CONTRIBUTION OF VOCATIONAL EDUCATION IN POVERTY REDUCTION IN MUFINDI DISTRICT, TANZANIA

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN RURAL DEVELOPMENT OF SOKOINE UNIVERSITY OF AGRICULTURE MOROGORO, TANZANIA.

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ABSTRACT

The study was conducted in Mufindi district, Iringa region, Tanzania to determine the contribution of vocational education in poverty reduction among Vocational Education and Training (VET) graduates. The study adopted a cross sectional design by using a questionnaire with both open and closed ended questions from a sample size of 120 respondents (60 women and 60 men) who have completed vocational training in the past three to ten years. Data analysis was done using the Statistical Package for Social Sciences (SPSS) in which Principal Component Analysis (PCA) was done to determine socio-economic status of the respondents' households. Key findings indicate that the majority (29.2%) of the respondents were engaged in tailoring activities followed by motor vehicle mechanics (20%). The mean income of VET graduates was Tshs. 102 775 per month with the minimum income of Tshs.18 000 and the maximum income of Tshs. 700 000 per month. Their mean income implies that the majority of the respondents earn income above the minimum government salary, which is Tshs. 80 000 per month. Results from the study also reveal that female VET graduates in Mufindi district earn less income compared to male graduates. The mean income of male graduates was found to be Tshs.119 216.67 while that of female was Tshs. 86 333.33. This is to say men earn 30.1% more than women. The difference was also found to be statistically significant at $p < 0.05$. However, there was no significant association between income and type of skill, duration of training and form of training ($p > 0.05$). Study findings also revealed that 20.8% of the respondents' households were poorest while 19.2% of them were better off. Major problems faced by respondents were inadequate capital

and high taxes charged for their enterprises. It was concluded that vocational education contributes a lot in poverty reduction among VET graduates in Mufindi district. Since capital was found to be the main constraint to VET graduates the study recommends that district councils and vocational training centres should help to link them with micro-financing institutions, which can provide them with credit facilities. If possible revolving loan funds should be established for the graduates and link with savings components. This will enable them acquire working capital easily and hence expand their enterprises.

DECLARATION

I. AGNES STEPHEN NZALI do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work, and has not been submitted for a higher degree in any other University.

Nzali — Nov 8, 2007

Agnes S. Nzali — Date

(M.A Rural Develpment)

The above declaration is confirmed by;

Nov 8, 2007

Dr. J.G. Lyimo-Macha — Date

(Supervisor)

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DEDICATION

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune-Deficiency Syndrome
FDCs	Folk Development Centres
GDP	Gross Domestic Product
GNP	Gross National Product
GTZ	Gesellchaftfuer Technische Zusammenarbeit
HIV	Human Immuno-deficiency Virus
IFAD	International Funds for Agricultural Development
ILO	International Labour Organization
IMR	Infant Mortality Rate
INCOMET	Incofin - Mufindi Education Trust
LDCs	Least Developed Countries
MDGs	Millennium Development Goals
NBS	National Bureau of Statistics
NHBS	National Household Budget Survey
NPES	National Poverty Eradication Strategy
NSGRP	National Strategy for Growth and Reduction of Poverty
PPP	Purchasing Power Parity
REPOA	Research for Poverty Alleviation
SMEs	Small and Medium Enterprises
SNAL	Sokoine National Agricultural Library
SPSS	Statistical Package for Social Science

SUA	Sokoine University of Agriculture
TAWLAE	Tanzania Women Leaders in Agriculture and Environment
TDHS	Tanzania Demographic and Health Survey
TEC	Tanzania Episcope Conference
UNDP	United Nations Development Programme
UNESCO	United Nations Education. Science and Culture organisation
UNICEF	United Nations Children's Education Fund
UPE	Universal Primary Education
URT	United Republic of Tanzania
VET	Vocational Education and Training
VETA	Vocational Education and Training Authority
VIP	Ventilated Improved Pits

CHAPTER ONE

INTRODUCTION

1.1 Background information

Poverty is inherently a rural phenomenon (NBS, 2000). This does not mean that only rural people are more likely to be poorer than their fellow in urban areas, but poverty is highly found in rural areas because the majority of the population live in these areas. The state of poverty is not evenly distributed all over the world. There are differences within geographical regions or populations. It is estimated that about 2.8 out of 6 billion people in the world live on less than US$ 2 a day, while 20% of them live on less than US$ 1 a day, 44% of these being in South Asia, followed by Sub Saharan Africa about 204 people and Latin America, Caribbean and North Africa, about 76 million people. In Tanzania surveys have shown that 50% of the population is poor and 36% live under very poor conditions (World Bank, 2003).

Kisusu (2003) also states that the estimate of the population who live in rural areas is about 70% of Asians, over 75% of Africans and 50% of Caribbeans. For Africa where the majority of its inhabitants live in rural areas, chronic and widespread poverty is a deafening characteristic than in urban areas (Maokola–Majogo, 2004). The Sub-Saharan Africa in particular, including Tanzania, most countries have a poor state of economies and deteriorating social conditions which make the region to be the least developed in the world, with about two-thirds of its population living in absolute poverty. It has also, been evidenced in Tanzania that, 60% of the rural population is poor compared to 39% of urban population (URT, 1998). World Bank indicators of poverty also show that in Tanzania, poverty is largely a rural

phenomenon as the majority of people live on less than 1 US$ per day (UNDP, 1995). According to reassessment of poverty based on 1991/92 National Household Budget Survey (NHBS) data and 2000/2001 NHBS data, basic needs poverty has increased by nine percent (NHBS, 2002).

Poverty is concerned with income, assets, health, life expectancy, diet, shelter, education, security, access to vital resources and other aspects of living standards (Mtatifikolo, 1999). According to World Bank (2001), the poor are the people who lack adequate food and shelter, education and health and have deprivations that keep them from leading a kind of life that everyone values. Moreover, they are often exposed to ill treatment by institutions of state and society and are powerless to influence key decisions affecting their lives. The majority of people in Africa have limited access to income resources especially women. They also, have less access to other economic and social services such as education, health care, security and other living standard aspects (Mtatifikolo, 1999). Poverty does not only mean lack of food, assets, malnutrition, diseases and illiteracy, but also powerlessness, isolation and vulnerability to irreversible direction of impoverishment (Rutasitara, 2002).

One of the factors contributing to poverty in Tanzania is lack of equal access to employable skills to enable the disadvantaged population engage in productive activities and increase their earnings. Vocational Education and Training (VET) policies promote equitable access to vocational training regardless to geographical location, physical disabilities and sex, so that even the vulnerable groups are able to contribute toward poverty reduction and hence its eradication (Ndunguru, 2002).

Vocational education has a vital role to play in poverty reduction through employment generation as well as economic development in a poor country like Tanzania. In the context of mass poverty in most developing countries, the critical role of vocational education is highly needed to improve productivity, income and equitable access to employment opportunities. Knowledge, skills and competencies of all men and women have become the cornerstone of personal growth and employability, enterprise competitiveness, and society's economic and social sustainability (ILO, 1997).

If vocational training is to address poverty, it must be part of poverty reduction agenda and strategically linked to other poverty reduction actions. The multidimensional nature of poverty, that the poor receive general education and vocational training in a range of social competencies. It also must have an explicit agenda of gender equality. This is due to the fact that gender biases and relations are rooted in cultural norms and values and reproduced and reinforced by most of training institutions in the country (Dejardin, 2001).

Based on these facts it is highly important to put emphasis in developing rural economies (World Bank, 2000). The war of poverty is critically a mutual dimensional issue. It requires that various disciplines and social institutions operate and work strategically and jointly in order to fight and win over poverty bondage (Kapinga, 2006).

1.2 Problem statement

Despite the efforts done by the government through VETA to provide vocational training for poverty reduction, there is no empirical information on how vocational training has contributed to poverty reduction among graduates. The number of graduates who are either self employed or employed in the formal sector has not been critically assessed to come up with empirical evidence. A particular striking feature of most poverty reduction strategies in Tanzania is that the role of vocational training in its wide variety of forms is largely absent (Mosha, 2000). This neglect is puzzling not only because of the extent of absolute poverty in the country, but also because it is widely accepted that vocational training is an essential instrument for poverty reduction, especially for those with no formal employment in our society (Bennell, 1998). Beside this, little attention has been given by VETA itself as well as other providers of vocational education to periodical assessment on the contribution of vocational training to poverty reduction. Little or no research has been undertaken on the economic contribution and relative impacts of this type of training although it is frequently asserted that vocational training is particularly beneficial for graduates from poverty reduction point of view (UNDP/ILO, 1997). This availability of hard evidence on vocational training outputs and impacts continues to be 'lamentable'. From this point of view it can therefore, be argued that the information on vocation training contribution to poverty reduction is not clear. This lack of empirical evidence has prompted the researcher to conduct this study with the aim of studying empirically on how such training contributes to poverty reduction among VET graduates.

1.3 Problem justification

Emphasis in provision of vocational training has now changed from job seekers to job creators. This is in line with the National Strategy for Growth and Reduction of Poverty (NSGRP) (URT, 2005a). Assessment of vocational training outcomes is important in determining whether the goals set have been achieved or not. It is helpful to planners and implementers in the rectification of the training programs and or strengthening them. There is also, lack of good quality comprehensive data about the provision of vocational training to the poor and the outputs and impacts of this training effort (Benell, 1998). There is a tendency to over or under-estimate the extent of self-employment among the poor in both the urban and rural informal sectors as well as the scope for improving productive independent economic activity based on vocational training skills. However, the fact remains that there is no evidence to empirically assert this idea (UNDP/ILO, 1997). Mbughuni (1994), said "... it is difficult to assess the impact of vocational training... as there are so few tracer studies which are gender sensitive". She also added that there is a reason to suggest that impact assessment should take into account not only economic benefits but also the social benefits of vocational training to graduates, other wise there is a danger of losing sight of the general contribution that it has made to poverty reduction within the country. In the light of the above it is therefore, necessary to study the contribution of vocational training to poverty reduction as one of the national goal so as to come up with empirical evidence on its contribution to poverty reduction. It will certainly reveal how far it is important to people's life standard than what is commonly asserted irrationally. Understanding its importance will contribute towards making efforts aimed at strengthening the training programs. This

will help to address issues related to increased technology and employment to graduates and hence poverty reduction.

This research is therefore, useful as it will come up with results, recommendations and conclusions which will be useful to planners, curriculum developers and implementers of vocational training programs such as VETA and the Ministry of Education and Vocational Training to be in a better position in determining their contribution to poverty reduction among graduates through vocational training.

1.4 Research Objectives

1.4.1 General objective

To determine the contribution of vocational education in poverty reduction among VET graduates.

1.4.2 Specific objectives

Specifically this study seeks to:

(i) identify vocational skills practiced by VET graduates;

(ii) determine income earned by VET graduates through vocational skills;

(iii) compare income between male and female VET graduates;

(iv) determine the association between income earned and vocational skills, form of training and training duration;

(v) examine house hold socio-economic status of VET graduates and

(iv) assess major constraints facing VET graduates in skills application

1.5 Research hypotheses

Ho: There is no significant association between skills practiced and level of income

H_1: There is a significant association between skills practiced and level of income.

Ho: There is no significant difference in income level between male and female VET graduates.

H_1: There is a significant difference in income level between male and female VET graduates.

Using chi-square and t- tests at 95% confidence interval will test hypotheses.

1.6 Conceptual framework

A conceptual framework was developed with the aim of meeting the information needs of the study objectives and to identify the variables for data collection. The dependent variable was poverty reduction.

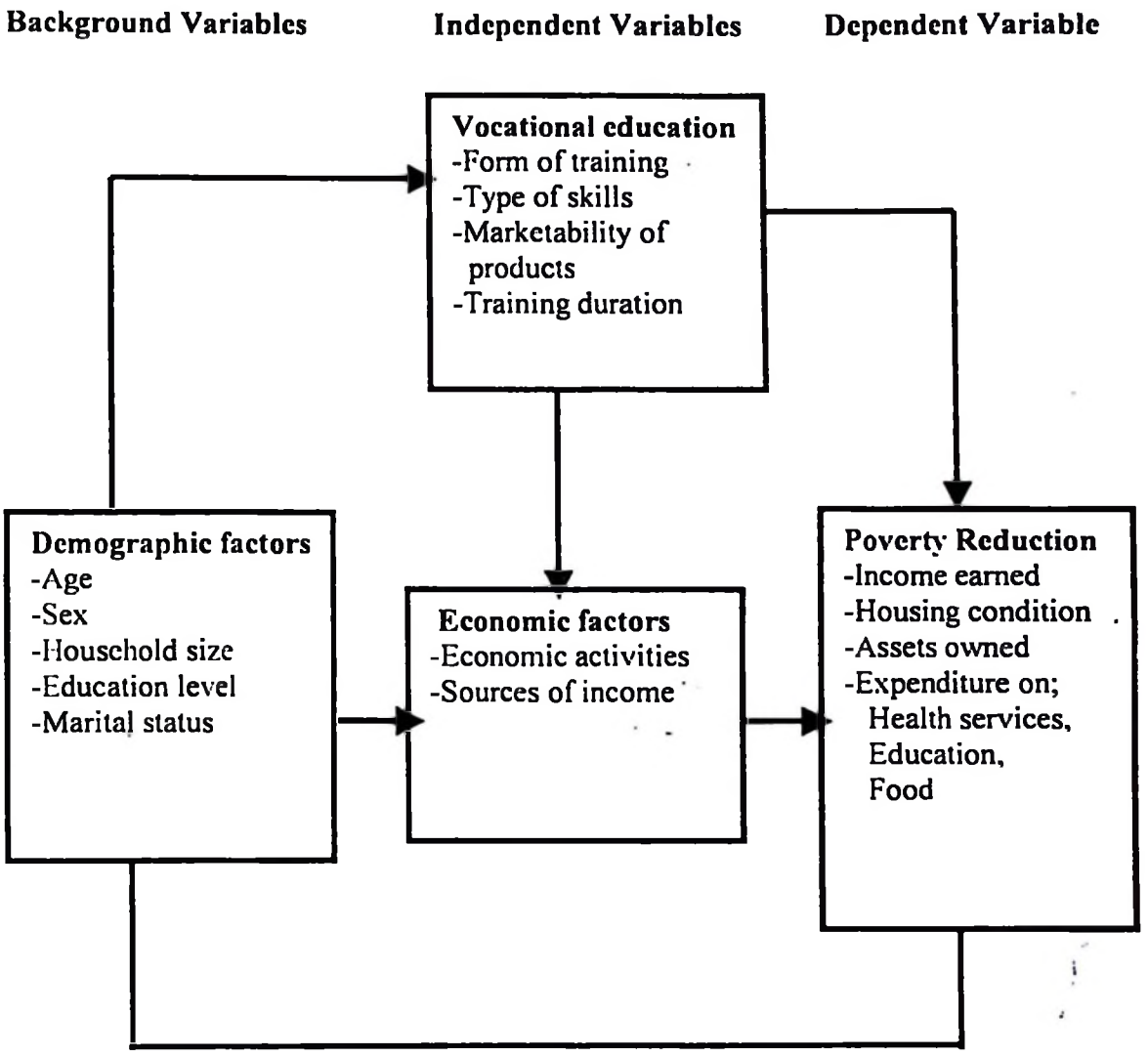

Figure 1: Conceptual framework

The indicators used for measuring poverty status were income earned per month, assets ownership. housing condition and expenditure on education. health and food. Income was determined by the income poverty line (by comparing with the minimum government salary scale, which is Tshs. 80 000 per month. The conceptual framework proposed in this study aimed at showing a set of independent variables, which influence the contribution of vocational education in poverty reduction as

shown in Figure 1. Demographic factors such as age, sex, household size and education level may have direct influence on the independent variables such as form of training, training duration, type of skills to be trained and also on economic activities performed. On the other hand, those independent variables have direct influence on the dependent variable i.e. poverty reduction, which is measured by indicators such as income, asset ownership and respondents expenditure on food, health and education. Additionally other indicators like sources of energy for cooking, water and toilet facilities were also used to measure respondents' socio-economic status.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

A Literature review is a discussion that shows some position or point of view about a certain study or research. It also sets the basis for discussion or analysis or contemplation of implications or anticipation of further research. Through the literature review one can distinguish what has been done from what needs to be done. Literature review can help the researcher and the reader understand the structure of the problem. It can also place the research in a historical context, showing that the researcher is familiar with the most recent innovations in the field. However, the researcher needs to determine the scope of the literature review and what types of literature are to be reviewed, and often this is determined by the nature of the study (Obenzinger, 2005).

