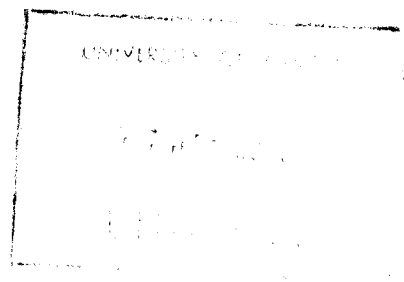


THE CLOSURE OF KABWE MINE AND ITS IMPACT ON THE SOCIO-ECONOMIC
TRANSFORMATION OF KABWE URBAN, ZAMBIA.

BY

LUKE MANKAPI



A DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA IN PARTIAL
FULFILMENT OF THE REQUIREMENTS OF THE DEGREE OF MASTER OF SCIENCE
IN GEOGRAPHY.

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I, LUKE MANKAPI, do declare that this dissertation was solely composed and written by me. Sources of information have been adequately acknowledged. This dissertation has not been submitted for a degree at the University of Zambia or another university.

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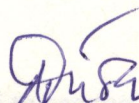
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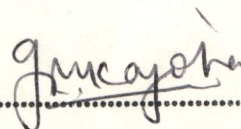
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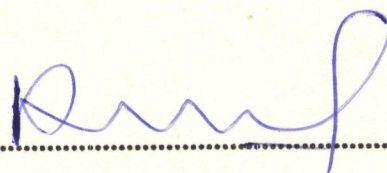
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DEDICATION

I dedicate this work to the dear ones who never lived long enough to see the dawn of this day. Among them are my late parents (Mr. and Mrs. Mankapi), my late young brother (Rueben Knapi Mankapi) and my late sons (James and Paul Mankapi).

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ABSTRACT

The Kabwe ZCCM mine helped greatly in the establishment and growth of Kabwe town. In due course it became the largest property owner and employer in Kabwe town and contributed significantly to the revenue of the council through owner's rates and personal levy for its workers. Furthermore, it also provided a large market for the goods and services offered by other companies in Kabwe such as Zambia Railways Limited and Kabwe Milling Company Limited.

This study aimed at assessing the impact of the closure of the Kabwe Mine on the socio-economic transformation of Kabwe town. The objectives of this study were; (i) to determine whether or not there had been any loss of part of the population due to the former miners moving out of the town to other areas to look for alternative means of livelihood; (ii) to examine whether or not there had been growth of squatter settlements because of former miners who would put their newly acquired houses on rent as an alternative means of livelihood while they moved into the squatter settlements; and (iii) to evaluate whether or not there had been growth of the informal sector as an alternative means of livelihood.

Data for this study were collected by way of unstructured and structured interviews. The data collected were analysed by Computer Packages of Microsoft Excel (CPME) and Statistical Package for Social Sciences (SPSS). These packages were used for descriptive analysis of the data as well as for the application of the Chi-square test (χ^2) for significance tests.

This study showed that there were no marked or significant influences on the sizes of the population, the squatter settlements and the informal sector in Kabwe town as a result of the closure of the mine. However, the greatest negative impacts of the closure of the mine were identified in the quality of life led by the former miners, the operations of the Municipal Council and other institutions such as Zambia Railways Limited and Kabwe Milling Company Limited.

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LIST OF ABBREVIATIONS

BRR	Balubhai, Ravindra and Ramesh
CPME.....	Computer Packages of Microsoft Excel
CPSMSBA.....	Central Province Small and Medium Scale Business Association
CSO.....	Central Statistics Office
G15.....	Group of 15 comprising 15 former ZCCM employees who established the Kabwe Power and Metal Company Limited
GPL.....	General Pharmaceuticals Limited
GRZ.....	Government of the Republic of Zambia
HRM.....	Human Resources Manager
ILO (A).....	International Labour Office
ILO (B).....	International Labour Organisation
KCCI.....	Kabwe Chamber of Commerce and Industry
KFWPD.....	Kabwe Foundation for Women Participation in Development
KIFCO.....	Kabwe Industrial Fabrics Company Limited
KMC.....	Kabwe Municipal Council
KPM.....	Kabwe Power and Metal Limited
KTTI.....	Kabwe Trades Training Institute
MMD.....	Movement for Multiparty Democracy
MTZ.....	Mulungushi Textiles Of Zambia Limited
NGOS.....	Non Governmental Organisations
NMC.....	National Milling Company Limited
PRB.....	Population Reference Bureau
PSRP.....	Public Service Reform Programme
RBHDCo..	Rhodesia Broken Hill Development Company Limited
SADC.....	Southern African Development Community
SEDB.....	Small Enterprises Development Board
SPSS.....	Statistical Package for Social Sciences
UNDP.....	United Nations Development Programme
ZCCM.....	Zambia Consolidated Copper Mines Limited
ZCMTJV...	Zambia – China Mulungushi Textiles Joint Venture Limited
ZGA.....	Zambia Geographical Association
ZRL.....	Zambia Railways Limited

CHAPTER ONE

INTRODUCTION

1.1. Introduction

This research project aimed at looking at the impact of the closure of the mine on the socio-economic transformation of Kabwe town. This was so because it was assumed that the closure of the mine would have several effects on its growth such as; (i) loss of population due to former miners moving to other towns and areas to look for alternative means of livelihood (although this does not ignore other factors which may lead to population loss such as reduced fertility coupled with increased mortality rates), (ii) growth of the informal sector as an alternative means of livelihood, and (iii) growth of the squatter settlements because of former miners who would put their newly acquired houses on rent while they moved to the squatter settlements.

Kabwe is one of the oldest towns in Zambia which, unfortunately, failed to compete with Lusaka, Ndola and Kitwe in attracting many industries from the time of its establishment in 1914 up to the 1990s. This left Kabwe with the mine and Zambia Railways as the two major employers in the town; with the mine being the largest employer. Other industries like Mulungushi Textiles (MTZ, 1981) and Kabwe Industrial Fabrics (KIFCO, 1967), were established in the years indicated in brackets. These companies also failed to provide employment even for 10,000 employable people in a town with a population of about 104,036 people in the working age group of between 12 and 65 years in 1990 which was expected to grow to about 127,067 in the year 2000 (GRZ, 1994).

The employment problem of Kabwe was compounded by the restructuring of Zambia Railways Limited (ZRL) and other industries and the eventual closure of Kabwe Mine. With these industrial activities taking place, Kabwe is expected to remain with very limited employment opportunities for the adult as well as the growing populations (Kapferer, 1966; Gardiner, 1971; GRZ, 1994, 1995; Naidoo and Bwalya, 1995; Sikanyiti and Chisanga, 1997).

The information presented above shows how important the continued existence of the mine would have been to the growth of the town as well as the well being of its people. Therefore, the closure of the mine was expected to have a very significant impact on the growth of the town. This concern brought the need to conduct this research in order to ascertain the actual impact of the closure of the mine on the socio-economic transformation of the town.

1.2. Statement of the Problem

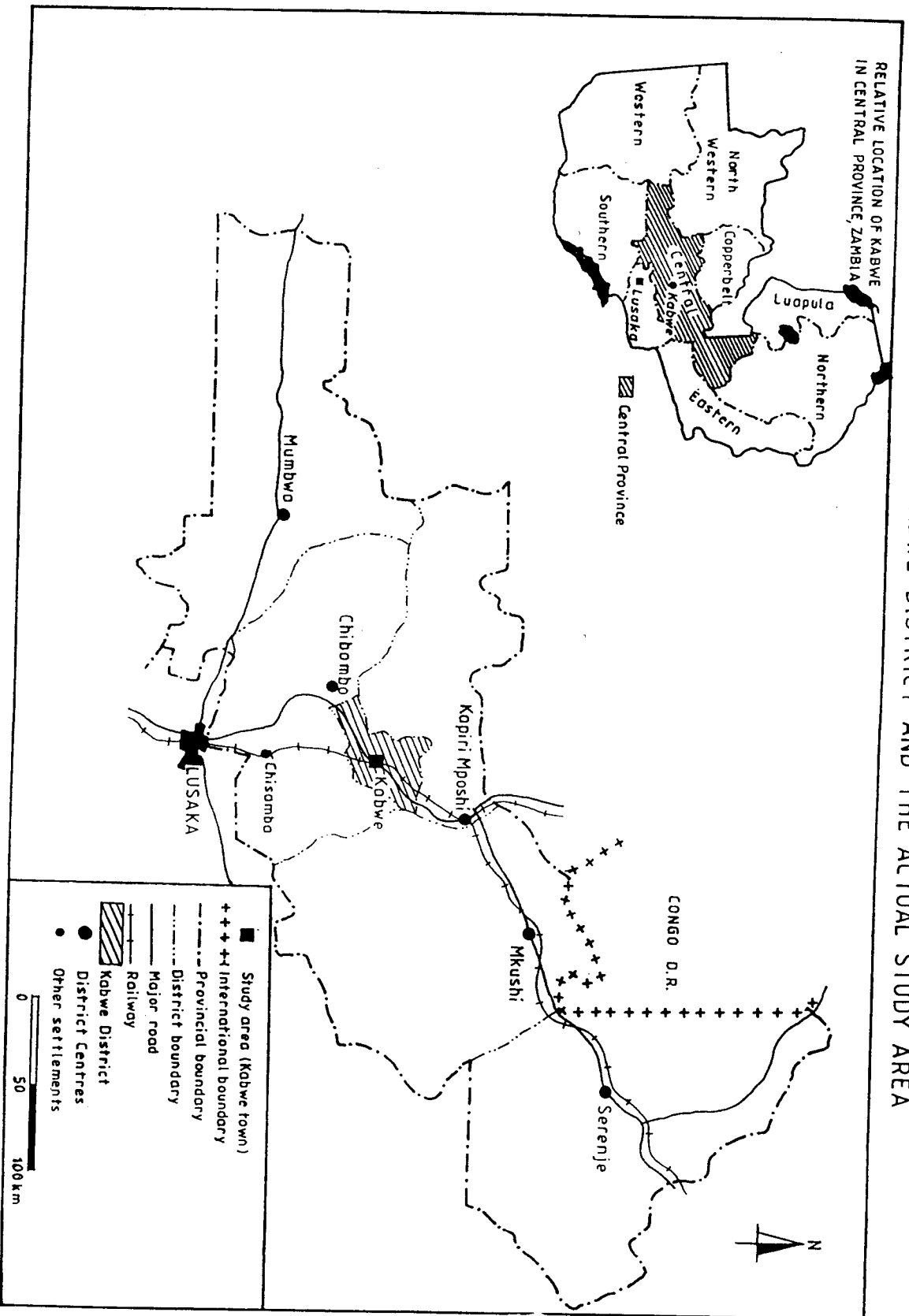
The socio-economic life of Kabwe Urban changed with the closure of the mine and the restructuring of some industries. The greatest impact on the socio-economic transformation of the town was expected to come from the closure of the mine. This was so because the mine contributed greatly to the establishment and growth of the town through provision of employment from 1904 to the time of its closure in mid-1994. For instance, the employment figures for the mines rose from 500 in 1920 to 2,585 by 1921 and to 3,500 in 1926 (Turner, 1979). The problem was that the closure of the mine left many people without formal jobs and the extent of the impact of these changes had not been documented yet.

Kabwe is in the centre of the Central Province of Zambia which is bordered by eight other provinces, namely; the Copperbelt, Southern, Lusaka, Western, Luapula, North-Western, Northern and Eastern (Kapferer, 1966; GRZ, 1983). The town lies in the heart of Zambia and is connected to other parts of the country by the two major land routes, namely; the Great North Road and the railway route from Livingstone to the Copperbelt (see Figure 1.1).

Sadly, the central location and access to the two major land routes did not help Kabwe to develop a larger industrial sector than what it is today (Kapferer, 1966; Gardiner, 1971). The few other industries (apart from the mine and Zambia Railways) which opened in the town underwent restructuring in the years indicated in brackets such as Mulungushi Textiles (1993, 1994, 1996), Kabwe Industrial Fabrics (which was privatised in 1996) and General Pharmaceuticals Limited [GPL] (which closed in 1995). Like Zambia Railways, these companies left many people without formal jobs when they were restructured (Gardiner, 1971; GRZ, 1996).

The closure of the mine meant a major drop in employment opportunities in the town, not only for the former miners but also for non-miners. In the late 1970s the mine had employed over 5,000 people which number continued dropping until only 107 employees remained for the care and maintenance of equipment belonging to Zambia Consolidated Copper Mines (ZCCM) by December 15, 1998 (interview with ZCCM Human Resources Manager Kabwe Division, 15/12/1998). Naidoo and Bwalya, (1995) showed that Kabwe was beaten by Lusaka, Ndola, Kitwe, Luanshya and Livingstone in terms of the number of industries which offered employment opportunities to the residents.

Fig. 1.1. LOCATION OF KABWE DISTRICT AND THE ACTUAL STUDY AREA



It was in the light of the non existency of alternative formal employment opportunities in Kabwe that this study sought to find out whether the closure of the mine had ignited out-migration from the town, or whether it had brought about any change to the squatter settlements (unplanned settlements) or indeed whether it had encouraged the growth of the informal sector.

1.3. Rationale of the study

The closure of Kabwe Mine, in 1994, should not have come as a surprise to any one. This is so because as early as the 1960s and 1970s the problems of Kabwe Mine such as technical problems of metal extraction, low metal prices and the loss of the South African market (which had accounted for about 75% of its sales) were recognised (RBHDCo., 1960; Gardiner, 1971).

By the 1980s, the problems of the mine increased resulting in the imbalance between production costs and the revenue from sales. This even led to the prediction that the mine would stop operating by 1990 (RBHDCo., 1960; ZCCM, 1986).

The closure of the mine, just like any other industry, should not have been regarded as a phenomenon peculiar to the Third World Countries or even to Zambia in particular. This phenomenon occurs even in developed countries. Bradbury, et al., (1982), calls it 'urban decline'. This is a situation where a town or city either loses some of its population or jobs or develops a reduced capacity to perform its social functions.

In view of the above stated problem (mine closure), Kabwe could therefore, be referred to as having experienced this process of urban decline through the loss of mine jobs. It was felt that instead of crying over spilt milk, it was only prudent to look at how

the former miners had responded to the loss of jobs and how best they could be assisted to get alternative sustainable means of livelihood. One benefit to the workers, however, was the acquisition of houses which were sold to them after the closure of the mine.

It was further felt that the results of this study would help in a number of ways: First, the current situation of the former miners would be brought to light. This study would help in the sense that where the former miners had done well, they would be encouraged to continue with their current activities. In cases where they had not done well help may be sought for them from the government and Non-Governmental Organisations (NGOs) when policy makers, other concerned citizens and donor agencies read the recommendations of this study.

Furthermore, Kabwe Urban, as a whole, would benefit in the sense that the well being of the former miners would imply the well being of the town itself since this would mean that crime and other vices such as prostitution would not be a major problem in the town. The vices mentioned above arise in a situation of poor economic conditions (Wind, 1975). Further still, other people who have suffered a fate similar to that of the former miners would learn from the Kabwe experience (GRZ, 1996).

