

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.



**AN ASSESSMENT OF KNOWLEDGE USE AND  
KNOWLEDGE MANAGEMENT MATURITY AMONG THE  
MICRO, SMALL AND MEDIUM ENTERPRISE SECTOR IN  
ZAMBIA**

**DENNIS SIKAZWE**

**SKZDEN001**

**A DISSERTATION SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR  
THE AWARD OF THE DEGREE OF  
MASTER OF LIBRARY AND INFORMATION SCIENCE**

**Supervisor: Dr. J. G. Smith**

**Faculty of the Humanities**

**University of Cape Town**

**2012**

## COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: 

Signed by candidate
---------------------

 Date: 01-09-2012

University of Cape Town

## **ABSTRACT**

The focus of this study was to establish the knowledge use and Knowledge Management (KM) maturity among the Micro, Small and Medium Enterprise (MSME) Sector in Zambia. This is a domain that has received little attention in the Zambian business and economics literature, partially because of the newness of KM as a business concept. Knowledge Management is a very important aspect as far as innovation and competitiveness are concerned in the knowledge economy. Since the inception of the open market economy in Zambia in 1992 and the move to diversify Zambia's national economy from state control into private hands, the MSMEs still seem to be struggling with lack of innovation and competitiveness. Despite several attempts to boost the sector's viability, little success has been recorded.

The literature relating to KM and Micro, Small and Medium enterprises was reviewed. The limitations and strengths of the two domains were noted. The insights developed from these studies, as well as the researcher's experience with the Zambian MSME sector, assisted him to develop a theoretical framework and a set of eleven variables to investigate the state of knowledge use and KM maturity within the MSME sector in Zambia. A triangulated research approach was adopted in order to facilitate the collection of both qualitative and quantitative data. Three data collecting instruments were used, i.e. questionnaires, personal interviews and observation.

The questionnaires were administered to 180 MSMEs in the major cities and towns of Zambia. Ten respondents were further selected for personal interviews and observation to capture more in-depth data on the topic and obtain a better understanding of the phenomenon. The data was processed, analysed and significance tests performed by using the STATISTICA statistical software package.

This study aimed to answer three research questions, viz. whether MSMEs in Zambia use knowledge from within and outside the country to help meet their business goals and objectives; whether the typical working behaviours of managers and other employees in MSMEs support KM objectives, strategies and processes; and the potential growth in the use and application of KM among Zambian MSMEs. It was determined that the current state of knowledge use and KM maturity among MSMEs in Zambia is very low.

Among some of the reasons that were identified to account for these low scores are that KM is a new business concept in Zambia, the country lacks a knowledge society promotion policy and the ICT infrastructure is poor. Most of the knowledge activities currently taking place in the Zambian MSME sector are as a result of knowledge spillovers from financial institutions and large international firms that are based in countries with a knowledge driven business environment. It is, however, the researcher's view that the prospects for KM to thrive in Zambia are very high if the above mentioned impediments are addressed.

It is suggested that this study is of relevance to economic growth, poverty reduction and job creation in Zambia. The paradigm shift that has taken place from the predominant economic factors of production to the knowledge based economy calls for readjustment in MSME development strategies in Zambia. Organizations that are active in knowledge creation and its effective application are more prone to innovation and are subsequently more competitive. Innovation cannot take place in the absence of new knowledge.

University of Cape Town

## ACKNOWLEDGEMENTS

I am indebted to the Department of Library and Information Science for having accepted me into its programme and having been allocated a supervisor in the name of Dr Gretchen Smith. She has been selfless, caring and committed to her work.