In this chapter, a review of what is known about vocational education and poverty issues is discussed as it helps to orient and locate the research by defining its breadth and limitations. This chapter begins with definition of terms, the nature of poverty and its measurements and the state of poverty (worldwide to country wise). It then proceeds to discuss about vocational education in Tanzania, vocational education and poverty reduction, vocational education and employment and lastly vocational education and gender.

2. 2 Definition of terms

2.2.1 Poverty

Poverty is a complex and multi dimensional concept that can be defined in various ways (Kapinga, 2006). Poverty can simply be defined as low monetary value of produce and services whereas poverty reduction refers to lifting the poor out of poverty that is reducing people's inability to obtain basic needs or increase of monetary value of produce and services (Mtatifikolo, 1994). The United Republic of Tanzania (URT) (2000) defines poverty using income and non- income poverty human development attributes. Non- income poverty includes low level of education, survival rate, nutrition, clean water, social well being and vulnerability. On the other hand, income poverty means the level of income that a human being has. However, many researchers have attempted to define poverty in different ways based on their different purposes.

In the National Poverty Eradication Strategy (1998) and the Poverty Reduction Strategy Paper (2000) of the United Republic of Tanzania define poverty as the state of deprivation and prohibition of descent human life. This includes both inadequate income and deficiency in non- income human development like education, survival rate, nutritional status and clean water (URT, 2000). Mukaruka (1997) reported that poverty in Tanzania's context entails many variables. Apart from income, they also include access to transport and communication facilities and hence market. It is also manifested in areas like living in squalid surroundings, low technological utilization, high dependency ratios, and chronic unemployment and underemployment. These conditions are more so in rural areas when compared to urban areas.

Rutasitara (2002) defined poverty as a situation of lack of sufficient means or income for minimum level of living: food, shelter, clothing, job, a piece of land to till, vulnerability to changing economic and cultural conditions. Likewise Kayunze (1998) defined poverty as a deficiency in various sphere of human life, including nutrition, education, housing, clothing, health, water, sanitation, employment, expenditure, income and consumption. In this study poverty is defined as a situation in which a person is unable to live a decent life due to various factors such as insufficient income and consumption and lack of physical assets like housing and other household assets.

2.2.2 Vocational education

Vocational education is a kind of education that is directed towards occupation (skills oriented) mainly provided to standard seven and form four leavers who have no opportunity for further secondary school education (Mbwanji, 2002). Okoro (1994) defines vocational education as an education intended to prepare individuals for gainful employment. It provides the skills, knowledge and attitude that are required for employment in specific occupation or self-employment. Ndunguru (2003), also defines vocational education as the kind of education aimed at preparing the student for work in a commercial or technical field, the course content is mainly practical and enables graduates to enter the labour force. She adds that general education on the other hand prepares students for the next higher level of education and the courses are mainly academic and theoretical.

Usoro (2000) on his side defines vocational education as the total of those organized and purposeful experiences essential to the career development in skills, industrial or technical occupation. The programme enables an individual to learn about, explore and prepare for a trade. These occupations are found in any of the career clusters (manufacturing, construction, communication and transportation) and identifiable in the dictionary of occupations which functions in the designing, producing, processing, fabricating, assembling, testing, modifying, maintaining, servicing or repairing of any product or commodity.

Ojo and Vincent (2000) said, "Vocational education is many things to man, a visa to success, a passport to the unknown, a catalyst to great heights. Vocational education empowers, emboldens, refines, civilizes, enlightens, enriches and gives confidence to man. All educational systems in the world give priority to vocational education. Gone are the days when people who attended vocational education were looked upon as intellectual inferiors". This study has adopted the definition of vocational education from Mbwanji (2002) because it is more recent and also relates to the situation of our country concerning vocational education.

2.3 The nature of rural poverty

Poverty is mainly found in rural areas (World Bank, 1990). There are various reasons for this situation including less access to employment opportunities and inadequate social services that limit production. Most of the rural poor families live in either remote area, far from urban centres or on the edges of villages or far away from the main roads (Kiros, 1985). Rural development is therefore, aimed at achieving a

widely shared and dynamic rural economic growth and eradicating poverty and hence raised living standards of the rural population (URT, 2003). Poverty devastates families and communities in rural and poor nations. It causes instability, political unrest and conflicts. Today some 800 million people in poor countries are chronically hungry and malnourished and everyday children die in rural areas due to causes directly related to poverty (Annan, 2006).

2.3.1 Categories of poverty

The World Bank (1990) and Atkinson (1991) categorized poverty into two categories: absolute poverty and relative poverty. Absolute poverty has been defined as the inability to attain a specific minimum standard of living. The definition is focused on the absolute economic well being of the poor in isolation from the welfare distribution of the society. The minimum standard of living is referred to as a poverty line. There is an advantage of using poverty line to measure poverty as it enables to trace the changes in the welfare position of the poor and to measure the extent of poverty reduction. Relative poverty focuses on the economic well being of the poorest percentage in the population. The distribution of welfare of the entire society is taken into account. This approach sounds good as individuals relate each other at all levels of economic well being. The approach however, does not measure the extent of poverty reduction hence ignoring mobility into and out of poverty.

2.3.2 The concept of poverty

Poverty can be conceptualised and measured in different ways. The conventional economic approach focuses on the quantifiable poverty line based solely on

consumption and expenditure patterns (Narayan, 1997). Poverty line is an important measure of poverty in a country over time, although poverty goes beyond income levels. It includes respect status, access to health care, feeling of powerlessness, isolation within the community and hopelessness. Therefore many of its dimensions are often hidden. Once poverty line is specified, it is kept constant in real terms for meaningful comparison over time (Kayunze, 1998). According to Kisusu (2003) poverty line is referred to as minimal Purchasing Power Parity (PPP), which can enable a person to acquire basic needs in a day. The interpretation is that those living above and below poverty line are considered as non-poor and poor respectively.

2.3.3 Measurements of poverty

Principally there are two major ways of measuring poverty. These are by means of basic and social needs and monetarily defined poverty lines (NBS, 2000). The former way is done by setting minimum values of social indicators and people getting less of needs than the minimum amounts are said to be poor and those who get the minimum and above the amounts are considered to be non- poor. However, the method is very subjective as it relies highly on income poverty where as poverty has many other dimensions as well. In a country like Tanzania for instance, where the economy is very much informal, no one can ever be certain that the statistics it produces capture the wealth of a person correctly (Mosha, 2000). This is to say, social and basic needs differ among different people of different localities and culture. For example, how can one classify a Maasai pastoralist who may have no permanent house and no money but owns a large herd of let say, 800 cattle? Can be considered as she/he is

poor or non- poor? This is one of the limitations of using income poverty lines in classifying people as poor or non- poor.

However, the importance of poverty lines defined on monetary basis is in its tendency to avoid the difficulties of poverty measurement by social indicators. Tanzania does not have an official poverty line and a number of values have been proposed in the past (NBS, 2000). All the poverty lines so far proposed for Tanzania are absolute lines defining poverty in terms of measurement of income required to provide a defined level of living. The Food Poverty Line on one side reflects the cost of a basic food basket, while the Basic Needs Poverty Line provides for other non-food expenditure. Usually the income spent on food is derived from the community food expenditure behaviour (NBS, 2002).

2.4 The state of poverty

2.4.1 An overview of the world state of poverty

IFAD (1992) estimated that, more than one billion people in the world population lived below the poverty line, of which 939 million were in the rural areas. Asia had the highest number of these, some 633 million followed by 204 million in sub-Saharan Africa, about 76 million in Latin America and Caribbean and the rest in the near East and North Africa.

Recently, the World Bank (2000) has indicated that between 1987 and 1998 the population in developing countries living on less than 1US$ a day fell from 28% to 24%. However, there was a large regional variation in performance. According to the same report the number of that population had risen in some regions. In Asia, for

example, the number of the poor rose from 474 million to 522 million over a decade, although the share of people in poverty fell from 45% to 40%. In Latin America and the Caribbean the number of poor people rose by about 20%.

2.4.2 The situation of poverty in Tanzania

Tanzania is classified as one of the poorest countries in the world. This classification is based on a wide range of monetary indices like Gross Domestic Product (GDP) and Gross National Product (GNP), per capita income and living on less than 1 US$ a day (URT, 2003). In 2001 it was found that more than a third of the Tanzanian population could not satisfy their basic needs and nearly 18% could not afford to attain food requirements for a healthy living (URT, 2002). The prevalence of income poverty is still high in Tanzania. According to the Household Budget Survey of 2000/01 the proportion of the population below the national food poverty line is 18.7% and that below the national basic needs poverty line is 35.7% (URT, 2005b). The World Bank (2000) reported that about half of all Tanzanians are basically poor and one third are living in abject poverty, of which between 15 million and 18 million live below poverty line of US$ 0.65 a day. Of these nearly 12.5 million live in abject poverty, spending less than US$ 0.5 a day. Furthermore the number of people living in absolute poverty has increased because of population growth.

Several studies compared the poverty situation in Tanzanian with other developing countries under health status basis. For instance, health statistics indicate that the average life expectancy in Tanzania is 50.1 years for men and 52 years for women compared to 63.9 years and 68.1 years respectively for the world average life

expectancy (UNESCO, 2002; URT, 2006). Infant Mortality Rate (IMR) was higher (112 per 1 000) compared to 64 in other developing countries and only 7 in developed countries. About 578 per 100 000 pregnant women died in 2004/05 as a result of maternal complications compared to 95 deaths in other developing countries (Word Bank, 2000: Kisusu, 2003; TDH, 2005).

There is a big disparity between urban and rural poverty for both food and basic needs poverty. Poverty remains in rural areas where 87 percent of the poor population live, and is highest among households who depend on agriculture. Regional disparities in poverty status also merit special attention. These have been shown for instance in income poverty, human capabilities, survival and nutrition. Imbalances are also evident in data such as the distribution of population, natural resources, climatic conditions and current distribution of transport infrastructure and social infrastructure such as schools and health facilities (URT, 2005b). There are several causes for this situation. However, some of the major causes were found to be unequal economic distribution, unfavourable terms of trade and other transactions at international level and political issues. Other indirect causes include low level of education, gender relations, traditions, norms and culture and inadequate skills that hinder effective resource utilization and participation in income generating activities (URT, 1999). The challenge is for the policy makers to identify poorer regions for possible new investments such as infrastructure development and social services.

2.4.3 Efforts made by Tanzania to reduce poverty

Poverty reduction is the war that the country has to win so that the present and the future generation can lead more descent life (URT. 1998). One of the Millennium Development Goals (MDGs) is to eradicate poverty and hunger with the target of halving the proportion of those whose income is less than 1 US$ a day and those who suffer from hunger by 2015 (World Bank, 1990). Since independence in 1961. The Government of Tanzania has been facing three development problems namely, ignorance, diseases and poverty. The national efforts for tackling these problems were through medium and long term plans which resulted in a significant improvement in the per capita income, access to education, health and other social services in 1970s (URT. 2000). Unfortunately the improvement could not be sustained. It has been found that during the period of 1961 to 1967 there were no specific actions for poverty reduction.

Mtatifikolo (1999) argues that there are two approaches towards poverty reduction that have received attention on poverty issues. One is through economic growth and the other is through redistribution of resources. In the first approach it is assumed that the results of growth will trickle down to the poor through primary and secondary incomes and hence poverty reduction. In the later approach poverty is to be reduced through special programs, donor projects and redistribution of resources. He argues that the redistribution strategy is more practically effective. This is because disbursing income/resources to the poor and raising required resource to the non- poor seem to be less costly and more effective in poverty reduction.

Tanzania has been struggling to reduce poverty even before the Millennium Development Goals (MDGs) in 2000. These efforts are evidenced by the formulation of the National Poverty Eradication Strategy (NPES) in 1998, the Poverty Reduction Paper (PRP) in 2000 and Poverty Reduction Strategy Phase II in 2004 and very recently the National Strategy for Growth and Reduction of Poverty (NSGRP). The National Strategy for Growth and Reduction of Poverty is a second national organizing framework for putting the focus on poverty reduction high on the country's development agenda (URT, 2005a). The NSGRP is informed by the aspirations of Tanzania's Development Vision (Vision 2025) for high and shared growth, high quality livelihood, peace, stability and unity, good governance, high quality education and international competitiveness. It is committed to the Millennium Development Goals, as internationally agreed targets for reducing poverty, hunger, diseases, illiteracy, environmental degradation and discrimination against women by 2015. It strives to widen the space for country ownership and effective participation of civil society, private sector development and fruitful local and external partnerships in development and commitment to regional and other international initiatives for social and economic development (URT, 2005a). The Word Bank (1990) argues industrialized countries to assist developing countries like Tanzania to reduce poverty, and the United Nations Development Programme (UNDP) declared the year 1997 to 2006 to be the decade for poverty eradication.