The experience of Kabwe is like a mirror image of the situation in the whole country. The Third Republic under the Movement for Multi-Party Democracy (MMD) government has brought in the aspects of privatisation and liberalisation of the economy. This has led to some industries closing, others changing management and ownership while others have restructured and have left many people jobless. In view of this, the

experiences and lessons to be learnt from the Kabwe situation would help take care of those who would have lost their jobs in other towns in Zambia.

Understanding the impact of the closure of the mine in Kabwe would help people in general and those in authority, in particular, to understand the plight of the former miners and help avert hunger where need be. The long-term benefits would involve proper planning before people are relieved of their jobs.

In 1993 the Zambian government launched a reform programme known as the Public Service Reform Programme (PSRP) and begun Privatising State owned companies (Parastatals). These two processes were expected to leave many people unemployed. To take care of the unemployed, the government introduced the ‘Future Search’ programme to help the retirees or retrenched from the government and or the parastatals to find new jobs or even to learn how to run their own businesses (GRZ, 1993; 1997).

Participants of the Future Search programme are drawn from interested individuals; implying that it is an optional programme. Therefore, a question remains as to what happens to those people who may not be interested in this programme or may miss the advertisements in both the print and electronic media. Other forms of assistance should be devised to involve as many unemployed people as possible.

The experiences and lessons to be learnt from the Kabwe situation would be helpful to other nations also in the region, in Africa and in the whole world. They would benefit in the sense that they would realise the need to prepare workers psychologically through seminars and meetings before they could be retrenched. It would also help in the sense that this would cause people in authority to realise the need to establish schemes to help retrenched and retired workers economically.

In view of the fore stated, it was felt that this dissertation would be of great help to planners at both town and national levels of Zambia and the world at large. Furthermore, it would provide valuable information and benchmark literature to academicians who may wish to carry out further studies related to the subject in question since no research of this nature had been conducted in Kabwe before the current study.

1.4. Specific objectives

From the overall objective already stated under the introduction, the following specific objectives arose: -

- (i) to determine whether or not the former miners had migrated out of Kabwe Urban to other areas;
- (ii) to determine whether or not the former miners had moved into squatter settlements within Kabwe Urban while leaving their newly acquired houses on rent as an alternative means of livelihood; and
- (iii) to determine whether or not the former miners had taken to informal sector activities as an alternative way of making a living.

1.5. Hypotheses

The following hypotheses were formulated and tested in order to achieve the objectives stated above:

- (i) the closure of Kabwe Mine has led to the migration of a significant number of former miners to other towns;

- (ii) the closure of Kabwe Mine has significantly forced former miners to leave their newly acquired houses on rent while they themselves have moved to squatter settlements resulting in the growth of these areas; and
- (iii) the closure of Kabwe Mine has led former miners to significantly turn to informal sector activities as an alternative means of livelihood.

1.6. Organisation of the Dissertation

This dissertation comprises four other chapters apart from this one. Chapter two reviews literature related to the current study. The methodology used in the study and information on the study area are presented in Chapter Three. Chapter Four presents the findings of this study and the discussions resulting from the analysis of the data. Finally, Chapter Five brings out the conclusions and recommendations arising from the current study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

Kabwe, as an organised settlement, began with the establishment of the lead and zinc mine in 1904 by the Rhodesia Broken Hill Development Company Limited. The growth of the town was helped by the growth of the mine and the Railway Company which made Kabwe its Territorial Headquarters in 1967. In spite of being centrally located and enjoying direct access to two major routes of the country, the town failed to attract many industries before 1964 (Kapferer, 1966; Gardiner, 1971; Turner, 1979; ZCCM, 1995).

After 1964 (period after independence), however, the town did attract some industries such as Kabwe Industrial Fabrics [in 1967], General Pharmaceuticals Limited [in 1975], Mulungushi Textiles [in 1981], Balubhai, Ravindra and Rameshi [BRR] Oil Industries Limited [in 1983] (GRZ, 1988; KFWPD, 1998). All these industries have gone through restructuring while the mine was completely closed in 1994 (Jere, 1998; KFWPD, 1998; Musambachime, 1998).

This situation of urban decline has occurred in many other countries, including developed ones. Many writers agree that urban decline is almost part of any process of urbanisation since history has shown that neither town nor city growth can go on unchecked (Berry, 1970; Drewett and Spencer, 1976; Bradbury et al., 1982; William, 1988). This situation is brought about by reduced in-migration into cities and increased

out-migration from the inner cities. This also results from economic crises in towns and cities.

The writers cited above and others such as Lichtenbeger, (1976) have argued that this decline has affected many cities in Europe, North America and the Mediterranean region with varied results in different places. The results include increased unemployment, out-migration and also the growth of the informal sector. This chapter, therefore, reviews literature related to this situation of urban decline in both the developed and the developing countries, as is the case of Kabwe town of Zambia.

2.2. The unemployment situation

Unemployment refers to the situation in which people are found without wage or salaried work or employment. According to Jere, (1998:1) “... the International Labour Organisation (ILO) defines all persons aged 12 years and over as belonging to the labour force if classified as employed or unemployed. This segment of the population is either already working or is available to start work if employment is offered”. However, unemployment can either be voluntary or involuntary (Iles and Tucker, 1960; Turnham, 1971; Sinclair, 1978). This aspect of unemployment can even affect people who leave their mining jobs before reaching their retirement age.

Voluntary unemployment refers to a situation where an individual recognises the existence of a work vacancy but does not want to get it. This may be as a result of low wages, the type of work and even the location of the employment source (Iles and Tucker, 1960). Involuntary unemployment, on the other hand, arises from a situation where people are ready for any type of work but can not find that work (Turnham, 1971).

Iles and Tucker (1960), argue that though developed countries of the day may have achieved full employment during the war periods, this is no longer possible. They argue that in the 1950s and 1960s periods of high unemployment alternated with periods of low unemployment. They further argue that even in the face of some level of unemployment, their economies were such that the whole community was able to enjoy “... a standard of living vastly superior to that of the backward countries” (Iles and Tucker, 1960:5). This was so because full employment is not synonymous with a high standard of living due to some very low wages offered for some jobs. This, therefore, meant that unemployment was not as serious a problem in the developed countries as it was in developing countries.

Developed countries have benefited from advanced technologies which are not labour intensive. Further support comes from population growth rates which are relatively lower than those found in the developing countries (Simons, 1979; Squire, 1979).

Unemployment is a big problem which is still growing in developing countries. This is due to the insufficiency of employment opportunities in these countries due to a poorly developed formal sector (Turnham, 1971; Jolly et al., 1973; Sinclair, 1978; Squire, 1979; Ecotec, 1993). The problem is worsened by the high population growth rates in the less developed countries. However, some countries like Chile have a well developed wage employment system with 70 percent of the labour force being in wage employment (Squire, 1979). The Southern African Development Community (SADC) report of 1998 shows that the SADC countries are suffering from high unemployment due to the process of globalisation. This globalisation is undermining the capacities of these countries to

develop sizeable formal sectors. These sectors (formal) would in turn increase the employment opportunities in these countries (UNDP, 1998).

Nevertheless, scholars do not seem to agree as to what constitutes unemployment. Scholars such as Iles and Tucker, (1960) and Turnham, (1971) have recognised a number of causes of unemployment such as the ignorance of job seekers of the existence of a vacancy in another area, their reluctance to move from one area to another, lack of necessary skills for the available job, and the seasonal nature of some vacancies. Other causes include decline of industries (mines inclusive) due to out dated technology, deficiency of demand for the products and unfair competition from cheap imported goods. Munowenyu (1996) points out that in cases of mining, mineral resources may be depleted leading to the closure of the mines and loss of employment for the miners. Unemployment in developed countries is somehow encouraged by the existence of an unemployment insurance system which provides better incomes than some low paying jobs and people choosing not to work.

Zambia's economic situation has been on the decline since the 1970s (ILO, 1981). The decline continued and became worse in the 1990s with the privatisation and restructuring of companies, and the liberalisation of the economy and the closure of some companies (KFWPD, 1998; Musambachime, 1998). This situation is assumed to have led to the growth of the unemployment problem. The unemployed comprise people who have not worked before and those who have been forced out of employment before attaining retirement age.

Just as there is no total agreement as to what constitutes unemployment there still remains the question of whether formal employment is the only way of attaining a better

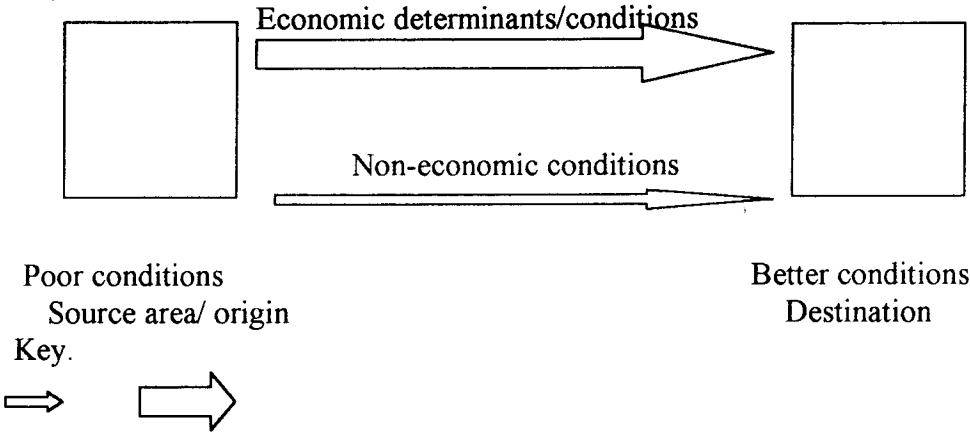
standard of living. This is so because people tend to ignore other possibilities open to people who are not in formal employment, both in urban and in rural areas, through which they can attain a reasonable means of sustenance.

2.3. Migration

The human race in general, is characterised by a history of movements from one place to another in order to enjoy a better standard of living. However, not all movements constitute migration. Among others, Banda and Sikanyiti, (1997: 143) define migration “... as a form of geographical movement or spatial movement involving a change of residence”. This movement should include the crossing of an administrative boundary. Migrations may be termed semi-permanent or permanent depending on the length of stay in the new area of residence.

Many scholars have come up with different models to explain the causes and nature of migration. Simmons et al. (1977), have argued that migrations are induced by both economic and non-economic determinants. Under economic determinants/factors they include income differential as being the major reasons in determining the benefits and costs of migration between sources and destinations of people (See Figure 2.1).

Figure 2.1. Determinants of migration



The arrows (not drawn to scale) show the volume and direction of migration.

Source: Designed from arguments of economic and non-economic determinants of migration which were propounded by Simmons et al., (1977). Poor conditions in origin area and better conditions in destination area force some people to migrate.

Simmons et al. (1977), indicate that non-economic determinants of migration include educational factors, perception of rural and urban life, with the latter being viewed as being better than the former. This perception of urban and rural areas encouraged and still encourages the migration of people to mining and other towns with better economic and social services (Munowenyu, 1996). Other determinants include the presence of friends and relatives in urban areas, cultural opportunities and the availability of more things to do in towns. Other people have been forced to migrate by pestilence and natural disasters.

A number of models, as quoted by Simmons et al., 1977; Richmond et al., 1976; Mukuka, 1997, indicating the nature and causes of migration were formulated by scholars such as Ravenstein [1885-1889], Zipf [1946], Schultz and Sjaasted [1962], Kuznets [1964], Lee [1966] and Mabogunje [1970]. Ravenstein formulated the earliest theory of migration in the late 19th century. In his theory, Ravenstein believed in the selective

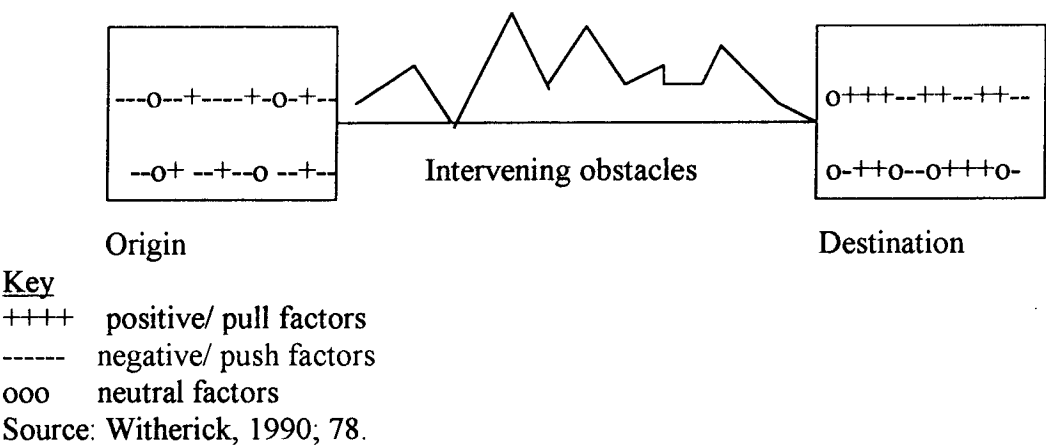
character of migration and also that migration progressed step by step. He further argued that there existed a counter-current of migration also referred to as return migration (Simmons et al., 1977; Burtenshall, 1990; Mukuka, 1997). Zipf (1946), also formulated a theory of migration which indicated that the volume of migration was directly proportional to the distance between the origin and the destination. The theory or model was referred to as the gravity model which argued that the longer the distance between the two places the lesser the volume of migration (Lewis, 1982; Burtenshall, 1990).

The theory of migration formulated by Schultz and Sjaasted (1962), focussed mainly on the costs and benefits of migration. This theory gave prominence to the issue of income differentials between rural and urban areas. Kuznets, on the other hand, emphasised the selective character of migration in terms of age and sex. Like Ravenstein, Kuznets also believed in the selective character of migration and also that migration progressed step by step. He also agreed with the push and pull factors put forward by Ravenstein as being responsible for the migration of people between two different places (Simmons et al., 1977; Burtenshall, 1990).

Lee formulated another theory of migration in 1966, which developed further the ideas put forward by Ravenstein. This theory looked at the "Push" and "Pull" factors which influenced people either to move or not to. According to him, the push factors, such as natural disasters (droughts, floods), famine, low wages, persecution and civil wars, forced people from their original areas into new areas. Furthermore, he argued that pull factors, such as better job opportunities, salaries/wages, houses, climate, schools and health facilities would attract people into new areas. Lee's theory also involved a third or middle factor which was referred to as intervening obstacles which would influence the

migration flow between the source and the destination areas (Simmons et al., 1977; Burtenshall, 1990) [See Figure 2.2].

