - at least during the field surveys - where these Indians came from, but it is possible that they were either from Kisumu or Kisii

centres where the Indian Community had long established themselves in the retail and wholesale business activities; and establishing the similar retail business at Awendo 'site' could be seen just as a part of their countrywide expansion of their economic hegemonies in the commerce sector - where they have the upper most hand upto now - much to the chagrin of not a few lesser nationals. For more-or-less at the same time retail business was getting instituted at various centres such as Migori and Ndhiwa by businessmen of the Indian origin.

As more local produce such as maize, beans sim-sim, clay pots etc. were increasingly exchanged here mainly by women, an open-air market was set-up later in 1928 thereby separating retail activities, animal exchange and the other activities. At about the same period a main road from Kisii towards Tanganyika through the other centres such as Migori was constructed through the emerging centre dividing it into two sections. This road was later upgraded to an International Trunk road standard. The important history here is that the road itself, for much of its sections, tended to have followed the same trade route used by the animal traders. During the same decade, Awendo primary school was started at the centre by the Missionaries, during which time a sub-post office was opened here.

1930s:

With the construction of the main road the small centre became open to external influences. In 1933, the Missionaries established a health centre in the neighbourhoods of the centre. The health centre still remains the only public health unit in Awendo.

To facilitate the missionary activities, in 1935, the colonial government constructed a road from Awendo centre to Rapogi (where the missionaries set up a church and a mission school which themselves formed the nucleus for the now Rapogi market centre). But before that, in 1931, a main bridge was constructed on the first road to a more stable standard, next to Awendo centre, across the sare river, which is the source of water supplies to Awendo Town. Just about the same time the first three butcheries were opened up at Awendo centre.

In 1932, the colonial government, through the local chief, mobilised the local people and a road from the centre to Mariwa in the east was constructed by human labor. This road linked the Awendo centre with the eastern regions of the district as far as Masai land in Narok District. It is also during this time that a more permanent bridge across the sare river on the main road from Kisii to Migori-Tanganyika was constructed thereby making it possible

for bigger vehicles to move further into the interior regions of the district, (then covering much of the southern parts of the district). It made centres such as Migori more accessible to the already opened up areas such as Kisumu and Kisii, hence facilitating flows between them, a factor to which Migori and the centres around it owe much of their growth.

At this time Awendo had become an established centre for trade and had moved from a mere barter market centre to a status, then referred to as a general market.

1940s


Awendo entered the 1940, with the status of a general market centre. Much of the activities therein were retail business. A posho mill was established during this period. It is also the time that two wholesale premises were opened up.

The centre was divided into two parts on either sides of the same river on racial grounds. The Asian side was called Sare while the Africans' side was called Awendo. The two groups of people could not conduct their businesses at the same place owing to the colonial taxonomic creteria (see Map 6). The Asian area; permanent structures - mainly retail and wholesale premises; while the African centre was

AWENDO LOCAL CENTRE 1953 (5.0 acres)

1:10,000

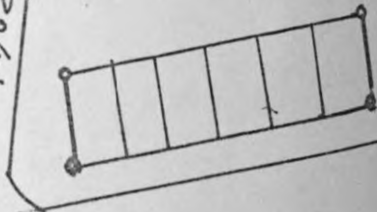
LEGEND

- P.O. Post office
- H.C. Health Centre
-  Commercial shops

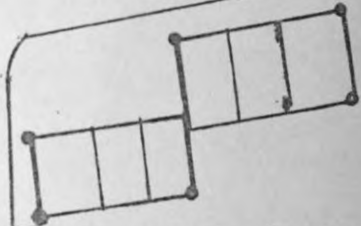
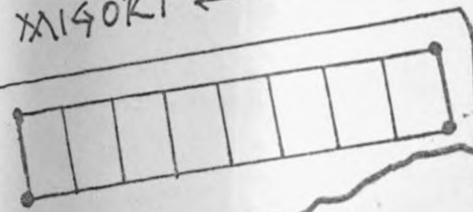
SARE TRADING CENTRE
(ASIAN AREA)



To XP041



XAI90Z1 ←



River
SARE

100m. SARE PRI. SCHOOL

To XAI90Z1



Map. 1

a Chief's Camp. No official explanation was given for the evacuation of the African traders from Awendo market centre. It had just to be taken as a gubernatorial order. However, it was suspected, most probably, that the Asian traders had requested the

5/11/53

dorminated by temporary and semi-temporary structures, with a central open market place which operated on a periodic basis - once in a week.

The Asian area was upgraded to a trading centre, an indication of the level of recognition granted it by the colonial government. It continued to grow mainly along the major road, while the African area grew randomly at the isolated site.

1950s

In 1953 a major change occurred in the structure of the centre after it was surveyed for the first time by the south Nyanza A.D.C. The African market centre (Awendo) was cancelled and transferred elsewhere at Ochuna (now Ranen) some 6 kilometers in the Kisii direction. The African traders were forced out and were only allowed to carry their business at this new centre. Only the Asian remained at the same trading centre. The only structures that remained close to the former African market centre were the two blocks of the Awendo Health Centre and a Chief's Camp. No official explanation was given for the evacuation of the African traders from Awendo market centre. It had just to be taken as a gubernatorial order. However, it was suspected, most probably, that the Asian traders had requested the

colonial authorities to push out the African traders from close neighbourhood where the latter 'tended to galvanise most of the customers; thereby reducing the business turnover rates for the Asian traders. With the racial categorisation placing the Asians in the second position After the Europeans in the social structure that time, it was not strange when the government responded to their (Asians') plea by cancelling plots allocations at the Africa market centre and transferring the market function some 6 kms. away. (That transfer gave rise to the present Ranen market centre, then referred to as 'Ochuna', meaning 'forced').

If the aim was to eliminate competition between the Asians and African traders then that transfer was the best move on the side of the Asians. The entire surrounding population now remained at the service of them alone. Their business must have been accentuated for soon after that more plots allocations were necessarily done extending the trading centre with a number of structures and undeveloped plots bestriding the main road from Kisii to Tanganyika, a nearby primary school, health centre and chief's camp.

1960s

The order of displacing the African traders out of Awendo centre remained until 1961 when it was abrogated. This time the African were allocated plots within the Sare trading centre previously set exclusively for the Asian traders.


As commerce continued to play a dominant role in the growth of the centre, a further extension was done to allow more premises bringing the total area of the centre to 6.3 acres. The open air market that was formally a part of the old Awendo (African) centre was incorporated in the Sare trading centre.

Although only a few of the plots were developed in the early parts of the period many of them were developed at the end of it and, infact, more extension was done in 1967 along the main roads (see Map 7). Growth along Awendo-Rapogi . . road started then.

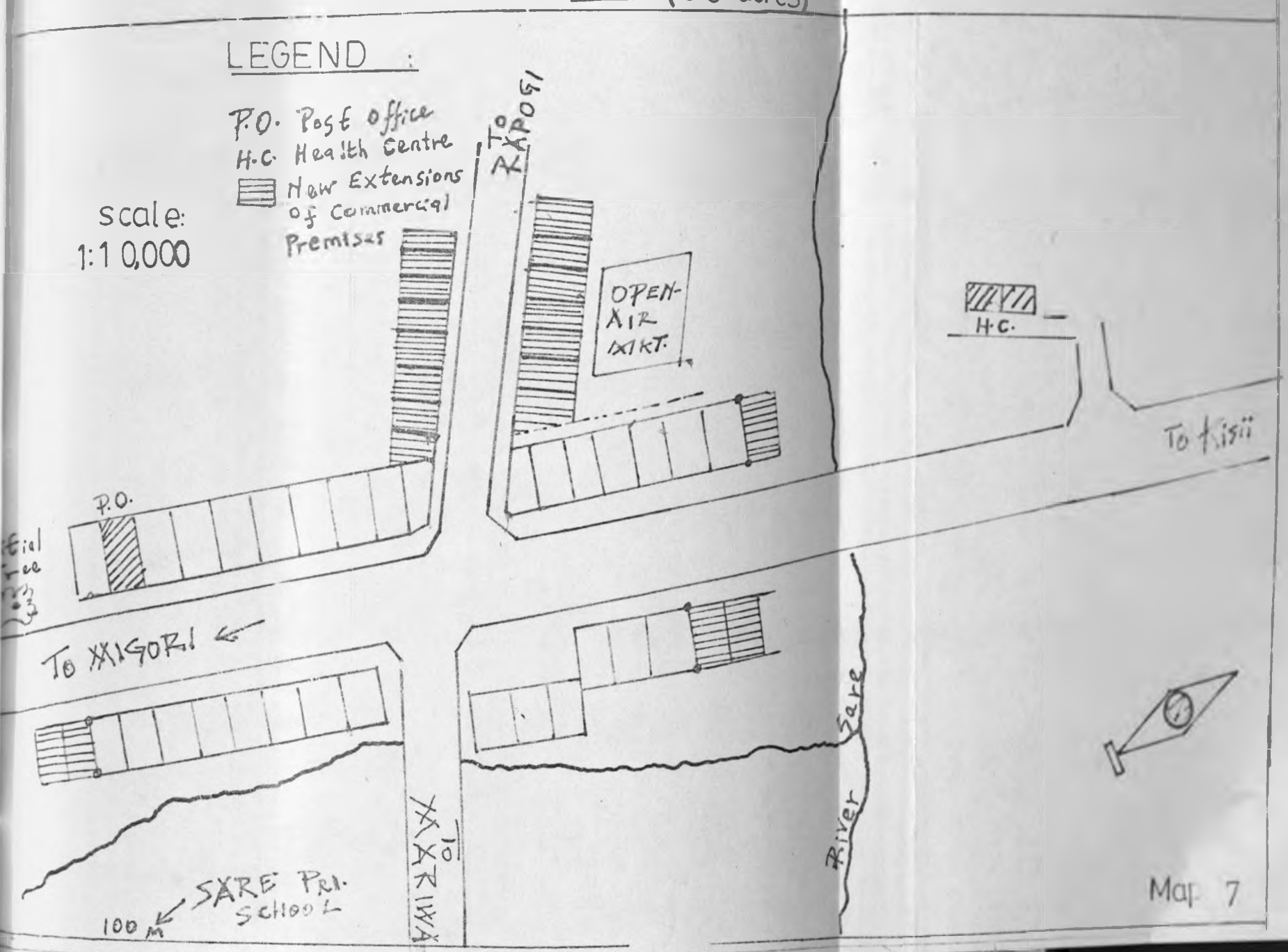
Perhaps a major achievement during this period in terms of urban form was consolidation of the centre making it into a one unit, rather than scattered paraphenalia, a form which is convenient for the provision of central services and lower costs of the provision of such services. The town has since then maintained a compact form in its growth. Besides that

AWENDO TRADING CENTRE 1967 (6.3 acres)

LEGEND :

- P.O. Post office
- H.C. Health Centre
-  New Extensions of Commercial Premises

scale:
1:10,000



Map 7

established with its factory set up at the Awendo centre. Almost all sectors of the town underwent some change. The rate of commercial activities growth almost doubled. Service sector grew by 14 times. Light industrial activities went up by 7 times.

Population shot from a size just above 1000 to over 7,000. This presented an exceptional demand for housing and consequently for the first time housing sector became a distinct functional unit with the private individuals investing in the sector as a business. More social and physical infrastructural facilities came up with some of the already existing ones improved.

1980s

The increased rate of the various sectoral changes continued in this period from the late 1970s. A new boundary was defined to allow for the expansions of various activities. The faster commercial and industrial activities growth rates can be seen in the table 2 below. Then the physical development of the town in this period is provided in Map 9 in the next chapter.

Table 2

Commercial And Industrial Activities Start Time

Period	Retail	Wholesale	Bar/ Restaurants/ Hotel	Butchery	Hardwares	Light industrial	Service centres	Godown
1920-1930	8	-	-	-	-	-	1	-
1930-1940	12	-	-	3	-	-	1	-
1940-1950	13	2	-	-	-	1	-	-
1950-1960	9	1	-	1	-	-	-	1
1960-1970	12	-	-	2	1	2	-	-
1970-1980	14	2	7	1	4	14	1	-
1980-1987	17	3	10	5	2	48	14	2

Source: Field Surveys.

Light industrial = Blacksmiths, motor garages, bicycle repairs, shoe repairs, radio/watch repairs, posho mill, carpentry.

Service centres = Filling station, studio, laundry, saloon, post office, health facility.

3.2 Some Quantified Changes

Population size change

Since the 1930s, the population size of the centre has been changing steadily much in the same direction with the activities therein. The following table 3 shows the population estimates at various times and the rates of the changes thereof, since the 1930s upto the present. The steady growth of the centre that was interrupted in the 1950 is here reflected in the drop in population size by about 0.1 times.