2.5 Vocational education in Tanzania

2.5.1 Delivery of vocational education in Tanzania

Delivery of vocational education in Tanzania was partly through the secondary school system, which was diversified in 1970s with the intention of providing students with vocational skills alongside academic knowledge. Since the secondary school system could accommodate only a small portion of primary leavers, the government had to establish post-primary training centres, offering two – year courses in vocational skills. There were also a number of Folk Development Colleges (FDCs), offering shorter courses for rural people so that they can serve their communities (Mbughuni, 1994).

After independence in 1961, the Government of Tanzania inherited two trade schools operated by the Ministry of Education. These were Ifunda and Moshi Technical Schools. The schools were providing a three-year training programme for youths who had completed primary school education with a subsequent specialisation in the third year. The schools were initially established to fulfil the industrial skills, as there was a demand for skilled labour in industries (Moshi, 2005).

In 1969 a Vocational Training Centre was established at Chang'ombe in Dar es Salaam and was the first centre in Tanzania. The main trainees were soldiers and workers from the Ministry of Works. In 1974 the National Vocational Training Division was established within the Ministry of Labour and Manpower Development. This existed for twenty years and 18 training centres were established

in all regions except in Lindi and Kigoma. One Vocational Teachers Training College was established in Morogoro region (Mbwanji, 2004).

The Vocational Education and Training Act was enacted by the Parliament in 1994 to guide the Vocational Education and Training (VET) system in Tanzania. The Act established the Vocational Education and Training Authority (VETA) as an autonomous government agency to replace the previous National Vocational Training Division. VETA is charged with an overall responsibility of coordinating, regulating, providing and promoting vocational education and training in the country. The act further established the Vocational Education and Training Board, which is responsible for the performance of the function and management of the affairs of the Authority (Mbwanji, 2002).

VETA colleges offer a wide range of courses, many focused on modern job sector. The provision of vocational education in Tanzania is characterised by a mix of owners. These include company-based training, private operators, governmental providers as well as church owned centres. Many institutions are registered by VETA (Nyambo, 2002). For a large number of primary school leavers, vocational education seems to be a major alternative road to employment (Wegdewood, 2005). It is estimated that around 40 000 to 50 000 trainees had been registered yearly in Vocational education in Tanzania between 1998 and 2001. The number of graduates in 2002 was 54 072 of them, 24 726 were women. Similarly, vocational training centres registered and approved by VETA have increased from 330 in 1995 to 764 in

2004. It is the responsibility of VETA to ensure that the centres offer quality training (Mbwanji, 2004).

Recently, the government of Tanzania has been engaged in massive efforts in expanding enrolment in primary and secondary education. This results into massive influx of inadequate academically competent primary and secondary school leavers. VETA therefore, promotes traditional apprenticeship training system as one of the most promising strategy in addressing the problem (Ndunguru, 2003). Although traditional apprenticeships provide a low intensity and low cost training yet it is an important support system for those with no ability to pay high fees in vocational training centres. In Tanzania, traditional apprenticeship has the ability to provide opportunities to many young men and women in improving their market through self- employment. It provides marketable skills such as car repair, carpentry, tailoring, welding and masonry. It also provides basic support services for starting a business cheaply, flexibly and with a keen sense of emerging niches in fast changing markets (Mbwanji, 2002). Additionally it gives a broad exposure to small business realities and the opportunity to cultivate the social and economic networks needed to overcome obstacle to self- employment (Haan, 2001).

However, ILO (2004) found that, apprenticeship training in Tanzania is too unsophisticated, it is rudimentary and some of apprentices do not receive any purposeful training at all. In addition, a wide gap exists between types, quality and quantity of skills demanded and those supplied. It has also been criticised to be too rigid and not encouraging innovation because the training is unorganised and

finished products are often of low quality. Compared to Uganda the term apprentice implies to a very specific group of enterprise-based trainees. The environment is governed by regulations, including course content, testing and certification (Haan, 2001).

In Tanzania, like in many other countries, the provision of vocational training is regarded as one of the essential pre-conditions for the economic growth and development. Since independence, therefore, the government decided to direct some investments towards the development of vocational training in order to build local capacity needed for socio-economic development through the provision of the required skills and competencies (URT, 2005b). The commitment of the Government of Tanzania to vocational training, underpin the development of human resources with high level of skills required to improve the quality of its people's life and alleviate poverty through formal and non-formal employment. Vocational skills are needed for any economy to function properly. Production will be weakened and the country will lag behind economically and technologically if there are either no or poor skills. Imagine what would happen when there were no carpenters, electricians, plumbers, welders, tailors, auto electricians, and others? Obviously there would be low productivity and hence poor economy.

Therefore, vocational education is not only a vehicle for socio-economic development of the country, but also a strategy for successful development of the manpower required for the labour market (Kondo, 2003). Given its limited resource base, the government needs to nurture and culture partnership with private sector as

the local private sector seems to be the key in raising the level of demand in vocational education and training. Its growing role needs to be supported with incentives such as tax incentives for investment, teaching materials, and other direct costs (Nduguru, 2002).

2.6 Vocational education and poverty reduction

Some reports mention that over the years technical/vocational education has been seen as less dignifying, only suitable for dropouts in school and children of low-income groups, this is a wrong perception of vocational education. The trend has been that many boys whose parents are poor or fail to get admission to traditional secondary schools because of poor grades get enrolled in vocational centres (Haan, 2001).

Knowledge measured in terms of literacy and years of schooling. This is universally accepted as one of the basic elements of material well-being that is linked to other dimensions of poverty that are tangible, for example, nutrition, health, access to productive resources and assets and intangibles such as social networks, power and autonomy. Vulnerability to risks and uncertainties, and social exclusion are reinforced by deprivation in economic, social and political resources (Dejardin, 2001). Education is a major pre-requisite for developing human resource through transmission of basic knowledge and skills. It is a part of the solution to poverty, but not education only in formal academic sense. Teaching people to read and write is not enough to help them escape from poverty. An integrated approach is necessary. Applied educations through non- formal training including vocational education

should be used to enable people reduce poverty (UNESCO, 2000). Vocational education system needs to be channelled to suit the needs of the community. It needs to be sensitive to poverty issues and enforcing the community approach, strengthening traditional support skills and providing people with tools to help them fight against poverty. This will consequently make it flexible and survive its impact on poverty reduction.

Inadequacy in vocational education leads to difficult in meeting modern challenges (ILO, 2000). Moreover, VET institutions should focus on specific occupational training, to suit the young people of poor households who lack basic general education having left primary school and no opportunity for secondary education. The poor gain access where training programmes are located in areas with high poverty incidence (Dejardin, 2001). The Government has to cushion the effect of poverty on vulnerable groups by establishing vocational and technical schools. This type of education is essential for people well being as it provides skills to industrial workers, artisans and craftsmen (UNICEF, 2001). Skilled labour force contributes to the attainment of macroeconomic goals of society and can be considered as a magnet to new investment. Provision of vocational skills can strengthen export related industries that could in turn increase foreign exchange and lessen balance of payment problems. On the other hand, the shortage of vocational skills could act as a hindrance to economic development in the country (Moshi, 2005).

Nwagwu (2003) asserts that, the vocational skills learnt must lead to the production of skilled personnel who will be self reliant and enterprising. This calibre of

manpower is also required for the development of any nation. However, the questions that quickly come to mind are; to what extent are the vocational skills so acquired relevant for rebuilding our economy and for bringing prosperity to graduates of such schools? To what extent has the skills so acquired helped in improving the quality of lives of the graduates, thereby reducing the incidence of poverty among the graduates? Enabling young people to acquire decent skills is therefore a crucial way out of poverty trap. Vocational training not only develops technical and entrepreneurial skills but also elevates graduates' employability by imbuing them with skills necessary to earn a decent livelihood.

2.7 Vocational education and employment

2.7.1 The concept of self employment

Self employment refers to full- time involvement in one's occupation in mobilising inputs such as materials, finance, labour and other resources, organising production and services and eventually marketing the output (products and services) for purpose of generating income (Dejardin, 2001). Training for self employment therefore, is the process of preparing the trainees to be able to scan the environment and creatively respond to it through identifying viable business opportunities, organising resources to implement the opportunities and launching enterprises which would thrive and grow through making profit (ILO, 2006).

2.7.2 Vocational education and youth employment

Creating and sustaining a high level of employment is one of the most important factors in poverty eradication. This is why employment promotion should be of a

strategy of political concern. Employment promotion is not only a matter of one economic sector or one Ministry alone, but it has to evolve from many sectors of the economy and can only become a success if all stakeholders consider it as a national responsibility and pull on the same string (GTZ, 2000).

Survey findings have shown that unemployment is a serious problem among youth aged 14 to 34 years. Young women are more vulnerable to the problem than men (URT, 2005b). Kaale (2005) added that, the incidence of unemployment among the youth is relatively high. The youth constitute 60 % of all people who are unemployed. Unemployment is highest among the youth of 15 – 24 years, of which young women face a particularly serious unemployment problem. In 2000/01 it was found that, youth unemployment rate was about four times the adult unemployment rate and it was growing at double the rate for adult unemployment URT (2003).

According to NBS (2002), about 40.9% of all youth aged 10-24 years were unemployed of whom 18.82% were males and 22.08% females. The majority (29.70%) of the unemployed were found in urban areas while 18.82% were in rural areas. It is estimated that between 500 000 and 800 000 youth annually seek to enter the labour market. Due to the fact that the formal sector is creating fewer jobs it means that the Tanzanian economy is largely made of the informal sector. UNDP/ ILO (1997) reported that in urban areas informal sector activities account for about 65%. However, when compared with the formal sector, the informal sector though providing employment to many in urban areas, its contribution to the Gross Domestic Product (GDP) seems to be less. The private sector is now growing and in particular

small – scale economic activities are increasingly absorbing the new entrants into the labour market. As a result the private sector will win its importance and increasingly take the role of pacemaker, both as self-employment potential employer as well as the supplier of goods and services (Ndunguru, 2002).

The provision of the vocational skills is considered important for the promotion of the informal sector. Efforts on the introduction of entrepreneurship education in vocational training centres, the promotion of centres for informal sector promotion and initiation of various skills training programmes should be emphasized (ILO, 2000). The Vocational Education and Training Authority has highlighted its significant achievements over the past 10 years since it commenced, by changing its focus from the training of job-seekers to the preparing of job-creating trainees. As a result of that change, graduates are now establishing and running their own enterprises in the forms of car-repair workshops, hair dressing salons, carpentry, masonry and other skills. These have provided employment for numerous youngsters in different areas in the country (Tanzania) (GTZ. 2000).

VET policies need to evolve VET system, which is flexible and adaptable to changing demands of employment, and support the emerging sectors such as agro processing, hospitality and tourism. It is also challenged to produce graduates who are innovative and adaptable to changes in the world of work (UNESCO, 2000).

The fact that all markets have now been absorbed in one market (the global market), which premeditates removal of restrictions in the movements of goods and services, including labour force, calls for VET policies to ensure that VET graduates

demonstrate work competencies, which meet the global quality expectations. Such VET will enhance competitiveness in economic performance and promote employment to many Tanzanian youths who enter the labour force. At present formal vocational training systems reach only a tenth of potential youths in the employable population. However, most training packages tend to be distanced from the labour market demand, institutional bound, supply driven, long term and costly (Ndunguru, 2003).

2.8 Vocational education and gender

Women and men, in the same community, geographical area or income group, face similar disadvantages and risks that could lead them into poverty and social exclusion. However, norms about women and men roles, division of labour and entitlements lead further to gender inequalities and discrimination of women in vocational education and the labour market. These processes make women more vulnerable to falling into poverty (Dejardin, 2001). Parity between general and vocational education is achieved if the percentage of male and female enrolment in the two types of education are similar and the dropouts are minimised in both sexes. Limited access to vocational training is one of the major constraints for women wishing to enter the labour market, especially for those who do not qualify for admission to formal post-secondary training (Kitundu, 2004). The general situation revealed that the participation of girls in vocational education is generally low with some differences between the countries. This disparity between girls and boys is further intensified when only soft options of courses such as tailoring, dressmaking, and secretarial, catering and childcare are made available to girls. The under-

representation of girls in vocational training has also been the result of traditions in many parts of Africa (UNESCO, 2000). ILO (2004) argues that training systems in developing countries should meet the training needs in equitable manner. The continuing limited vocational training opportunities for women are, therefore, a constant hindrance for their technological development and diversification of income sources.

ILO (2005) findings showed an additional reason for the disparity is the duration it takes to complete male dominated skills which is longer than that of female dominated ones. This is seen in many places in Africa as a hindrance to women's access to male dominated skills as many women at that level prefer short-term training. However this reason can be linked to women's triple roles, women's low level of education, cultural related issues such as early marriages, discrimination against women and other gender stereotypes.

In Tanzania, girls' participation is only 30% with a higher concentration in "soft" skills, although some have taken advantage of increasing diversification to take up new skills. Girls form a large majority of trainees in tailoring (95%), catering (95%), secretarial and computer training (94%) office machine (68%). Skills with a very few or no girls at all include foundry, panel beating, truck driving, pattern making, shoe making, car mechanics, masonry, painting, and carpentry (Ndunguru, 2002). Researches on gender-related attitudes in vocational training of 1996 also indicated that, women represent 8.5% of the teaching staff in vocational training centres (UNESCO, 2000).

In formal training institutions such as VETA institutions, the courses do not single out sexes, but the behaviour of trainers and lack of strategies to promote mixed sex courses has made it seem to be like promoting males to register themselves in male dominated skills rather than in female dominated ones. In the Beijing +10 reports, the Ministry of Women Affairs (2000), pointed out one challenge specifically about VET that, most of the VET centres were basically established to carter for men and boys and the majority of women and girls have been left behind of the mainstream of vocational training. For instance, the list of skills offered at training centres run by the Tanzania Episcopal Conference (TEC), shows a bigger preference to boys than girls in terms of more employable skills. Boys are trained in car mechanics, carpentry, masonry, shoe making, welding and commercial subjects. Girls on the other hand were trained in typing, general knowledge, childcare, cookery and house keeping (Chonjo *et al.*, 1999).

This situation can also be linked to women's triple roles and other cultural related issues because as girls grow up they perform those roles in the household therefore the community sees that women must be trained in traditional female related skills to extend to their responsibilities in reproductive roles. In summary this chapter has presented various literatures that provide information on the importance of vocational education and how it is provided among youths in Tanzania and other places in the world. They also give information on the importance of vocational education to the community. However, none of them has given any empirical information on the contribution of vocational education on poverty reduction among VET graduates in Tanzania and hence opening the research gap of this study.