Figure 2.2. Lee’s Push and Pull Theory/ Model

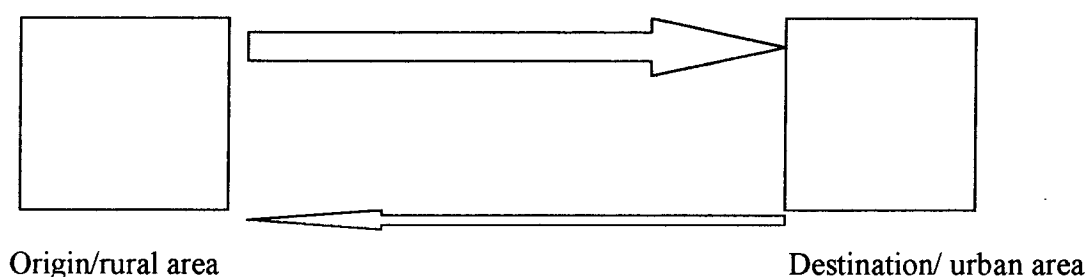


Mukuka, (1997), shows that the dependence theory helped (especially during the colonial days) to force Africans to move from rural areas into urban areas in order to produce materials for industrial growth in the colonising countries. He also argues that “ while the theoretical frame work of dependency explains the pull, push and intervening factors, it also predicts that as long as the rural areas remain economically backward in relation to urban areas, rural-urban migration would persist in larger proportions than urban-rural migration” (Mukuka, 1997:12).

Mukuka, (1997:12), further argues and quotes Mabogunje (1970), that “ another way of explaining and predicting rural-urban migration is by using a systems approach. This approach describes rural-urban and urban-rural migration as a circular, interdependent, progressively complex and self-modifying system in which the effect of changes in one part can be traced through the whole system”. Actually Mabogunje

rightly argues that this is a more realistic model especially within the African context. This is so because migration can not be viewed as a simple uni-linear occurrence but as a complex pattern of movement and counter movement in different directions (Lewis, 1982) [See Figure 2.3].

Figure 2.3. Cyclic migration (Systems approach)



Key.

++ rural area pull factors

----- rural areas push factors

+++++ Urban areas pull factors

--- Urban areas push factors

↔ Direction and volume of migration with the size of the arrows (not drawn to scale) showing differences in the volume of migration. The larger the arrow the greater the volume of migration (emigrants and immigrants between source and destination areas).

Source: Designed from the arguments on the Systems Approach as propounded by Mabogunje in 1970.

While Lee 1966 explains migrations by way of the push and pull factors, Mabogunje shows that an individual's desire to migrate is not only affected by one factor but by many factors working together. Lee's theory of migration can, therefore, not be used adequately to explain the African migrations (Chanda, 1978; Lewis, 1982; Gurusamy, 1997).

Many writers have expressed the view that people who find themselves unemployed in towns will usually decide to move to another town to search for

employment there. This is especially true for the cities or towns of developed countries where migrations even lead to the growth of small towns and sub-centres (Sinclair, 1978; Paterson, 1979; Munowenyu, 1996). Paterson, (1979:540) even argues that "... there can be few areas in the whole world where the range is wider or the freedom of movement for the individual greater than in North America". However, this migration to small towns and sub-centres has involved not only the unemployed but also the wealthy people who have moved from the congestion of the inner cities (Berry, 1976; Drewett and Spencer, 1976; Lichtenberger, 1976; Sinclair, 1978; Paterson, 1979; William, 1988).

In developing countries, of which Zambia is part, on the other hand, it has been observed that the unemployed tend to stay in their first town of settlement. They may sometimes move around several times within the same town in search of jobs and accommodation (Sinclair, 1978). This is unlike in the earlier years when even those employed in the urban areas still considered themselves part of the villages where they came from and would in due course return there. Their stay in towns was only temporary and was only meant to help them accumulate some wealth before returning to their villages (Sinclair, 1978; Jackson and Hudman, 1990). However, "due to the existence of better facilities and the desire to escape the boredom and drudgery of tribal life, people have tended to remain in urban areas with or without employment" (Pollock, 1968:318).

2.3.1. The relationship between rural-urban migration and squatter settlements

Continued rural-urban drifts or migration in developing countries have led to the development of uncontrolled settlements and shanty towns. Other names such as squatter

settlements, unplanned settlements and slums may be applied to such settlements in different countries (Sinclair, 1978).

Studies conducted in South America and other developing countries in the 1960s and 1970s show that immigrants into towns and cities are very reluctant to leave their first town of settlement. Studies in India have also shown that people preferred to remain in low wage employment in their original areas than move to other areas with better paying jobs (Flinn, 1968; Popola and Subrahmarian, 1975; Perham, 1976). Iles and Tucker, (1960) also identified a similar pattern of settlement where former miners in West Cumberland preferred to remain unemployed in their area than to go and work among different people in a different area of England.

The situation in Zambia is such that rural-urban migration has continued from the 1920s, albeit at a low rate inspite of the drop in the availability of wage employment. These movements into the urban areas have further enhanced the growth of shanty towns or squatter settlements, as they are commonly known. However, the 1990s have shown a change in the migration pattern where urban areas such as those in the Copperbelt province of Zambia have lost some people to the rural areas (Hampwaye et al., 1997; Sikanyiti and Banda, 1995; Mukuka, 1997).

Sikanyiti (1998), observed that Kabwe Urban did not experience any in-migration during the intercensal period (1980 to 1990) but instead lost some of its population to the rural areas. According to him while the rest of the province experienced in-migration, Kabwe urban did not. He further shows that the population of Kabwe did not experience any serious out-migration either. Just as with other areas looked at, Kabwe has

experienced a growth of unplanned or squatter settlements (KFWPD, 1998). Miners or former miners have been known to move to these settlements after leaving work.

2.4. Growth of the informal sector

The informal sector is generally taken to be the opposite of the formal sector which is supposedly characterised by organisations large in size and complex in their operations. This includes well-run accounting systems and well-established relationships between employers and employees (Sinclair, 1978). However, Sinclair (1978:70), also argues that even the smallest and most unsophisticated street trader in the informal sector "...might exhibit some of the characteristics listed, albeit in indigenous form".

The dividing line between the formal and informal sectors is not very clear. Sinclair (1978), notes that Steel (1976), in his studies in Ghana identified an intermediate sector which comprised larger than the usual informal sector ones but smaller than the formal sector enterprises. Informal sector enterprises are said to be small, run by individuals, or family members, friends or even some employees.

The informal sector activities range from well established retail traders, through small manufacturing, service and commercial establishments with the traditional petty vendors being at the bottom of the list (Sinclair, 1978; Squire, 1979; Ecotec Consultants, 1993; Imboela, 1997). This feature of an informal sector is not restricted to the developing countries of Africa alone but can also be seen in Asia, Europe and the Americas. However, due to low unemployment levels in developed countries and the subsequent growth of the service industry after the decline of the manufacturing sector, activities of the informal sector are not as pronounced as they are in the developing

countries of South America, Asia and Africa (Squire, 1979; Jere, 1998). All in all, Imboela (1997), observed that there is no consensus among the many policy makers, scholars and researchers as to what actually makes up the informal sector.

Sinclair (1978), and Imboela (1997), argue that this sector is important in absorbing and supporting urban workers, and that it also encourages the growth of entrepreneurship. This, according to Imboela, helps in lowering the cost of living by providing simple goods cheaply for urban workers. Studies in Brazil, Ghana, India, Ivory Coast, Mauritania, Sierra Leone and Sudan have revealed the important role which the informal sector plays in providing alternative employment to urban dwellers. It also acts as a part time employer before people get into formal sector employment (Merrick, 1976; Steel, 1976; ILO, 1977; Sinclair, 1978; Squire, 1979). These studies show how the informal sector has contributed greatly in creating wage employment in the countries mentioned above. These studies have also shown that some of the people in the informal sector do not even desire to get into wage employment in the formal sector although it is not always easy to enter into this sector (Sinclair, 1978; Imboela, 1997).

In Zambia, the situation has not been different from the other developing countries. ILO, (1977), reports that at independence the informal sector, in Zambia, was weak and continued to be so for some time due to the dominance of the mining and general manufacturing industries. This report further pointed out that there was, nonetheless, a slow growth in the formal employment sector compared to the rapid increase of the labour force. This was particularly true in the urban areas. This aspect increased the importance of the informal sector as a labour market of the last resort.

Furthermore, the ILO report of 1981 indicated that there was a major expansion of the informal employment sector in Zambia. This report identified a wide range of productive activities in the informal sector. These activities include carpentry, tin smithing, tailoring, welding, leather works, works in small-scale construction (especially house building), retail trading in a wide variety of goods such as charcoal, household implements, vegetables, soap powder, bicycles, cars, machinery, watches and radios. Chiwele and Chinganya (1997), argue that, in Zambia, 35 percent of urban employment is in the informal sector. Their findings show how important the informal sector is in providing a means of livelihood to many people who fail to get jobs in the formal sector.

The informal sector, with its wide variety of activities, has unlimited possibilities for those who get into it. It is such a wide spread sector that sometimes it becomes difficult to identify when one enterprise has changed from being informal to being a formal organisation. The Zambian situation seem to have been confused in the sense that the formal sector was almost synonymous with the parastatal sector. Therefore, the change of ownership of these enterprises and their subsequent restructuring seems to have brought a crisis in the employment arena in the country.

2.5. Noticeable gaps in literature

The literature reviewed above showed that some gaps existed which needed filling. The examples of the gaps identified were as follows: -

- i. the lack of clarity on the option frequently taken between out-migration and informal sector participation as a response to formal sector unemployment;

- ii. lack of information on the relationship between age and educational level with out-migration and participation in the informal sector of the formally unemployed; and
- iii. insufficiency of information with the effects of the closure of mines on different towns both in developed and developing countries.

The current researcher strongly felt that these gaps needed filling in.

CHAPTER THREE

STUDY AREA AND METHODOLOGY

3.1. Introduction

This chapter brings out information on the study area and later discusses the methodology that was used to collect and analyse data for this study.

3.2. Study area

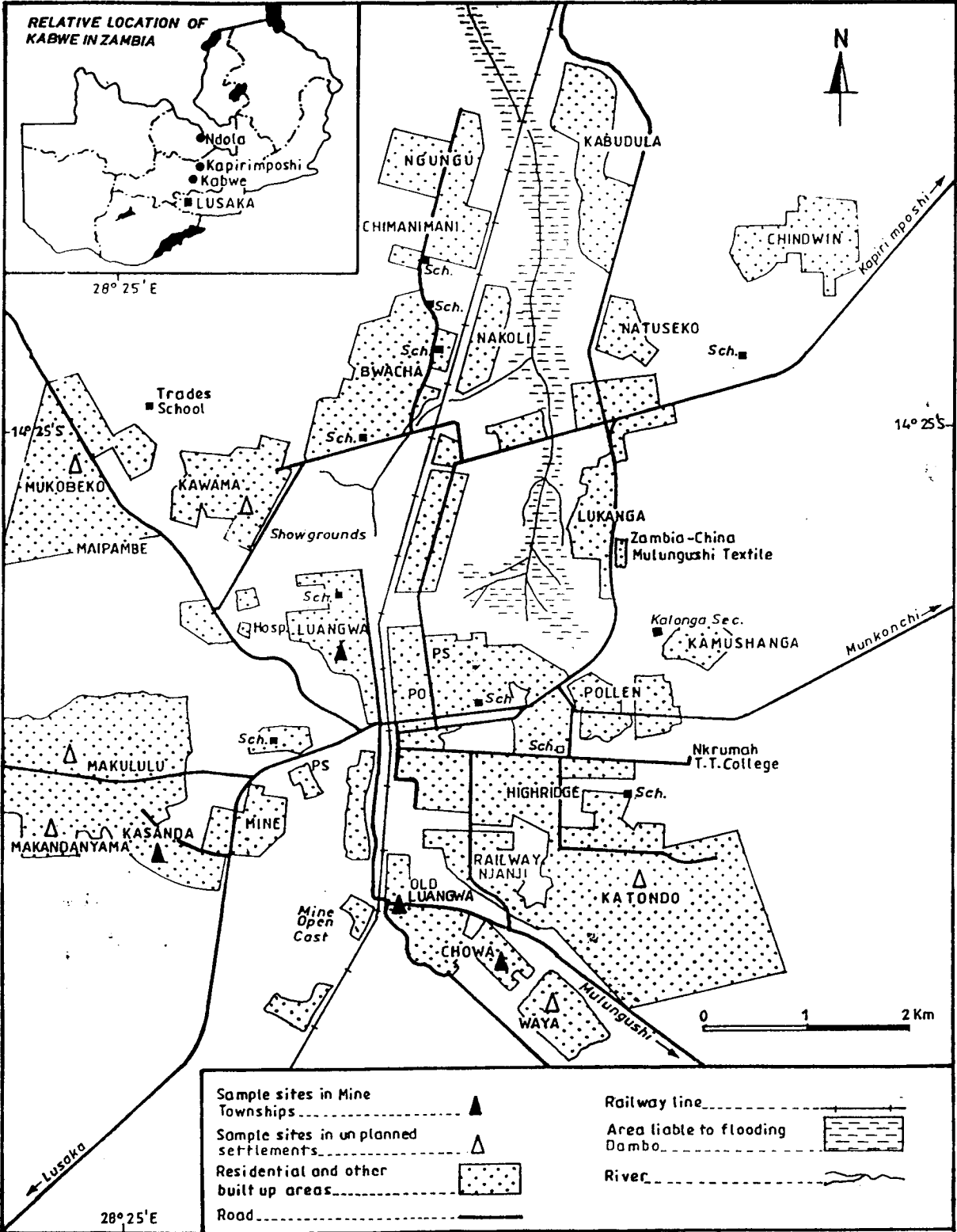
This study generally focussed on the effects of the closure of Kabwe Mine on the socio-economic transformation of Kabwe urban. It concentrated on both the planned and the unplanned settlements of the town.

3.2.1. Geographical location of Kabwe urban

Kabwe urban is located between longitudes 28°22'30"E and 28°30'00"E and also between latitudes 14°22'30"S and 14°28'45"S. The town is about 140 kilometres north of Lusaka and about 200 kilometres south of Ndola (the nearest Copperbelt town) (KMC, 1975; GRZ, 1988; KCCI, 1998) [See Figure 3.1].

Kabwe is the administrative capital and the most centrally located town of the Central Province of Zambia. It is also found in the central area of the country (KCCI, 1998). This central location could not help Kabwe become the capital city of Zambia inspite of being very suitably located. This was because the early town and country planners disqualified it on the basis of its haphazard development which was uncontrolled

Fig.3.1. Locations of Sample sites in Kabwe Urban, Central Zambia.



in the early years of the town's growth (before 1964) by three independent bodies, namely; the mines, the railway company and the Local Authority (ZGA, 1970).

3.2.2. Population of the town of Kabwe

Kabwe urban's population has grown steadily over the years from about 58,000 people in 1963 to over 160,000 people in 1990 (GRZ, 1995). In recent years this population has been growing at the rate of 2.0 percent per year and was projected to rise to about 196,813 people by the year 2,000 while holding constant factors of fertility, mortality and migration.

This kind of projection may not work because of the problem of HIV/AIDS which is ravaging many towns and countries. This pandemic of HIV/AIDS is really decimating populations in many areas and countries (especially the African countries) and Kabwe may not be an exception. For instance, it is estimated that 80 percent of the patients admitted to Zimba Mission Hospital in Kalomo District of Zambia were HIV/AIDS patients (UNDP, 1998; PRB, 2000; Zambia Daily Mail, 17/3/00;3).