Table 3:
Population Size and Changes

Period	1930	1940	1950	1960	1970	1980
Pop. Estimate	73	169	211	201	560	800
Rate	1.3	1.45	0.1	1.8	1.3	

Source: County Council records and own estimations.

A sudden leap in the growth of the town after the establishment of the Sony industry is also expressed in the sudden increase in population by about 13 times, at 1980 period. But prior to that the growth of population tend to be closely associated with the growth of commercial activities. The implication is that

commerce as a human activity has been a dominant factor in the growth of Awendo town and its population, so that for instance, during the 1950s when the African traders were evicted from the centre the population suddenly went down this can be cross-checked by looking at the growth rate of commercial activities presented in the summary table 1. In the late 1970s and 1980s the growth of the population cannot be explained largely by commerce but, as will be seen later, but this time largely by the Sony industry, that has induced an exceptional immigration. (It should be noted that the boundary change did not cause population change for once the area had been taken by the County Council the residents were evicted).

Local Authority's Revenue Charges:

Another parameter of historical assessment whose past and present records were obtainable is the County Councils revenue raised from the centre. This revenue has been raised by way of occupation licences, market due and others. The council has not been changing the rates at which the revenue is raised which means any changes in the revenue totals have been mainly due to changes in the number of taxable items and their units. But the expansion of these items and their units is a reflexion of growth of activities in the centre. The relationship is such

that the faster the growth of taxable activities the larger the revenue thereof assuming the tax rate is constant. The following table 4 shows the yearly revenue the County Council raised from the centre since 1973. The figures have been adjusted to cater for inflationary tendencies (using: $P_t = P_0 (1+r)^t$, where r is inflation rate taken at 15% p.a averagely.

Table 4: County Council Revenue Growth

Year	Revenue (Kshs.)	Marginal Revenue
1973	6,553	3,931
1974	10,484	2,994
1975	13,478	11,272
1976	24,750	1,349
1977	26,099	- 815
1978	26,284	1,044
1979	26,328	-5,106
1980	21,222	9,038
1981	30,260	-3,216
1982	27,044	11,206
1983	38,250	18,000
1984	56,250	33,000
1985	89,250	123,250
1986	212,500	

Source: County Council Revenue File

The marginal revenue column represents the rate of change in the total revenue. Revenue changes upto 1981 have tended to be erratic in some years it is higher and at others it is lower. There was never a steady rise, but in the succeeding years the rise has not only been steady but substantially fast, upto the present time. This tendency is experienced after the establishment of the Sony Industry. The industry's role in this case is discussed in a later chapter.

Conclusion

In the foregoing chapter we have seen the emergence of Awendo town and its growth process upto the time the sugar industry was set up here. We have also noted some of the major changes that have occurred at the centre over its life-long history. We have found out that several factors have been behind the centre's emergence and growth. That it started along a major interregional trade route indicates the significant role transportation factor played in the emergence of the centres, but, this was an influential role. However, the main activity that necessitated the emergence was commerce, initially in barter form. Next we saw the government coming in by establishing some administration units. The centre

having emerged on the basis of those three factors, we saw its growth attributed mainly to commercial activities mostly on retail items and local produce. The Missionaries have also been seen to have contributed particularly on educational, religious and health infrastructure. The government's role has been very limited besides the construction of the main roads, a support office and a police post.

The investment rate in the centre has tended to be very slow, perhaps due to scarce demand opportunities, hence the slow growth rate of the centre. The service sector has also tended to expand rather slowly and the same can be said of the population growth.

But Sony sugar industry is a major investment in the region. Its role in the development of the centre will be seen as direct and stimulatory; and this will be reflected in the rates of change in the various aspects of the centre besides in the introduction of new aspects that hitherto did not exist. The following chapter is a discussion of the existing development situation of the town and when superimposed onto the presented history we shall be able to identify what contribution the factory has made on that history.

References:

1. South Nyanza A.D.C. Survey Maps 1983 and 1961.
2. Folk-lore by (1) Ismael Owiro Akoko
(2) Constantive Okumu Amamo.
3. Personal Retrospective Surveys on Activities.

CHAPTER FOUR

ANALYSIS OF CURRENT LEVEL OF URBAN DEVELOPMENT

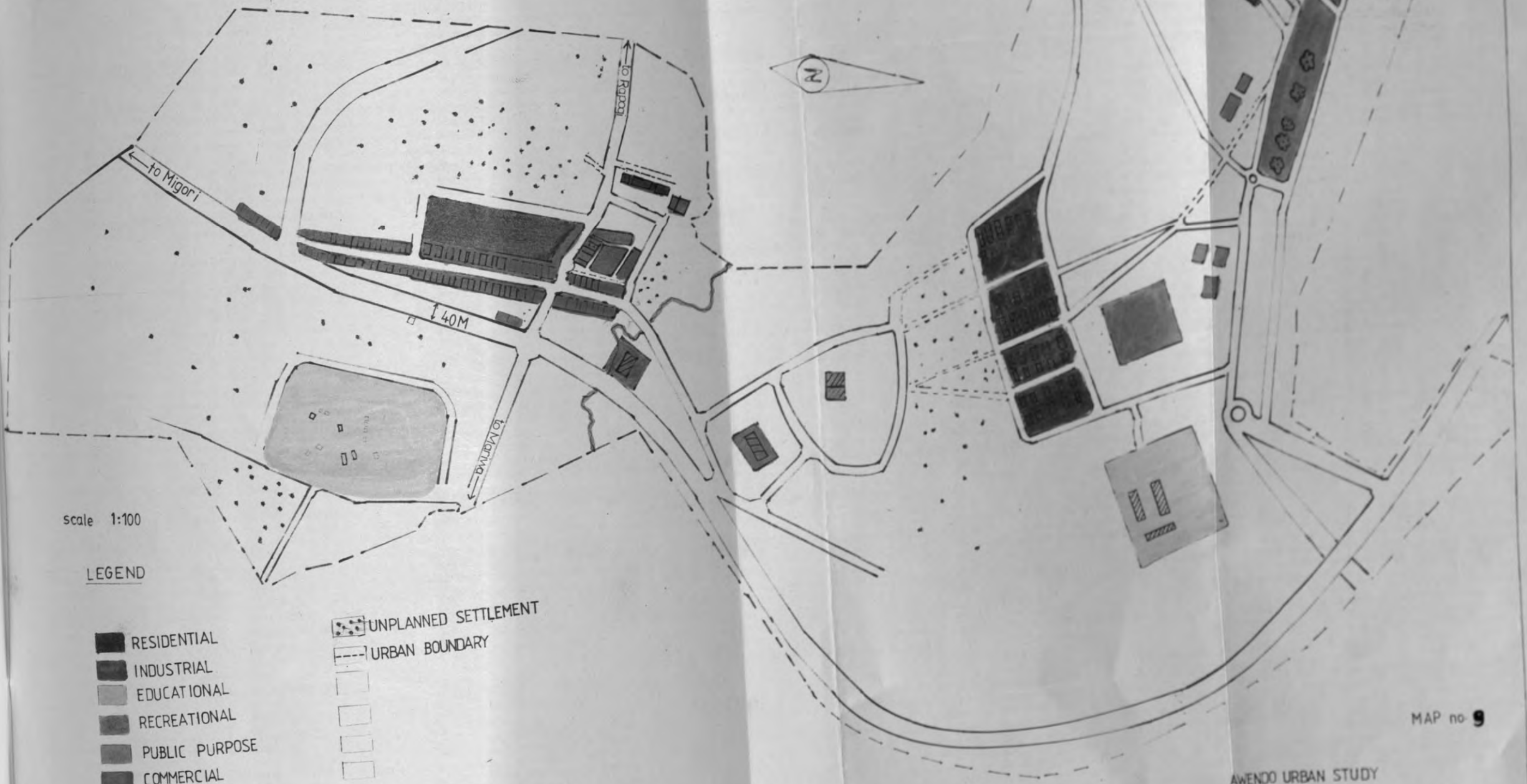
4.0, INTRODUCTION

The preceding chapter has examined the historical evolution process of Awendo town since the time it sprang upto the present time attempting to establish. The rate of its development and the various factors behind that development. The established rates and operative factors of development is to provide us with a ground from which to measure the contributions of SONY Sugar industry on the development process of the town - the industry being just one of the factors. But before isolating those contributions of the industry. We in this chapter examine in details the current level of development of the town in a manner that makes it easier to measure factor contributions. We carry out the examination on sectoral basis.

4.1, PHYSICAL DEVELOPMENT

We have examined the natural physical factors in Chapter 2 as part of regional perspectives as they influence various activities related to urban functional processes. In this section we examine the physical development that has occurred in the town.

AWENDO TOWN
EXISTING LANDUSE PATTERN
1987



scale 1:100

LEGEND

- RESIDENTIAL
- INDUSTRIAL
- EDUCATIONAL
- RECREATIONAL
- PUBLIC PURPOSE
- COMMERCIAL
- PUBLIC UTILITIES
- TRANSPORTATION
- DEFERRED
- UNPLANNED SETTLEMENT
- URBAN BOUNDARY

MAP no 9

AWENDO URBAN STUDY
DURP UON
1987

(a) The Boundary

The South Nyanza County Council drew a new boundary for Awendo town in 1977 defined as the Awendo Urban Area which measures about 1.2 km². The new land was acquired from the freeholders and now any non-urban land use is illegal and those residing on the land are mere squatters. The new boundary was drawn in order to accommodate any new developments that was anticipated by the establishment of the SONY Industry, on the basis of other areas' experience.

(b) Existing Urban Structure

The town broadly consists into three distinct sections :

- (1) the trading centre and the juxtaposed, fusedly, with the high density residential;
- (2) the SONY Industrial plant and
- (3) the SONY Company residential and a number of unplanned housing have come up at various parts of the urban area. Defferred pieces of land intersperse these sections of development and are allowance for future expansion (see map No.9).

The trading Centre is the origin Awendo town where a main street bestrides the various business premises. A second street aslo bestrides a second

'wing' of the centre extending towards the west; while a third street links the whole centre with the bypassing international road in the eastern side.

The high density residential area is on the western parts of the trading centre and is served by some streets some of which are unplanned footpaths. The houses are of various types and sizes.

The company residence is of three categories : low, medium and high class residential on the basis of workers categories and are served by internal street systems. The factory area consists of the plant and the company offices and has its own internal circulation system.

The unplanned structures serving as housing and commercial premises occur in pockets at diverse points deemed 'strategic' by their owners especially kiosks.

The various landusers have developed to varying degrees and so far residential use occupies the greatest proportion of the whole land area, followed by commercial user.

4.2. ECONOMIC DEVELOPMENT

Income and Employment

We consider income under two categories viz. income earned by households and that earned by the local authority.

(a) Household Income:

The various households at Awendo earn their income through three main sources namely business, wage employment and farming. Of the total income earned the following are the proportional contributions of each sector:

Wage employment	76.7%
Business	20.9%
Farming	2.4%

Business is conducted mainly at the trading centre of the town, farming is done in the surrounding areas including the non-built up areas within the urban boundary; and the wage employments are at various places, generally : the factory and Awendo town centre which include public work places e.g. offices; business employment, etc.

Of the 89 persons interviewed the following were the proportions of the wage employment per work-place:

Table 5. Wage Employment per workplace

Work place (as income source)	Proportion of total employment
At SONY factory	89.9%
At Awendo Town Centre	10.1%

Income Levels:

Household Income classification of an area is normally based on some index which varies from one area to the other. This index ought to be a one that takes care of the prices that are reigning in that area so that the classes thereof incorporate the cost of living in that particular area. It was however not easy in the field to determine the cost of living index in Awendo town. We accordingly used the Central Bureau of Statistics 1982 income classification for the whole nation and the following were the income levels obtained.

Table 6 Income classification

Income class	% of household earning the Income
0 - 1500	50%
1501 - 3000	31.6%
above 3000	18.4%

Income levels are an indicator of the level of development as more people join the higher income brackets and less remain in the lower classes.

The ideal goal of development is to bridge the income inequality gap among individuals and regions.. In Awendo town only 18.4% of the people are in the upper income group while 50% are in the lower income group. This distribution is not much different from the national figures.

Commercial Activities

As the history presented in the previous chapter has shown Awendo town has over the years grown mainly out of commercial activities. It continues to be an important commercial centre. Her commercial sector ranks second to industry as the source of income and employment. The commercial activities are conducted mainly at the trading centre, although a number of informal activities are slowly mushrooming beside the residential areas and along the major roads.