CHAPTER THREE

METHODOLOGY

3.1 Description of the study area

3.1.1 Location

The study was conducted in Mufindi District. Mufindi District is one of the seven districts in Iringa region. Other districts include Iringa Municipal, Iringa Rural, Kilolo, Njombe, Ludewa and Makete. The district is situated at the central part of Iringa region, which is on southwest highlands of the country, about 75km from Iringa town. Its administrative headquarter is located along the Dar es Salaam - Tunduma main road. The district borders Iringa Rural from the north, Njombe from the south, Morogoro Region from the east and Mbeya Region from the west. The total area of the district is 7 122km^2 of which 6766km2 is cultivatable while the rest is non- cultivatable. The population density is 32 people per square kilometre. The total forest area covers 144 028 ha of which 47 338ha consist of planted trees mainly pines, 80 000 ha miombo woodland and 16 690 ha being under catchments (URT, 2001). The climate varies with two distinct altitudes: The Eastern Highland zones lies between 1700m and 2200m above sea level has a mean rainfall of 1200mm – 1600mm per year and temperature ranging between 13.2^{0}C to 18.4^{0}C. The plateau zone, which lies between 1600m – 2000m above sea level receives an average rainfall of 950mm per annum and temperature ranging from 19.3^{0}C to 20^0 C. According to the Population and Housing Census of 2002, the total population of the district is 282 077 of which 148 915 are women and the rest are men (Appendix 1).

The district has five administrative divisions, 28 wards and 132 villages (URT, 2002).

3.1.2 Agricultural activities

About 90% of the population live in rural areas and depend on agricultural activities. Food crops grown in the district include maize, finger millet, sweet potatoes, round potatoes, beans, wheat and some fruits such as peaches, pears, plums and guavas. Cash crops include coffee, tea, sunflower and pyrethrum.

Animals kept in the district include cattle, goats, sheep, pigs, chickens, rabbits, and some few ducks. Livestock facilities found in the district include 40 dips, 7 abattoirs, 8 crushers and 7 hide and skin sheds (URT, 2001).

3.1.3 Socio-economic activities and social services

There are some industries within the district, which provide employment and casual labour to the people in the district. This helps to improve their income status and hence raising their life standards. The industries found in Mufindi district include tea processing, pyrethrum processing mill, paper mill, saw mills and brick making.

Social services include education and health services. There are about 138 primary schools, 16 secondary schools and about 7 vocational training centres. Health services include 3 hospitals, 5 health centres and 45 dispensaries. Other infrastructure includes trunk road (178km), Regional roads (210km) District road (360km), feeder roads (475km) and one airstrip (URT, 2001)

3.2 Research design

The study used a cross sectional study design in which data collection was done at one point in time. This study design has been recommended because it is economical to conduct in terms of time and it allows comparison of the variables of interest (Babbie, 1990). Data collected were used for the purposes of simple statistical description and interpretation as well as determination of the relationship between different variables.

3.3 Sampling procedure

Three sampling procedures were used to obtain the required sample. These include purposive sampling, simple random sampling and stratified sampling. Purposive sampling was used to get the VET graduates. This is because it is an appropriate approach when the sample elements are to fulfil a certain criterion or possess certain characteristics under study (Mbilinyi, 1992). Graduates were then stratified into two groups of males and females then the respondents in each group were randomly selected.

3.3.1 Sample population and size

The study involved a representative sample of vocational education graduates from various training centres with different skills who have graduated in the past 3 – 5 years. According to the formula for calculating sample size, the sample size was supposed to be 400 (see Appendix 2) but 30 percent of this sample size (120) was interviewed. The choice of this sample was dictated by the financial resource limitations and the need to ensure sufficient number for meaningful analysis. From

the sample, 60 VET graduates (50%), such that, 30 females and 30 males were sampled in Mafinga town by random sampling and the remaining 60 respondents (50%) were selected randomly from other selected villages in the district including Changarawe, Kinyanambo, Ndolezi, Mjimwema and Luganga. This is because Mafinga town is a business centre in the district and is rapidly growing with high concentration of small and medium scale industries such as wood and timber industries, pole treatment plants, tea packing, oil pressing, tiles manufacturing, brick making, tailoring and metal work, car repair and furniture production. It was therefore expected that a good number of graduates would be found in the town doing those income-generating activities

3.4 Data collection

3.4.1 Primary data

A pre tested structured questionnaire was used to collect primary data from respondents and it included both open and closed ended questions (Appendix 3). Discussions and clarifications of issues, which were not clear, were also employed. Informal conversation was employed for the purpose of maintaining conducive atmosphere in responding to some questions. Personal observation was used in this exercise, especially in the assessment of socio-economic status of the respondents such as asset possession and housing conditions for confirmation.

3.4.2 Secondary data

Various information concerning poverty alleviation, records and other references were obtained from VETA Southern Zone office, Sokoine National Agricultural

Library (SNAL), Internet, evaluation reports and documentary reviews of surveyed research on Poverty alleviation (REPOA). Information concerning the description of the study area was obtained from Mufindi District Council office.

3.4.3 Data processing and analysis

Statistical Package for Social Sciences (SPSS) computer programme, version 11.5 was employed in data processing. This included coding, editing and data entry. Data cleaning was done manually at the research site. Data analysis was done at SUA Computer Centre using SPSS programme to make realistic inferences on the study sample. In this programme descriptive statistics like frequencies, percentages and means were described at univariate level. A chi-square test was employed to test associations between skills opted for and income of respondents, duration of training and income and form of training and income. Moreover a t-test was used to find out if there was significant difference between incomes earned by male and female VET graduates. In both chi-square test and t- test, the null hypothesis was accepted if the P value was found to be greater than 0.05. Conversely, the alternative hypothesis was confirmed if the P value was found to be less than 0.05 (Kothari, 2004). The Principal Component Analysis (PCA) was employed to generate quintiles and hence household socio-economic status. PCA is a form of factor analysis that uses a technique of extracting from a large number of variables to few linear combinations of variables that best capture common information.

3.5 Limitations of the research

(a) Results for this study should be taken in caution because most respondents did not keep record of their monthly income and expenditure. Therefore, some of the data might be just estimations as the respondents were requested to give their average income and expenditure per month.

(b) Reluctance of some respondents to provide information during data collection, some respondents were not willing to give answers to some questions particularly on income and expenditure for fear that they will miss assistance if they mention a large amount of income and that the District Council will raise the taxes for their businesses.

(c) Transport especially to remote areas was another limitation during data collection. It was very difficult to reach the respondents in remote areas as it was a rain season. To overcome this, bicycles were hired to enable the researcher and research assistants to reach the areas. This problem prolonged the data collection activity.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Overview

In this chapter, the results of the study are presented and discussed in line with the study objectives and hypotheses. The main purpose of this chapter is to provide detailed information on the contribution of vocational education in poverty reduction in the study area. The chapter is divided into six sections. Section one describes the basic demographic characteristics of respondents, while section two presents vocational skills practiced by respondents. Section three presents the major sources of income and amount of income earned by respondents per month. It also compares income earned by male and female VET graduates. Expenditure on education, food and energy used for cooking are discussed in section four. Section five presents the respondents' household social economic status. Lastly, section six describes the constraints faced by respondents in their skill application.

4.2 Demographic characteristics of respondents

The demographic characteristics of the respondents are presented in Table 1 and Table 2. The parameters for demographic characteristics include variables such as age, marital status, education level, household size and number of dependants. Parameters such as age, marital status and education level are presented by sex.

4.2.1 Age

The age distribution of respondents is presented in five-year age category hence facilitating comparison between this study and other studies. The minimum age was

16 years while the maximum age was 39 years. The mean age was 27.9 years. Results in Table 1 reveal that the majority (32.5%) of the respondents were in the 30 – 34 years of age group followed by those in age group of 20 – 24 years. Very few (about six percent) respondents were in the 15 – 19 years age group. The implication of this age structure is that, most of the respondents are in their active labour force stage of life. Despite the deteriorating life expectancy in Tanzania and sub-Saharan countries in general, this age structure is generally perceived as energetic and can easily adopt new technologies. Sex wise, there was a slightly higher proportion for males in the early ages and the difference was increasing as the age increases. This is due to the fact that as females enter adulthood stage they become highly involved in the women's triple roles such as productive, reproductive and community managing roles. These roles prevent them from being fully engaged in vocational activities at a certain stage of age. Wedgewood (2005) revealed in her study that among the factors influencing women in full participation in income generating activities are economic, cultural and social factors with reference to community members' attitudes towards women's triple roles in most developing countries.

4.2.2 Education level

The provision of quality education is central to achieving socio-economic development in any country. It increases the product capability of a nation by building capacity of its people to understand, manage and harness the environment through increased knowledge and adoption of science and technology in the process of production. It is also a tool for achieving social change and modernization. The major education levels found in Tanzania are primary, secondary and tertiary.

Primary education aims at providing the basic elementary education, while secondary education is provided at the ordinary and advanced levels. Tertiary education is provided at vocational training, technical colleges and universities (TDHS, 1997).

During the survey, information on education attainment was collected from every respondent in terms of the highest level of education reached. It was observed in this study that all respondents had been to school except one respondent. The high proportion of respondents who had been to school can be explained by high enrolment rate as described by the National Policy of Universal Primary Education (UPE) of 1975 that gave every child the right to free primary education (TDHS, 1996).

In the case of level of education, the results reveal that the majority (57.7%) of respondents completed primary education followed by almost one third (32.5%) of the respondents who had ordinary level secondary education. Few of the respondents had completed standard four, form two and form six as it is shown in Table 1. Sex wise, there were small differences in percentages between boys and girls in primary and secondary education. Females slightly dominated the primary education while the opposite was true for males. This distribution can be due to several causes including gender relations in the community. It can also be due to the poor performance of females in primary education, which limits them to enter secondary education as a result of gender roles in the household. Other factors include early marriages, pregnancies, stereotypes and cultural practices such as forced marriages and discrimination against girls. The 2002 Population and Housing Census also

revealed that, the number of men aged 25 years and over who completed lower secondary education was bout two times (6.4%) that of women (3.7%) (URT, 2006).

4.2.3 Marital status

As presented in Table 1, this study revealed that the majority (29.2%) of the males who were engaged in vocational skill activities were married compared to women (13.3%). This implies that married women either had no time for those activities or this can be due to economic, cultural and social factors such as low income, gender relations, and traditions. Herzog (2001) found that, women in Tanzania limited their ambitions to business activities that are flexible to accommodate family roles.

Table 1: Demographic characteristics of respondents by sex

Category	Percent (N=120)		
	Males	Females	Total
Age			
15 - 19	3.3	3.3	6.6
20 - 24	8.3	14.2	22.5
25 – 29	10.8	15	25.8
30 – 34	19.2	13.3	32.5
35 – 39	8.3	4.2	12.5
Total	50	50	100.0
Education			
Non formal	0	0.8	0.8
Standard four	0.8	2.5	3.3
Standard seven	27.5	30	57.5
Form two	1.6	2.5	4.1
Form four	19.3	13.3	32.5
Form six	0.8	0.8	1.6
Total	50	50	100.0
Marital status			
Single	20.8	29.2	50
Married	29.2	13.3	42.6
Divorced	0	3.3	3.3
Widow	0	4.2	4.2
Total	50	50	100.0

Furthermore, they seem to limit their ambitions because they could see almost no chance of progression to those activities, as they could not balance business and family roles. It was also found that, there were few (3.3%) divorced and widow (4.2%) females while the two categories were not found in the male group.

The results do not differ much from that of 2002 Population and Housing Census, which observed that the number of women who were divorced was two times that of men. It was also found that 1.5% of men were widows while that of women was 3.5%. The reasons for differences between the two sexes are: First in many societies wives are generally younger than their husbands, second women on the average tend to live longer than men and third widowed men have greater chance of remarriage than widowed women (URT, 2006).

4.2.4 Household size of respondents

The household sizes of most (63.3%) respondents ranged from one to three persons. Only one (0.8%) household had seven and above persons and the rest (35.8%) had between four and six persons. The overall mean household size has been found to be 3.2 persons as it is displayed in Table 2. The average household size of the study area is less than the national household size of 2002, which was found to be 5.2 persons (URT, 2006). This could be due to the family planning education, which is now provided to many families in our country (Tanzania) in order to reduce population growth rate. This structure may reflect two important aspects. On one side the smaller the family reflects the more the ability to supply the basic needs to the members of the family including food, education, health services and other social

services. On the other hand small families may not be able to provide sufficient labour for different activities such as food production and other activities. However, this depends largely on the composition of the family.

4.2.5 Number of dependants

Respondents were requested to provide information on the number of dependants who reside in their households. It was found that the majority (71.7%) of them have between zero and two dependants whereas only few (1.6%) of them have more than six dependants as it is shown in Table 2. However, the average number of dependants was found to be two persons per respondent.

Table 2: Distribution of respondents' household size and number of dependants

Category	Frequency	Percent
Household size		
1 - 3	76	63.3
4 – 6	43	35.8
7 – 9	1	0.8
Total	**120**	**100**
Number of dependants		
0 – 2	86	71.7
3 – 5	32	26.7
6 – 9	2	1.6
Total	**120**	**100.0**

According to the 2002 Population and Housing Census, this average is somewhat higher (two times more) than the total dependence ratio of Tanzania where 100 persons have to support 93 persons. This means that one person has to support about one person (URT, 2006). The main reason for this higher dependency ratio in the study area might be the incurable killer disease HIV/AIDS and also because Iringa

region is one of the most affected regions by the disease in the country (TDHS, 2003).

Barrie (2004) pointed that in Tanzania, despite that there are no proper statistics with respect to number of HIV/AIDS orphans, it was estimated that by 2005 there should be two million HIV/AIDS orphaned children. This provides an indication that there has been an increasing in death toll of parents leading to increased number of orphaned children in Tanzania and hence increased dependency ratio. Therefore, tremendous increasing number of orphans should not be neglected by any means, but it requires more efforts to rescue the future generation.

4.3 Vocational skills practiced by respondents

The first objective of this study was to identify vocational skills practiced by respondents. The information obtained from this study as indicated in Table 3 and Figure 2 show that, the majority (29.2%) of the respondents were engaged in tailoring followed by motor vehicle mechanics (20%). Very few (1.7%) respondents were engaged in domestic science activities.

Sex wise, most (29 out of 35) of female graduates were found in tailoring and the rest of them were engaged in secretarial and catering activities, which are called soft skills. Very few of them were engaged in the other skills. A good number of male graduates (18 out of 24) were engaged in motor vehicle mechanics compared to female graduates who were only six. The rest of males were engaged in other skills

such as carpentry, welding and fabrication, masonry and electrical installation fields. This is due to the fact that the community regards them as male dominated skills.