My acknowledgements will not be complete if I do not give God almighty all the glory for having come this far. Besides UCT staff members, there are a number of other people who contributed greatly to this project and provided both spiritual and moral support. These include Rev B.B. and Hildah Sinyangwe, Rev Alan and Roma Roy, Rev Douglas Varey, Rev Helen Roberts, Mr. Duncan Simuchimba, Mr. Simon Simuchimba, Mr. George Macauley, Mrs. Edna Macauley, Mr. Felix Ng'ambi, Mr. Mwelwa Ng'ambi, Mr. Frank Gondwe, Mr. Chilufya Mulenga, Mr. Dora Mulenga, Mr. Tapson Mwamulima, Mrs. M. Mugala, Mr. Rainbow Mugala, Mrs. Joy Mwila Kabwe, Ms Gladys Mutale, Rev. A.C. Sinkala, Rev. Dr. C. Ng'ona, Mrs. Loveness C. Ng'ona, Ms Dyness Silwimba, Ms Monica Mhango, Ms Juliet Mukuka, Mr. Trinity Chula, Miss Faith Kanyimbo, Mr. Morgan Ng'onga, Ms Alice Saidi, Ms Fridah Lwando, Ms Beatrice Chansa, Ms Judith K. Matanga, Ms Kunda M. Ms Phiri, Mrs. Martha Ngwira, Miss Mambwe Charity, Mr. Kelvin Mumba, Mr. Gift Mwansa, Mrs. Cleopatra Mwansa, Ms Florence Katongo, Ms Carols Mbita, Mr. Godfrey Muwowo, Mr. Muyunda Sikazwe, Mr. Kapulo Musonda, Mr. Mark Kakelwa, Mr. Moola Inambao, Mr. Simwaba Edward, Mrs. Margaret Simwaba, Ms Elika Namwaba Simposya, Mr. John Nyirenda, Mrs. Sarah G. Nyirenda, Mr. Sydney Mwiinga, Mr. Douglas Chisenga, Mr. Amos Musonda, Mr. Kasanda Joseph, Mr. Chitundu Moses, Mrs. Matembo L.S., Mr. Barnabas Mumba, Mrs. Nancy Mumba, Mrs. Chama, Mr. Chama, Mr. & Mrs. Enock Simukonde, Mr. and Mrs. Boniface and Miriam Samala, Mrs. Catherine Simwanda, Mr. Andrew Sinyangwe, Mrs. Josephine Bwalya, Mrs. Grace Mwamba, Mrs. Margaret Ng'ambi, Mr. Simukoko Debby, Mrs. Martha Simukoko, Miss Rose Nansungwe, Mary Chimbaya, Mr. Mrs. Jeff Mwenechanya, Mrs. Mary Ng'andu, Ms Beauty Ng'andu, Mr. and Mrs. Jere, Mrs. Valerie Chibamba, Mr. Maden and Mrs. Sikazwe, Mrs. Grace Mwansa, Mrs. Ireen Maimbolwa, Miss Omega Mwenya, Mrs. Precious Lumai, Mr. Stephen and Judith Kainga, Mr. Ndovi Gilbert, Mrs. Ruth Kapulo, Mrs. Chibeka Agness, Mrs. Mukonde Mercy, Mr. Shepard and Mrs. Evelyn Bwalya, Mr. and Mrs. G.Mpundu, Mr. and Mrs. Thomas/Lydia Chanda, Miss Florence Tegha, Mrs. Jacqueline Mwelwa, Ms Christine Sakala, Mr. Evaristo Mwelwa, Mr. Arthur Sambala, Mrs.

Pamela Kabwibwa, Miss Kapembwa Nyembele, Ms. Maggie Nambeye, Mr. J. D. Mwanza, Mr. & Mrs. Ng'ambi, Owen Kabaye, Mrs. Gladys Chileshe, Mr. Mrs. D. Mulenga, Mr. and Mrs. Amutike, Rev. Shadreck Mulenga, Mr. J.M. Kabwe, Mr. and Mrs. Mushabati, G. Mwansa, Deac Etambuyu Maliwa, Kakoma Mark, Mr. and Mrs. Likukela, Mrs. Lwando, Mrs. Chansa, Mr. and Mrs. Kasisi, Inambao Mbola, Mr. and Mrs. Simukoko, Mrs. Martha Ngwira, Rev and Mrs. Sinyama, Mr. & Mrs. Kamwendo, Mr. & Mrs. Nyimbiri, Mr. Moses and Mrs. Grace Sinyangwe, Ms Silwimba Dyne, UCZK/East Prayer Group, Mukuba UCZ congregation women's fellowship, and members of the Congregation at Kamfinsa UCZ.