(i) Types of Commercial activities:

There are various types of commercial enterprises in the centre majority of which are retail activities, kiosks and open air market activities. The following table indicates all these enterprises and their number. They are mainly at the Awendo trading centre. The number of those in undesignated areas was not established in the field.

Table 7

Types of Commercial Activities

Activity	Number
Retail shops	77
Wholesale	8
Bars/Restaurants/ Hotels	17
Butcheries	13
Kiosks	80
Filling stations	1
Bookstore	2
Tailoring shops	5
Studio	1
Laundry	1
Hardwares	6
Godowns	3
Saloon	2

Source: Field Surveys

The large number of retail shops indicates the significance of the town as an important active commercial centre as all of them are operating. They serve the resident population and the population in the entire region within the sugar-belt, and even beyond. The wholesale shops herein serve the retail shops in the market and local centres within the sugarbelt such as Mariwa, Rapogi, Ranen and Ururi.



Plate 4: The opportune moment for investments
has arrived.

The large number of Bars, restaurants and butcheries is a reflection of the large size of a consumer population. Since most of these enterprises sprang up only recently it is evident that that tendency is a response to the recent demand engendered by the establishment of the industry and the population growth thereof.

An interesting spectacle is the exceptional growth of kiosk businesses. These are small scale activities carried out in temporary structures. About 90% of them came up in the late 1970s and early 1980s. We associate these activities with the low income businessmen, quite zealous to subsist and generate wealth in the shortest possible time. The highly temperamental people - daredevil - too quick at responding to any demand that unveils before them. Their presence in such a large number is an indication of demand and this is an indicator to the larger scale investors who normally take a longer time to establish themselves. Such investors have now started putting up more permanent structures. (See plate -No,3)

The hardwares have also sprung up in response to the needs of other activities within the centre such as carpentry, light industries, building and construction etc., besides serving the surrounding rural population

whose incomes are steadily rising. The rise of saloon, laundry activities is a reflection of the growing consciousness associated with urbanism.

The presence of a petrol station is an indication of the significance of the centre as a transportation centre. This in combination with the motor mechanic activities reflect the motor vehicular volume in the centre. The company in addition runs its own service station. The problem with the petrol station at the trading centre is its small size and location. A station such as this ought of necessity be located at a point easily accessible to the vehicles. It is a one activity that should be located by the main streetside to allow for the incoming and outgoing vehicles to be served without undue traffic jams. A Maize and Cereals Produce store has been established also.

There are also stores that cater for the farmers' needs such as fertilizers, seeds and farm implements. Besides, the company supplies the sugarcane farmers with the necessary farm inputs under the outgrowers' service scheme. So far there were no cases of shortages of farm inputs, an indication of the sufficiency of such services at the centre.

The periodic air market at the centre is almost as old as the centre itself. Perhaps, it has been the

stigma of the centre. It operates twice a week; and there are two sections of it. One catering for livestock exchanges - mainly cattle, sheep and goats - and the other section accommodates a variety of local products such as agricultural produce, mainly grains and vegetables, fish, pottery, baskets and other products of arts and crafts; foodstuffs like gruella (uji), cooked potatoes, beans and maize etc. The latter section is, however, not completely fenced. The problem with it is its small size which on the market days cannot accommodate all the businessmen which often leads to spilling over of such activities onto the unauthorized locations in the town. Secondly, the conditions under which some of the items are exchanged is apparently not upto the hygienic standard required. There is severe incidence of dust and flies, and stench smell in some sections of the market place.

Hawking activities have come up, like in most other urban centres at Awendo town. They sell 'second hand' goods mainly clothes and household items. Hawkers are itinerant sellers. "They follow demand". They are quite flexible and highly mobile. They move from one centre to the other and are never permanently stationed. At Awendo they are to be found at diverse locations particularly by the side of the main streets. The problem with them is that when

their number is fairly big they locate themselves at points in the town which are not designated for them. This tends to compel the local authority to be constantly struggling with them. It is an interesting struggle of chase which is cyclic because as the authority's askaris push out a group out of a point, the following day a different group settles at the same spot, as long as it is strategic for them to sell there. The challenge is how to accommodate these hawkers within the centre. They are a vital section of commerce which apparently serves the poorer populations more, as their prices are lower than at retail level. A shirt that is bought from a shop at 150/= can be obtained from the hawker at 80/=.

Industrial activities

Large Scale

Sony sugar factory is the largest industrial unit at Awendo having been established here in 1978. It is owned by the Sony Sugar Company limited which is a state corporation manufacturing sugar from cane grown on the company's own nucleus estate and by small holder farmers in the surrounding area within a radius of about 16 km, of the factory. The company employs over 1,200 permanent employees and about 3,000 casual workers, and currently produces in excess

of 30,000 tonnes of white sugar annually. At the moment only phase one of the project is operating which means there is a possibility of expansion of the scale in future.

The factory itself has provided opportunities for other industrial units to come up especially users of mollasses and baggase, which are its byproducts. It is possible for other units that can use such cheap material to manufacture other products to locate here to take such advantage. Otherwise at the momemnt it is a problem to the company disposing of them, inefficiency at which occassionally leads to environmental pollution.

The company also runs its own internal engineering works to cater for the maintenance of its machinics system. However, such services are internalized and are not open to the general population.

Light Industries:

There are numerous light industrial activities in the centre, majority of which belong to the so-called informal sector. They carry out light manufacturing and repair services. There are over 48 units in this sector currently operating at the centre. These include blacksmiths, motor-mechanics, bicycle repairs,

shoe repairs radio and watch repairs, posho mills, carpentry. They employ between one to 10 employees. 74% of them have come up in the 1980s.

The activities are carried out at the trading centre. Most of them are carried out under temporary structures or in the open spaces at various locations within the centre - except for the posho mills and some carpentry activities. Some of them have rented those spaces while some have been accommodated on mutual grounds but others operate 'illegally'. Those interviewed expressed that their main problem is lack of defined space for their activities as some are a nuisance to the neighbouring unrelated activities. For instance one carpentry workshop was found located beside a hotel, sawdusts from the former was in fact a nuisance to the latter. Some lacked enough space for proper operation

4.3 SOCIAL DEVELOPMENT

Demographic Characteristics

Population size:

Awendo town now has reached a total population mark of about 10,335 people. Those on the company's residential quarters number about 5,500 while those on the private residential areas of the town number about 4,935. This total has attained that size from

a mere 2,000 in the 1979 representing an increase of about 8,000 in seven years, a rate of over 1,000 per year. This is the highest rate in the history of the town (see the Historical Population Trend in Chapter 3).

Population structure:

(a) Sex :

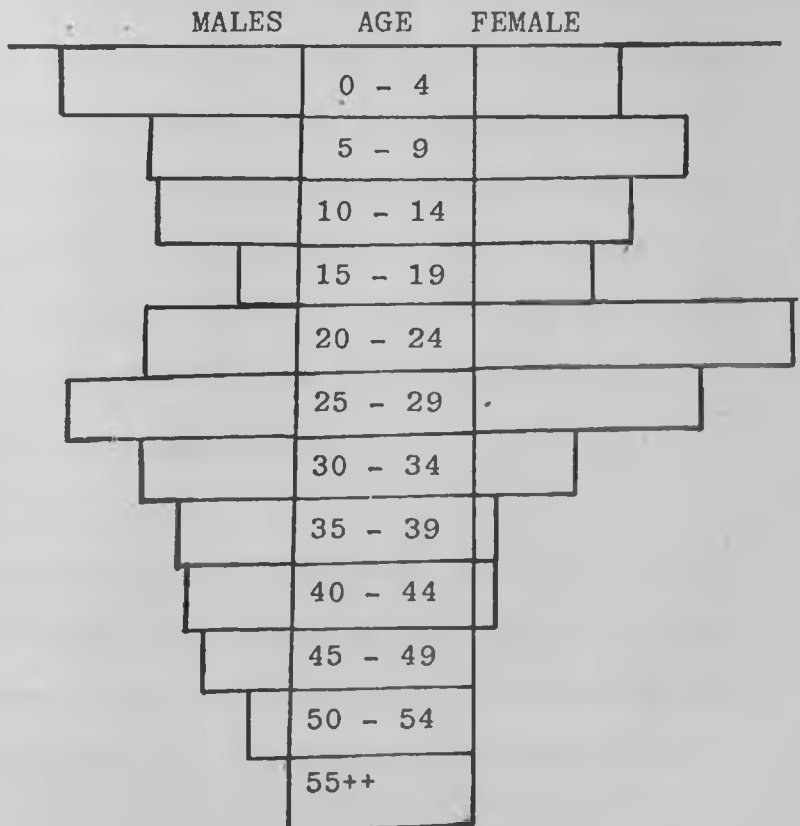
Of the 97 families interviewed 52.7% of the members were males while 47.3% were females. This sex structure is not a true reflexion of the national structure where females averagely outnumber males. The national picture is in fact a natural structure. In Awendo town, especially beginning from the recent past many families are not permanently settled here. They have not taken the town as a home but rather as a place for finding a source of income to support their families back in the rural homes. Most of those families interviewed were just a portion of their entire families. And most of these families (see section on Migration below) migrated here only recently. Since it was a migration in search of a livelihood the men of the working age have tended to spearhead in the search; as it were. This explains the tendency of males being more than females. It is not so unusual to find incomplete families dominated by males.

(ii) Age-Structure:

The age distribution is not so much similar to the national structure which is thickest at the youngest age groups and it thins away as age advances. The one at Awendo tends to be thickest in the middle ages of both sexes. The information adduced indicates that there is hardly any elderly people above 55 years. The working age groups dominate because most of the migrating families interviewed were a people targeted. They come for either business or wage-employments, They left behind other family members. Because of this the town tends to be inhabited mainly by those in the working age groups. The absence of the very old reflects the tender age of the town.

SEX-AGE-STRUCTURE

FIG. NO. 1.



Source: Field Surveys.

Migration Pattern

On the basis of the information obtained from the 97 households interviewed on their places of origin and also that obtained from the factory's office 10.3% originated from within the sugar belt, 44.3% from outside the sugarbelt but within South Nyanza District and 45.4% came from outside the district.

The small proportion of those coming from within the sugarbelt (10.3%) is attributed to the fact that most of those who operate within the town are able to return to their homes in the neighbourhoods of town. Of those who came from within the district, 50% of them originated from the constituency area within which the factory is situated i.e. Rongo. The field surveys indicate that 3.1% of the town resident came to the centre before 1978, while 96.9% came after 1978. There are three main reasons that have induced immigration, viz business, wage employment and farming. 3% came to carry out farming in the surrounding areas, 23.5% came to do business and 73.5% came for wage employment.

Further analysis of the data showed a stable relationship between the range of migration and the expected income. By superimposing or regressing the range of migration (i.e. distance travelled by the

migrants) data onto the income earned data, it was found out that most of those who earned very low income came from the surrounding areas while most of those who had travelled long distances earned much of the high income. From this it can be concluded that "the income that a person expects to earn will tend to determine the 'distance' he will be willing to go for that income". The following table 8 represents the numbers of interviewees, their places of origin and their income group. Our concepts are high aggregations due to the nature of data.

Table 8 Income Levels

Place of Origin	No.	0 - 1500	1500 -300	3000+
1. Within the study region		50%	32%	18%
2. Outside study region but in South Nyanza		27%	49%	24%
3. Outside South Nyanza		23%	29%	48%

Source: Field Survey

If we assume that the three categories of places of origin reflect some distance differentials, distance changes with respect to income level can be seen in terms of number of respondents under each income group. Majority of the low income earners (50%) come from within

the study area. Majority of the high income earners (48%) come from outside South Nyanza District. Take raw 1 of those who come from within the study area. The total number of respondents falls as income level increases. This is the opposite trend in the case of the last row of those who originate from outside South Nyanza district.

Household size

The household data analysed showed that 46.4% of the households had from 1 to 3 members, 46.4% had from 4 to 6 members and only 7.2% had 7 and above members - but none had beyond 9 members. Majority of these households (18%) had 6 members followed by those which had 1 member constituting some 17%, then those which had 2 members forming 16%. Over-ally 92.8% of the families had less than 6 members and on average the family size in the town was found to be 4 members. This is a figure below the national urban average which is 5.8.

Housing

60% of the houses in the town are terraced, 20% are semi-detached and single ones (detached) are also 20%.

44.8% of these houses are single-roomed; 31.3% of them have 4 or more rooms. The remaining

23.9% have either 2 or 3 habitable rooms. The average number of habitable rooms is 3. This gives an average occupancy ratio of 1.3 per room. However, it should be noted that this ratio rises substantially, majorly in the high density residential areas which also has most single-roomed housing.