The population of Kabwe comprises indigenous Africans, Asians, Coloureds and Europeans (to a lesser extent). This is because the European population in the town declined in the 1960s because of their fear of the imminent African rule. These Europeans were not sure of their continued well being under indigenous Zambians' rule (Turner, 1979).

The 1980 population census showed that Kabwe urban had an almost balanced sex ratio of 101.2 males for every 100 females (GRZ, 1988). The same report indicated that by the year 2,000 over half of the population of Kabwe urban would either be under

the age of 15 or over the age of 65. This scenario would increase the dependence ratio of a town whose formal sector had already experienced a decline in employment opportunities. The sex ratio seemed to have remained the same in the sense that the 1990 census showed that the sex ratio almost remained at one to one (CSO, 1997).

3.3. Data collection

Data for this study were collected from both secondary and primary sources.

3.3.1. Secondary data collection

Secondary sources of information from the University of Zambia Library included books, journals, annual reports and newspapers. Project reports, files and books were consulted from Kabwe Municipal Council. From the Central Statistics Office in Kabwe, materials consulted included files, unpublished reports, papers presented during dissemination seminars of census reports and other institutional reports. The Kabwe Chamber of Commerce and Industry provided an investment profile for Kabwe and a list of its members. A report was also obtained from the Central Province Small and Medium Scale Business Association as well as the Kabwe Foundation for Women Participation in Development. The Zambia Consolidated Copper Mines (ZCCM) offices in Kabwe provided files which were used to locate sampled houses as well as to ascertain the number of houses previously controlled by ZCCM (Kabwe Division).

3.3.2. Primary data collection

This approach involved the collection of primary data using both unstructured and structured interviews. In both cases personal interviews were preferred because this enabled the researcher to cut on postage expenses and time spent in the postage process to and from the interviewee. Furthermore, personal interviews do enable the interviewer to gather more and quite accurate information about the interviewees. Banda (1981), argues that personal interviews yield a high percentage of returns and have the ability of reaching most persons in the sample. On the whole personal interviews allow for flexibility in the questioning where the interviewer may even use extra probing questions to obtain the desired responses.

3.3.3. Unstructured interviews

These interviews were conducted with officials at different levels from different institutions, government departments and some selected companies in Kabwe urban as indicated below. Human resources managers were consulted from each of the following companies; ZCCM, ZRL, Zambia-China Mulungushi Textiles Joint Venture (ZCMTJV) [including the deputy general manager of human resources], KIFCO, GPL and NMC. From KPM/G15 people interviewed included the company secretary, the managing director and the chairman of the board of directors. At Aupie Agro-Foam Products Kabwe branch, the manager was interviewed while at Luchindashi Cotton and Jute Twine Winders; the Company Director/owner was interviewed. The ware house manager and the marketing manager were interviewed at Kabwe Steel Distributors.

Other officials interviewed included the town clerk and the senior accountant (revenue) of Kabwe Municipal Council, His Worship The Mayor of Kabwe (both as a mayor and as chairman of KCCI), the Provincial Statistical Officer of CSO-Kabwe office, the secretary of CPSMSBA and the manager at Small Enterprises Development Board (SEDB) centre in Kabwe.

Pastors or priests in charge of the following churches were interviewed; River of Life Church, Railway-Chowa Roman Catholic Parish (two churches under one priest) and the Grace Church. These church leaders were selected by purposive sampling because their churches are either found within or around the former mine townships. It was the researcher's view that many former miners who attend church services would be going to these churches.

Further interviews were conducted with Market masters at each of the following markets; Njanji, Town Centre (formerly Green Market), Kamanda and Rafam Shopping (formerly Kasanda Mine Market). Six councillors (one from each) from Waya, Katondo, Makandanyama, Makululu, Kawana and Mukobeko squatter settlements were also interviewed. The four markets were selected because of their proximity to the former mine townships. In the same way, the six squatter settlements were selected out of sixteen because of their proximity to the former mine township (they are located around the former mine townships). In all, 31 people were interviewed in this section. All these interviews were conducted for the following reasons: -

- (i) to determine the number of miners who had either retired or transferred to other divisions of ZCCM or had been retrenched;

- (ii) to determine the number of housing stocks formerly owned by ZCCM (Kabwe Division);
- (iii) to determine whether there has been a marked growth in squatter settlements in Kabwe after the closure of the mine;
- (iv) to determine the changes, if any, in the population of Kabwe urban since 1994;
- (v) to determine the social, economic, moral and psychological impact of the loss of employment of the former miners;
- (vi) to determine the social and economic impact of the closure of the mine on the transformation of the town; and
- (vii) to determine whether the companies and / or industries in Kabwe are able to provide alternative sources of employment opportunities for the residents of the town.

3.3.4. Structured interviews

Three types of interview schedules were prepared for three groups of people namely; the former miners resident in former mine townships, the non-former miners living in former mine townships and the marketeers from the four markets named above (these markets are found close to or within the said areas of residence). All these questionnaires were administered through personal interviews to save on costs and time as explained earlier under unstructured interviews.

The four townships are known as Chowa, Kasanda, Luangwa and Old Luangwa (Refer to Fig. 3.1). The four markets that were sampled were Kamanda, Njanji, Town Centre and Rafam Shopping Complex.

The interview schedules sought information which would determine the following: -

- (i) the responses of former miners after the loss of employment; and also
- (ii) the impact of the closure of the mine on the small-scale commercial activities of the town of Kabwe (See Appendices I and II).

3.3.5. Sample size

The respondents were selected using the systematic sampling of household heads without prior regard to age groups. This approach was used to select 100 former miners from all the four former mine townships. Out of the 100 respondents, 32 came from Chowa Township with a population of 632 households, 51 came from Kasanda Township with a population of 1,006 households; 13 came from Luangwa Township with a population of 257 households and four came from Old Luangwa Township with a population of 73 households (See Table 3.1).

Table 3.1 Whole sample and sub-sample sizes

Township	Former miners				Non-miners	
	Number of houses	% of total	Sample taken	% of total sample	sample	% of total sample
Chowa	632	32	32	32	6	30
Kasanda/Mine	1,006	51	51	51	10	50
Luangwa	257	13	13	13	3	15
Old Luangwa	73	4	4	4	1	5
Totals	1,968	100	100	100	20	100

Source: Compiled from own research data.

As can be seen from Table 3.1, a further sample of 20 non-miners were interviewed in order to obtain information about former miners who had vacated their homes. Out of this sample, six came from Chowa Township, ten came from Kasanda Township, three came from Luangwa Township and one came from Old Luangwa Township. The proportions were calculated as shown in Table 3.1. These proportions were calculated as percentages of the total numbers of houses found in each residential area in relation to the overall total number of houses for all the four townships put together.

Some 20 marketeers (five from each market) were selected by purposive sampling method from Njanji Market, Town Centre Market, Kamanda Market and Rafam Shopping Complex. Equal numbers of marketeers were picked from each market because the market officials did not have records of how many marketeers were found in each of these markets. Furthermore, the respondents were picked because of their long involvement in the market business so that they could share their experiences before and

after the closure of the mine. The researcher felt that recent marketeers would not give a clear picture of how the business was before the closure of the mine.

The afore mentioned markets were selected for interviews because they were either close or within the mine residential areas. These marketeers provided information on the effect of the closure of the mine on the small-scale business community in Kabwe urban.

3.4. Data analysis and presentation

Computer packages of Microsoft Excel and Statistical Package for Social Sciences were used to analyse the data.

The Chi-squared test (χ^2) was used to test the significance of the results obtained in the study. This type of test was used because the other parametric tests could not be used on the nominal (frequency) data that were collected through the field research. Descriptive statistics were also used to analyse the data obtained from the field.

The results of the research are presented under different headings such as the population of Kabwe Urban; ZCCM-Kabwe Division and its employees and the distribution of the respondents according to age, among many others. The summarised data are presented in form of tables, graphs, frequency and percentage distributions.

3.5. Limitations of the study

A few problems were encountered in conducting this study. One of which was the difficulty involved in obtaining information from some offices at the Council and at

Small Enterprises Development Board (SEDB) due to what seemed to have been faulty filing systems. Nonetheless, much of the required information was obtained through persistent searches.

Furthermore, it was felt that some respondents were trying to exaggerate their socio-economic conditions by either understating their average monthly incomes or by not being frank on what they were doing to earn a living. However, probing questions were used to bring out the necessary information.

Additionally, some houses appearing on the ZCCM residential maps were either vandalised and unoccupied or were altogether demolished. A good example can be found in the "E" Section of Kasanda Township where houses numbering one to forty eight were demolished hence houses begin with number forty nine. Another example was in the "G" Section of the same township where houses begin with number 101 while the others before this number were demolished.

In spite of the few problems mentioned above, sampling and resampling enabled the researcher to get the required number of respondents. Field observations also helped in ascertaining the economic status of the respondents. All in all, 171 respondents were interviewed for this study (31 for unstructured interviews and 140 for structured interviews as outlined elsewhere in this chapter).

CHAPTER FOUR

PRESENTATION OF RESULTS, ANALYSIS AND DISCUSSION

4.1. Introduction

This chapter presents the research findings obtained in the field. It also brings out the analysis of the research findings and the discussions which resulted from this analysis.

4.2. Population of Kabwe Urban

This study showed that since the 1990 Census no survey of the population had been done in Kabwe urban due to financial constraints. The CSO, in Kabwe, further indicated that since 1990 the new population figures could only be obtained through the population projection method.

More than 50 percent of the people interviewed felt that movements of former miners out of Kabwe urban were negligible since almost all the houses were still occupied. It was further revealed by CSO in Kabwe that the survey of population would still be done before the 2000 Census of population and Housing. The survey had not been done by the time of writing this dissertation. CSO projected the population of Kabwe urban to reach 196,813 people (98,780 males and 98,033 females) by the year 2000 while bearing in mind factors of fertility and migration.

4.3. ZCCM-Kabwe Division and its employees

Kabwe Mine was running four mine townships before its closure. These townships were Luangwa (low-density area), Old Luangwa (also low-density area), Chowa (high-density area) and Kasanda (also a high-density area).

These townships were of varying sizes in terms of the number of houses found in each one of them. The largest township found was Kasanda with 1,006 houses followed by Chowa with 632 houses, Luangwa with 257 houses and lastly Old Luangwa with 73 houses. All in all, 1,968 houses were found in these former mine townships. According to the Human Resources Manager (HRM), at the time of the closure of the mine on 30th June 1994, the mine only had 1,373 employees. By 1978, the mine had employed over 5,000 miners and that this number had been reducing over the years to the number found at the time of the closure. Serious retrenchments started as early as in 1992 such that only very few workers were left working in the health, police, management and general workforce departments up to the time of the closure.

Table 4.1 shows the number of houses and the various categories of workers at the time of the closure of the mine. The information presented in the table shows that at the time of closure, the mine had more houses than employees. The HRM revealed that non-miners occupied 595 excess houses.

Table 4.1. Number of houses and status of miners at the time of closure of the mine on 30th June 1994.

Category	Number
<u>1. Houses</u>	<u>1,968</u>
<u>2. Workers</u>	
Retired	22
Transferred	178
Left working	390
Retrenched	783
Total	<u>1,373</u>

Source: Field data.

The ZCCM officer (referred to earlier on) also revealed that even before the closure of the mine, some flats found in the Central Business District had been sold to the Zambia Army. All the miners at Kabwe Division of ZCCM who were either retired, or retrenched or transferred to other divisions and all of those who were left working were sold the houses they were occupying. The excess houses were sold to the Ministries of Education and Health, other government departments, some other institutions like banks and in some cases to individuals who had earlier on been renting the houses from the mine administration.

About 219 houses in Kasanda Township were sold to miners from other towns such as Lusaka (from Corporate Headquarters), Nampundwe and the Copperbelt towns. These employees were not allowed to evict the tenants who were living in the houses sold to them until after two years dating back from the day of offer. They were also not allowed to charge rent up to more than 1.25 percent of the value of the houses which, in most cases, was about Zambian Kwacha (ZK) 25, 000.00 or US \$ 8.64 (first week of

April 2000’s exchange rate). Those who would evict the tenants risked losing the houses to other prospective buyers (ZCCM, HRM, Kabwe 15/12/98).

4.3.1. Respondents according to age distribution

The former miners who were interviewed comprised a group of people mostly aged above 40 years as shown in Table 4.2. This table shows that only 16 percent of the respondents were aged 39 years and below while 82 percent of them were aged 40 years and above. Actually, 61 percent of them were aged 45 years and above. The information presented in Table 4.2 shows that the majority of the interviewees were over the usual age of looking for employment in Zambia. This can be seen from many newspaper vacancy advertisements which usually indicate that the prospective applicants should not be more than 45 years of age (Zambia Daily Mail, 13/07/00;3,11). This means that these respondents will find it difficult to look for new jobs due to what most employers would take as old age.

Table 4.2 also shows that the ages of two percent of the respondents were unknown because the spouses who stood in for their partners who had died were not able to remember their ages. This information implies that the spouses were not open to each other about their ages. This is so because the ages of the husbands did not matter as much as those of their wives since the former would want to marry spouses younger than themselves. Furthermore, it may also indicate that these spouses did not go far in education and did not relate freely with their husbands on matters relating to ages and the educational levels of their spouses (This conclusion is based on the current researcher’s experience in the society).

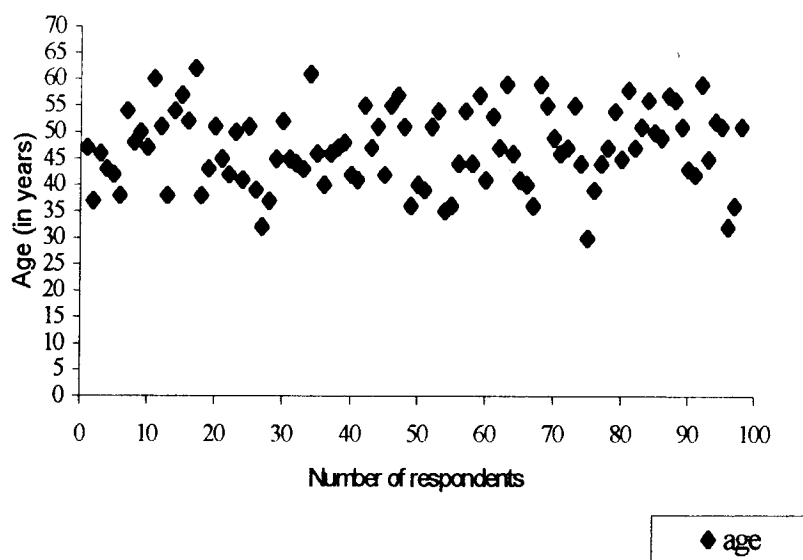
Table 4.2. Ages of respondents

Ages	Number of people	Percent of total	Cumulative percent
30-34	07	07	07
35-39	09	09	16
40-44	21	21	37
45-49	22	22	59
50-54	22	22	81
55-59	14	14	95
60-64	03	03	98
Unknown	02	02	100
Totals	100	100	

Source: Field data.