Finally but not the least I thank Mr. and Mrs. Chamangwa and the Rev and Mrs. Simunyola of Lusaka, the Rev and Mrs. Musonda Bowa of Kafue, Albano Sinkala of Kabwe, the Revs Isaac and Erica Mumba of Chingola and the St Marks Congregation business men and women for being helpful during my data collection, the Copperbelt Presbytery Bishop and his wife (Rev. and Mrs. Sichilimas), my Synod Bishop (the Rt. Rev Mutale Mulumbwa) and the General Secretary (Rev Peggy M. Kabonde), my Principal at UCZTC, Dr Musonda Bwalya and all the academic and support staff.

## **DEDICATION**

This work is dedicated to my wife Priscilla, and my children Marrian, Wiseman, Dennis (Jr), Chela, Natasha and Niza. Thank you for being patient with me and for your prayers during my absence from home. This work provides the reason why I was so often away from home. Thank you for enduring. I also recognize and return the love and respect I enjoyed from you Stanley, Lizzy and James. I thank God for you.

University of Cape Town

## LIST OF ABBREVIATIONS

BOZ – Bank of Zambia

CBU – Copperbelt University

CEEF – Citizen Economic Empowerment Fund

COMESA – Common Market of East and Southern Africa

CSO – Central Statistics Office

DANIDA – Danish International Development Agency

DBZ – Development Bank of Zambia

DFIs – Development Financial Institutions

EC – European Community

EU – European Union

GDP – Gross Domestic Product

HIPC – Heavily Indebted Poor Countries

ICTs – Information Communication Technologies

IICD – International Institute for Communication Development

IDA – International Development Association

ILO – International Labour Organisation

IMF – International Monetary Fund

KM – Knowledge Management

LFS – Labour Force Survey

MLE –Medium and Large Enterprise

MMD – Movement for Multiparty Democracy

MSE – Micro Small Enterprise

MSME – Micro Small and Medium Enterprise

MU – Mulungushi University

NCSR – National Council for Scientific Research

PSDP – Private Sector Development Programme

PRGF – Poverty Reduction Growth Facility

RSZ – Railway Systems of Zambia

SADC – Southern Africa Development Countries

SALC – Southern African Labour Commission

SED – Small Enterprise Development

SEDB – Small Enterprise Development Board

SIDO – Small Industry Development Organization

SME – Small and Medium Enterprise

SEPAC – Small Enterprises Promotion Advisory Council

SSEP – Small –Scale Enterprise Promotion

TDAU – Technology Development and Advisory Unit

TEVETA – Technical Education Vocational and Entrepreneurship Training Authority

UNHSPP – United Nations Human Settlement Programme Publication

UNIP – United National Independence Party

UNZA – University of Zambia

VIS – Village Industries Service

WB – World Bank

ZABS – Zambia Bureau of Standards

ZCCM – Zambia Consolidated Copper Mine

ZPA – Zambia Privatisation Agency

ZCA – Zambia Communication Authority

ZCC – Zambia Competition Commission

ZDA – Zambia Development Agency

ZIC – Zambia Investment Centre

ZICT – Zambia Information Communication Technology

University of Cape Town

## Table of Contents

CHAPTER ONE: INTRODUCTION.....	4
1.1. Introduction.....	4
1.2. Background to the Study.....	4
1.3. Zambia’s Socio-Economic Profile.....	5
1.4. Profiles of Lusaka, Kafue, Kabwe and Major Towns of the Copperbelt.....	7
1.5. Rationale and Objectives of the Study.....	9
1.6. Research Problem and Research Questions.....	11
1.7. Scope and Limitation of the Study.....	13
1.8. Key Concepts Used in the Study.....	13
1.9. Structure of the Dissertation.....	13
CHAPTER TWO: DEVELOPMENT OF THE MICRO, SMALL AND MEDIUM- SIZED ENTERPRISE SECTOR IN ZAMBIA.....	14
2.1. Introduction.....	14
2.2. Enterprises and Entrepreneurship.....	14
2.3. MSMEs in the Global Context.....	16
2.4. The Development of MSMEs in Zambia.....	17
2.5. Conclusion.....	22
CHAPTER THREE: THE DEVELOPMENT OF KNOWLEDGE MANAGEMENT IN THE KNOWLEDGE ECONOMY.....	24
3.1. Introduction.....	24
3.2. Defining Knowledge Management.....	25