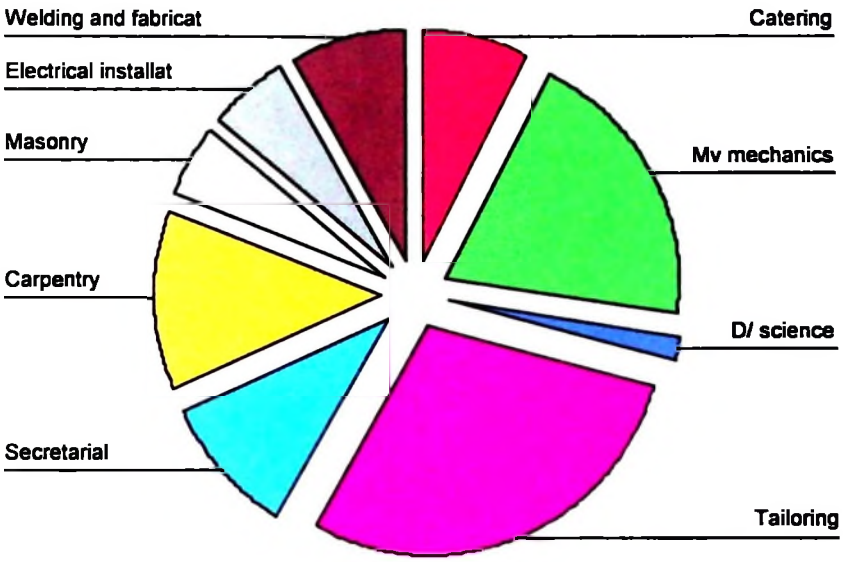

Figure 2: Vocational skills practiced by respondents

Rescarches on gender-related attitudes also indicate that the absence of women from those traditional "male" skills cannot simply be overcome by making such fields available for girls in technical schools and vocational training centres. There is a need for creating awareness among community members on the existing gap between men and women concerning vocational education in the study area. Other studies have shown that, by the onset of adolescence, girls are already biased against technical careers (ILO, 2000). Another reason for the situation was mentioned to be the community mindset that women are bound to household related activities based

on traditions and norms which tend to distribute different tasks between males and females making few women on male dominated skills (Wedgewood, 2005).

The ILO (2005) in Vocational Skill Project Study found that 45% of parents in Kenya preferred that females who want to enter male dominated skills should not learn carpentry, masonry, welding and motor vehicle mechanics because they require too much energy, which might destroy their physical beauty. Lack of physical strength is often cited as one of the reasons why women should not take male dominated skills. Yet some studies have shown that most women working in these fields do not consider physical strength to be the factor in the exercise of their occupations.

Vaillancourt (2004), pointed out that, the weaker sex is not as weak as one may think. Furthermore, he argued that many traditional female occupations require more strength than male fields. For example, early childhood educators regularly have to pick up wriggling children weighing up to 20kg.

Table 3: Distribution of vocational skills by sex

Skill	Frequency (N = 120)		
	Male	Female	Total
Catering	2	7	9
Motor vehicle Mechanics	18	6	24
Domestic science	0	2	2
Tailoring	6	29	35
Secretarial	2	10	13
Carpentry	14	1	15
Masonry	5	1	6
Electrical installation	4	3	7
Welding and fabrication	9	1	10
Total	60	60	120

Moreover some studies have found that, generally females are more attracted to female dominated skills than to male dominated ones due to social and cultural factors. Gender roles and practices are socially prescribed and strictly enforced in the social upbringing of girls. These include the traditional gender stereotype in reproductive and productive roles of women. It is also, believed that only the ugly, old fashioned and masculine-featured illiterate women should perform the tasks required for men. Consequently cultural beliefs and attitudes act as a barrier to limiting women access to male dominated skills. Likewise women are worried that if they choose male dominated skills, customers will not purchase their products (ILO, 2004).

4.3.1 Respondent's reasons for choosing skills opted for

Respondents were asked to give reasons as to why they decided to study the practiced vocational skills. Information on reasons for choosing skills is important in designing vocational training programmes to meet the demand of the trainees. Reasons such as marketability of the skill is very helpful to planners, trainers and the owners of the training centres to design and provide relevant skills to enable the graduates either employ themselves or be employed by various companies, organisations, industries and other places. It was found that the majority (55.8%) of respondents chose the skills because they were marketable, followed by those who chose the skills because they were simple (26.7%). Only few (5.8%) respondents said that they chose the skills because many people liked them (Table 4). This shows that the graduates required good orientation before deciding to join a certain skill.

Vaillancourt (2004) found that in many cases vocational education trainees receive counselling and career guidance from parents, guardians, counsellors and relatives who have little knowledge of the skills. Additionally vocational education instructors seem to lack confidence to provide career guidance because most of them attained low levels of such education.

Table 4: Distribution of respondents by reasons for choosing skills opted for

Reason	Frequency	Percent
It is marketable	67	55.8
It is simple	32	26.7
It is cheap	14	11.7
Many people like it	7	5.8
Total	120	100.0

4.3.2 Respondent's reasons for choosing specific skills

Information on the reasons for choosing specific skills is very important as it can help the training programme designers for VETA and other providers to understand the major reasons for their customers to join in particular fields. This will enable them to review their training programmes and provide good orientation to their trainees.

From this study it was observed that the majority of the respondents who were engaged in catering, tailoring, secretarial and carpentry chose these specific fields because they were simple and cheap. This provides the truth that the majority of them decided to opt for the skills trained not because of the foreseen future and that they are interested, but because the skills are cheaper and simple. On the other hand, slightly more than a third (34%) of the graduates from motor vehicle mechanics followed by those in carpentry (11.9%) chose these skills because they were

marketable (Table 5). According to the results, women concentrated in skills such as tailoring, catering, secretarial and domestic science and main reason for joining the skills was because they are simple.

Table 5: Distribution of respondents by reasons for choosing specific skills

Skill	Reason % (N = 120)			
	Simple	Many like it	Marketable	Cheap
Tailoring	56.3	28.6	13.4	42.9
Secretarial	9.4	14.3	6.0	28.6
Carpentry	3.1	42.9	11.9	21.4
Masonry	0.0	0.0	7.5	7.1
Catering	18.8	0.0	4.5	0.0
Mv. Mechanics	3.1	0.0	34.3	0.0
Domestic science	6.3	0.0	0.0	0.0
Electrical installation	3.1	14.3	7.5	0.0
Welding & fabrication	0.0	0.0	14.9	0.0
Total	100.0	100.0	100.0	100.0

This is due to the fact that women relate the skills to their traditional reproductive roles and they have been exposed to the skills for so long and hence being simple to them. ILO (2005) found that women tend to avoid the "male" skills as they are regarded by their societies as more "masculine". This is influenced by the way women are socialized, because in most cases their role models tend to be their parents and other community members.

Similarly boys experience the same thing, thus being reluctant to join "women" skills. This gender stereotype has posed a barrier to women's access to male dominated skills, which are highly paying as women have little exposure to the skills.

Lack of exposure and support from parents and the community have diminished the prospects of women's choice of the skills (Kitundu, 2004).

Kaale (2005) added that culture and social perceptions also play a critical role in hindering women, particularly parents and the community who emphasize that women have their productive and reproductive role and doing otherwise would be against their traditions and norms. They further insist that men are stronger than women and that a woman cannot do what a man can do, therefore a woman has to perform simple tasks.

4.3.3 Marketability of respondents' products

Marketability of products is a considerable factor for the graduates so as to be sure of getting customers for their products. When respondents were requested to provide information on whether or not they get adequate number of customers for their products, about three quarters (71.7%) of them said they get adequate customers (Table 6). This indicates that there is a reliable market for most of the respondents' products. The results also reveal that the main reason for those who did not get adequate number of customers was the failure to compete. This might be due to lack of competence or poor quality of their products.

Table 6: Distribution of respondents by marketability of products

Parameter	Frequency	Percent
Do you get adequate customers for your products?		
Yes	86	71.7
No	34	28.3
If no why? (N = 34)		
Failure to compete	33	97.1
Not well known	1	2.9

Chonjo *et al.*, (1999) found that most of the VET graduates fail to compete due to various reasons such as lack of creativity, independence, and outstanding performance and entrepreneurship skills.

Another inhibiting factor displayed by the graduates was inability to sense viable economic opportunities for their respective areas. They have little knowledge on targeting customers so as to win the market.

4.4 Respondent's major sources of income

4.4.1 Major sources of income

The study revealed that more than three quarters (83.3%) of respondents rely on their vocational skills as the main source of income as summarised in Table 7. This implies that most graduates were able to use the skills gained in vocational training to generate income. The rest of respondents claimed to rely on petty trade and wage employment as their major sources of income. However, for those who were employed, their employment was based on their vocational skills.

Ndunguru (2003), in her paper on Integrated Life Skills in Vocational Education and Training said that the critical question is however, on the quality and relevancy of the provided Vocational Education and Training (VET) skills in terms of addressing the key labour force questions facing a given country. In the case of Tanzania, the key question to be addressed by VETA is whether the provided skills produce employable graduates who are able to fit in the formal wage employment, or create their own job and sustain in employment. While the provision of skills for creation of own jobs is essential in a context where formal jobs only absorb about 15% of the total labour force, the provision of life skills is equally essential in the current situation where HIV/AIDS is threatening the sustenance of labour force (Nwagwu, 2003).

Table 7: Distribution of respondents by major sources of income (N=120)

Source	Frequency	Percent
Vocational activities	100	83.3
Petty trade	19	15.8
Wage employment	1	0.8
Total	120	100.0

4.4.2 Amount of income earned by VET graduates per month in relation to skills

The study revealed that, the mean income of respondents was Tshs. 102 775 per month, with the minimum income of Tshs. 18 000 and maximum income of Tshs. 700 000 per month. More than three quarters (78.3%) of the respondents earned an income between Tshs. 46 000 and 150 000 per month (Table 8). Only few (11.7%) of the respondents received the lowest range of income. Such income distribution

implies that the majority of the respondents earn an income of above the minimum government salary which is Tshs. 80 000 per month (Ministry of Finance. 2006). equivalent to US$ 61.54 per month and US$ 2.05 per day. at a rate of Tshs. 1300 per 1 US$. Despite these variations in income among skills. chi- square test revealed that there was no significant association between income and the skills practiced at P < 0.05 and hence accepting the null hypothesis that there is no significant association between income earned and the skills practiced.

Table 8: Income earned by respondents per month in relation to skills (N=120)

Skill	Income (Tshs. '000)					
	15 - 45	46 - 90	91 - 150	151- 300	Above 300	Total
Catering	2	4	3	0	0	9
Mv Mechanics	1	4	13	6	0	24
Domestic Science	0	1	1	0	0	2
Tailoring	9	21	4	0	1	35
Secretarial	1	8	2	1	0	12
Carpentry	1	5	6	2	0	14
Masonry	0	4	2	0	0	6
E/installation	0	1	6	1	0	8
Welding	0	1	8	0	0	10
Total	14	49	45	10	1	120
$X^2 = 0.328$	df = 1			p - Value 0.567 **		

** Not significant at p < 0.05.

4.4.3 Income of respondents by sex

Study results show that female VET graduates in Mufindi district earn less income compared to male graduates (Table 9). About a half (51.7%) of the male graduates earn between Tshs. 46 000 and Tshs. 150 000 while only a quarter (25%) of the female graduates fall under this range of income. The mean income of male graduates was found to be Tshs. 119 216.67 while that of female was Tshs. 86

333.33. This is to say men earn 30.1% more than women. This is due to the fact that women usually allocate less time for their enterprises because of their domestic and reproductive roles.

Women normally perform triple roles leading to inadequate time for them to attend their businesses. This makes them earn less than men as some of their time may be used for reproductive activities such as child caring, meal preparation and cleaning which are not paid for. Derjadin (2001) on her study of linking work, skills and knowledge found that, gender relations, within the family, household and community, partly determine differences in the way men and women allocate their labour time and limited resources, respond to markets and manage risks. She also added that, with regards to skills, they tend to be passed along gender lines rather than learned in formal institutions. A by-product is gender stereotyping of productive roles, men tending towards activities with higher returns.

UNICEF (2006) revealed that for many women, unpaid chores in and for the household take up the majority of their working hours with much less time spent in the remunerative employment. Data from urban areas in Africa revealed that household work is the principal for one in every four women while the corresponding ratio for men is one in every two hundreds. It was also found that even when women participate in the labour market for paid employment they still undertake most of the work in the home.

Table 9: Distribution of respondents' income by sex (N=120)

Income (Tshs. '000)	Respondents (N = 120)			
	Males		Females	
	Frequency	Percent	Frequency	Percent
15 – 45	6	5	7	5.8
46 - 90	13	10.8	36	30
91 - 150	31	25.8	15	12.5
151-300	7	5.8	1	0.8
Above 300	3	2.5	1	0.8
Total	60	50.0	60	50.0

Similarly, Engle (2001) asserts that, women not only spend significantly less time in paid business than men, but also when they work outside the household their average income is also lower. Haan (2001) also found that women face a number of barriers to improving their income, including less access to working capital, less access to market information and less access to skills that attract higher income. Although the disaggregated data in wages is scarce, the available evidence shows that across regions, women's nominal wages are roughly 20% lower than that of men.

A t- test was used to test the hypothesis that there is no significant difference in income level between male and female graduates. The results revealed that there was statistical significant difference ($p < 0.05$) as shown in Table 10. The results therefore, allowed the null hypothesis which says; "There is no significant difference in income level between male and female VET graduates" to be rejected and hence confirming the alternative hypothesis which says "There is a significant difference in income level between male and female VET graduates"

Table 10: Comparison of income levels between male and female respondents

Sex	Count	Mean	Std. Deviation	t - value	P - value
Male	60	119 216.67	63 585.28	2.373	0.019*
Female	60	86 333.33	86 474.58		

NB: * = Statistically significant at $p < 0.05$.

4.4.4 Respondents' income in relation to form of training

It is expected that under normal circumstance graduates from VETA, and other VETA registered training centres to earn more income than those who graduate from non formal (traditional apprenticeship) training centres. This is due to the fact that registered training centres are expected to have adequate and qualified instructors. training facilities and official curricula provided by VETA while the later do not. This is because without this fulfilment a centre cannot be registered by VETA. However, it was revealed from this study that the form of training had very minor effect on the income of the graduates as it is displayed in Table 11. The mean income for the graduates from VETA registered centres was Tshs. 105 300 and that of from non- registered was Tshs. 100 250. This difference was also found not to be significant after testing using chi-square at $p < 0.05$ and hence accepting the null hypothesis.

Table 11: Distribution of respondents' income in relation to form of training

Income (Tshs. '000)	Frequency (N=120)			
	VETA registered	Non registered	Total	Percent
15 – 45	4	9	13	10.83
46 - 90	27	22	49	40.83
91 - 150	25	21	46	38.33
151-300	2	8	10	8.33
Above 300	2	0	2	1.67
Total	60	60	120	100.0
$X^2 = 0.128$		df = 1	p Value 0.721 **	

NB: ** = Not significant at $p < 0.05$.