Descriptive statistical analysis of primary data showed that the mean and median age of the respondents was 47 years while the modal age was 51 years. This analysis produced a skewness of -0.056 which showed that the majority of the respondents had ages above the mean age. This information shows that at the time of the closure of the mine the majority of the employees were above 45 years of age. This kind of information may indicate the fact that ZCCM had stopped employing younger workers before the closure of Kabwe mine. With retrenchments having begun seriously in 1992, one would not expect the company to have been employing people while at the same time retrenching others. Table 4.2 and Figure 4.1 show that very few of the respondents were aged 40 years and below. Most of the retrenched and retired workers were above 45 years of age.

Figure 4.1. Ages of respondents (former miners)



Source: Field data.

The mean age of the 20 marketeers interviewed, was 41.8 years while the median age was 41 years and the modal age was 28 years. The ages varied between 28 years and 67 years. A skewness of 0.98 showed a distribution closer to normal but positive. This meant that most of the respondents were slightly below the mean age of 41.8 years.

This kind of age distribution among the marketeers shows that the small scale trading sector is not age specific but is open to all age groups. However, the clustering of ages below the mean could indicate that a greater proportion of the younger people is getting into this sector compared to the older generation.

4.3.2. Marital status of the respondents

Ninety six percent of the former miners who were interviewed were married while those who were single and widowed represented one percent each. Two percent were made up of families where the spouses (who were former miners) had just died.

This information shows that most of the former miners in Kabwe are married and are maintaining families which usually have many demands.

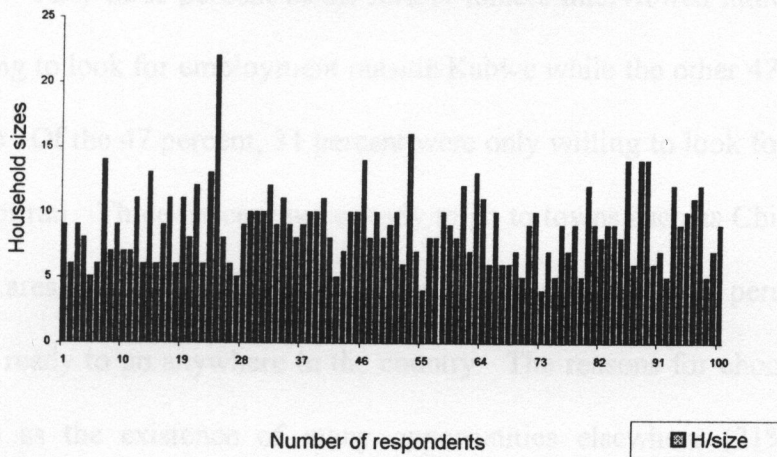
4.3.3. Household sizes of the interviewees

Figure 4.2 shows that the former miners' households have, on average, larger than five but less than ten members. The mean, median and modal household size is nine. Sixty three percent of the respondents have household sizes between five and nine people (with one extreme case having 22 members)

This information shows that these respondents have large responsibilities of looking after these families. This means that they need to have reliable sources of income in order to manage their families. Any change, therefore, in the respondents' economic status means a drop in their ability to look after their families (See Figure 4.2.).

Figure 4.2 shows that many households comprise between five and ten members. As can be seen from Figure 4.2, some households have less than five members. This is as a result of some family members having gone to live with other relatives due to the economic hardships being faced by some families after the loss of mine employment. However, some households have still remained larger than ten members because they have found other means of livelihood.

Figure 4.2. Household Sizes



Source: Field data

The household with 22 members comprised parents, children, grand children from unmarried daughters and some orphans. The grand children, in this case, are an example of some illicit sexual relationships that are taking place in these townships. The presence of orphans shows an increasing problem of orphans after the death of one or both parents. As explained elsewhere, in this dissertation, the problem of orphaned children is on the increase in the former mine townships and in Kabwe town as a whole. This means that the feature of large households will increase with increased deaths of parents and /or guardians.

Among the marketeers interviewed, the mean, median and modal household size was six members. Sixty percent of the marketeer-respondents had households larger than five. This information gives a picture of people with huge family responsibilities. Like the former miners interviewed, these marketeers also needed to have a steady source of income in order to meet the daily needs of their families.

4.3.4. Aspects of migration

Fifty three percent of the former miners interviewed indicated that they were not willing to look for employment outside Kabwe while the other 47 percent were willing to do so. Of the 47 percent, 31 percent were only willing to look for employment along the line of rail. Three percent were ready to go to towns such as Chipata, Kasama and other rural areas away from the railway line. The remaining 13 percent indicated that they were ready to go anywhere in the country. The reasons for choosing certain areas were given as the existence of many opportunities elsewhere (21%), existence of many business opportunities (16%), areas free from serious crime (02%) and also the presence of relatives in the areas of preference (02%). Thirteen percent of the respondents, on the other hand, felt that their current financial difficulties could not allow them to choose areas to go to.

The responses to the question concerning the respondents' willingness or unwillingness to migrate out of Kabwe to look for employment elsewhere were used to test hypothesis one for significance using the Chi-squared (χ^2) test.

This test produced a result of $\chi^2 = 0.36$. The 0.05 level of significance was used and it produced the χ^2 critical of 3.84. With the critical value being larger than the calculated or observed one, this meant that there was no significant difference between the number of respondents who intended to look for employment outside Kabwe and those who did not want to. Whatever difference existed between the sizes of the two groups was just a matter of chance.

Further evidence from the interviews conducted with non former miners living in former mine townships showed that only five percent of the former miners had sold their houses so that they could go back to their villages because they could not cope with life in town. The other five percent bought their houses from ZCCM-Kabwe Division as sitting tenants of some of the 595 excess houses discussed earlier on in Section 4.3 of this chapter.

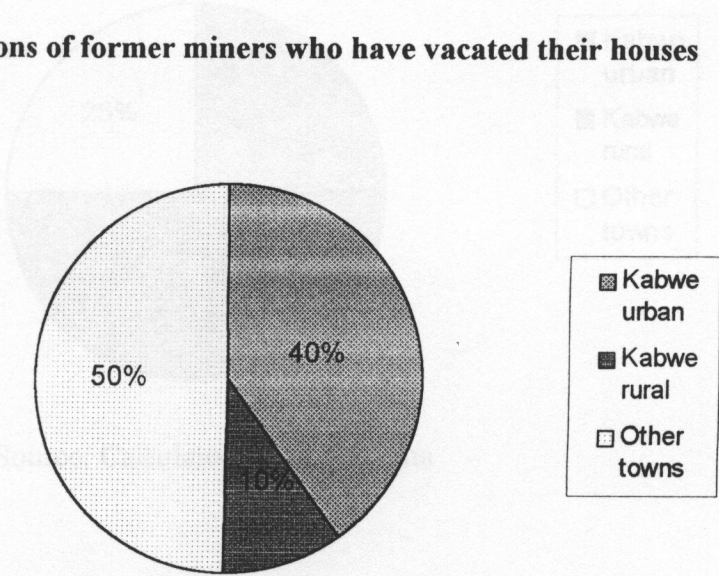
Out of the 90 percent who were just renting houses, 60 percent were renting their houses from former miners living in other areas within and outside Kabwe. Fifteen percent were renting the houses from ZCCM offices at the closed mine plant. The other fifteen percent were renting houses from either; (i) ZCCM through their employers; or (ii) non-miners who bought the houses from former miners who left to work in other towns; or (iii) miners who had been transferred to another division of ZCCM.

The information highlighted above shows that there were some houses which were not occupied by miners at the time of the closure of the mine as elaborated elsewhere in this chapter. Non-miners occupied these houses instead. The presence of the said houses gives further proof that the mine was not operating at full employment capacity at the time of closure.

Furthermore, the information presented above shows that the majority of the former miners opted to put their houses on rent rather than sell them. This is so because only five percent of them had sold their houses while the 65 percent of those who vacated their houses did not do so but instead decided to put them on rent. This was done in order to earn stable incomes from the houses through collection of rent.

Figure 4.3 shows that of the respondents who vacated their houses, 40 percent have remained within Kabwe Urban, 10 percent have gone to the rural parts of Kabwe town while only 50 percent of them went to other towns. These data show that there has been no significant difference between the numbers of respondents who have left Kabwe Urban and those who remained within the town. Figure 4.3 also emphasizes this point.

Figure 4.3. Destinations of former miners who have vacated their houses



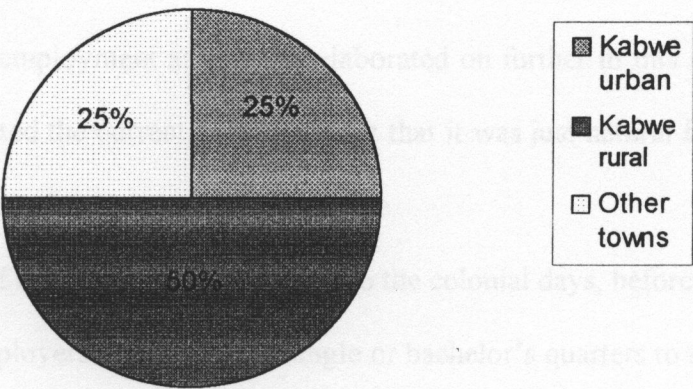
Source: Calculated from data collected in the field.

Figure 4.4, on the other hand, shows the destinations of the families of the former miners who have since died. It shows that 25 percent of the families have remained in Kabwe Urban while 50 percent have moved to the rural fringes of Kabwe town. Only 25 percent of these families have gone to other towns.

The same Figure 4.4 shows that the majority of the families have actually remained within Kabwe town. All the data presented in this section show that there have

been no significant movements of former miners out of Kabwe town. In absolute terms, the bulk of them have stayed within Kabwe.

Figure 4.4. Destinations of the families of deceased former miners



Source: Calculated from field data

In view of what has been stated above, hypothesis one which states that: **the closure of Kabwe Mine has led to the migration of a significant number of former miners to other towns**; is rejected because there have been no significant movements of former miners to other towns. If anything, former miners from other divisions of ZCCM have also come to stay in Kabwe as elaborated under Section 4.3.

4.4. Emergence of squatter settlements in Kabwe Urban

Squatter settlements in Kabwe Urban and elsewhere in Zambia emerged in the early part of the 20th Century because of inadequate housing for the rapidly growing urban populations. Another dimension to the growth of squatter settlements in Kabwe, emerged through the establishment of farm plots by ZCCM to enable its workers supplement their food stocks. These areas were also meant for eventual settlement of the miners after they left employment as shall be elaborated on further in this same section. In view of the fore stated the current researcher felt that it was just natural for the miners to move into these areas after the closure of the mine.

The problem of urban housing dates back to the colonial days, before 1964, where administrators and employers only provided single or bachelor's quarters to the employed urbanites. This was so because the Indigenous Africans were treated as migrant workers whose stay in town was transient and, therefore, were not expected to bring their families into town. Those who brought their families into town were expected to build their own houses (Simons, 1979).

At independence, in 1964, the new Government of the Republic of Zambia failed to reverse or even curtail the growth of squatter settlements. This was because the new government failed to provide decent shelter and related services to the rapidly growing urban population due to the high rate of rural-urban migration (Simons, 1979; KMC, 1994).

In realising its inability to meet the demand for decent shelter to the urban dwellers, the Zambian government, in 1972, put up a policy in the Second National Development Plan aimed at upgrading the squatter or unplanned settlements (KMC,

1994). The policy of upgrading these settlements continued through the Second Republic into the Third Republic which began in 1991.

Kabwe District Council, just like the Central Government, could not manage to provide decent accommodation to its growing population. The problem of inadequate housing was a legacy of the colonial government as pointed out above. From the early part of the 1900s the emerging industries such as the mine and the railway companies provided accommodation to their employees (Turner, 1979). Up to the 1990s the provision of shelter in Kabwe was employer-related (KMC, 1994). This meant that the urban unemployed or those employed by smaller companies without own houses could only live in squatter settlements. The Kabwe Municipal Council report on ' Nakoli Shelter Improvement Project Profile' of 1994 indicates that about 40 percent of the population of Kabwe lives in 16 unplanned settlements.

The Local Council, in line with the Central Government's policy of squatter upgrading, decided to upgrade five squatter settlements, namely; Nakoli, Kawana, Katondo, Makululu and Kaputula, in order of priority. The policy of upgrading these settlements began in 1993 and will continue, as funds become available.¹

4.4.1. Movement of former miners into the squatter settlements

It was the view of the current researcher that the squatter settlements would experience a marked growth due to the influx of former miners who would put their newly acquired houses on rent while they moved into these areas themselves. Further, it was felt that growth was to come about due to new houses being constructed by the same

people thereby adding to the areal extent of the said settlements. The settlements which were expected to experience this feature were those surrounding the former mine townships. These settlements were Katondo, Kawama, Makandanyama, Mukobeko, Makululu and Waya (See Figure 3.1). The compounds were each established as one acre plots for the settlement of retired miners (Turner, 1979). In due course even non-miners began to live in these areas.

Interviews with the councillors in these settlements revealed that evidence of former miners moving into these areas was there. They only argued that it was difficult to have the actual numbers of people involved because people did not register as they moved into these areas.

Another feature established was that inspite of receiving new settlers from other parts of the town or from outside the town, these squatter settlements were not experiencing any further areal expansion. This was as a result of strict controls instituted by the MMD government which discouraged the haphazard development of these areas.² It specified that new areas for development needed to be demarcated and houses to be built of conventional materials (such as cement blocks for the walls and proper roofing materials of either iron sheets or asbestos sheets). This process had not began by the end of 1999.

Furthermore, this study shows that the movement of people is from high cost areas like Luangwa to low cost areas like Chowa and Kasanda Townships while people in the low cost areas move into surrounding squatter settlements. These movements are for

¹ Interview with the chief Settlement Officer of Kabwe Municipal Council on 15/01/99

² Ministry of Local Government and Housing circular number MLGH/102/19/56 of 19th June, 1999.

the purpose of renting out their houses in order to get incomes for their daily needs. Those who move into squatter settlements either get houses for rent or build their own houses in the spaces within the established settlements. Table 4.3 gives an indication of how much movement has taken place in the former mine townships by way of an example from the streets of one such township.

Data presented in Table 4.3 show how much movement has taken place in the former mine townships. Most of the houses sampled along selected streets show less than 50 percent owner occupancy. Between half and less than half of the former miners could still be living in their houses. The other half or so has moved to other townships and even to squatter townships while others have moved to other towns.

Among the former miners, 36 percent of them indicated that they had other houses apart from the ones in which they were staying. Out of these 10 percent had houses in the squatter settlements, while eight and three others had their houses in other mine townships and other townships within Kabwe Urban respectively. A further 10 percent had their houses in Kabwe rural while the remaining five percent had their houses in other towns.