3.3. Underlying Concepts of Knowledge Management.....	27
3.3.1. Data.....	27
3.3.2. Information.....	27
3.3.3. Knowledge.....	28
3.3.4. Different Types of Knowledge.....	28
3.4. Knowledge Management in the Knowledge Economy.....	29
3.5. The Use and Application of Knowledge in Business.....	31
3.5.1. The Business Environment and Knowledge Application.....	31
3.5.2. The Political and Economic Nature of Knowledge.....	33
3.6. Knowledge Management Strategy, Processes and Systems in a Business Environment.....	34
3.6.1. KM Strategy.....	34
3.6.2. KM Processes.....	37
3.6.3. KM and ICT Systems.....	37
3.7. Organizational learning and Culture.....	39
3.7.1. Organizational Learning.....	39
3.7.2. Networking and Collaboration.....	40
3.7.3. Organizational Culture.....	41
3.8. Leadership, Management Techniques and People Skills.....	42
3.8.1. Emerging Knowledge Leadership.....	42
3.8.2. Management of Intellectual Capital in a Knowledge Driven Organization.....	43
3.9. Conclusion.....	45
CHAPTER FOUR: THEORETICAL FRAMEWORK.....	46
4.1. Introduction.....	46
4.2. Theoretical framework.....	46
4.3. Research Model.....	53
4.4. Conclusion.....	56
CHAPTER FIVE: RESEARCH DESIGN AND METHODOLOGY.....	57
5.1. Introduction.....	57
5.2. Research Problem and Research Questions.....	58
5.3. Research Design.....	59
5.4. Survey Research Method.....	61
5.5. Survey Population and Sampling.....	62
5.6. Units of analysis and Sample Size.....	64
5.7. Validity and Reliability.....	64
5.8. Data Collection.....	66
5.8.1. Questionnaires.....	66

5.8.2.	Interviews .....	68
5.8.3.	Observation .....	69
5.9.	Data Processing and Data entry .....	69
5.10.	Ethical Issues.....	70
5.11.	Conclusion .....	70
CHAPTER SIX: DATA ANALYSIS AND PRESENTATION OF THE FINDINGS .....		70
6.1.	Introduction .....	70
6.2.	Data Analysis Process for the Study .....	71
6.3.	Demographic Profile of the Sample .....	71
6.3.1.	Enterprise Category Distribution .....	72
6.3.2.	Enterprise Location .....	73
6.3.3.	The Enterprises Categorized According to Turnover .....	74
6.3.4.	The Type of Business .....	75
6.4.	Findings relating to Knowledge and Knowledge Management Attributes.....	75
6.4.1.	Introduction .....	75
6.4.2.	An Overview of all KM Maturity Indicators .....	76
6.4.3.	Tacit Knowledge .....	78
6.4.4.	Explicit Knowledge .....	79
6.4.5.	Knowledge Resource Centres and Libraries.....	81
6.4.6.	Creating and Maintaining Knowledge-related Processes .....	82
6.4.7.	KM-related Information Technology Infrastructure .....	83
6.4.8.	Leadership and KM .....	85
6.4.9.	People and Skills Valued.....	87
6.4.10.	KM-related Culture and Structure .....	88
6.4.11.	Measures .....	90
6.4.12.	Market Leverage .....	91
6.4.13.	Good MSME Infrastructure .....	93
6.5.	Presentation of the Findings Relating to the Significant Cross Tabulations .....	95
6.5.1.	Introduction .....	95
6.5.2.	Enterprise category and KM Maturity Indicators .....	96
6.5.3.	Location of Business and KM Maturity Indicators .....	97
6.5.4.	Turnover and KM Maturity Indicators .....	98
6.5.5.	Business Type and KM Maturity Indicators.....	98
6.6.	Concluding Remarks .....	100
CHAPTER SEVEN: DISCUSSION, SUMMARY AND CONCLUSION .....		101
7.1.	Discussion of the findings .....	101
7.1.1.	Demographic Profile .....	101
7.1.2.	Discussion of the Findings Relating to Knowledge and Knowledge Management Attributes of the MSMEs .....	103
7.1.3.	Discussion of the significant cross tabulations .....	108
7.1.4.	General Conclusions Relating to the Results.....	110
7.2.	Review of the Research Questions and the Findings .....	110
7.3.	Recommendations with regard to MSMEs Knowledge Use and KM development in Zambia. ....	112
7.4.	Suggestion for Further Research .....	113
7.5.	Summary and General Conclusion.....	113
REFERENCES .....		115
APPENDIX ONE: QUESTIONNAIRE .....		130
APPENDIX TWO: PERSONAL INTERVIEWS QUESTIONS .....		134
APPENDIX THREE: OBSERVATION GUIDE .....		135
APPENDIX FOUR: DEMOGRAPHIC DATA CODES.....		136