4.4.5 Respondents' income in relation to training duration (N=120)

The number of years one has gone for training has been used in many studies as an indicator for an individual being better off. Therefore, it was expected that as the respondents take longer to be trained in a certain skill he/she becomes more knowledgeable and competent in that particular skill. The majority (47.5%) of the VET graduates in this study were trained for one year while only four of them were trained for only six months. The maximum training duration was found to be three years.

The study also found that graduates who were trained for two and three years had higher chances of getting more income than those who were trained for less than that. Those who were trained for only six and one year, only one graduate managed to get the maximum income of Tshs. 300 000 while the rest two categories, one graduate in each, earned above maximum income of Tshs. 300 000 (Table 12).

Table 12: Distribution of respondents' income in relation to form of training

Duration	Income (Tshs. '000) (N=120)						
	15 – 45	46 - 90	91 - 150	151-300	Above 300	Total	Percent
6 Months	0	3	1	0	0	4	3.3
1 Year	10	29	17	1	0	57	47.5
2 Years	2	10	17	6	1	36	30.0
3 Years	1	7	12	2	1	23	19.2
Total	13	49	47	9	2	120	100.0
$X^2 = 0.128$		df = 1			p Value 0.721 **		

NB: ** = Not significant at $p < 0.05$.

This means that duration of training can determine the level of income for VET graduates. However, even those who were trained for six months some of them managed to earn more than Tshs. 80 000 (the minimum government monthly salary 2006/07).

4.5. Income expenditure by respondents

Respondents were asked to report on their income expenditure on education. health, food and energy used for cooking. This is because these items are among the basic needs of human beings and hence the expenditure on them can indicate the well being of an individual. A household for instance which uses a half or more of its income for food is regarded as poor and it was found that poor households in African countries spend an average of 50% of their income on food (URT, 1999).

4.5.1 Respondents' income expenditure on education per month

Study results as shown in Table 13 reveal that more than three quarters (79.2%) of the respondents used a maximum of Tshs. 10 000 per month on education, equivalent

to Tshs. 100 000 per academic year. This amount of money is more than the mount paid for school fees (Tshs. 20 000) in government secondary schools for ordinary level secondary education (Form I – IV). This implies that most of respondents could be able to pay school fees for about five persons per year in government secondary schools. This group of respondents was followed by those who spent a maximum of Tshs. 20 000 per month, which is equal to about Tshs. 200 000 per year. The difference in income expenditure on education depends highly on the number of people who are schooling whom a respondent has to pay for the education expenses.

Table 13: Respondents' income expenditure on education per month

Income (Tshs)	Frequency	Percent
0 -10 000	95	79.2
10 001 – 20 000	18	15.0
21 000 – 30 000	3	2.50
31 000 – 40 000	1	0.83
41 000 – 50 000	1	0.83
51 000 – 60 000	1	0.83
61 000 – 70 000	1	0.83
Total	120	100.0

4.5.2 Respondents' income expenditure on health services per month

When respondents were asked to report on their income on health services per month, out of 120, 51 (42.5%) of the respondents were able to do so. The rest (69) said that they did not remember the amount of money used for health services. This might be due to the cost sharing policy where as people pay just little amount of money for the services in government hospitals and other government health centres available in the district. Another reason is that most people in our country normally

do not keep records for their expenditure on various items especially if the items require little amount of money. However, for those (51 respondents) who managed to provide information on their expenditure on health services, it was revealed that more than three quarters (86.3%) of the respondents used a between Tshs. 1000 and 5000 on health services per month followed by those who spent between Tshs. 5100 and 10 000 per month (9.8%). None of the respondent spent more than Tshs. 15 000 per month (Table 14).

Table 14: Respondents' income expenditure on health services per month (N=120)

Amount of money (Tshs.)	Frequency	Percent
1000 – 5000	44	36.7
5100 – 10 000	5	4.2
10 100 – 15 000	2	1.7
Do not remember	69	57.5
Total	**120**	**100.0**

4.5.3 Respondents' income expenditure on food per month

This study revealed that more than a quarter (32.5%) spent between Tshs. 21 000 and 30 000 for food per month while the majority used up to Tshs. 60 000 and only one spent up to Tshs. 90 000 (Table 15). Based on the respondents' mean income (Tshs. 102 775), the results show that most of them used between Tshs. 51 000 and 60 000 per month which is about a half (50%) of their mean income per month. According to URT (1999), most of the people in Tanzania who spend more than a half of their income in food are considered as poor. However this expenditure on food might not be very accurate as it is common in many households in Tanzania especially in rural areas where people produce their own food to reduce the expenses of buying food.

Table 15: Respondents' income expenditure on food per month (N = 120)

Income (Tshs)	Frequency	Percent
0 -10 000	5	4.2
10 001 – 20 000	16	13.3
21 000 – 30 000	39	32.5
31 000 – 40 000	16	13.3
41 000 – 50 000	21	17.5
51 000 – 60 000	16	13.3
61 000 – 70 000	4	3.3
71 000 – 80 000	2	1.7
81 000- 90 000	1	0.8
Total	**120**	**100.0**

4.5.4 Respondents' income expenditure on energy for cooking per month

One half (50%) of the respondents used a maximum of Tshs. 20 000 per month on energy for cooking. Others used between Tshs. 1000 and 10 000 and only two respondents (1.7%) spent up to Tshs. 70 000 (Table 16). This is because most of them use firewood as a source of energy for cooking and the fact that sometimes they go to the forest to fetch some firewood for cooking instead of using other sources like charcoal, kerosene and electricity, which are normally more expensive. For those who spent more income on energy for cooking. it is because they used electricity and kerosene, which are more expensive than firewood and charcoal, implying that they are better off than the others.

Table 16: Respondents' income expenditure on energy for cooking per month

Income(Tshs)	Frequency	Percent
1000 -10 000	52	43.3
10 001 – 20 000	60	50
21 000 – 30 000	4	3.3
31 000 – 40 000	2	1.7
41 000 – 50 000	0	0.0
51 000 – 60 000	0	0.0
61 000 – 70 000	2	1.7
Total	120	100.0

4.6 Respondents' household socio-economic status

The fifth objective of the study was to determine household socio-economic status of respondents. In order to achieve this objective Principal Component Analysis (PCA) was employed to determine the socio-economic status of the households. Socio-economic data such as house ownership and housing conditions, ownership of household assets, source of energy for cooking, source of water for domestic purposes as well as toilet facilities were used to develop a welfare index. The index was then used to categorise households from which respondents lived into five groups. The first group was for the poorest while the last group was for better off. This section therefore, provides information on respondents' household socio-economic status and also develops a welfare index through PCA.

4.6.1 Respondents house ownership by sex

Housing is one of the basic needs of a human being. However, not all people in many places in the world have managed to build their own houses. In Tanzania, a person who does not own a house he/she either rents or lives with his/her relatives as

extended family. This is common in many societies of Africa. The summary of findings on the house ownership is presented in Table 17. It was revealed that about two thirds (70.9%) of the respondents reported not to own houses instead they rent rooms or houses and others stayed with either their parents or relatives. Only 35 respondents (29.1%) owned houses. This might be due to the fact that building a house is an expensive task especially in urban and peri- urban areas where local building materials are not readily available compared to the rural areas.

Sex wise, the study revealed that the proportion of female respondents that did not own houses were two times (46.7%) higher compared to that of male respondents (24.2%). This is because it is normal in African countries for a woman who gets married to leave her parents and go to the husband's place. On the other hand, most of the men either build or rent a house before getting married.

Table 17: Distribution of respondents' house ownership by sex (N=120)

House ownership	Sex		Total
	Males %	Females %	
Yes	25.8	3.3	29.1
No	24.2	46.7	70.9
Total	**50**	**50**	**100.0**

Although most (70.9%) did not own houses, they managed to rent houses and managed to pay the rent house. Therefore the result does not imply that those with no houses are poorer than the ones who own houses.

4.6.1.1 Size of respondents' housing in terms of number of rooms

The definition of a room in this study was adopted from that of 2002 Population and housing Census, which defines a room as a part of a dwelling unit, enclosed by four walls, floor and a roof. A dwelling unit with no portion was considered as having one room (URT, 2006). In this study, information on the number of rooms for the houses built by respondents was collected. Table 18 below shows the percentage distribution of respondents by number of rooms owned. Out of 120 respondents, only 35 of them managed to build their own houses. The results revealed that most (42.9%) of the houses built by the respondents had three rooms followed by those with four rooms and then two rooms. Moreover, only four (11.5%) respondents had houses with 6 or more rooms.

Table 18: Number of rooms owned by respondents (N=120)

No. of rooms	Frequency	Percent
1	0	0.0
2	4	3.3
3	15	12.5
4	11	9.2
5	1	0.8
6 and more	4	3.3
Not owning houses	85	70.9
Total	120	100.0

This distribution is somewhat different from the results observed in 2002 Population and Housing Census whereby the highest proportion (36.8%) of the houses had two rooms followed by one room (33.2%) and then three rooms (17.5%). Only one percent of the houses had seven or more rooms (URT, 2006), implying that vocational education has enabled most of the graduates to own larger houses in the study area.

4.6.1.2 Place of living for those who do not own houses

Respondents who do not own houses were requested to report on the places where they lived. The study found that slightly more than a half (51.8%) of them reported to rent houses in which they are living. Thirteen (15.3%) married women claimed to live in their husband's houses (Table 19). These women reported that by the time they got married they found their husbands had already built the houses and therefore the houses are not theirs. The rest of the respondents reported that they lived in their family houses. However this is to say that the VET graduates who did not manage to build houses they managed to rent and pay the house rent every month.

Table 19: Place of living for those who do not own houses (N=85)

Place to live	Frequency	Percent
Rented house	44	51.5
Family house	28	32.9
Husband's house	13	15.3
Total	**85**	**100.0**

4.6.1.3 Number of rooms rented by respondents

Information on the number of rooms rented by respondents was also collected. The results revealed that most (54.5%) of the respondents managed to rent two rooms followed by those who rented three rooms (22.7%) and then one room (13.6%). Very few (9.1%) respondents managed to rent up to four rooms as displayed in Table 20. These results differ from the results of those who built there own houses whereby most of the respondents managed to build three rooms followed by four rooms. This is due to the fact that it is more expensive to rent many rooms as the rooms are charged monthly. For one to build a house he/she can decide on the amount of money to be used for the expenses at the right time and not forced by someone else, but for renting a house one has to follow the conditions of the owner of that house and therefore committing to a small number of rooms so that he/she can be able to pay.

Table 20: Distribution of number of rooms rented by respondents (N = 44)

Number of rooms	Frequency	Percentage
1	6	13.6
2	24	54.5
3	10	22.7
4	4	9.1
Total	**44**	**100.0**

The average cost per room rented was Tshs. 5 000 per month. This situation differs from that of rural areas because many people in the rural do not rent rooms or houses instead they build their own houses. Therefore, most of the people in peri-urban and urban have to spend extra money for housing.

4.6.1.4 Sources of money for building/renting a house

The study revealed that 35 and 44 respondents owned and rented houses respectively. When these respondents were asked to report on the sources of money used to either build or rent the houses, the majority (78%) of the respondents reported to use the money earned from vocational skill activities as shown in Table 21. This was followed by only few (13%) of the respondents who used income earned from petty trade and salary. Very few (9%) respondents either built or rent houses using the money gained from other sources.

Table 21: Distribution of source of money for housing by respondents (N=79)

Source of money	Frequency	Percent
Vocational skill activities	62	78
Petty trade and salary	10	13
Other sources	7	9
Total	79	100.0

4.6.1.5 Housing condition in which respondents lived

To assess housing conditions in which respondents live, respondents were asked questions about the kind of material used for building the wall, roofing and flooring. Information on these indicators is useful as they reflect the household socio-economic status. Results from study indicate that the majority (61.7%) of the respondents' house walls were made up of mud bricks followed by those with burnt bricks (34.2%). Very few (4.2%) respondents lived in houses with cement brick walls. Almost all (99.2%) respondents lived in houses, which were roofed by corrugated iron sheets, while only one respondent lived in a house roofed by tiles (Table 22). On the other hand, the majority (90.2%) of respondents' house floors are

cemented. The results conform to the findings from TDHS (1996) where it was established that more than a half (63%) of urban houses in Tanzania had cement floors implying that there is an improvement in the living standard of VET graduates in Mufindi district.

Table 22: Housing condition in which respondents lived (N=120)

Material used for floor	Frequency	Percent
Mud		
Cement	109	90.2
Ceramic Tiles	1	0.8
Total	120	100.0
Material used for walls		
Mud/raw bricks	74	61.7
Burnt bricks	41	34.2
Cement bricks	5	4.2
Total	120	100.0
Material used for roofing		
Corrugated iron sheets	119	99.2
Tiles	1	0.8
Thatch grass	0	0
Total	120	100.0

4.6.2 Ownership of selected household assets by respondents

Respondents were asked to report whether they own domestic assets such as radios, bicycles, sewing machines, hand hoes, machetes, charcoal stoves, kerosene stoves, motorbikes, cars and tractors. In order to understand rural area and its effects on different groups, the assets owned by the poor and those, which have access to, should be examined for links to the economy. These assets are considered as indicators of socio-economic status of the household (Jere, 1993). For instance, a household with a radio or television have access to mass media communication while a bicycle, motorbike and car assure access to good transportation and hence accessing social services and simplify some activities such as bringing farm products at home.

The ownership of household items may be taken as an approximate measure of household's wealth or an indicator for poverty monitoring (URT, 2006). The study findings reveal that certain assets are common and others are not. Most of the respondents were more likely to own radios, hand hoes, axes, machetes, charcoal stoves, kerosene and stoves (Table 23). Radios and charcoal stoves were found to be the most outstanding assets among them.

Table 23: Distribution of household assets owned by respondents (N=120)

Asset	Frequency	Percent
Charcoal stove	111	92.5
Radio	106	88.3
Hand hoe	99	82.5
Machete	94	78.3
Axe	91	75.8
Kerosene stove	86	71.7
Dining table set	81	67.5
Coffee table set	74	61.5
Bicycle	74	61.7
Tool box	61	50.8
Cupboard	60	50.0
Sewing machine	48	40.0
Television set	21	17.5
Wood saving stove	12	10.0
Sofa set	9	7.5
Motorcycle	9	7.5
Computer	3	2.5
Car	2	1.7
Tractor	0	0.0

NB: Results are based on multiple responses for each item

Assets such as cupboards, dinning table sets, coffee table sets, toolboxes and sewing machines were also owned by most of the respondents. As it was expected, the ownership of cars, televisions, motorcycles, tractors and computers was limited to only few respondents. The fact to this is that, these items are expensive to buy and maintain. Similarly the URT (2006) from its analytical report in volume ten found

that, 50.6% of the Tanzania mainland population owned radios, 77.2% owned hand hoes and 33.5% owned bicycles.