Table 4.3 Out-movements of former miners from Luangwa Township of Kabwe

Street name	Number of houses	Number of former miners still resident there	Percentage of total number of houses along the street
Acacia	2	1	50.0
Begonia	6	6	100.0
Clarkia	6	3	50.0
Daisy	7	2	28.6
Erica	7	4	57.1
Foxglove	21	12	57.1
Godetia	27	12	44.4
Holly	32	14	43.8
Iris	32	9	28.1
Jasmine	30	5	20.0
Kochia	20	4	20.0
Lobelia	20	7	35.0
Mimosa	30	8	26.7
Nerina	17	8	47.1
Totals	257	95	37.0

Source: Field data

The information provided above shows that only 28 percent of the 36 respondents who had other houses had them in the squatter settlements. This percentage is not even half of all the respondents thereby showing a minor contribution to the number of houses in the squatter settlements. This information and the one already discussed above shows that even though there have been movements of former miners into the squatter settlements, the contribution made to the overall growth of the said areas has been insignificant. This is also because the in-migrants into these areas have either occupied houses already built or have built their houses in the spaces existing in these areas. Hypothesis two which states that: **the closure of Kabwe Mine has significantly forced former miners to leave their newly acquired houses on rent while they themselves**

have moved to squatter settlements resulting in the growth of these areas, therefore is rejected.

Having looked at the movement of former miners into the squatter settlements, it is now necessary to look at whether employment opportunities do exist in Kabwe for those who lost their mine employment.

4.5. Some major employment providers in Kabwe Urban

This study showed that employment opportunities still existed in Kabwe urban even after the closure of the mine. Companies which existed before the closure of the mine and those which were established thereafter provided these opportunities. According to Jere (1998), the closure of the mine simply brought a change in the characteristics of the labour force.

Table 4.4 provides information on some of the major employment providers of the town and their future prospects. Employment opportunities also exist in other industries not listed in Table 4.4, although most of them are small scale with very small sizes of workforce. Many small-scale industries are emerging in the informal sector. The range of employment opportunities is quite wide but many of these may not provide adequately remunerable jobs which may attract qualified personnel. Some former miners have found employment in some of the organisations listed in Table 4.4.

Table 4.4 Employment opportunities and future prospects in Kabwe Urban

Name of company	Workforce	Future workforce
Aupie Agro-foam supplies	64	200
Broken Hill Breweries Limited	24	36
General Pharmaceuticals Limited	4	4 * ¹
Kabwe Industrial Fabrics Co.Limited	300	400
Kabwe Municipal Council	700	400
Kabwe Power and Metal Limited	103	59 * ²
Kabwe Steel Distributors Limited	30	250
Luchindashi Cotton and Jute Co.	14	14
National Milling Co. Limited	127	150
Small Enterprises Development Board	7	7 * ³
Zambia-China Mulungushi Textiles	1400	1500
Zambia Railways Limited	1500	900
Totals	4,273	3,920

Source: Field data

Note: *1. Company was closed in 1995 but operations may begin any time with the new investment from the Development Bank of Zambia.

*2. Company is seeking new investment in order to improve and increase operations and the workforce.

*3. The Board runs a centre which houses about 21 small enterprises involved in a variety of activities with different sizes of workforce.

*4. Many of these organisations also offer temporary/seasonal employment.

On the other hand Table 4.4 shows a decline in the future employment opportunities due to the restructuring and closing down of some companies. The table further shows that only 50 percent of the companies were looking forward to an increased workforce while the other 50 percent were planning to scale down their labour force. However, prospects for increased employment opportunities still exist as explained in the notes following Table 4.4. Furthermore, companies, such as Zambia-China Mulungushi Textiles are expanding in their operations, thereby increasing employment opportunities in the town. The said Company has opened a ginnery, a clothing factory and is to open a cooking oil factory soon (Times of Zambia, 1/05/2000).

The difficulties in attracting investment capital, at the moment, seem to indicate that the era of large labour intensive industries is dying out. This means that Kabwe and many other towns in Zambia will have to rely on the emergence of many small-scale industries with minimal operational costs. The former miners of Kabwe will either find employment in these organisations or establish their own in order to have some means of livelihood. These activities in Kabwe are being encouraged by organisations such as the Kabwe Chamber of Commerce and Industry (KCCI) and the Central Province Small and Medium Scale Business Association (CPSMSBA).

This study has also revealed that there is an increase in employment opportunities in the sector of education provision. A number of privately run pre-schools/nurseries (30) and many others though not yet registered, community (6), primary (5) and secondary schools (2) are operational in the town. Furthermore, tertiary education providers such as the National College for Management and Development Studies, Nkrumah Secondary Teachers College, Kabwe Trades Training Institute, Army Training School, Fire Fighters Training School, the Pan African Institute for Development for East and Southern Africa, King George Youth Training Institute and many more too numerous to mention also exist in the town (KCCI, 1998). Many other organisations such as the Paglory Teachers College, Kabwe Pre-School Teachers College, Immaculata Visitation Teacher's College and the Salamano Youth Project also exist in the town.³

³ Interviews with the Senior Education Officer Planning, Kabwe Education Office and Chief Community Development Officer of KMC on 17/07/2000

4.5.1. Entry of former miners into new jobs

Of the 100 former-miner respondents interviewed in this study, 81 percent had not found new jobs yet while only 19 percent had found other jobs in some of the companies listed in Table 4.4. Of those who found new jobs the highest percentage of 36 were employed by Kabwe Power and Metal Limited (KPM/G15) while the other employers were ZCCM Kabwe Mine Closure and Kabwe Mine Hospital. Others were employed on part-time basis by other institutions such as Kabwe Trades Training Institute (KTTI) and Kabwe Municipal Council (KMC).

Of the 19 percent who found new jobs, about 79 percent of them were not happy with their jobs. Only 21 percent were happy with their new jobs because they were shareholders in the same companies. Some of those who were unhappy with their new jobs advanced many reasons for their unhappiness such as; poor salaries, irregular payments of salaries, risky work (in the case of watchmen), work was part-time and also the lack of proper conditions of service. These were indications of the type of jobs available that were not education specific.

Fifty six percent of the respondents had intentions of getting other jobs within Kabwe while the other percentage had no such intentions. The majority of those who wanted new jobs indicated financial difficulties as a cause for their desire to look for new jobs. Fifteen percent indicated that they were too old to look for new jobs elsewhere while the other twelve percent felt that they were now more interested in self-employment and farming than working for some one else. The majority of those who were interested in finding new jobs were ready to work for any type of organisation (small or large) that could offer good conditions of service.

Fifty percent of the former miners who had vacated their houses had found employment within and outside Kabwe (including one chief). On the other hand, forty percent of them had gone into small scale farming while only ten percent were involved in business.

A Chi-squared test which was applied on the data obtained from the question on whether one had found a new job or not produced the following results: The χ^2 Observed value was 36.00 while the χ^2 Critical value was 3.84 at 0.05 level of significance while using one degree of freedom. The result from the test was that χ^2 observed was greater than χ^2 critical. This result, therefore, shows that there is a significant difference between the number of former miners who have found new jobs as compared to those who have not. This result shows that a great majority of them have not found new jobs and have to look elsewhere to find means of livelihood. The people who have failed to find new jobs could have been hindered by many factors such as the inadequacy of jobs in the town, the old age of many of them and the inadequacy of the academic levels of many of them.

Among former miners who were interviewed, 67 percent of them did not have any tertiary education before getting into their jobs. Only 33 percent of them had tertiary education. This information shows that most of the former miners were employed on the basis of training-on-the job. Most of them had no specific qualifications which would have helped them find new jobs after the loss of mine employment let alone do their work efficiently.

In an era of increased demand for qualified manpower, most of these former miners can not hope to get jobs as good or better than their former ones. This was

especially true for 47 percent of the respondents who had not even reached Form Five or School Certificate level. These people seemed to have joined the large pool of the unemployed after the closure of the mine. However, another sector of the economy, known as the informal sector, through which these former miners could earn a living still exists.

4.6. Informal sector activities in Kabwe Urban

The survey of street vendors of Kabwe urban conducted in August 1998 by CSO Kabwe office showed that there were about 2,751 street vendors and that most of these were between the ages of 10 and 35 years (CSO, 1998). This CSO study shows that the informal sector is an important source of employment for the unemployed, especially the youths. This is especially true in the sense that the number of people involved in this sector is larger than the number of employment opportunities offered by ten companies shown in Table 4.4 excluding Zambia-China Mulungushi Textiles and Zambia Railways Limited. Furthermore, the CSO study shows that the majority of the participants in the informal sector were aged between 10 and 35 years (the majority of them were youths). The unfortunate aspect was that this sector is not very stable and prospects change with changing consumer tastes.

4.6.1. Household income generating activities of former miners

Fifty seven percent of the respondents indicated that they were not running any businesses as a family or as individuals while 43 percent said they were doing so. A number of ways of raising family incomes were brought out; such as circular

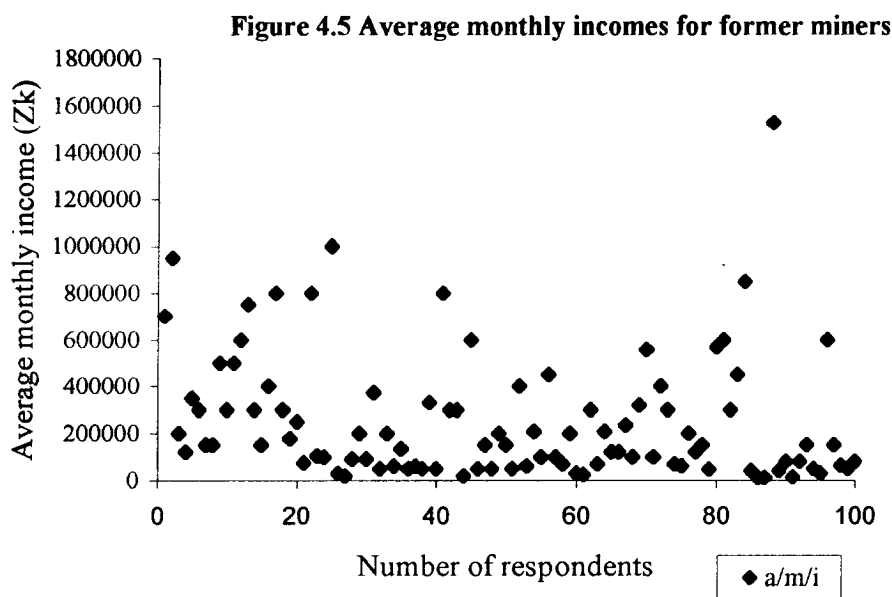
employment (14%), part-time work (26%), small businesses (57%), house rentals (3%) and assistance from children, relatives and friends (8%). The average monthly incomes for the families visited varied greatly from the lowest of Ten Zambian Kwacha (ZK 10,000.00) to ZK 1,525,000.00 as the highest. The mean was ZK 257,438.80 while the median and the mode were ZK 150,000.00 and ZK 300,000.00 respectively (the exchange rate at the beginning of April 2000 was ZK 2,892 per US \$1.00. The beginning of April is used because financial years for many companies, such as Zambia Railways, Kabwe Industrial Fabrics Company Limited and Zambia –China Mulungushi Textiles Joint Venture Limited to mention but a few begin in April every year).

With over one third (39%) of the respondents having ZK 100,000.00 or less the mean and the mode do not give a clear picture of the income situation of the former miners. The median is closer to the real picture of 59 respondents getting ZK 200,000.00 and less per month. A positive skewness of 1.923 implies that the majority of the respondents were below the mean income stated above.

As a result of the afore stated, 88 percent of the respondents indicated that they were not happy with their monthly incomes. This was so because the monthly incomes were too low to meet their monthly bills such as those for electricity, school fees let alone the ever rising bills for food. Another aspect to this problem was that the means of raising these incomes, such as small shops (*tuntembas*) and the sale of foodstuffs at the markets as well as the seasonal sale of ice blocks were quite unreliable and unpredictable. This is so because these businesses do easily change with changing consumer tastes.

Only 12 percent of the respondents indicated that they were happy with their current incomes since they were able to manage their families adequately.

Figure 4.5 clearly shows that the majority of the respondents had incomes below ZK 200,000.00. This scenario shows that many of the former miners are struggling to survive each day that passes by. Only 22 percent of these respondents were getting incomes above ZK 400,000.00.



Source: Calculated from field data
A/m/i stands for average monthly incomes of different respondents.

A Chi-squared test was used to test for significance in terms of the differences between those respondents who were participating in the informal sector and those who were not. The following were the results: χ^2 observed = 1.96, degrees of freedom = 1, level of significance = 0.05. With χ^2 Critical being 3.84, it meant that χ^2 observed was less than χ^2 critical. This result, therefore, shows that there was no significant difference

between the number of people who were participating in the informal sector and those who are not. This also means that hypothesis number three which states that; **the closure of Kabwe Mine has led former miners to significantly turn to informal sector activities as an alternative means of livelihood**, is rejected. The participation of spouses and children in the informal sector was not a factor since these participate even when the main breadwinner is still working.

4.6.2. Contribution of spouses to household incomes

Thirteen percent of the respondents indicated that their spouses were working and adding their incomes to the overall family income per month. On the other hand, 86 percent of the respondents said that their spouses were not working. Two percent of them were either single or widowed. Out of the 100 former miners randomly selected for this study, only two respondents were female. This meant that only two percent of the respondents were female. This information shows that mining employment in Kabwe was predominantly for the male folk. Even at the time of the closure of the mine in June 1994, out of 1,373 affected workers only 136 of them were females representing a percentage of only 11 percent. These data show a bias towards the male folk in employment provision by the mine employers. This information shows that the women folk in the mine townships are mostly housewives not involved in any form of gainful formal employment. This study, nevertheless, shows that even these “full time” housewives are involved in some income generating activities which contribute considerably to monthly household incomes as elaborated below.

This study shows that 62 percent of the spouses are involved in some income generating ventures such as selling of ice blocks and foodstuffs at home and the market. They are also involved in money lending and stone breaking. Even in homes where husbands were not involved in informal sector activities, wives are involved in these activities.

These results also show that women are increasingly playing an important role of breadwinners in situations where the men have failed to get jobs. The contribution of women to household income generation has helped in many cases to sustain the homes of the former miners. In some homes these results may even imply a reversal of some roles where men would remain home and look after the children while the women would be out acting as breadwinners.

4.7. Impact of the closure of the mine on some institutions and industries in Kabwe Urban

This study shows that a number of institutions and industries have been impacted negatively by the closure of the mine in 1994 in ways that are elaborated below. Among the notable ones were Kabwe Municipal Council, Zambia Railways Limited and Kabwe Milling Company.

4.7.1. Kabwe Municipal Council

The Kabwe Division of ZCCM, before its closure in 1994, made a lot of contributions towards the revenue of the council. These contributions were mainly through paying owners' rates for property built on council land and personal levy for its

employees. These contributions were in amounts of ZK 60 million [US \$ 20,746.89, US \$ equivalent while using the exchange rate of the first week of April 2000], (Financial Mail, 11-17, 2000) personal levy and ZK 102 million (US \$ 35,269.71) as owners' rates per annum. All this income was lost after the closure of the mine.⁴

The same sources indicated that the Council also used to benefit from ZCCM from time to time through donations and assistance in projects such as road maintenance, street lighting and garbage collection. The mine also used to service its townships in terms of water supply, street lighting and road maintenance. These are all now the responsibility of the local authority.