## LIST OF FIGURES

Figure 4.3-1 ‘Inside out - outside in’ Research Model .....	54
Figure 6.3.1-1: Enterprise category .....	72
Figure 6.3.2-1: Enterprise location .....	73
Figure 6.3.3-1: Enterprise turnover.....	74

Figure 6.3.4-1: Business Type .....	75
Figure 6.4.2-1: All KM Indicators (cf. Questions A1 – K45).....	77
Figure 6.4.3-1: Tacit Knowledge Measures (Questions A1 – A4) .....	78
Figure 6.4.4-1: Explicit Knowledge Measures (Questions B5 – B8) .....	80
Figure 6.4.5-1: Knowledge Resource Centres & Library Results (Questions C.9 - C.12) .....	82
Figure 6.4.6-1: Knowledge-related Processes (Questions D 13 –D 16) .....	83
Figure 6.4.7-1: Technology Infrastructure Results (Questions E.17 – E.20).....	84
Figure 6.4.8-1: Leadership & KM (Questions F.21 – F.24) .....	86
Figure 6.4.9-1: People and Skills Valued (Questions G.25 – G. 28).....	88
Figure 6.4.10-1: KM-related Culture & Structure (Questions H.29 – H.32) .....	90
Figure 6.4.11-1 Measures (Questions I.33 – I.36) .....	91
Figure 6.4.12-1: Market Leverage (Questions J.37 – J.40).....	93
Figure 6.4.13-1: Good MSME infrastructure (Questions H.29 – H.32) .....	95

University of Cape Town

# CHAPTER ONE: INTRODUCTION

## 1.1. Introduction

Chapter one presents the background, rationale, and statement of the problem as well as the aims and objectives of the study. This chapter also outlines the research questions, the scope, limitations and the relevance of the study, followed by an outline of the structure of the report. A layout of the major domains that form the basis for the study are introduced, and a short political and socio-economic description of Zambia is given in order to understand the context in which the study was undertaken.

## 1.2. Background to the Study

Knowledge as well as knowledge management (KM) are concepts that do not have consolidated and universal definitions. However, most scholars agree that knowledge is processed information. In this study Sveiby, Handzic and Zhou's ideas have been adopted as study concepts. According to Sveiby knowledge management (KM) relates to how an organization can create value by leveraging its intangible assets (Sveiby, 1997). Within the perspective of the management of a firm, KM is seen to consolidate all knowledge and information systems that are relevant to a range of managerial areas. Meliha Handzic and Albert Zhou state that KM provides an integrative approach that combines economics, human behaviour and technology. This encompasses knowledge as an organizational asset, organizational space for socialization as a strategy to facilitate the contribution and sharing of knowledge and the role of ICTs in KM within an organization (Handzic & Zhou, 2005).