Concerning housing conditions 39.2% of the houses are permanent structures, 33% are temporary mainly mud-walled and 27.8% are semi-permanent mainly mud and cement walled. Majority of the more temporary houses are in the high density residential areas occupied mainly by the low income class residents. 44.2% have inhouse conventional sanitation connection while the rest are served by the traditional pit latrines as indicated under section dealing with disposal system.

Concerning provision of housing 55.8% of the houses are owned by private developers or landlords with a rent and 44.2% are houses belonging to SONY sugar company.

4.4 Infrastructural Development.

The study covered both physical infrastructure (e.g. roads, water supplies, energy supplies) and social infrastructure (e.g. educational and health facilities). We herebelow discuss them focussing on their existing capacities and in some cases, the level of utilization

Transport and Communication:

(a) roadways:

Awendo town is linked to other centres by

- (i) Class A international road from Kisumu to - Kisii and goes southwards through Migori and finally into Tanzania
- (ii) a class D road which runs eastwards to centres such as Mariwa and finally into Narok District of Rift Valley Province; and
- (iii) a class D₅ road which links it with the centres in the western regions. The International road is tarmaced while the other two are gravelled. There are also a number of nucleus Estate feeder roads some are tarmaced while others are well murramed and are thus all-weather roads. All these are shown on Map No. 2(b) of roads.

Internally, there is a main street that bestrides the trading centre (see plate No.3). There are two streets one joins, the main street to the bypassing International road while the other joins it to the Class C road leading to western regions. There are also backstreets or alleys (see Map 9) The problem with these streets is that they were gravelled long time ago and now they have developed potholes and are extensively worn-out and dust incidence is severe during dry seasons (See plate 3).



Plate 5

A main street in Awendo town.
Notice the warn-out parts as at where
the two men are.

Elsewhere in the town exist undesignated footpaths and undeveloped earth roads leading to various parts of the town. Some of these are a part of the unplanned growth especially in the residential area.

A main bus and matatu terminus is in the midst of the trading centre. There are also three others, one along the road heading westwards to Rapogi and the other two along the main road (international) which caters for those vehicles which may have no business going in the trading centre but have to stop briefly. The present location of the main terminus on the main street seems to be a makeshift. As the

on the main roads - due to the heavy cane-trucks. For most sections of the roads these trucks have their own roads separated from the general traffic roads and they criss-cross by flyovers (See plate 5 over leaf).

Traffic Volume Counts and Trip-end:-

Traffic volume along the roads in the sugar belt has grown tremendously in the recent years. All the routes have had increased traffic volume counts (TVC) as can be seen in the table 9 below. We only considered the motor-vehicular traffic aggregately.

Table 9

T. V. C (Per hour.)

Route	1970	1976	1978	1984
Class A - Kisii - Awendo	90	32	38	43
Class A Migori-Awendo	31	32	40	48
Class D Mariwa-Awendo	4	8	15	14
Class D Rapogi-Awendo	3	5	10	12

Source: Ministry of Transport and Communications.

Before the establishment of the industry the Traffic Volume on the roads was not only low but also grew at a very small margin as can be seen in the two years of 1970 and 1976. That volume had shot up exceptionally as can be seen in the 1978 and 1984 periods.

traffic volume expands it will be necessary to set up a terminus elsewhere at a proper position so as to eliminate the congestion on the main street currently experienced especially on peak times due to the present location (see plate 4).



Plate 6.

This is a main street. Part of it caters for bus and matatu terminus. Notice the blockage of the street,

A main problem of the road system experienced in towns with induced large traffic flows which the road system planning in Awendo has avoided is congestion



Plate No.7

Main public roads criss-cross with cane transport roads by Flyover.

Along the class A road 80% of the vehicles was merely passing through and the public service vehicles stopped just for passengers to embark or alight. 20% of the vehicles were actually destined to Awendo according to the 1986 surveys. A similar survey carried out in the 1976 indicates that about 97% of the vehicles along the same road were merely passing through.

Along the two class D roads over 90% of the vehicles were destined to Awendo centre, it being a regional business centre and these are regional routes.

(b) Postal Services:

There is one sub-post office which serves both the town residents and the surrounding population of over 50,000 people. By any standard of public services a sub-post office is an under-service to this large population. A sub-post office is expected to serve optimally a catchment population of 15,000 people which happens to be the approximate size of a market centre and its environs. It is now necessary to upgrade the sub-post here to a full post office. Problems of congestion were noticed at the office, and for better services some people preferred to travel to Migori town.

(c) Telephone

Telephone lines have just reached Awendo town. About 15% of the businessmen and other households interviewed indicated that they have installed telephones into the premises and houses. Some 5% had just submitted their applications.

There is a public telephone booth at the sub-post office. During the surveys the problem of congestion was noticed at this booth.

Water Supplies:

Sources of Water supply

44.3% of the sampled population obtain their water from the Sare stream which separates the trading centre from the rest of the town. The stream is joined by a spring which is also used by some 1% of the population. The stream is perennial and has not suffered much pollution. 42,3% of the same sample were served by piped water private in house connection, while 4,2% by communal piped system. 8,2% obtained their supplies from jerry can water hawkers who deliver it at their houses or premises. All the private and communal piped water supplies are provided by the company while the rest is individuals' own arrangements.

A water pumping station has been constructed at the lower part of the trading centre by the company and at the moment the water thereof is supplied to the Company workers most of whom live on the company's residence while others live elsewhere in the town. Plans are under way to increase its intake and construct a public pipe water out of which will be sold to the general public.

The stream water is not treated and thus is a potential medium for water-borne diseases (see medical report under health section). The implication thus is that 53.4% of the population are not served by clean and safe water,

Waste Disposal Systems

Under this we studied the various methods which are used for disposing of both solid waste i.e. garbage and refuse and the sewerage i.e. waste-water and its load. We considered the capacity and efficiency of such methods.

(a) Solid Waste disposal

The disposal method of the solid waste in the town is a combined effort of various bodies according to the nature of the waste matter and who 'creates' it.

The local authority has employed workers who remove the rubbish from the streets and the open air market area. The rubbish hereof is deposited at a place set aside where it is burnt. At the residential areas there are specific areas where the individual households deposit their garbage which is occasionally burnt. Other activities such as carpentry have their own areas where they also burn their garbage. In the company residences the company provides rubbish-bins which the company trucks collect and is burnt elsewhere. The surveys did not discover any serious inefficiency in this kind of garbage disposal organisation.

(b) Sewerage disposal:

There are two main methods of sewage disposal in Awendo town. In the company residence the houses have flush toilets connected to an oxidation pond through sewage lines. The lower density residences have septic tanks, The rest of the town use exclusively the traditional pitlatrines and these are strategically situated some distance from the living houses and business premises. Most of these latrines are shared among a number of families and only a few are strictly for single families who own them. The problem with these pit latrines is that most of them are not properly maintained such that flies menaces and smell incidence have to be contented with particularly in the very high density residential areas.

Energy

The following table shows the sources of energy used in the area and the proportion of the population that uses each and the uses it is put to. Note that one household could use more than one of these sources complementarily.

Table 10

.....Energy sources

Energy Source	% of population	The Uses
Charcoal	38.1%	Cooking and heating
Fuel-wood	10.1%	Cooking and heating
Kerosene	36.0%	Lighting and cooking
Electricity	15.8%	Cooking, heating and lighting

Source: Field Surveys.

(i) Wood-fuel and Charcoal:

The methods of using the energy particularly charcoal and fuelwood . was also considered so as to indicate the economy in the use of these natural energy sources which are used by almost all the population particularly the lower income families.

All those who used charcoal were found to be using the traditional jiko. And all those who used woodfuel used the traditional three-stones in their cooking and heating. None of them used the energy saving modern jiko, This shows the low level of economic use of the available woodfuel energy. The traditional open fire has been found to be 'wasting energy of upto 90% per given quantity of wood-fuel'.

Wood and charcoal come from the rural hinterland and thus their supply is subject to what happens to the vegetation. The clearing of the hitherto sources of wood to give way for crops without simultaneous planting of trees at appropriate areas is likely to reduce the supply of wood fuel and charcoal.

(ii) Electricity :

Electricity, like telephone, has just been installed into the town. The power is generated at Gogo falls station within the district by the Power and Lighting Company Ltd. All the company residential houses are installed with electricity. 15% of the other residential houses have electricity connections while some 18% of the business premises have installed the power. Now that the town has electricity supply it is upon the households and businessmen to tap it,

4.5 Community Facilities and Social Services

In examining the community facilities we considered their capacities and their conditions so as to assess their level of development.

Educational facilities:

The following table shows the educational facilities available for the town's residents and their sizes. So far there are 1 nursery, 4 primary schools, 1 secondary school.

Table 11

Educational facilities

Facility	Physical size	No. of teachers	Admission No. pupils
Nursery 1	2 classrooms		200
Primary 1	24 classrooms		1,200
2	18 classrooms		900
3	16 classrooms		800
4	12 classrooms		600
Secondary 1	4 classrooms 2 dormitories 1 workshop		200

Source : Field Surveys.

These facilities serve both the town's residents and the surrounding population. Two of the primary schools are not actually within the town's boundary but they serve the town.

Health:

There is one health centre, five clinics and one dispensary. The five clinics are private charging fees and to many people are cost inhibitive. The dispensary belongs to the company and serves only the company employees and only urgent ailments from the general public.

The only public health centre has 2 clinical officers, and is an out-patients centre. Severe congestion was noticed during the surveys.

The medical records indicate an increased rate of disease incidences since 1978. Among the common ailments that show this trend are venereal diseases, anxiety, assault cases. For instance, a leading clinic at Awendo town recorded the following average rates before and after 1978.

Table 12

.....Some disease rates

Common Ailment	Av. No. of victims per month	
	1970s	1980s
V.D.		
V.D.	4	8
Anxiety	1	4
Assault cases	1	9

Source: Odera Clinic.

Public Purpose:

Owing to historical circumstances most of the governmental services are located at Migori, Rongo and Homa bay. These towns have in the past tended to overshadow the other towns of the district in terms of location of the government services. The reason for this has been given as distance considerations. It is rational to locate these services at fairly distributed centres so as to maximise their accessibility to the population and thus simultaneously avoid their concentration amidst only a section of that population. (See map 3 showing Awendo in its regional context). It is for this particular consideration that Awendo has not developed substantially in this public purpose sector as its population size would demand.

However, some government offices have recently been opened up here namely Education office (Ministry of Education), Cooperative Development Office and Ministry of Agriculture office. There are also in existence other administrative units namely a Chief's office, and a Police post. The police officers at this post are actually housed by the Sony sugar company in the latter's premises who have also offered a site for the construction of a complete Police post.

Recreational Facilities

A number of facilities that are used for recreation have developed in the centre. These were found to be as follows:

(i) Sporting facilities:

There is a stadium which accommodates games namely football, netball, and volley ball. This has been constructed by SONY company. There are also in-door games facilities accommodated in the social hall presented below,

(ii) Social Hall

Besides in-door games provisions herewithin the social hall has other recreational provisions namely entertainment theatrics such as show-room and a television and it also serves drinks,

(iii) Park facilities:

There is a park located in the SONY Company's area displaying the 'beauties and delights' of nature that only greeneries can provide. It is a stretch of planted trees and well-cared-for grass extending about 200 m. in juxtaposition with the stadium.

(iv) A number of bars and restaurants are available in the town serving drinks and all that go with it; some treat their patrons to discotheques.

Religious Facilities:

The people in Awendo town are as religious as the rest of the population of Kenyan nation. The town itself has not, however established any facility catering for the needs of its own population within its boundary. But a number of church buildings exist in the neighbourhoods of the town where the more faithful town residents do attend their services. The surveys revealed two S.D.A. Churches, an Anglican and a Catholic. Those interviewed indicated that they had no difficulties in travelling to these worship places as they are within 3 km. distance.

SUMMARY

It has been found out and shown in this Chapter that Awendo town has realised a significantly high level of physical, social, and economic changes in the recent times. In cases where the rates of the development could be estimated such rates have been shown to have been profound since 1978, compared with periods preceding the 1978. New aspects have since then been introduced while in some cases the hitherto existing ones have either been expanded or improved. In the next Chapter we point out what is ascribeable to the Sony industry from that examined level of development. It seeks to project the contributions of the industry on the town's development process.