The Mayor, the Town Clerk, the Council Director of finance and the senior accountant all argued that the mine used to provide the largest revenue to the council because it was the largest property owner as well as the major employer before the retrenchments began in 1992 as elaborated elsewhere in this dissertation. This state of affairs meant that the mine paid more money to the council as owner's rates and personal levy for its workers than any other company in Kabwe urban. They further pointed out that other companies such as the Zambia Railways Limited, Zambia- China Mulungushi Textiles Joint Venture Limited and the Kabwe Industrial Fabrics Company are unable to make the monetary contribution to the Council as was the case with ZCCM. They further argued that as a result of the above, the local authority was experiencing problems of inadequate revenue. This has reduced its capacity to pay its workers and provide adequate social services to the residents of Kabwe town.

⁴ Interview with the Council Town Clerk on 15/01/99

4.7.2. Zambia Railways Limited

The railway company used to transport raw materials such as coal, sulphuric acid, explosives, lime, zinc ore, lead dross and sodium drums and finished products of lead and zinc, for the mine plant before its (the mine) closure. The railway firm used to raise large amounts of money from transporting these materials. During the 1992/93 financial year, the company got a total of ZK 263,220,953.00 equivalent to US \$ 496,643.31 as at the rate in the first week of April 1993 of ZK 530.00 per US \$1.00 (Weekly Post, 26/3/93). The total income for the financial year 1993/94 was ZK 540,598,785.00 equivalent to US \$ 762,480.66 at the rate of ZK 709.00 per US \$ 1.00 during the first week of May 1994 (Times of Zambia, 5/5/94).

The 1993 value of the income translated to the rate of the first week of April, 2000 (ZK 2,892.00 per US \$ 1.00) would be ZK 1,436,292,453.00 or US \$ 496,643.13 (Financial Mail, 11-17/4/2000). On the other hand, the 1994 income would be ZK 2,205,094,069.00 or US \$ 762,480.66. To date no company has filled in the gap left by ZCCM. This is because the industries currently operating in the town do not carry bulky goods. They also do not usually transport their goods using trains. This, therefore, shows how much income has been lost by the railway firm in Kabwe after the closure of the mine. ⁵

4.7.3. Kabwe Milling Company Limited

ZCCM provided a ready and large market for mealie meal from the Kabwe Milling Company Limited. This was so because it used to buy a lot of mealie meal from

the milling company. The mealie meal bought would later be supplied to ZCCM employees as part of the conditions of service.

On average, the milling company used to supply over 6,000 (25kg) bags of mealie meal per month to ZCCM during the year of 1992. By 1993 the average supply of mealie meal had dropped to about 3,000 (25kg) bags per month. The supply of mealie meal continued declining to about 1,000 bags in 1995, 800 bags in 1996, 300 bags in 1997 and 1998 before finally dropping down to 130 bags in May 2000. May 2000 was declared the last month for the supply of mealie meal to Kabwe ZCCM.⁶

At the July 2000 wholesale price of ZK 16,000.00 or US \$ 5.53 per 25 kilogram bag (being a bulk buyer ZCCM was sold mealie meal at the wholesale rate), and the 1992 rate of supply of mealie meal to Kabwe Mine, the milling company would have been making about ZK 96,000,000.00 (US \$ 33,195.02) per month had the mine not closed. Even the last supply of mealie meal would have been giving the company ZK 2,080,000.00 (US \$ 719.23) per month as at the July 2000 rate. This source of income for the milling company has been lost without any replacement. The continued supply of mealie meal to ZCCM at the 1992 rate would have helped the company to maintain or even expand its operations.

The supply of mealie meal dropped drastically after 1992 from an average of 6,000 (25kg) bags per month to about 3,000 (25kg) bags per month in 1993. This was because, as mentioned elsewhere in this dissertation, serious retrenchments at the mine began in 1992. While the people who used to be supplied with the mealie meal from

⁵ Interview with the Zambia Railways Head Marketing, Research and Rates on 17/07/00

⁶ Interview with the Marketing Officer at Kabwe Milling Company on 17/07/00

ZCCM may still be in Kabwe, it is not automatic that they will buy their mealie meal from Kabwe Milling Company. This is because Kabwe Milling is not the only milling company supplying mealie meal to the residents of Kabwe urban. Other mealie meal suppliers in the town include National Milling Company, Simba Milling Company and Ghirardi Milling Company.

4.7.4. The small scale trading sector

All the marketeers who were interviewed indicated that there was a change in their businesses since the closure of the mine. They all argued that business had become slow due to the reduced number of customers. They felt that this was so because many people had entered into the trading industry, which led to a reduction of money in circulation. Unfortunately, they could not quantify the actual change which they accrued in monetary terms. This was because almost all of them did not keep proper financial reports in order to monitor the monetary changes in their businesses.

Only ten percent of the respondents from the markets indicated that they had intentions of leaving Kabwe while the other 90 percent were not thinking of ever doing so. Out of the ten percent who intended leaving Kabwe, five percent wanted to go to Kabwe rural while the other five percent desired to go to the Copperbelt.

The supposedly poor economic status of Kabwe after the closure of the mine did not seem to encourage or influence people to move out of the town to other places which may be doing better than Kabwe at the moment. These people preferred staying in

Kabwe – a town which they are used to rather than become strangers in another town within Zambia.

4.8. Social, moral and psychological impacts of the closure of the mine on its former employees

Interviews were conducted with church leaders within and around the mine townships. A number of social, moral and psychological impacts were identified as presented below. However, the said church leaders did not want numbers of the people involved revealed because they felt that this would give away the identity of the specific churches and would also help some would be readers of this dissertation to identify some people referred to in this document.

4.8.1. Prostitution

The interviewed church leaders observed that this trade had increased involving both the youths and the adults. However, they indicated that for the sake of privacy they could not reveal the numbers of the actual cases involved in these problems. According to them, one identified form of prostitution involved girls moving with older men (some of whom were married) in order to supplement family incomes. Some of these youths were encouraged by parents to look for money to supplement family incomes.

The other form of prostitution involved married women because their husbands had run out of money. As for men, it was observed that they had mostly involved

themselves in cases of adultery when they just got their retirement packages but such activities declined with a reduction in finances.⁷

4.8.2. Divorces

A number of divorces were also recorded among the families of former miners. In one church about five divorces were recorded from among the former miners. Some of the affected members have even left the church. All the church leaders interviewed observed that marriages broke up at three stages, namely; (i) husbands left their houses and wives for other women after getting their packages; (ii) following disagreements experienced when sharing the retirement packages; and (iii) after the husbands ran out of money, wives tended to desert their homes. Even the ZCCM officials gave corroborative evidence of an increased record of unstable marriages.

4.8.3. Abuse of children

The interviewed church leaders also observed that there are cases of child abuse recorded among the former miners. According to them, the forms of child abuse include withdrawing children from schools and forcing them into street vending. There was also a case of a father asking for sexual favours from his daughter before giving her money for school requirements (as revealed by one of the interviewed church leaders).

⁷ The identity of which church leader said what was deliberately left out for the sake of confidentiality of the cases in question.

4.8.4. Crime

Another observation made by the same church leaders is that crime in form of thefts has increased with the closure of the mine. Thefts cover such areas as the homes of the thieves themselves (children stealing from their parents' homes) , other homes, churches and other places. Some of these cases after being handled by the police are also referred to the church leaders for counselling.

It was agreed by more than 80 percent of the interviewees that this increase in thefts has been caused by poverty which many homes of former miners have suffered after running out of money.

4.8.5. Other impacts

Through interviews with the church leaders, this study shows that many former miners are suffering from frustration and anger towards the *Zambian Government*, which they feel, has treated them unfairly by not avoiding the loss of their jobs. Some of them even indicated that God had no meaning in their lives since he never answered prayers to save them from their economic woes. This reasoning has even led to some of them stopping going to church because they feel that it is not helpful at all. The problems mentioned above have even led (in some few cases) to suicides and attempted suicides because some people feel that life is not worth living. The cases of suicide or attempted suicides involve both the youth and the adults.

4.8.6. Health problems (Lead Poisoning)

Mining is regarded as one of the “... occupations that are inherently dangerous” (Haag, 1978;362). Mining operations are almost all the time associated with the release of dust and other materials which are harmful to the health of human beings. In view of the afore said, Haag, (1978; 362) argues that “ dust diseases, cancer linked to vinyl chloride, dermatitis, lead poisoning, and industrial accidents are some of the underlying causes of deaths of workers”.

Dust poisoning produces different types of diseases such as histoplasmosis, pneumoconiosis and silicosis. Lead poisoning is also associated with dust poisoning which contains lead dust or fumes. All these dust diseases affect the alimentary canal, the blood stream, the brain/ spinal system and the skin of human beings (Eastman, 1971; Haag, 1978). Among some of the signs of poisoning are fever, weakness, chest pains, cough, breathing difficulties, loss of appetite, abdominal problems, muscular weakness, tremor, joint pains, fatigue, anemia, gradual loss of weight and encephalitis [meningitis] (Eastman, 1971; Haag, 1978).

This study revealed that in realising the dangers associated with mining operations, the company [ZCCM] used to conduct regular medical checkups for its employees. This was meant to monitor the lead levels in the bodies of the employees so that those with higher lead levels in their bodies could be given some treatment to reduce such levels. This aspect of medical check ups was stopped soon after the closure of the mine. Nonetheless, these check ups continued for children aged 12 years and below. Quite a number of cases of lead poisoning were identified among the children. While lead poisoning could be through inhaling of lead dust or fumes or through the mouth, the

former miners argued that the parents could have transmitted the poison to their children through the blood stream before birth.

In view of the earlier stated signs of dust and or lead poisoning, the former miners argued that some of the deaths which were still taking place among them could be as a result of lead or dust poisoning. They argued further that these deaths could even be mistaken for HIV/AIDS related deaths because of the varied signs of dust and lead poisoning.

The biggest problem for the former miners is that having lost their means of livelihood, they are not able to afford the medical fees being charged even by the former mine hospital. Before the closure of the mine, the medical fees were highly subsidised by the mine employers. The company [ZCCM] tried to stop further cases of lead poisoning by covering residential plots with black soils in Chowa Township. This was meant to cover the lead-polluted soil. Unfortunately, this was not done for Kasanda Township to the west, which falls in the direction of the smoke from the plant (See Figure 3.1 for the location of the two townships). How much lead and dust poisoning exists among the residents of Kabwe Urban [both former miners and non-former miners] can only be ascertained by further research. Table 4.5 shows the number of deaths that have occurred among former miners and their spouses since the closure of the mine as recorded on 18th October 1999. Some of these deaths may or may not have been as a result of lead poisoning.

Table 4.5 shows that more men died compared to women. This was actually the view held by more than 90 percent of the respondents. A number of respondents argued that more men died due to depression after loss of employment and realising their failure

to adequately look after their families. These data show a growing problem of orphans among the families of the former miners and the population of Kabwe as a whole. Table 4.5 also shows that along some streets couples had actually died thereby leaving behind their children as double orphans. All together the township, had by 18th October 1999, lost four couples. This meant that four homes had lost both parents leaving behind the children as double orphans. All in all 24 deaths had been recorded in the township by the said date.

Table 4.5. Deaths of former miners and or their spouses (an example of Luangwa Township)

Street Name	Males	Females
Acacia	0	0
Begonia	1	1
Clarkia	0	0
Daisy	0	1
Erica	1	2 (Couple)
Foxglove	2	1 (Couple)
Godetia	0	0
Holly	1	0
Iris	1	2
Jasmine	0	0
Kochia	2	2 (Couple)
Lobelia	3	0
Mimosa	1	1 (Couple)
Nerina	1	1
Totals	13	11 (4 Couples)

Source: Field data obtained on 18th October 1999.

4.9. Summary

This chapter has shown that there have been migrations of former miners to other towns but that these movements have been insignificant. It has also shown that there was

no marked impact by the former miners on the growth of the squatter settlements and the informal sector in Kabwe urban. The information discussed above tallies with the findings on migrations by many authors as highlighted in Chapter Two. Writings like those of Iles and Tucker (1960), on England, and Popola and Subrahmarian (1975), on India show that most of the original in-migrants who move into towns are reluctant to move from towns of first residence to others. This is because most of them prefer to remain in towns familiar to them rather than become strangers in new towns. The results for Kabwe show that many of the former miners were unwilling to leave Kabwe.

Almost all the migration theorists agree that human movements are usually selective on the basis of age, sex and educational attainments (Trewartha, 1969). Their findings indicate that usually the younger and better-educated are more prone to movement than the older people and the less educated. According to this argument, the age and educational attainment worked against most of the former miners who were mostly old and without specialised training. These factors may have discouraged many of them from migrating to other towns.

This study has also shown that there was no marked growth in the squatter settlements after the closure of the mine. This is because many former miners have opted to either remain in their houses, or have moved to other townships within and outside Kabwe town other than go to the squatter settlements surrounding the former mine townships. This finding tallies in well with the findings of scholars like Sinclair (1978), and Simons (1979), which showed that squatter settlements grew as a result of continued rural-urban migration and not as a result of people who had left employment for one reason or another.

This chapter has also shown that the informal sector is elastic and can accommodate many participants. It has also shown that a wide variety of activities are conducted in the informal sector. However, it has also shown that the closure of the mine did not have a significant impact on the growth of the informal sector in Kabwe urban.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter is divided into two sections, namely; conclusions and recommendations. The section on conclusions highlights the major findings of the research while the section on recommendations brings out suggested solutions to problems identified in the course of the research.

5.2. Conclusions

This study aimed at assessing the impact of the closure of Kabwe Mine on the socio-economic transformation of Kabwe town. Both secondary and primary sources of data were used to analyse the impact of the closure of the mine on the social, cultural and economic characteristics of the town's population.

This study has shown that there were no marked changes in the population of the town from the time of the closure of the mine in 1994 to 1999 (the time when the study was conducted). The Central Statistics Office in Kabwe indicated that they had not noted any significant changes in the population. According to them the population of the town was expected to continue growing. Furthermore, the majority of the former miners interviewed (53%) indicated that they had no plans of ever leaving Kabwe Urban. This finding confirms the argument of CSO (Kabwe office) that the closure of the mine would not significantly reduce the population of Kabwe town.

Among the former miners who had vacated their houses, 36 percent were still in Kabwe urban while 21 percent had gone to the rural part of Kabwe District. This

indicates that 57 percent of the former miners were still living in Kabwe district. These findings show that most of the former miners are still living within the boundaries of Kabwe town thereby not affecting the population of the town negatively. A lot of mobility has taken place among the former miners but no serious out-migrations have resulted from the closure of the mine.

These findings [on the population movements] conform to the findings in other developing countries, such as those in South America and India which show that in-migrants into towns and cities are reluctant to leave their first towns of settlement. This phenomenon can also be found in some other areas of the developed countries as pointed out by Iles and Tucker (1960), concerning the former miners of West Cumberland in England who were reluctant to leave their area inspite of having lost their mine employment (Iles and Tucker, 1960; Flinn, 1968; Popola and Subrahmarian, 1975; Perham, 1976).