Traditional factors of production alone can no longer guarantee success to an enterprise. Social and economic activities are dependent on the effective application of knowledge and, therefore, knowledge driven. Knowledge is the basis of all known inventions and innovations. What people refer to as initiative and efficiency are different expressions of accumulated experience called knowledge. It is therefore argued that acting in the absence of full or incomplete knowledge or on the basis of belief, prejudice, faith or ideology results in undesirable consequences.

Zambia's political and economic policy shift in 1991 saw the privatization of the country's national economy and the new dispensation has since played a positive role in inculcating an entrepreneurial culture in Zambia (Christian Liberation, Justice and Development: The

Churches' Concern for Human Development in Zambia, 1987:32).

This has resulted in a surge in the number of Micro, Small and Medium Enterprises (MSMEs) in Zambia. This sector is now larger than the large enterprise sector, and yet it is the weakest in terms of innovation and competitiveness. Throughout the world MSMEs are known for their ability to grow national economies, reduce poverty and create jobs. In Europe, Japan and America MSMEs are specifically regarded as very important for their national economies and job creation. The success of these MSME's can to a large extent be attributed to their recognition of the value of knowledge in a knowledge-driven environment. For most of these firms it has become the driving force behind wealth creation, and it is fostering creativity, innovation and the discovery of new markets as well as turning around production and delivery processes. It is therefore argued that business knowledge and effective knowledge management is of importance, not only to the producers of goods and services, but also to those who receive their outputs, the customers. It is for this reason that this study attempts to probe the levels of knowledge use as well as KM maturity in the MSME sector in Zambia.

The researcher is fully aware that the concept and practice of knowledge management (KM) is not yet widely known in the Zambian business community, and very little has been written on the subject compared to information technology, entrepreneurship and economics. This factor provided a challenge for this study. To provide adequate context, the researcher has examined the distinctions between the concepts of data, information, knowledge and knowledge management in chapter three.

### **1.3. Zambia's Socio-Economic Profile**

Agmon and Drobnick (1994:2) are of the view that there are two important aspects that enable firms to prosper regardless of their size: comparative advantage and competitive advantage. Each country has its own comparative advantage<sup>1</sup> by which its suitability for habitation is determined. Zambia is a unique country with its own comparative advantage

---

<sup>1</sup>A comparative advantage constitutes those things - usually primary endowments that are strategically placed by nature in particular nations or locations (Drobnick & Agmon, 1994: 2). These natural placements or resources need to be transformed or activated by the people who reside in those particular locations (e.g. lakes, rivers, fertile soils, good landscapes, mineral deposits, other surrounding countries etc.).

which its MSME sector can explore and exploit in order to gain competitive advantage<sup>2</sup>. As a landlocked country Zambia shares borders with Zimbabwe, Malawi, Botswana, Namibia, Congo DR, Angola, Mozambique and Tanzania. The country covers 752,612 sq. km divided into ten provinces. It has approximate 12.9 million people distributed into 72 ethnic groups. Zambia is one of Sub-Saharan Africa's most highly urbanized countries with over one third of the population concentrated in a few urban zones strung along the major transport corridors, while rural areas are under-populated<sup>3</sup>. The annual population growth rate was 2.9% in 2009, the infant mortality rate is 70/1,000 and the average life expectancy is 38.63 years. Literacy levels are 60.6% for women and 81.6% for men.

Zambia has a pleasant climate and good average rainfall together with an abundance of natural resources ranging from lakes, rivers, mineral resources and wildlife. All these factors give Zambia's MSMEs a substantial comparative advantage. Of the Zambian workforce, 85% are engaged in agriculture, 6% in mining and manufacturing, and 9% in the services industry<sup>4</sup>. The country's rate of economic growth, however, cannot support the population growth. Unemployment and underemployment are serious problems and most Zambians live in poverty. Although the country is among the world's poorest nations, the World Bank recently reclassified it as a middle-income country<sup>5</sup>.