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CHAPTER FIVE

THE ROLE OF SONY INDUSTRY

5.0 INTRODUCTION

In the previous chapter the current level of development of Awendo town has been presented. This has been examined under physical, economic, social and infrastructural components. While in Chapter Three the historical perspectives of the town were examined during which stage various factors were identified, which have, over the years, engendered the development of the town upto its observable stage currently. All these factors have collectively operated to that effect with each factor contributing to variable proportions. SONY Sugar Industry is one of these factors, and this chapter examines quantitatively and descriptively - where appropriate - the contributions that the industry has made on this level of development of Awendo town. That extent will reflect the extent to which an agro-based industry of this scale can effect the urban development goal as entailed in the growth centre concept, more so, by bringing a difference between when the factory is located as an integral part of the urban system and when it is distantly located as in the case of Mumias factory (a case studied by Khaguli (1981)). That extent will also be seen to impact on matters related to planning for the proper functioning of the town.

5.1 Role in Physical Development:

The establishment of the sony sugar industry with its plant situated at Awendo has played a significant role in the development of the town's structure.

- (a) In order to accommodate the plant and the anticipated developments there-from the authorities were compelled to extend the towns boundary to cover some 1.2 km². This however, was achieved by compulsorily acquiring the land from freeholders without any alternative settlement provided. Now the urban area has been extended.
- (b) Sony sugar company has established a number of structures in the town all which go into the physical makeup of the town. There is the central factory area, the company's residential areas, and there are also other physical constructions examined later under their respective sectors.

The central factory area and the company's residence measure about 0.29 km². This is 48% of the total area of the built up area of the town which measures some 0.6 km.²

5.2 Role in Economic Development

1. Income and Employment

The two categories of income examined here are (a) household incomes and (b) the local authority's income.

(a) Household income:-

In this section we consider only the direct contribution of the SONY industry on the household income. This contribution is in the form of wage-employment. Wage employment in Awendo town provides 76.7% of total income earned by households. (Other sources are Business - 20.9% and farming 2.4%).

This 76.7% total wage income is earned at various places of work. The places of employment can be looked at under two areas namely (i) Sony industry, and (ii) Awendo town centre, which includes public work-places and business employment. We want to find the proportion of that wage income contributed by the Sony Industry.

Of the 89 persons interviewed the following were the proportions of the workers according to their work-places:;

(1) At Awendo town centre 10.1%

(2) At Sony Industry 89.9%

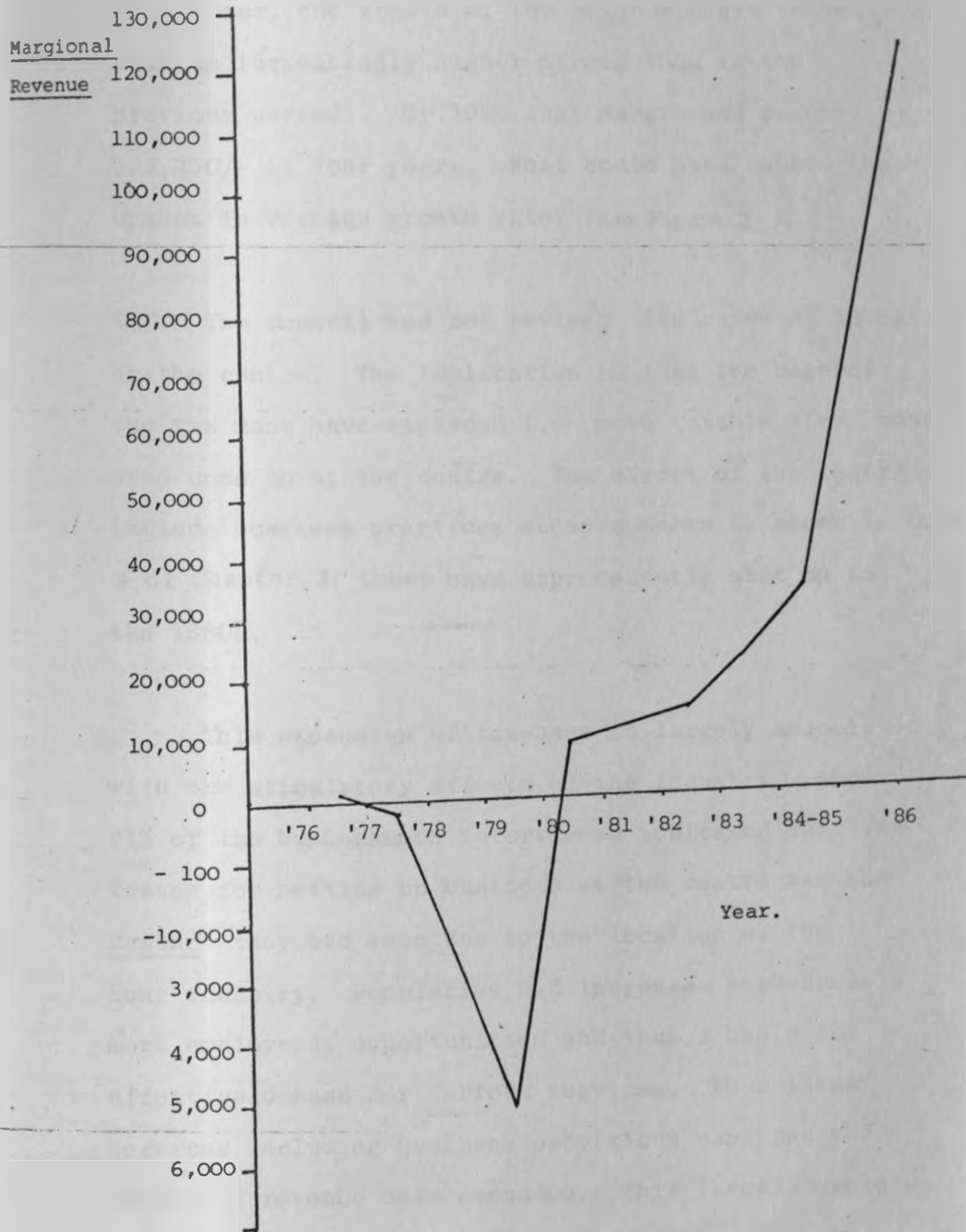
Since 76.7% of income is earned through wage employment and 89.9% of the wage employment is held at Sony Industry, the industry thus contributes 89.9% of the 76.7%, which is 68.95% of the total wage employment.

Therefore, on the basis of our sample the contribution of SONY sugar industry to the total household income earned in the town is 69%.

(b) Indirect Role in Income Growth:

Besides wage employment incomes have accrued to households through business and also to the local authority through levies and collections from various items in the town. It is not possible in these cases to single out the factors that have contributed to the increased incomes in a quantitative way. The role of the Sony industry can thus be seen as a stimulatory one. We now consider the case of local authority's income. The table 3 in chapter 3 shows how the County Council's revenue has been changing over the years. We can plot the marginal revenue column to show the rate at which this has been. From the graph we notice that the revenue has been changing but with very

Fig.2 County Council Revenue Growth Rate



Source: Own computation from County Council files.

small margin - within 15,000/- since 1975 upto 1982. Thereafter, the growth of the revenue began to be with an increasingly higher margin than in the previous periods. By 1986 that margin had reached 123,250/- in four years. What could have caused that upshot in revenue growth rate? (See Figure 2).

The council had not revised its rates of levies at the centre. The implication is that the base of the tax must have expanded i.e more taxable items must have come up at the centre. Tax effort of the centre include business practices whose numbers as shown in table 4 of Chapter 3; these have unprecedently shot up in the 1980s.

This expansion of tax-base is largely associated with the stimulatory effects of the industry. About 91% of the businessmen interviewed indicated that the reason for setting up business at the centre was the demand they had seen due to the location of the Sony industry. Population had increased tremendously more employment opportunities and thus a basis for effective demand for various services. When these services including business provisions expanded the council's revenue base expanded. This largely explains the upshot in the revenue received by the council - of stimulatory role of the sony industry.

2. Role in commercial development:

Commercial aspects of the town have received a highly significant accentuation by the industry. The role of the industry in this sector is characteristically stimulatory. We have seen in the historical analysis the rate of growth of commercial activities over time. We have seen that after 1978 there has been an exceptional growth in these activities - with kiosk activities leading in off-shooting. Since at this time there was not any growth factor other than the SONY industry we can attribute that unprecedented activities' growth to the introduction of the industry.

This is so because commerce, as it were, is a function of demand. Demand itself is a function of population and income among others. The population and incomes in the town have been shown to have significantly progressed. Under such conditions underlying effective demand level of exchange and the exchange activities are on balance of all probabilities bound to rise and the degree of that rise depends on the amount of change in these demand elements. The field surveys in the town have shown this to be true. For instance, table 2 in chapter 3, shows that between 1970 and 1980 a period of 10 years fourteen retail shops had come up while between 1980

and 1986, a period of shorter length, 6 years, a total of 17 retail shops came up. Other commercial activities have tended to show a similar trend while new ones have been introduced. According to the surveys about 91% of the businessmen indicated that the main reason for locating at the centre and not elsewhere was the expected demand due to the establishment of the industry here.

3. Role In Industrial Development:

The role of Sony Company on industrial development are both direct and indirect. First the industrial sector of the town now has the Sony factory plant (the largest industrial unit) manufacturing white sugar at the rate of 30,000 tonnes annually and employs over 4,000 people. It is thus a large scale unit, it is also the only one of its size in the town. Secondly Sony sugar industry has had an influential role in the growth of other industries. These are basically servicing industries exemplified by carpentry, blacksmiths, motor garages, bicycle repairs, radio and watch repairs. Of the 65 units over 48 units were established after 1978 (74%). Like in the commercial sector about all the entrepreneurs interviewed acclaimed the increased demand at the centre and this was their main reason for location here. That they serve the population and its

activities their growth and intensity of business is dependent on that population. In this sense the contribution of SONY is stimulatory and indirect. Besides that, the industry has also opened avenue for the evolution of some other industrial activities that can make use of some of the by products such as mallasses and then the available white sugar. This is a possibility which has not been exploited yet.

5.3 Role in Social Changes

Demographic characteristics:

1. Population size, growth rate and migration

The total population in Awendo is about 10,335. 5,500 of these live on the company residence while the rest live elsewhere in the town. This total has grown quite steadily over the years with a sudden leap only in the late 1978, a time that the industry was established. The following is a graph of the growth rate of the population since 1930s (that rate is extracted from the population estimates presented in chapter 3).

From the graph the population growth rate in the earlier periods tended to be steady upto 1940s. That rate dropped between 1950 and 1960 after which it rose again to its initial level. This trend is closely associated with the growth of human activities, especially commercial activities particularly in the initial periods. The implication is that commerce as a human activity has been a dominant factor in the growth of Awendo town's population, so that, for instance, during the 1950s when the African traders were evicted from the centre the population simultaneously went down - explaining the downward slope in the graph.

After 1976 the population growth rate shot up to about 13% thereby increasing the total population by about 7,000 people in 7 years representing an increase of 1,000 people per year. To assess the contribution of the industry on the population growth we examine the immigration process and here we consider two variables; i.e. time of migration and reasons for migration. This is treated under the assumption that population growth is mainly engendered by immigration.

According to the field surveys the following were the time and proportion of people involved in the inmigration:

Table 13

Inmigration and time

Time	No.	% of Total Population inmigrating
Before 1978	3	3.4 %
After 1978	94	96.6%

And, the following are the workplaces and the proportions of the migrants according to their workplaces:

Table 14

Inmigration per workplace

Workplace	No.	% of total inmigration
At Sony Industry	66	68%
At Awendo centre	31	32%

From the two tables we can see that of the 97 people interviewed 94 (96.6%) of them inmigrated after 1978. Of these 66 (68%) do work at the Sony Industry.

This is the direct contribution of the industry on total immigration, and since we have assumed that the growth of the town's population is mainly caused by immigration the figure is thus an approximation of the contribution of the industry on that growth.

5.4 Role in Housing Development

Residential housing in the entire town has provided two main developers i.e individual landlords and the Sony Company. And, housing sector is the single construction sector that has realised the greatest amount of change in terms of new constructions.

The surveys on ownership indicate that before 1978 housing in the town were dominantly in the hands of individual developers. Even the government rented houses for its workers. But now; the surveys show that the individual developers provide some 55.8% while the Sony Sugar Industry provides about 44.% of the housing in the town this 44% is a direct contribution of the company which has occurred since 1978.

Besides that, the population increases realised in the town, to a large extent caused by the factory's establishment here, has presented an increased demand for housing a situation that basically augurs well for

residential sector's investments. This indeed is a stimulatory role. Housing units have accordingly been constructed with respect to this new demand. But then, this dire need for housing has given rise to a spectre of a number of substandard structures supposed to provide shelter and much worse is that most of them occur in an haphazard pattern. One can ascribe the mushrooming of this urban squalor in the recent past to the establishment of the industry in this area. However, the company on the other hand has constructed some of the good housing units in the town for most of its workers.