This study has also shown that, while there is evidence of some former miners moving into the surrounding squatter settlements, these movements have not influenced the further expansion of the said areas. These movements, instead, have led to the filling up of the gaps which had earlier existed within the established boundaries of these unplanned settlements. In fact, some of the former miners who have vacated their houses have moved to other former mine townships or any other townships within the town, thereby reducing the number of former miners moving into squatter settlements. Another aspect identified is that even the former miners who have not vacated their houses still maintain other houses in squatter settlements and other townships in Kabwe town.

Evidence of the existence of alternative sources of employment, such as Kabwe Power and Metal Limited, Kabwe Steel Distributors, National Milling Company Limited and Zambia-China Mulungushi Textiles Joint Venture Limited, after the closure of the mine has also been provided by this study. However, the employment opportunities offered by some of the major employers (less than 5,000 workers) in the town are very inadequate for a fast growing population like that of Kabwe. On the other hand, new employment opportunities have been coming up in the town such as the opening of the ginnery, the clothing factory and the cooking oil factory by the Zambia-China Mulungushi Textiles Joint-Venture Limited. Another cooking oil factory has been opened in the town (Times of Zambia 1/05/2000).

Nevertheless, inspite of these new employment opportunities coming up in the town, the former miners are unlikely to benefit from these opportunities because most of them are quickly approaching the Zambian retirement ages of 50 for women and 55 for men. This is so because the average age of the former miners interviewed is 47 years. This shows that most of the people who were working for the mine before it closed are well over 40 years of age thereby disadvantaging them in the area of looking for new employment.

Only 43 percent of the former miners have turned to informal sector activities as a means of raising family incomes. The majority (57%) of them have not done so because of the availability of other ways of raising family incomes such as circular employment, part-time work, salaries/wages of working spouses, house rentals, involvement of spouses in informal sector activities and also assistance (in form of money and material goods) from children, relatives and friends. Some of the informal sector activities the former

miners are involved in include the running of small shops at home (*tuntembas*), involvement in the transport industry (running buses), part-time engineering works, electrical and general works and the running of stalls at markets. On the whole, the former miners are having difficulties in meeting their daily needs.

The market masters (market supervisors employed by the council) do not have any records of how many former miners have obtained stalls in the surrounding markets. In view of the forestated, it is not easy to show how many former miners have entered into the small scale-trading sector of the town.

Nonetheless, the closure of the mine has had a significant negative economic influence on the town. This is because the closure of the mine has led to reduced revenue for, among others, the district council, the railway company and Kabwe Milling Company Limited in ways already discussed in this dissertation. Furthermore, other sectors of the town have also been affected negatively such as the purchasing power of the residents due to the loss of mine employment and the subsequent decline in family incomes of former miners. This is because of the meagreness of the incomes (between two and five million Zambian Kwacha) received by each former miner as retirement/retrenchment benefits.

Programmes introduced by the Zambian Government, such as the Future Search and many others, of trying to assist people who left employment in one way or another have not been helpful. This has been as a result of the fact that these programmes are optional and catering only for people who are interested in them. This means that those who are not interested or have not heard about these programmes have been left to fend for themselves.

Additionally, this study has shown that the former miners have been affected in many more ways such as through moral decay leading to the break down in social values of life and family ties apart from the economic effects. Furthermore, this study has also shown that the impact of dust and lead poisoning on the health of former miners may be greater than is alluded to.

5.3. Recommendations

The findings of this study show that the impact of closure of the Kabwe Mine on the population of Kabwe town and the growth of the squatter settlements has not been significant. This study has also shown that the entry of the former miners into the informal sector has not been significant. However, this study shows that the greatest (most significant) negative impact of the closure of the mine has been on the quality of life the former miners are leading which also has had an impact on the general economic life of the town. This study has also shown that the closure of the mine has had a significant negative influence on the operations of institutions such as the council, the railway company and the milling company which have already been mentioned in this dissertation. In view of the findings of this study the following recommendations are made: -

1. Serious efforts should be made by the government to alleviate the suffering of the former miners and others like them who have also lost employment by providing them with micro-financing facilities. These are meant to help them join the informal sector or the small-scale farming sector of the town. This is because employment opportunities which are available in the town can not cater for the growing population

of the town. An improvement in the economic welfare of the people concerned will in turn improve the economic life of the town.

2. Programmes such as the ‘ Future Search’ which were established by the government to take care of the former government workers should be extended to cover all the other people who have left employment in one way or another. New ways should be devised to widen the coverage of participants unlike the current loose coverage of involving only those people who are interested in the programmes. This method of getting participants leaves out many people who may seriously need such programmes but may not participate in them due to ignorance.
3. Kabwe Municipal Council should devise ways of collecting revenue from all the property owners in the town. This is because almost all the properties, previously owned by the ZCCM in Kabwe, have either been bought by individuals or by companies. Furthermore, the council should engage in commercial ventures to help them raise the necessary finances which would help them meet their obligations of providing social services to the residents of the town.
4. Kabwe Milling Company Limited should engage in a vigorous marketing strategy aimed at capturing a new and wider market not reached or covered before. The majority of the people who consumed the mealie meal from the company are still living in Kabwe urban and so the market has not shrunk but has just changed in outlook. The company may require to pack more and more of its mealie meal in small packets which some respondents indicated were popular among the residents.
5. The government should help the railway firm by reducing the taxes, such as the fuel levy, it pays to the government in order to reduce the company’s financial burden.

The government should also make a deliberate policy to discourage the transporting of bulky goods by road so that the railway company could have an increased clientele. This will increase the revenue of the company. Furthermore, the government should take a deliberate policy of encouraging new investment in the town even through the improvement of infrastructure such as roads.

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APPENDICES

Appendix I

Questionnaire for former miners (n=100)

INTRODUCTION

This questionnaire aims at obtaining information on various ways in which the former miners have reacted to the loss of employment due to the closure of the mine. The questionnaire has been divided into sections namely; personal information, employment situation, accommodation situation, aspects of migration, informal sector activities and other relevant details in order to determine particular aspects of the anticipated responses.

A. Personal Information

This section aims at obtaining information on the personal details of the respondents. Indicate your answers with a tick where alternatives are given. Where alternatives have not been provided write your answers in the spaces provided.

1. Sex: Male () Female ()
2. Age: _____
3. Marital Status: A. Single () B. Married ()
 C. Divorced () D. Widowed ()
4. Family Size: A. Number of children _____ B. Number of dependants _____
5. Level of education reached: _____

B. Employment Situation

This section is intended to obtain information on the employment situation of the respondents. Indicate with a tick the desired responses and where necessary give an explanation.

6. How long did you work for the mines before leaving employment? _____

7. What type of work were you involved in? _____

8. How did you leave employment:

(i) Voluntarily ()

(ii) retrenchment ()

(iii) retirement ()

(iv) other (specify) and explain

9. Have you found another job after the loss of mine employment?

Yes () No ()

If your answer to question 9 is 'yes' proceed to question 10. If it is 'No' go to question 13.

10. Who are your new employers? _____

11. Are you happier with your current job compared to your mine work?

Yes () No ()

12. Explain your answer to question 11

13. Do you have any intention of finding another job within the town?

Yes () No ()

14. Support your answer to question 13

15. What type of organisation would you want to work for? Small with less than 5 workers or large with 5 or more workers.

Small () Large () Not applicable if your answer to question 13 is no ()

16. Justify your answer to question 15 _____

C. Accommodation Situation

This section is intended to obtain information on the accommodation situation of the

Former miners. Indicate with a tick the desired responses.

17. Have you ever lived in another mine house apart from your current house?

Yes () No ()

If your answer to question 17 is 'yes' answer question 18. If your answer is 'no' go to question 21.

18. Where did you live before moving to your current house? _____

19. When did you move from your previous house? _____

20. Why did you move from your previous house?

21. Did you buy the house in which you are living?

Yes () No ()

If your answer to question 21 is 'yes' proceed to question 22. If it is 'No' go to question 26.

22. Do you have any intention of selling the house in future?

Yes () No ()

23. Defend your answer to question 22 _____

24. Do you intend putting the house on rent in future?

Yes () No ()

Part of it () Not applicable if your answer to question 22 is yes ()

25. Explain your answer to question 24

D. Migration

This section seeks to determine whether part or the whole of your family intends to migrate or has already migrated out of Kabwe Urban. Indicate your responses with a tick or an explanation where necessary.

26. Are you willing to look for employment in other towns which may have better employment opportunities than Kabwe?

Yes () No ()

If your answer to question 26 is 'yes' proceed to question 27. If it is 'No' go to question 29.

Yes () No ()

If your answer to question 21 is 'yes' proceed to question 22. If it is 'No' go to question 26.

22. Do you have any intention of selling the house in future?

Yes () No ()

23. Defend your answer to question 22 _____

24. Do you intend putting the house on rent in future?

Yes () No ()

Part of it () Not applicable if your answer to question 22 is yes ()

25. Explain your answer to question 24

D. Migration

This section seeks to determine whether part or the whole of your family intends to migrate or has already migrated out of Kabwe Urban. Indicate your responses with a tick or an explanation where necessary.

26. Are you willing to look for employment in other towns which may have better employment opportunities than Kabwe?

Yes () No ()

If your answer to question 26 is 'yes' proceed to question 27. If it is 'No' go to question 29.

27. Which town would you prefer to go to in search of employment? _____
28. Why have you chosen the town in question 25? _____
29. Are there any problems that you think would stop you from moving to another to
Town?
- Yes () No ()
- Specify _____

30. Have some members of your family left your home?
- Yes () No ()
- If the answer to question 30 is 'Yes' proceed to question 31. If it is 'No' go to
question 34.*
31. Which members of your family have left? _____
32. Where have these people gone to? _____
33. Why have they left your home? _____

34. Do you maintain another house or settlement apart from your current house?
- Yes () No ()
- If your answer to question 34 is 'Yes' go to question 35. If it is 'No' go to question
37.*
35. Where is this house or settlement located? _____
36. Who looks after this house or settlement in your absence? _____

37. Do you have any ties with your village?

Yes () No ()

If the answer to question 37 is 'Yes' go question 38. If it is 'No' question 39 is not applicable, therefore, proceed to question 40.

38. What is the reason for our answer to question 37? _____

39. How often do you visit your village? _____

E. Informal Sector Activities

This section aims at determining whether the respondents or other members of their family have become involved in Informal Sector Activities after the closure of the mine. Indicate with a tick or an explanation the desired responses.

40. Do you run any business or businesses as a family?.

Yes () No ()

If the answer to question 40 is 'Yes' proceed to question 41. If it is 'No' go to question 42.

41. Who controls these business ventures? _____

42. How does the family raise its:

(i) normal income _____

(ii) extra income _____

43. What is your average monthly income as a family? _____

44. Are you happy with your average monthly income?

Yes () No ()

45. Please explain your answer: _____

F. Other Information

This section aims at finding out as to whether other members of the family are involved in earning a living for the whole family. Indicate the desired responses with a tick or an explanation wherever necessary.

46. Is your spouse working?

Yes () No ()

If your answer to question 46 is 'Yes' proceed to question 47. If it is 'No' go to question 51.

47. What type of work is she/he involved in? _____

48. How many workers are employed by the organisation where your spouse is working? _____

49. What does the organisation deal in? _____

50. How long has the organisation been in operation? _____

51. Does your spouse engage in other money generating activities?

Yes () No ()

If the answer is 'Yes' proceed to question 52. If it is 'No' go to question 53.

52. What activities is your spouse engaging in?

53. What are the children doing currently?

Indicate the number of children in each appropriate category.

(i) = Too young for school ()

(ii) = Going to school ()

- (iii) = In tertiary education ()
- (iv) = Working ()
- (v) = Other () and specify _____
- _____

54. What are the dependants doing? Indicate number in appropriate categories.

- (i) = Too young for school ()
- (ii) = Going to school ()
- (iii) = In tertiary education ()
- (iv) = Working ()
- (v) = Other () and specify _____
- _____

Thank you very much for your co-operation.

Appendix II A

For non-miners resident in Mine Townships(n=20)

The following information concerning former miners not living in the mine townships will be sought from the non-miners living in mine townships.

- Have you bought the house in which you are living?
- Are you renting the house from a former miner or another person who could have bought the house from the former miner?
- Are you related to the former miner who lived in the house you are currently occupying?
- where has the former miner gone to?
 - (a) within Kabwe
 - (b) Outside Kabwe; (i) to other towns
 - (ii) to rural areas ?
- What is the former miner doing for his/her living?
- Do they come to Kabwe?
- If they do, how often ?
- For what reasons ?

Appendix IIB

Officials from various organisations(n=31)

ZCCM

- The conversation will aim at determining the number of miners who have retired, transferred to other ZCCM divisions and those who have been retrenched, and
- determining the number of housing stocks formerly owned by ZCCM Kabwe Division.

Others: - Kabwe Municipal Council, Central Statistic office - Kabwe, Kabwe

Chamber of Commerce, Pastors' Fellowship - Kabwe.

The interviews will be centred on determining whether there has been a marked growth in squatter settlements in Kabwe due to the closure of the mine.

- determining the changes, if any, in the population of Kabwe Urban since 1994.
- determining whether the economic life of the town has changed greatly since 1994.
- determining whether there has been an increase in social vices such as marital problems among the former miners.

Appendix III (n=20)

For Marketeers in Green Market, Kamanda Market, Old Kasanda Market and Njanji Market. Information sought will include personal information, area of residence, employment situation, informal sector activities, migration and the impact of the closure of the mine on commercial activities of the town.

A. Personal Information

1. Sex A. Male () B. Female ()
2. Age _____
3. Marital Status A. Single () B. Married () C. Divorced ()
D. Widowed () E. Seperated ()
4. Family Size A. Number of children_____ B. Number of dependants

B. Area of Residence

5. Where is your house located? A. Mine area () B. Non mine area ()
C. Squatter settlement ()
6. Do you own, rent, or use a relative's house? A. Own () B. Rent ()
C. For a relative ()
7. How long have you lived in your current area of residence? _____
8. Where did you live before you moved to the current area of residence? _____
9. Why did you move from your previous residential area?

C. Employment Situation

10. Have you worked before? A. Yes () B. No ()

If your answer to question to question 10 is "yes" answer question 11. If your answer is

"No" go to question 12.

11. Where have you worked before?

12. Why did you leave employment?

D. Informal Sector Activities

11. How did you start being a marketeer?

12. How long have you been a marketeer? _____

15. Was it easy to become a marketeer? A. Yes () B. No ()

16. Explain your answer in question 14.

17. Do you intend to continue as a marketeer? A. Yes () B. No ()

If your answer to question 17 is "yes" proceed to question 18. If it is no answer answer question 19.

APPENDIX IV

FORMULAE SHEET

Chi square test (for testing the hypotheses)

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Skewness

$$\text{Skewness} = \frac{\sum (X - \bar{X})^3}{n\sigma^3}$$

Mean

$$\bar{X} = \frac{\sum X}{n}$$

Median

- (i) The median for ungrouped data with an even number is found by finding the mean of the two middle values.
- (ii) For data with an odd number, the location of the median is found by using the formula below:

$$\left(\frac{n+1}{2} \right)$$

Mode

Frequently occurring number in an ungrouped data set.