Zambia gained its independence and became a republic on October 24, 1964. Once a middle-income country, Zambia began to slide into poverty in the 1970s when the country's principal export, copper, suffered a severe price decline worldwide. Falling revenue forced the government to increase borrowing from foreign and international lenders for relief, but copper prices remained depressed. Despite limited debt relief, Zambia's per capita foreign debt remained among the highest in the world and it became increasingly difficult to service this growing debt. In 1991 Zambia adopted a new constitution and thereafter became a multi-party democracy. The new government of the Movement for Multi-party Democracy (MMD,

---

<sup>2</sup> Competitive advantage provides a value-adding approach to a firm's business strategy to create greater consumer utility and customer value and in the process achieve an advantage over its competitors and generate increased sales, margins and more customers (Adner & Zemzky, 2006: 215)

<sup>3</sup> [http://www.zamstats.gov.zm/media/chapter\\_3\\_population\\_comp.\\_size\\_and\\_growth.\\_final.pdf](http://www.zamstats.gov.zm/media/chapter_3_population_comp._size_and_growth._final.pdf)

<sup>4</sup> [http://www.nationmaster.com/graph/lab\\_lab\\_for\\_by\\_occ-labor-force-by-occupation](http://www.nationmaster.com/graph/lab_lab_for_by_occ-labor-force-by-occupation)

<sup>5</sup> <http://www.guardian.co.uk/global-development/poverty-matters/2011/jul/12/world-bank-reclassifies-28-poor-countries>

1991 - 2001) committed itself to an economic reform programme and made efforts to liberalize the economy and privatize industry (Craig, 2002). The government was successful in some areas, such as the privatization of most of the parastatals, maintenance of positive real interest rates, the elimination of exchange controls and the endorsement of free market principles.

In April 2005 the International Monetary Fund (IMF) and the World Bank's International Development Association (IDA) provided Zambia significant debt service relief under the Heavily Indebted Poor Countries (HIPC) initiative<sup>6</sup>. Zambia was the 17th country to reach the HIPC completion point and benefited by receiving approximately U.S. \$6 billion in debt relief. In July 2005 the G8 countries agreed on a proposal to cancel 100% of outstanding debt of eligible HIPC countries to the IMF, African Development Fund and IDA<sup>7</sup>. Despite these positive fiscal measures poverty nevertheless continues to be a significant problem in Zambia. The country also made a Poverty Reduction and Growth Facility (PRGF) arrangement with the IMF for the period 2008-2011<sup>8</sup>.

The Zambian government is currently pursuing an economic diversification program to reduce the economy's reliance on the copper industry. This initiative seeks to exploit other components of Zambia's rich resource base by promoting agriculture, tourism, gemstone mining and hydro-power. Zambia's 2008 GDP (purchasing power parity) was \$17.39 billion with an annual growth rate of 5.8% (2010, projected)<sup>9</sup>. The government is further seeking to create an environment that encourages entrepreneurship and private-sector led economic growth. Zambia continues to be a member of the Southern African Development Community (SADC) as well as of the Common Market for Eastern and Southern Africa (COMESA) which has its headquarters in Lusaka.

#### **1.4. Profiles of Lusaka, Kafue, Kabwe and Major Towns of the Copperbelt.**

The reason for profiling these specific areas is that they constituted the regions where the study was conducted.

---

<sup>6</sup> <http://www.imf.org/external/np/exr/facts/hipc.htm>

<sup>7</sup> <http://www.jctr.org.zm/downloads/1stQ-06brief.pdf>

<sup>8</sup> <http://www.imf.org/external/np/sec/nb/2002/nb0245.htm>

<sup>9</sup> <http://www.imf.org/external/np/exr/facts/hipc.htm>

**Lusaka** is the capital city of Zambia. The high population growth rate, coupled with increasing urbanization, tends to outstrip the supply of land for development in the city. The annual population growth rate in the city was 4 percent in the 1990–2000 period compared to 2.9 percent for Zambia as a whole (ZCSO, 1994 & 2001). The city is economically very significant for the central and southern provinces as it provides the market for the agricultural products from these areas. Manufacturing, financial, transport and retail businesses are the most important industries in Lusaka. Of these, the retail sector is by far the largest and is thus the largest formal employer (government excluded). It is, however, estimated that only 9 percent of the city's population is employed in the formal sector. The major reason for this is that the local economy has been drifting towards informal enterprise and self-employment since the liberalization of the economy in the early 1990s (UNHSP, 2009). Many people in Lusaka, however, still live in poverty and most micro enterprise owners lack business skills and confidence in the marketplace (UNHSP, 2009).