5.5 Role in Infrastructural Development

The role of Sony Industry in the development of infrastructure in Awendo town consists in two phases: first, improvement done on the facilities established earlier and secondly, introduction of new facilities either at the expense incurred by the company or the facility established as a result of the demand that the industry has created at the centre. Thus for every facility we look at the contribution of SONY industry in these two ways where applicable.

Transport and Communication:

(a) Road System:

Before 1978 Awendo town was connected to the other areas and its immediate hinterland by four roads.

Now, the company managing the Sony Industry has established a number of access roads within the sugar belt connecting the town to its rural hinterland. These roads measure up to 800 km. in length. Also, all these roads are all-weather. Before 1978, of the four roads two were bituminised and the other two were murramed with diverse sections of them worn out. But now their conditions have been improved by one tarmaced on its section from the town to Mariwa (a market centre in the south-east) and the other is gravelled and is all-weather road (from the town to Rapogi market centre in the west.)

Another development in the road system associated with the SONY industry is the establishment of fly-overs where the feeder roads criss-cross the main public transport roads, a strategy that has helped to avoid accidents which could have been engendered by the heavy cane trucks.

(b) Postal and Telephone Services:

The postal and telephone facilities in the town have been established by other state corporations. The role of SONY sugar industry in this respect is basically facilitative. Before 1978 the town had a sub-post office. After the establishment of SONY

industry the office was expanded to cater for the increased population. Also, it was only this office that had a telephone. But now the telephone facilities have been expanded and the individuals who apply are provided with their own telephone connections.

(c) Electricity:

Before 1978 the town never had any electricity supply. The supply that it enjoys now was initially intended for the SONY industrial plant. The power is being generated from the Gogo Falls on river Kuja. That power having been brought closer the other consumer units have now made connexions. The role of the SONY industry in this respect has been the facilitation of the town's electrification by having provided the initial minimum demand required for the transmission of electricity to an area.

(d) Water Supplies:

It is the intention of the government that every household is accessible to some potable - clean and safe - water supply. Before 1978, Awendo towns resident depended majorly on roof catchment and the sare river as their sources of water for domestic uses. Now some 46.5% of the population are supplied with

piped water through either individual in-house connections or communal standpipes. All this potable water supply in the town has been provided by SONY sugar company. The water intake mains-house is situated by the river sare which bestrides the town.

A negative effect of the industry on water resource is the pollution of the sare river's water by industrial effluence that at some parts finds its way into the river.

(e) Waste disposal system:

The company has established precedentedly, a water-borne conventional sewerage system serving some 45% of the households. For the company residence in-house flush toilets are connected to the main sewer lines which eventually empty their contents into an oxidation pond. The rest of the town is, however, still dependent on the traditional pitlatrines provided by the landlords.

Negatively the factory has introduced certain wastes matter namely mollasses, baggase and industrial fumes which have not been disposed of effectively. Some of this has at some points found its way into the Sare river thereby polluting it; whilst the

river has been a major source of water supply to the town's residents and others elsewhere.

5.6 Role in Community Development

Community facilities such as education and health, facilities have been provided in the town by:

(1) the government (2) harambee efforts and (3) non-governmental organisations. SONY Sugar Company is one of such bodies that have contributed. Here below we identify those facilities provided by the Sony Company.

(a) Education:

Education facilities in the area have been provided by the government, missionaries, harambee efforts and the Sony Sugar Company.

The only nursery school in the town has been setup and is run by the company. Of the 5 primary schools one has been established by the company; two by the government and two by the missionaries. The company school is the largest of all, while the only secondary school has been set-up on harambee efforts.

(b) Health:

Health facilities in the town have been provided by the government, private individuals and organisations. The health centre is a government run facility. Of the 5 clinics one is run by the Sony Company, while the rest are owned by private individuals. All these units offer general medical services. It is only the Sony dispensary that offers family planning services. On the other hand the increased population has stepped-up the demand on the public health centre thereby causing the identified congestion.

(c) Recreation:

Before Sony Sugar Industry was established Awendo town had bars and their services as the only recreational type. The company has now made available a number of recreational facilities in the form of a multi-purpose stadium, a social hall accommodating a wide range of functions and a central park. The town residents are now treated to film shows and other shows. The availability of electric power supply has now made it possible for the able residents to install T.V. sets.

(d) Security

Before the establishment of Sony Industry the area (both town and the rural community) was being policed from Rongo Police Station in support of the local administration police unit at the Chief's camp. After 1978, because of the crime rates Awendo Police post was set up and the few police officers and the post itself are actually accommodated in Sony Sugar Company houses. The company has given a site for the police post and its construction is due soon.

However, the Juxtaposition of the sugar plantations has made it easier to commit certain crimes such as assault as the criminals disappear into the thick plantations where the long arm of the law administered by less than 5 policemen seems to be too inadequate to reach.

Summary

This chapter has singled out and presented the changes that have occurred in Awendo town which are ascribable to the presence of the Sony Sugar industry. These changes have affected various aspects of the town: physical, social, economic and administrative. These changes are a reflection of the role that the

industry has played in the development of the town. With that role established the question that follows is: what are the planning implications of such changes? The answer to this consideration provides an awareness of what is expected in a town in the face of such an industry.

CHAPTER SIX

PLANNING IMPLICATIONS AND RECOMMENDATIONSS

6.0 INTRODUCTION

In the preceding chapter we have shown in details analysis of physical, economic, social and infrastructural changes that have occurred in Awendo town and are attributed to the establishment of the SONY sugar industry with its plant located here. This chapter examines the implications of these changes with respect to each aspect of the town. As has been shown the changes are significant and for every aspect therefore, it has become necessary to make some adjustments to ensure a proper functioning of the town. Accordingly therefore, suggestions are made on what lines of action could be adopted. The arguement here is that the introduction of the industry has not only brought desirable development to the town but has also generated new demands on various urban components which must in accordance be adjusted to cope with the new situation.

The recommendations made here are rather general in accordance with the scope of the study and nature of the data used. At best, they are indications of the direction of a desirable development path.

6.1 Physical Aspects:

It has been shown in the study how since the establishment of the Sony Sugar Industry Awendo town has experienced a substantially accentuated growth involving expansion in the built-up area comprising commercial and industrial premises, residential, educational, health and other infrastructural facilities. It has been shown how the town's boundary itself has changed. We have seen that although structurally the town consists in four distinct functional parts - the trading centre, high density residential, the factory area and the company residence - it is actually compact as opposed to scattered form. This means each functional unit is not any significantly separated from the others.

However, one structural problem and a constraint were identified, having been resultants of the establishment of the industry in this area: First, a significant portion of the induced development has occurred in characteristically haphazard pattern. Structures have come up particularly ones intended for commercial and residential purposes in an inorderly manner such that the development is not in line with the physical development plan prepared in 1979. Besides that some of the structures are substandard in quality.

These two phenomena of haphazard and substandard development pattern imply two things. First, the local authority, - the South Nyanza County Council - has not been effective enough in the control of the development process in the town. The point is that the rate of development has been faster than the council's management ability to cope with. Indeed this has resulted from the fact that the council is a county authority running all the centres in the district, except one; Homa Bay which has its own council, and thus has not been well prepared to follow up the development process in the town. It was found that there is only one markets superintendent whose role county-wide is to supervise the development activities in all the centres. That . officer alone with shortage of logistic support (transport) could not frequent the centre as is necessary for an effective development supervision, and even so he had several other centres to visit.

Secondly the haphazard pattern and substandard development reflect the lack of useful working relationship between the Local Authority and the Town Planning Department. That the department prepared a physical development plan in 1979 and it has never been used properly as a tool for development control

means that both organisations have not cooperated effectively to bring about a controlled development in the town. It is that once the development plan has been prepared the department is satisfied and is not concerned whether it is being implemented. The council on its part seems to prefer implementation without plan for even the development plan itself was nowhere within the county council's offices. Since all this is an issue of administration we make a recommendation later under administrative implications.

An interesting phenomenon which reflects lack of development control identified in the town is undesirable conflicts among certain land users. Investor have, due to lack of direction, put up premises where they find land without due consideration of the neighbourhood characteristics. There are cases where neighbouring activities have negative implications on each other. There is no convenience, for instance, in an hotel locating side by side with a carpentry workshop, or a carpentry workshop neighbouring a health clinic (see Plate No. 5). The by products of the workshop are definately polutants to the other two activities. This in effect suggests zoning of the urban landuse that will isolate unrelated activities and place together those that are related.



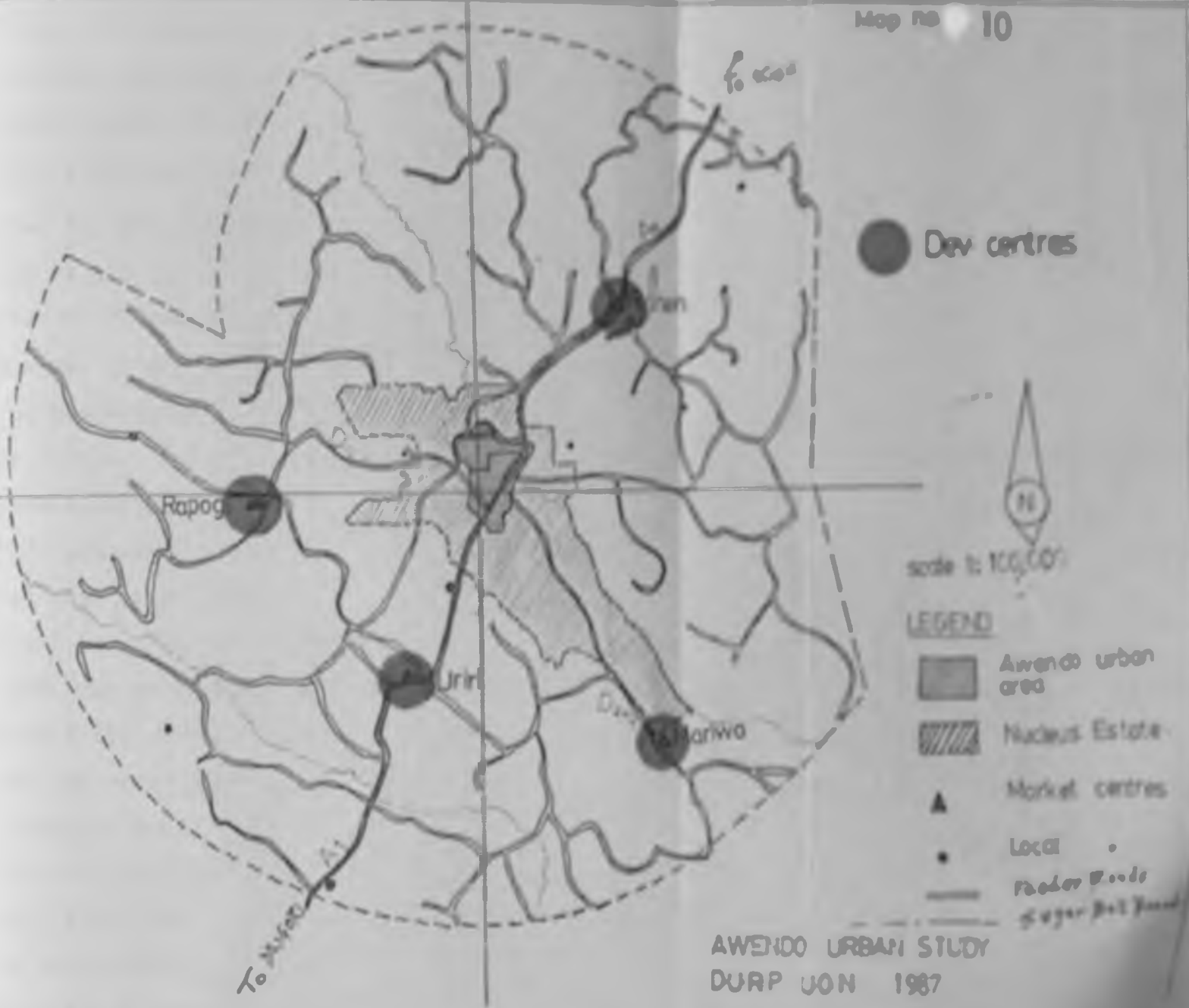
Plate 8: Here a Maternity home and clinic lie side by side with a panel beating and general engineering workshop.

However, structurally, the compact nature of the town is rationally commendable and will have to continue thus. The main advantage of a compact form of development is that the 'provision of utilities and services is accomplished at a relatively lower cost' than if it were a scattered nature.