4.6.3 Respondents' main source of energy for cooking

Information on the main sources of energy for cooking was collected during the study. The list of energy sources includes firewood, charcoal, kerosene and electricity. Table 24 presents the distribution of the respondents' main sources of energy for cooking. The results show that firewood together with charcoal is the main source of energy used for cooking by most of the respondents. This was followed by those who used charcoal alone and firewood alone. However, less than one percent used electricity for cooking. This is due to the fact that, electricity is very expensive and even difficult to access especially in peri-urban and rural areas where only few can afford it for the purpose of cooking. The use of firewood and charcoal has its implication in consumption of trees and forest products especially in sub-urban areas to meet the needs of the poor in densely populated areas.

Table 24: Distribution of source of energy for cooking by respondents (N=120)

Source of energy for cooking	Frequency	Per cent
Fire wood and charcoal	36	30.0
Charcoal only	31	25.8
Firewood only	31	25.8
Kerosene and charcoal	17	14.5
Kerosene	3	2.5
Electricity	2	1.7
Total	**120**	**100.0**

This also poses environmental degradation in the area. The use of charcoal and firewood has now been controlled by the district council so as to minimise environmental degradation. The charcoal dealers for instance have to get permission from the district council office and pay tax for the business. However, this results to an increase in the price of the fuel. The best alternative for this could be the use of solar energy, although the technology is not well known by most of people in rural areas.

4.6.4 Respondent's main source of water for domestic use

According to the study the main source of water for domestic use for the majority (38.3%) of the respondents was ordinary wells within house premises. Other sources included tap water within the house (21.7%), public wells, buying from street, rivers and springs (Table 25). It was also observed in this study that the majority of respondents depended mostly on wells due to poor distribution of water, poor allocation of channels/pipes and shortage of water during dry season. High cost for installation of water pipes is another factor that contributes to the failure of respondents to install water pipes within their house premises.

Table 25: Main Source of water used by respondents for domestic purposes

Source	Frequency	Percent
Ordinary well within house premises	46	38.3
Tap within the house	26	21.7
Buy from street	18	15.0
Rivers and springs	13	10.8
Public wells	12	10.0
Public tap	5	4.2
Total	**120**	**100.0**

The 2002 Population and Housing Census also found that the majority (32.7%) of rural people in Tanzania used unprotected wells as their main source of water while this was about only seven percent in the urban. Few (21.3%) people in Tanzania rural used piped water while in the urban this was more than a half (71%) of the population (URT, 2006). It was also found that in 2004, about 46.5% of rural population and 26% of urban population in Tanzania were using water from unsafe sources (URT, 2005b).

4.6.5 Toilet facilities and sanitation

Sanitation and conditions of human settlements have direct impact on the environment and on the health standards of the people who live in the neighbourhood (URT, 2006). In this study the information on human waste disposal was confined on the following types of toilets: traditional pit latrine. Ventilated Improved Pits (VIP) and flush toilets. Results from the study show that very few (8.3%) respondents used flush toilets, others (9.2%) used ventilated improved pits and more than three quarters (81.7%) of the respondents used traditional pit latrines (Table 26). The results therefore, prove that traditional pit latrines are common within the study area.

Table 26: Type of toilet facilities used by respondents (N=120)

Toilet facilities	Frequency	Percent
Local pit latrine	98	81.7
Ventilated improved pit	11	9.2
Flush toilet within the house	10	8.3
Shared flush toilet	1	0.8
Total	**120**	**100.0**

The results conform to the 2002 Population and Housing Census, where it was found that 86.9% of the rural population and 82.3% of the urban population in Tanzania used traditional pit latrines. Very few people, 0.6% and 3.6% of the rural and urban population used ventilated improved pit latrines respectively. Less than one percent (0.4%) of the rural population used flush toilets while this was 12.5% in the urban area (URT, 2006). This implies that, modern toilets facilities such as flush toilets and ventilated improved pits are not yet available to a large proportion of population in rural and urban areas.

4.6.6 Measuring household welfare status

Socio-economic data were analysed using PCA to obtain an index as a proxy for household socio-economic status. PCA is a form of factor analysis used to reduce large variables into categorical or fewer variables. The variables are then processed in order to obtain weights and principal components. The results obtained from the first principal component (explaining the most variability) are usually used to develop an index for household socio-economic status (Filmer and Pritchett, 1998).

In this study the index contained five sub indices; housing conditions, source of energy for cooking, sources of water, ownership of domestic asset and toilet facilities and the percentages for variables were summed up in their sub categories (Table 27). The biggest (59.85%) variation was accounted by housing conditions while toilet facilities made the smallest (6.85%) variation. The PCA has been applied to prepare these strata, which assist in categorizing the households in their relative welfare

groups (Filmer and Pritchett, 1998). The scoring factors and summary statistics for variables, which were entered in the computations, are displayed in Appendix 3.

Table 27: Total variance accounted for by first principal component

Variable category	%Variance accounted for
Housing conditions	59.848
Source of energy for cooking	11.621
Water sources	11.226
Ownership of assets	10.478
Toilet facilities	6.826

The following formula was applied to construct the household socio-economic index values, as suggested by Filmer and Pritchett (1998).

$A_j = f_1 \times (a_{ji} - a_1)/(S_1) + \ldots\ldots f_N \times (a_{jN} - a_N) / (S_N)$

Where:

Aj = welfare index value developed

f_1 = scoring factor of the first variable

a_j = the value for the first asset or service the household owns

a_1 = mean of the first variable

S_1 = standard deviation of the first variable

f_N = scoring factor of the last variable

a_{jN} = the value for the last asset or service the household owns

a_N = mean of the last variable

S_N = standard deviation of the last variable

For example; if a household has the following characteristics: 2 hand hoes, 1 machete, 1 bicycle, a house with iron sheet roof and cement floor, then using figures in Appendix 4, the welfare index (Aj) is obtained as:

Aj = 0.298*(2 -0.83)/0.382 + 0.271*(1 -0.78)/0.414 + 0.122*(1-0.62)/0.488 + 0.022 * (1 - 0.99) / 0.091+ (- 0.039) * (1 - 0.92) / 0.278 = 1.93

Based on this formula, indices of households were assigned to respondents' households and the resulting population was divided into welfare quintiles that then represented proxies for their socio-economic statuses. The asset index approach has been used and recommended by many studies (Filmer and Pritchett 1998; Mwageni *et al.*, 2000). There are 41 principal components and the first component accounts for 12.9% of the total variance and second largest component explains 7.9% of total variance of all the variables (Appendix 5). Appendix 6 displays the scree plot for the variance of the components. The Eigenvectors of the first component have been used as scoring weights for each of the assets and service items. The scoring factors can have negative or positive values. The negative values indicate the variables associated with households of low quintiles/socio-economic statuses, while the positive values indicate the variables associated with households with high quintiles/socio-economic statuses (Mwageni *et. al.*, 2002). Using the PCA equation, the welfare index (Aj) values for each household were obtained using all the 41 variables. The PCA results of the variables related to household socio-economic status of the respondents are presented in Appendix 7. Based on the index values of the households, the centiles; 20, 40, 60 and 80 (Table 28) were used to categorise the households into five quintiles (Table 29).

Table 28: Centile Index used to develop welfare quintiles

Variable	Observation	Percentile	Centile	Mean
Index	120	20	-0.6492	0.8540
		40	0.6547	
		60	1.1607	
		80	2.0511	

Therefore when the values are entered in the computation, the negative scores tend to decrease the index value while the positive ones tend to increase it. This implies that, the lowest quintile is considered as a socio-economic status proxy for the poorest and highest quintiles represent the better off households (Table 29).

Study results show that there is a slight difference in the number of respondents who are poorest (20.8%) and those who are better off (19.2%). Most of the respondents are in the second, third and fourth quintiles (20% in each).

Table 29: Household welfare quintiles

Socio-economic Quintiles	Lower limit	Upper limit	Frequency	Percent
First	Minimum	-0.6492	25	20.8
Second	-0.6492	0.6547	24	20.0
Third	0.6547	1.1607	24	20.0
Fourth	1.1607	2.0511	24	20.0
Fifth	2.0511	Maximum	23	19.2
Total			**120**	**100.0**

In general the poorest were below average (0.8540 centile) in most of the items or services to which the better off had access. This shows that vocational education has played a significant role in improving the living standards of VET graduates in Mufindi district.

4.7 Respondents' main constraints in application of skills

When the respondents were asked to report on the constraints they face during the application of skills, the majority of them (93.3%) said the major problem was inadequate capital to expand their business. Other constraints included high income tax, lack of permanent places for doing their business and high competition among VET graduates. For those who were employed their main problem was low salary (Table 30).

Nyaki (2006) asserts that, Small and Medium Enterprises (MSEs) are dominant actors in the economy of many developing countries and more so in a Least Developed Countries (LDCs) such as Tanzania. They accommodate a workforce characterized largely by low education and low skilled workers. The main structural challenges include lack of capital accumulation, low capital intensity, labour-intensive, low productivity and lack of entrepreneurship skills. According to Shahid (2006); United Nations (2005) and YES (2005), youths lack capital to support their economic activities and most of the micro financing institutions pose difficult conditions to be able to access loans.

Table 30: Major constraints faced by respondents in their businesses (N=120)

Constraint	Percent
Inadequate capital	93.3
High income tax	48.3
No permanent working area	28.3
High competition	25.0
Low salary	13.3

NB: The results are based on multiple responses for each item

4.8 Summary

This chapter presented a summary of findings of the study on the contribution of vocational education in poverty reduction. The study findings have shown how the VET graduates depend on vocational skills to generate income for their living. This implies that vocational education has contributed much in poverty reduction among VET graduates in Mufindi district as most of the graduates depend on activities based on vocational skills for their living. Through the income gained, graduates are able to get their basic needs such as shelter, food, energy for cooking as well as social services like education, health services and water. However, there is a significant difference in income level between male and female graduates whereas male graduates earn about 30% more than female graduates. It has also been found from the study that most of the respondents are living normal life, which is neither very rich nor very poor.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

This chapter gives a short summary of conclusion and recommendations derived from the findings of the study based on the objectives of the study to provide information on the contribution of vocational education in poverty reduction among VET graduates.

5.1 Conclusion

The main objective of the study was to determine the contribution of vocational education in poverty reduction among VET graduates in Mufindi district. The following conclusions are made from the findings of the study:

VET graduates have attained vocational skills, which enable them to generate income with a good number of them in tailoring and motor vehicle mechanics. However, it is evidenced that men concentrate more in motor vehicle mechanics while women concentrate more in tailoring, secretarial and catering skills. More than three quarters of the respondents depend on their vocational skills for their living. This implies that the contribution of vocational education to the total income of VET graduates in Mufindi district is significant as the income earned per month is almost equal to the minimum government monthly salary for women and more than that for men. Most of the graduates have managed to build or rent houses and pay for social services. However, there is significant difference in income level between men and women. Some skills such as motor vehicle mechanics and carpentry which are dominated by men seem to generate more income than those which are dominated by

women such as tailoring and catering although chi – square test showed no significant difference.

Most of the respondents are able to own common household assets such as hand hoes, radios, cupboards, bicycles, sewing machines, charcoal stoves, axes, kerosene stoves and machetes. Vocational education also helps VET graduates to buy working tools like sewing machines, toolboxes and computers. Concerning respondents' household socio- economic status, the study concludes that vocational education has enabled most of them to live a normal life, as they are found between the poorest and the better off. There is enough evidence that the main constraint faced by VET graduates in their daily application of skills is lack of adequate capital, high taxes inadequate working tools and lack of permanent place for running their enterprises.

5.2 Recommendations

Based on the empirical findings from the study the following key recommendations are made for the stakeholders:

Through vocational skills training strategy and mainstreaming gender issues into training institutions, community, employers' corporate plans, instructors, parents, society and public at large will significantly rectify the negative attitudes towards incorporating women into traditional "male" skills. There should be a supportive policy environment to dissolve stereotypes and encourage more women to join the skills. This can be through an obligation to ensure gender balance in all types of vocational skills.

Most of the VET graduates lack exposure to career options especially women, there should be a career counselling and guidance programme from vocational skill experts and instructors so as to enable the trainees attain skills which are highly paying.

There should be purposive efforts from the Ministry of Education and Vocational Training, Mufindi district council, VETA and training institutions to facilitate the initiation, growth and expansion of the graduates' enterprises and rehabilitate those, which are no longer working. In order to achieve this obligation the following measures are necessary: First by getting feedback on the performance of the VET graduates, in order to decide on the appropriate intervention programmes. This can be done through tracer studies and association of the graduates. Second is to create network mechanism between themselves, the graduates and other relevant stakeholders in order to promote collection, storing and dissemination of information among them e.g. through newsletters. Third is by creating and maintaining linkages among them and other stakeholders such as researchers, donors, NGOs, industries and higher learning institutions to facilitate the provision of resources, possibilities of contracts to the graduates as well as upgrading their technologies.

The district council and vocational training centres should help to link VET graduates with micro-financing institutions, which can provide them with credit facilities. If possible revolving loan funds should be established for the graduates and link with savings components.

Private sector is the greatest potential of creating employment, the increase of private enterprises like those, which are run by VET graduates should therefore, be the

principal aim of an economic development strategy. It is the government's role as a policy maker to create conducive economic labour environment and foster linkage between stakeholders of the private sector and the public sector.

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APPENDICES

Appendix 1: Mufindi District Population Composition by age and sex

Years	Male	Female	Total
0-4	21377	22270	43647
5-9	22362	22587	44949
10-14	20378	20726	41104
15-19	15272	13721	28982
20-24	11150	13630	24786
25-29	9765	12751	22516
30-34	7507	9696	17203
35-39	5999	7439	13438
40-44	4602	5744	10346
45-49	3665	4929	8594
50-54	2946	3987	6935
55-59	2041	2785	4826
60-64	1873	2679	4552
65+	4225	5971	10199
Total	**133162**	**148915**	**282077**

Source: *URT. (2002). Population and Housing Census*

Appendix 2: Sample size Calculation

The sample formula used:

$$n = \frac{Z^2 pq}{d^2}$$

Where: n = sample size when population is greater than 10,000

Z = Standard normal deviate, set at 1.96 (in simple at 2.0) corresponding to 95% confidence level,

p = proportion in the target population estimate to have a particular characteristic: if not known use 50%.

q = 1.0 – P

d = degree of accuracy desired, set at .05 or .02 (Kothari, 2004).

Therefore the sample size will be:

$$n = \frac{Z^2 pq}{d^2} = \frac{(2)^2 (0.50 \times 0.50)}{(0.05)^2} = \frac{4 \times 0.25}{0.0025} = \frac{1}{0.0025}$$

= 400 respondents.