The town will continue to grow with the current structure until all the deferred land is brought under use. The outward expansion will however be constrained and restricted within the present boundary by the nucleus sugar plantations which wholly surround it. These plantations form the main cane supply to the factory and cannot be removed in favour of urban growth and, furthermore, the land here - under belongs to the SONY Company. The implication is that there are no chances of the town growing beyond its current boundary delimited by the plantations. This will be an automatic check on its size and will most appropriately give opportunity for the smaller centres within the sugar-belt namely: Mariwa, Rapogi, Ranen and Uriri to grow as they become the satellites of Awendo. That Awendo town is engulfed in the plantations, even if various public services were located therein it would be much to the benefit of the town's residents more than the rural hinterland. And that the hinterland population which used to be served by the centre have been pushed further away from it to give room for the plantations the town has thus become 'remote' to the outermost rural populations. In view of this converse the study thus suggests that to serve more efficiently the rural folks the authorities, that be, should not just

AWENDO URBAN AREA : WITHIN THE SUGAR-BELT REGION: proposed dev centres

Map no 10



which 1980 FACTO development should 'leap-over' the 'green belt' (the plantations) to the surrounding areas.

focus their emphasis only on Awendo town but should consider the other centres within the sugar-belt named above. These centres are 'closer' to the people than Awendo at least for the lower order services.

That Awendo's outward growth is limited these centres can relieve it of any excess demand. At the moment they offer some residential places for some people who operate in Awendo town and that is an indication of the possibility of them developing as 'satellites' of Awendo. The study recognises that urban areas should not expand at the cost of agricultural land.

The Sugar-belt because of its high agricultural potentials and that it is a specific region there should be a rural-urban balance. And this balance at such a regional level can only be achieved by developing the central places within the region as shown in Map Number 10, as they are currently distributed, to serve the farming community herein and their own resident populations, without over developing one at the expense of others.

This means that Awendo will continue to develop but it should not be strained to accommodate all investments as some of this can be directed to those other centres which ipso facto become its satellites. In essence development should 'leap-over' the 'green belt' (the plantations) to the surrounding areas.

6.2 Economic Aspects:

It has been show since the SONY Industry was established various economic aspects of Awendo town have changed. Employment opportunities and incomes have risen, commercial and industrial businesses have been revamped. The sharp increase in population, together with incomes, have presented a simultaneous increase in the level of demand for various goods and services a fact which has made it much more viable to undertake investment in various sectors which also include housing, transportation and the more specialised services such as medical. The level of economic activities is said to have gone up. And the town functions as an economic - complex - whole. The increased level of economic activities in this complex whole has given rise to undesirable developments on one hand, and has presented new demands on certain components of the town system which must accordingly be adjusted to ensure a proper economic functioning, on the other hand.

First, the study identified a spectre of mashrooming of business premises both haphazardly and of substandard quality. This has been referred to under physical implications but here we treat it as an economic phenomenon. A town with much of its

commercial sector under temporary and unplanned structure may not be acceptable under the public health regulations. And more so if these structures are allowed to come up without any control they may under-cut the more permanent premises as they themselves tend to locate at more strategic points in the town with respect to customers. This together with the urban organisation need, as has been implied in section one, point in one direction: the need for the authority to embark on more strict development control in the town. As will be seen in the last section - it will also add to the demand for a more prepared and well constituted authority to manage the town rather than the county council.

Secondly, the study also found out that the town is deficient in certain economic related aspects whereby some activities have expanded while certain others have either lagged behind or stagnated - yet they ought of necessity be integral parts of a self-sustaining subeconomy. It has been shown how the various economic activities - commercial, industrial and service (tertiary) - have developed over the recent years in Awendo town. Other activities such as transportation and construction have also been accentuated.

As these major economic activities grow, to ensure a balanced and self-sustained urban growth the other facilitative activities have also got to simultaneously expand. One such supporting service activity that was found not available is banking. Virtually all the businessmen and other residents interviewed expressed a desire for banking services in the centre and they disclosed that for such services they are compelled to go to other urban centres namely: Homa Bay (36 km.), Migori (25 km.) and Kisii (40 km.) : For an urban centre such as Awendo with the numerous business activities, a working resident population and a surrounding farming community there is a dire need for a banking unit and even any other financial house to cater for the financial aspects of their activities.

Thirdly, an integrated urban development requires that as the various economic activities develop the transportation system has to adjust as this is an activity which provides linkage between activities and accessibility to the activities wherever they occur. Certain aspects of the transportation system in the town have been identified as undeveloped and thus pose hindrance to the process of movement of goods particularly in the trading centre which is actually the hub of economic activities. It has been shown using the traffic volume counts that the traffic

destined to Awendo centre has substantially increased in the recent years a phenomenon to a large extent ascribed to the establishment of SONY industry. Although the roads serving the centre have been developed tremendously the terminal facilities have not accordingly been provided. There is no space set aside with the necessary developments there - upon to serve as a terminus - a point where delivery, receipt and temporary storage of freight and embarkation of passengers are fulfilled. At the moment any given space can be a terminus. The other terminal facility in dire need is a filling station.

The services of a filling station at the moment are being sought elsewhere in the other urban centres. Thus the development of these aspects of the transportation system in the town would improve the functioning of the system as it facilitates the movement of goods and people.

6.3 Social Aspects:

This section attempts to relate the current population aspects to the various urban components which provide for social welfare. It has been shown in both chapters 4 and 5 the magnitude of increase in total population of the town since the inception

of Sony Industry. It has also been shown how the population structure tends to be skewed in favour of the working age groups and that immigration is a potent phenomenon in the town's population growth. The diversity in the population in terms of income and cultural background (the latter determined by area of origin) has also been shown. Due to population increases and other social dissatisfactions and behaviorial syndromes we have seen the resultant level of crime and disease spread rates on the rising side. On the other hand we have also seen the level of social provisions in the form of various facilities and services. We have noted that these facilities and services have been provided by the government, non-governmental organisations and the SONY Company. The company has by far provided a greater proportion of the total provisions than any other provider. But some of its provisions however have been shown to be limited to the use by only the company workers.

Even so, the increase in the population which has been shown to be by a significant margin above that of the time before the industry was set-up can no longer be maintained by the same social provisions as before. The point is that some of the urban public utilities and services have not accordingly been expanded with respect to the

population changes. The study identified areas where the concerned authorities should give emphasis either by channelling the public investments or encouraging the private sector to invest in these lines.

First, the study revealed deficiency in medical services particularly to the general members of the public. The private clinics and dispensaries were found to be cost-inhibitive, the SONY Dispensary is restricted to the use by the workers of the company and so the only health unit open to everybody is the Awendo out-patient health centre. The centre was established in 1933 to serve the surrounding rural populace - which it still does. It might have been suitable then with respect to its capacity and population size then. But now with the immigration and population level congestion was noticeable. And that it is just an out-patient health unit it caters for only minor ailments. Currently the people interviewed indicated they are compelled to travel long distances for higher-level medical services elsewhere. There is thus a dire need for a revamp on this centre. Alternatively, for a fairer distribution of medical services instead of having Awendo health centre serving the whole of sugar-belt a possibility of locating similar units in the

four, already alluded to, centres within the belt should be considered. This would relieve the Awendo unit of excess demand.

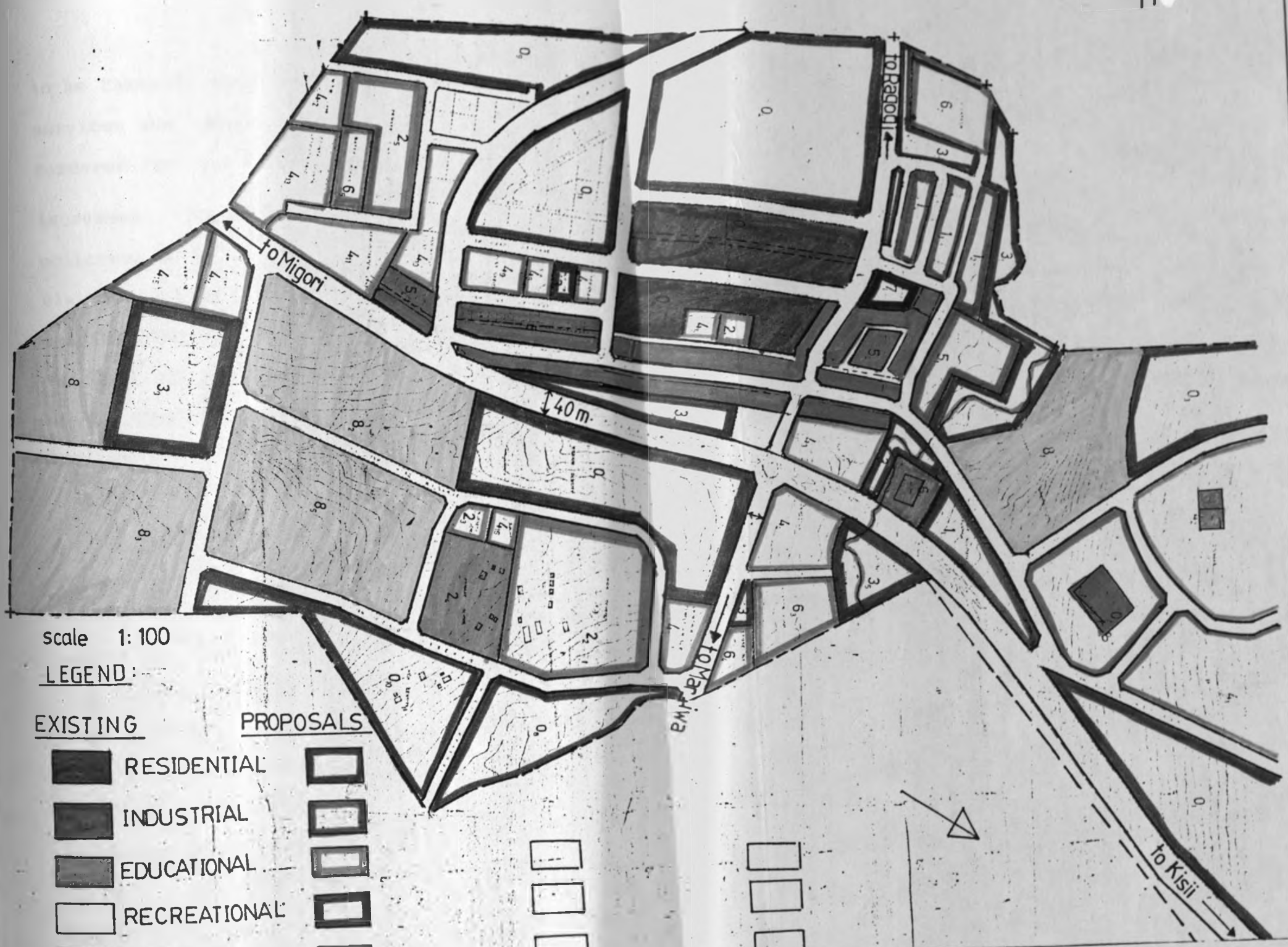
Secondly, it has been shown that housing sector has been the sector which has realised the greatest amount of change. Everybody who comes into the town has to reside in a house, so whether all will get housed depends on the immigration rates and the rate at which housing supply increases. Housing supply refers to the total number of new housing constructions, extensions and conversions of old buildings from other uses to housing. In Awendo new constructions constitute largely the supply. It has been shown that SONY Sugar Company and private developers have been the housing suppliers in the town. The study revealed that there were housing shortages and some of the people operating at the centre were compelled to commute to the other urban centres notably Migori some 25 km. away. At the same time the county council had received an increasingly substantial number of applications from would-be housing developers in response to the revealed dire demand. But so far no land had been allocated (although the informal housing sector went ahead to construct temporary structures already alluded to under physical

aspects). In view of this the study recommends to the authorities to consider more concernedly land allocation according to the development plan (See Map: No. 11) to this sector . At the same time they should also encourage housing development in the four other centres to cater for any excess demand. These centres after all are already providing housing to some of the people who have migrated into the sugar-belt. The fact that they are service centres as Awendo itself within one uniform region further augments the thesis that there is rationality in rural-urban balance in the belt by all the centres developing to avoid over-growth of Awendo town.

Besides health and housing provisions the other aspects identified in the study that because of the recent changes ought accordingly to be adjusted for a more desirable urban provision level were postal services, security services; and, also water supplies and solid waste disposal system. All these aspects have had new demand exerted on them which requires a reconsideration by those agencies concerned with their provision. Where necessary the council will have to take the initiative either as a providing agency or as a group whose profession includes, amongst other things, promulgation of the plight of those they represent for appropriate action

AWENDO TOWN (EXCLUDING COMPANY AREA)
LANDUSE PROPOSALS

MAP no. 11





















scale 1:100

LEGEND:

EXISTING

PROPOSALS

- | | | |
|---|------------------|---|
|  | RESIDENTIAL |  |
|  | INDUSTRIAL |  |
|  | EDUCATIONAL |  |
|  | RECREATIONAL |  |
|  | PUBLIC PURPOSE |  |
|  | COMMERCIAL |  |
|  | PUBLIC UTILITIES |  |
|  | TRANSPORTATION |  |
|  | DEFERRED |  |

AWENDO URBAN STUDY
DURP UON
1987

to be taken by those concerned. For the postal services the sub-post office set up in 1926 has been rendered far too inadequate by the population increases. The police sub-post with less than 5 policemen seems not to be adequate going by the claims of those people interviewed especially at the trading centre. Perhaps that the police post is in the SONY company's premises their focus is too long on the company's area and shorter in the rest of the town.

For the water supplies this is a dire need. For quite long the residents have depended on the Sare river. And the SONY can definitely undertake to supply water to those who are not its employees. The rivers water has of late been polluted as already been alluded to in analysis chapter under public health and waste disposal methods. Yet it is the government policy to have every household accessible to clean and safe water. Concerning waste disposal system a more immediate emphasis should be on the solid waste matter - garbage and refuse. It will require the council to organise a collection system which involves provision of dustbins and some personnel to take charge of the town's cleaning especially the trading area.

6.4 Administrative Implications:

We have seen under the physical, economic and social sections above various implications the new changes in Awendo town have had on the urban set-up. These changes have placed new demands on the various aspects of the town which as have been suggested ought to be adjusted in order to function more efficiently. The management of the town currently depends on how the South Nyanza County Council, which is the authority responsible, is equiped in terms of personnel, financial resources and logistic support. It has been shown how the physical problem of uncontrolled urban development results mainly from the council's in-ability to monitor the development process and accordingly act to guide it, and more so the council has least coordination with the Physical Planning Department. Besides lack of effective development control, various urban social provisions have been shown to be in deficiency presenting a spectre of the facilities provided several decades ago are still required to maintain the present population. This is because the County Council's financial resources are quite limited to cater for all the centres in the county.

We had also earlier on seen the magnitude of the population change in the town and the level of economic activities that are undertaken in the centre. All these coupled with the South Nyanza County Council's ill-preparedness to manage the affairs of the town effectively demands more on the urban administration than before. The rate of activities therein requires much more frequent decision-taking. That decisions regarding development control at the moment are delayed helps explain the defiance in the aforesaid development pattern. It needs a closer guidance on a daily basis.

It is therefore against such a background that the study recommends the institution of an urban authority according to the Local Government Act CAP 265 of the Laws of Kenya, which empowers the Minister to upgrade an urban area to an area under Urban Council after he is satisfied that the rate and magnitude of activities therein warrant such an authority. This council will replace the County Council to run the affairs of the town and given that it is an authority looking after one urban area it will be capable of a more effective planning, implementation and controlling of development in the town. Its formation will eliminate delays in decision making required on a

day-to-day basis, lack of which has contributed to the defiance in the development of the town. It will be responsible for land allocation amongst the various land-users. It will also, in the course of monitoring the development process, identify the problems of urban settlement and take it their own crusade to sought for solutions. The Coucil itself will, using the powers enshrined in the Local Government regulations generate funds by whichever method possible and take the responsibility - a leading one - of providing the urban provisions that have been identified as in dire need. Some of these, especially infrastructural and housing will most effectively be provided by the council being an initiator or being the representatives of the populace, as it were, they would solicit for effective effort from the more resourceful sources.

Lastly, it became apparent in the study that there is a major flaw in the manner by which town planning relates with plan implementation. The town has an approved development plan but the development herein is occurring without full reference to that plan. Why have a plan when it is not used as a guide or a control to the development? The study found out that the Law does not make it obligatory to the local authority to use the development plan prepared

by the Physical Planning Department. According to the Local Government Act CAP 265 of the Laws of Kenya the County Council may only adopt such plans. This means that they (the council) is not bound by such plans; they can chose to use it or not. In Awendo's case the Council seems to have chosen to pegeonhole the approved development plans.

Accordingly, therefore, the law related to plan implementation should be revised to 'make it obligatory for the local authority to adopt the physical development plans and such plans should be the basis for decision making in the allocation of land in the town. Otherwise, plans, good ones, will continue gathering dust in government offices.

Summary and Conclusion

Towns develop out of numerous factors. Such factors acting in its own fashion engender some development impact, directly or at times augmenting other factors' efforts. . Awendo town has been shown to have grown initially at a slow pace out of a number of factors the leading one of which is commerce. Then its development rate increased later, this time due to the Sony Industry. It has been shown how also the regional factors can influence the growth of a town using Awendo case. The more intensive these factors

are in their modes of operation the greater their development impacts are.

Then it has been shown how an agro-based industry can influence urban development in the same case study. Using diverse techniques of data analysis it has been singled out what is attributable to SONY Industry as its contribution to Awendo town's development. And such contributions have been shown to have created new circumstances within the town which have been subject to a planning consideration. Having brought social, physical and economic changes in the town how would a planning study respond? The last chapter is devoted to this question. In it the study has appraised the compact nature of the physical development of the town. It has also suggested a regional development pattern of the central places, viewing the sugar belt region as a special economic region which ought of necessity to be controlled, regulated and guided in its development by striking a rural-urban balance. It has also been suggested that development within the town ought to be controlled, regulated and guided on the basis of the physical development plan that has been prepared by the Physical Planning Department. Besides a lot more of urban provisions have been shown

to be in dire demand. All these have implied a greater and choser administration input which has called for the institution of an urban authority. Then for private investors the the town has been found out to have significantly high prospects especially in housing, commercial and industrial sectors.

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APPENDIX 1

P.L. JOBANDO

SOCIO-ECONOMIC SURVEY QUESTIONNAIRE

General Information:

1. Where is your original home? -----
When did you come here? -----
2. If outside Awendo/other centres, what is the reason for migrating into the area?

3. What is the household size -----

Household information in detail:

<u>Relationship with the Household Head</u>	<u>Sex</u>	<u>Age</u>	<u>Level of Education</u>
-----	---	---	-----
-----	---	---	-----
-----	---	---	-----
-----	---	---	-----
-----	---	---	-----
-----	---	---	-----

4. INCOME:

(i) What are your sources of income

	<u>Household Head</u>	<u>Other Members</u>
1. Business	-----	-----
2. Wage employment	-----	-----
3. Farming	-----	-----
4. Others(Specify)	-----	-----

(ii) Where are you employed? -----

(iii) Expenditure pattern (monthly) in order of importance?

<u>Item</u>	<u>Amount (Kshs.)</u>
Food	-----
Fuel	-----
Housing	-----
Education	-----
Water	-----
Transport	-----
Health	-----
Others (specify)	-----

(iv) What is your estimated total income per month (Kshs.)

- (a) 0 - 1500 -----
- (b) 1501 - 3000 -----
- (c) above 3000 -----

How much do you save -----

Where do you invest?

<u>Item</u>	<u>Amount</u>
Housing	-----
Industry	-----
Business	-----
Others	-----

And in which centre? -----

5. HOUSING

- (a) Type of House:
 - Semi-detached -----
 - Single house -----
 - Flats -----
 - Terraces -----

- (b) Ownership of dwelling unit:
 - Self-owned -----
 - Rented -----
 - Company staff house ----
 - Others (specify) -----

- (c) If rented, how much rent do you pay per month? ----- Kshs.

- (d) If self-owned what is the method of financing?
 - Own-savings -----
 - Tenant purchase -----
 - Mortgage -----
 - Bank loan -----
 - Inherited -----
 - Other (specify) -----

- (e) Number of habitable rooms -----

- (f) Approximate total of floor area in square metres -----

- (g) Building materials used?
 - Permanent -----
 - Semi-permanent -----
 - Temporary -----

(h) Which of these facilities are available

	<u>Private</u>	<u>Shared</u>	<u>Internal</u>	<u>External</u>
Kitchen	-----	-----	-----	-----
Bathroom	-----	-----	-----	-----
Toilet	-----	-----	-----	-----

(i) What problems do you experience with housing?

6. Water and sewerage

(a) Is water available on plot Yes -----No-----

(b) Source of water supply:

River -----

Private piped -----

Communal piped system -----

Borehole/well -----

Jerrycan/hawker -----

Roof catchment -----

(c) How far away is the water point? -----

(d) Who provides your water? -----

(e) What are the water problems you are facing?

(f) Sewage disposal method:

Private pit latrine -----

Shared pit latrine -----

Public pipes -----

(g) Garbage disposal method:

Burning -----

Town authority collects it -----

Others -----

(h) What problems of sewage/garbage disposal do you face?

7. EDUCATION:

(a) How far do your children go to school-----

(i) Nursery -----

(ii) Primary -----

(b) Were these there before the factory came?

Yes ----No----

(c) What problems do they face in their schooling?

(d) Who owns the school? -----

8. HEALTH

(a) How far is the nearest health facility?

(b) Where is it located (tick)

(i) At Awendo ----- (ii) Outside----

(c) If at Awendo was it there before the factory

9. RECREATION:

1. Which recreational activity are available to you -----

2. Who provides the recreational facility?

3. Which recreational facility would you like provided -----

4. Was the facility available before the factory was established? -----

10. What is your source of energy supply?

Charcoal -----

Fuel wood -----

Kerosene -----

Electricity -----

Others -----

Were these available to you before the factory was located here? -----

APPENDIX 2

BUSINESS QUESTIONNAIRE

1. What changes have you noticed since the factory was established here?

- Increased turnover? -----
- Increased customers -----
- No difference? -----
- Others (specify) -----

2. What new items have you introduced in the recent past (i.e. in the 1980s)

3. What is your income from this business? -----

4. If you started the business before 1978, how do you compare your income then and now?

What improvements have you had on your business since the factory was started?

Installation of: - Water?

- Electricity?

- Telephone?

- Extension?

- Employed more people?

5. What business problems do you face now?

APPENDIX 3

COMMUNITY DEVELOPMENT OFFICE

1. What community facilities are available in this area? And, their number and location (A map)

2. Which ones of these facilities are provided by the Company? (What is provided by other organisations e.g, Government, Churches, etc)

3. Who uses these facilities?.

APPENDIX 4

ELDERS' QUESTIONNAIRE - (HISTORICAL INFORMATION)

1. When did this centre start? -----
2. Why did it start here? -----
3. How did it start? -----
4. Who started it? (the Government? the people?

5. What subsequent changes did you see taking place
in this centre (- sequentially)? -----

6. What problems do you see the centre facing?

APPENDIX 5

FACTORY OFFICIAL'S QUESTIONNAIRE

1. Why was this factory opened here and not elsewhere?

2. Was the factory established as a part of (or to promote the growth of) Awendo town? -----

3. What is the total hectares covered by the plant area? -----
4. How many people do your company employ in this factory? (Specify their categories) -----

5. What is their places of origin (e.g. by district) -----

6. What is their income structure? -----

7. How many are housed by the Company? -----
What about others? -----
8. What problems are there related to housing? -----

9. What is the relationship between the industry and the town and the other market centres?

10. In what ways do you see that relationship has contributed to the development of activities in these centres? -----

11. Do you see these centres as going to grow, and if so, how fast and in what ways? -----

12. What problems of growth do you see in these centres? -----

APPENDIX 6

COUNTY COUNCIL OFFICIAL'S QUESTIONNAIRE

1. How has the status of Awendo market centre and the other rural centres (namely, Rapogi, Mariwa) changed since 1978? -----

2. What would you say have been the benefits and growth effects that SONY Industry has had on these centres? -----

3. Have there been any increase in plots allocation/ or applications in those centres? -----
4. Have your revenue collections improved in these centres? By how much -----

5. What kind of development activities have occurred on those plots? -----
Residential? -----
Commercial? -----
Industrial? -----
Recreational? -----
Others -----
6. What would you say about the growth prospects of these centres? -----
7. What plans do you have concerning these centres? (e.g. market places, boundaries, etc.)-----
What negative (problems) has the industry brought to settlements within the region?-----

APPENDIX 7

TRANSPORT/COMMUNICATION OFFICE

1. What were the nature and conditions of the road system in this region before the establishment of the SONY industry? -----

2. In what ways have they changed since 1978?
New routes? Improvements? Terminal facilities?

3. Who has financed the roadworks herein? -----

4. What transportation problems are experienced in this region? -----