30 percent of the sample size is 120 respondents

Appendix 3: Questionnaire for VET graduates.

SECTION 1: GENERAL INFORMATION

Questionnaire No. _____

Village _____

Ward _____

Date of interview _____

SECTION 2: RESPONDENTS' DEMOGRAPHIC INFORMATION

1. What is your age? _____ (Years)
2. Sex
    1. Male [ ]
    2. Female [ ]
3. Marital status
    1. Single [ ]
    2. Married [ ]
    3. Divorced [ ]
    4. Widowed [ ]
4. What is your education level? (Tick one)
    1. Non – formal education [ ]
    2. Standard four [ ]
    3. Standard seven [ ]
    4. Form four [ ]
    5. Form six [ ]
    6. Other (specify) _____
5. What is your household size? _____
6. How many dependants do you have _____

SECTION 3: RESPONDENTS' VOCATIONAL SKILLS INFORMATION

Put a tick in given space and fill the blanks where required.

7. Where did you get your training? (Tick)

    1. Street (Kijiweni) [ ]
    2. Formal training centre (VETA registered) [ ]
    3. Other (specify) _____

8. Which vocational skill were you trained in? (Tick)

    1. Catering [ ]
    2. Motor vehicle mechanics [ ]
    3. Domestic Science [ ]
    4. Tailoring [ ]
    5. Secretarial [ ]
    6. Carpentry [ ]
    7. Masonry [ ]
    8. Driving [ ]
    9. Other (specify) _____

9. Why did you choose it?

    1. It is simple [ ]
    2. Many people like it [ ]
    3. It is marketable [ ]
    4. Other (specify) [ ]

10. How long did the training take? (Tick one)

    1. Six months [ ]
    2. One year [ ]
    3. Two years [ ]
    4. Three years [ ]
    5. Other (specify) _____

11. Did you complete the training? (Tick one)

    1. Yes [ ]
    2. No [ ]

12. If the answer is No in 11 above, what was the main reason? (Tick one)

1. Failed [ ]
2. Failure to pay fees [ ]
3. Did no like the skill [ ]
4. Marriage [ ]
5. Others (specify) _____

SECTION 4: RESPONDENTS' INCOME STATUS AND EXPENDITURE

a) Source and amount of income earned per month

Put a tick in given space and fill the blanks where required.

13. What your main source of income? (Tick one).

1. Vocational skills activities [ ]
2. Petty trade [ ]
3. Farming [ ]
4. Wage employment [ ]
5. Other (specify) _____

14. For how long have you done the activity? _____ (Yrs)

15. How much do you earn per month from your main source of income? _____ (TShs.)

16. Do you normally get adequate customers?

1. Yes [ ]
2. No [ ]

17. If no give reason_____

b) Income expenditure on social services

Put a tick in given space and fill the blanks where required.

How Much money do you spend from your total income on the following items per month?

18. Health services _____(Tsh)

19. Education _____(Tsh.

20. Food _____(Tsh)

21. Fuel/energy _____(Tsh)

SECTION 5: RESPONDENTS' SOCIO – ECONOMIC INFORMATION

a) House ownership and housing condition

22. Do you own a house? (Tick one)

    1. Yes [ ]
    2. No [ ]

24. If yes, how many rooms does it contain? _____

25. How much did it cost? _____ (Tsh.)

26. If you do not own a house, where do you live?

    1. Rented house [ ]
    2. Family house [ ]
    3. Other (specify) _____

27. If renting how many rooms do you rent? _____

28. How much does it cost per room per month _____ (Tshs.)

29. Which type of materials used for the floor for the house you own/live ? (Tick one)

    1. Mud [ ]
    2. Cement [ ]
    3. Tiles [ ]
    4. Wood [ ]

30. Which type of materials used for the walls? (Tick one)

    1. Cement bricks [ ]
    2. Burnt bricks [ ]
    4. Mud bricks [ ]
    5. Mud and poles [ ]
    6. Others (specify) _____

31. Which type of materials used for the roof? (Tick one)

    1. Tiles [ ]
    2. Corrugated iron sheets [ ]
    3. Poles and thatching grass [ ]
    4. Others (specify) _____

32. Did you use the money from your income gained through skills to build the house?

    1. Yes [ ]
    2. No [ ]

33. If no what is the reason?

    1. Not enough
    2. Others (specify)

b) Respondents' major source of energy for cooking

34. What is the major source of energy used for cooking food? (Tick one)

    1. Electricity [ ]
    2. Firewood [ ]
    3. Kerosene [ ]
    4. Charcoal [ ]
    5. Kerosene and charcoal [ ]
    6. Firewood and charcoal [ ]
    7. Other (specify) _____

35. What is your main source of water? (Tick one)

    1. Tap water within the house [ ]
    2. Bore holes within the house premises [ ]
    3. Public tap water [ ]
    4. Public bore hole [ ]
    5. Buying from the street [ ]
    6. Rivers, canals and springs [ ]
    7. Other (specify) _____

36. Which type of toilet do you use in your household? (Tick one)

    1. Flush toilet within the house [ ]
    2. Public/shared flush toilet [ ]
    3. Ventilated Improved Pit (VIP) [ ]
    4. Local pit latrine [ ]
    5. Other (specify) _____

c) Respondents' household asset ownership

37. Indicate the assets you own in your household.

Type of asset	Yes	No	Number of items	Value
1. Hand hoe				
2. Bush knife (Panga)				
3. Axe				
4. Charcoal stove				
5. Kerosene stove				
6. Wood saving stove				
7. Coffee table set				
8. Dining table set				
9. Sofa set				
10. Tool box				
11. Cupboard				
12. Radio				
13. Television set				
14. Bicycle				
15. Motorcycle				
16. Car				
17. Tractor				
18. Sawing machine				
19. Computer				
20. Others (specify)				

SECTION 6: MAIN CONSTRAINTS FACED BY RESPONDENTS

38. What are the main constraints do you face in application of your skills for income generation (Give 5 main constraints)

1. _____
2. _____
3. _____
4. _____
5. _____

THANK YOU FOR YOUR COOPERATION

Appendix 4: Scoring factors and summary statistics

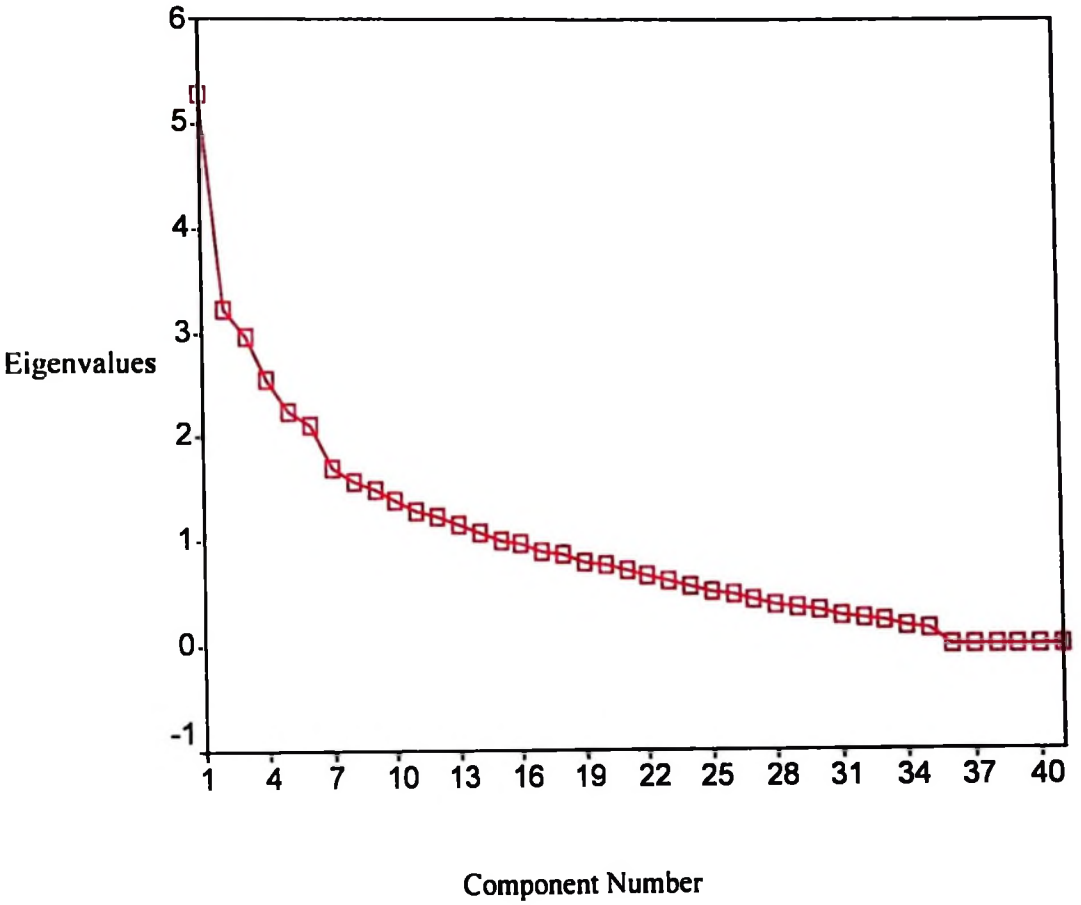
Variable	% of var. accounted for	Scoring weights	Var. Mean	Var. Std.dev	Min	Max
Housing conditions						
House ownership	12.883	.049	.29	.456	0	1
mud floor	7.859	.039	.08	.278	0	1
Cement floor	7.218	-.039	.92	.278	0	1
Tiles floor	6.197	.024	.01	.091	0	1
Cement bricks wall	5.483	-.021	.04	.201	0	1
Burnt brick wall	5.132	.010	.34	.476	0	1
Raw bricks wall	4.152	-.002	.62	.488	0	1
Tiles roof	3.844	-.022	.01	.091	0	1
Iron sheet roof	3.676	.022	.99	.091	0	1
Thatch grass roof	3.404	.023	.03	.157	0	1
Subtotal	59.848					
Source of energy for cooking						
Electricity	3.167	-.018	.02	.129	0	1
Firewood	3.014	-.006	.43	.496	0	1
Kerosene	2.820	-.050	.03	.157	0	1
Charcoal	2.620	.010	.55	.500	0	1
Subtotal	11.621					
Water sources						
Tap water within the house	2.481	.006	.22	.414	0	1
Bore hole within house premises	2.406	.006	.43	.496	0	1
Public tap water	2.219	.067	.10	.301	0	1
Water from the street	2.172	-.002	.15	.359	0	1
Water from river/spring/canal	1.948	-.081	.11	.312	0	1
Sub total	11.226					
Ownership of assets						
Hand hoe	1.411	.298	.83	.382	0	1
Panga / machete	1.295	.271	.78	.414	0	1
Axe	1.178	.209	.76	.430	0	1
Charcoal stove	1.054	.067	.94	.269	0	1
Kerosene stove	.979	-.068	.72	.453	0	1
Wood saving stove	.869	.061	.10	.301	0	1
Coffee table set	.805	-.059	.62	.488	0	1
Dining table set	.694	.182	.68	.470	0	1
Sofa set	.656	-.026	.08	.264	0	1

Tool box	.590	-.084	.51	.502	0	1
Cupboard	.467	.059	.49	.502	0	1
Radio	.415	.075	.88	.322	0	1
TV	.033	.027	.17	.374	0	1
Bicycle	.032	.122	.62	.488	0	1
Motorcycle	.000	-.034	.08	.264	0	1
Car	.000	.036	.02	.129	0	1
Computer	.000	.039	.02	.129	0	1
Sewing machine	.000	.098	.39	.490	0	1
Subtotal	10.478					
Toilet facilities						
Flush toilet in the household	1.889	-.057	.08	.264	0	1
Public flush toilet	1.769	-.155	.01	.091	0	1
Ventilated improved pit latrine	1.667	.024	.09	.290	0	1
Traditional pit latrine	1.501	.054	.82	.389	0	1
Subtotal	6.826					
Total	100					

Appendix 5: Eigenvalue Proportions accounted for by 41 Components

Component	Eigeinvalue	Proportion%	Cumulative %
1	5.282	12.883	12.883
2	3.222	7.859	20.741
3	2.959	7.218	27.959
4	2.541	6.197	34.156
5	2.248	5.483	39.638
6	2.104	5.132	44.770
7	1.702	4.152	48.922
8	1.576	3.844	52.766
9	1.507	3.676	56.442
10	1.396	3.404	59.847
11	1.299	3.167	63.014
12	1.236	3.014	66.028
13	1.156	2.820	68.848
14	1.074	2.620	71.468
15	1.017	2.481	73.949
16	.986	2.406	76.355
17	.910	2.219	78.574
18	.890	2.172	80.746
19	.799	1.948	82.695
20	.774	1.889	84.583
21	.725	1.769	86.352
22	.683	1.667	88.019
23	.615	1.501	89.520
24	.579	1.411	90.931
25	.531	1.295	92.226
26	.483	1.178	93.405
27	.432	1.054	94.459
28	.402	.979	95.438
29	.356	.869	96.307
30	.330	.805	97.111
31	.285	.694	97.806
32	.269	.656	98.462
33	.242	.590	99.052
34	.192	.467	99.519
35	.170	.415	99.935
36	.014	.033	99.968
37	.013	.032	100.000
38	.000	.000	100.000
39	.000	.000	100.000
40	.000	.000	100.000
41	.000	.000	100.000

Appendix 6: Scree Plot for eigenvalues of component



Appendix 6: Household welfare indices for social economic status

Welfare index	Frequency	Percent
-.39	1	.8
-.29	13	10.8
-.17	10	8.3
-.15	1	.8
-.14	10	8.3
-.07	1	.8
-.06	1	.8
-.02	6	5.0
-.02	1	.8
.00	3	2.5
.03	1	.8
.03	1	.8
.06	1	.8
.07	1	.8
.09	27	22.5
.20	1	.8
.22	17	14.2
.22	1	.8
.24	7	5.8
.30	3	2.5
.33	1	.8
.37	10	8.3
.42	1	.8
.45	1	.8
Total	**120**	**100**

Appendix 7: Definition of Variables

Variable	Operational Definition
Vocational Training/education	A kind of education that is directed towards occupation (skills oriented) provided to standard seven and form four leavers.
Poverty	Low monetary value of produce and services
Poverty reduction	-Reduction of inability to obtain basic needs -Increase of monetary value of produce and Services.
Income	Amount of money earned per month through vocational activities
Sex	Being a female or male
Education level	Highest level of respondent's education
Health services	-Availability of health services -HH consumption on health services
Household size	Number of household members
Housing condition	Type of building materials
Assets	Selected properties that can be changed to we
Age	Total number of years from birth
Marital status	Being either single or married or divorced or widow
Dependant	Any person who totally depends on the respor for his/her livelihood