**Kafue:** The town of Kafue is 44 kilometers south of Lusaka and most people who live here work in Lusaka. Most of the industries have closed resulting in a surge of small enterprises. The largest local industry is agricultural fertilizer production.

**Kabwe** is a former lead and zinc mining town situated on the Great North Road mid-way between Lusaka (130 km) and Ndola (about 170 km). To the east of the town are three hydro-electric power stations that were built to power the mine and the town. The town suffered an economic decline due to the closure of the mines and is now mainly a transit point for people commuting between the north and south of the country. The Railway Systems of Zambia (R.S.Z.) that runs freight and passenger services between Lusaka, the Copperbelt region and the neighbouring Democratic Republic of Congo (DRC) goes through the town. Due to the town's proximity to the country's major markets and the availability of transport, commercial farming thrives in the surrounding areas. It has a number of manufacturing industries which include pharmaceuticals, milling, cotton ginning and leather tanning. To the east and west of Kabwe are areas with good, but so-far undeveloped, tourist potential.

**Kitwe** is one of the largest cities in the central part of the Copperbelt and endowed with vast natural resources such as minerals and forests. In 2000, Kitwe had a total population of 376,124 which accounts for about 24 percent of the population in the province. The transient population from the surrounding towns and agricultural hinterland however pushes the daytime population over 1.2 million. Kitwe is known as the "hub of the Copperbelt" due to its

centrality and major economic activities which include mining, agriculture, trade, commerce, industry, forestry and fishing. Kitwe's core economic activities are mining or mining-related. In the 1990s unemployment rates grew with the decline of the mining sector (UNHSP, 2009) and most of the retrenched residents are self-employed in the informal sector. The liberalization of the national economy and subsequent closure of state-run commercial outlets created opportunities for small-scale entrepreneurs in the district (UNHSP, 2009) and many of the new mining investors have opted to outsource services previously provided by the Zambia Consolidated Copper Mines (ZCCM).

**Ndola** is one of the largest cities in Zambia with a population of 495,000 (2008 census). Many of its factories were closed after the downturn in the economy. There are no mines in Ndola itself except the Bwana Mkubwa open-cast mine which is only 10 km south-east of the city centre. Copper and precious metals used to be brought from elsewhere in the Copperbelt for processing at the Ndola Copper Refinery and Precious Metals Refinery which has since closed down. The oil pipeline from Dar-es-Salaam terminates at the Indeni Oil Refinery and this refinery supplies the whole country with refined petroleum. Ndola's commercial significance to Zambia is indicated by the presence of the only other major centre of operation for the country's central bank, the Bank of Zambia, outside of the capital, Lusaka. Ndola has huge limestone reserves which are believed to be among the most homogeneous of their kind in the world. Limestone has therefore become to Ndola's economy what copper is to the rest of the country

**Chingola, Mufulira, Chililabombwe and Kalulushi** are significant towns on the Copperbelt that have well developed economies that are mostly based on the copper mining industry, but also supported by established agricultural and forestry developments. Three of the towns are on the main route to the DR Congo, while Kalulushi, although not on this route, is close to Kitwe.

## **1.5. Rationale and Objectives of the Study**

The study on the topic "An assessment of knowledge use and KM maturity among MSMEs in Zambia" has largely been influenced by the following set of reasons and beliefs. The world has moved from a resource-based economy into the 'new' knowledge economy where the realization that knowledge, rather than labour and capital, has become the pivotal economic commodity: "... the production of ideas and not goods is the source of economic growth ..." (Davenport & Prusak, 1998:17). There is, therefore, no better time than now for MSMEs in

Zambia to assess their use of knowledge and the state of KM application or maturity. The country has recently, through privatization, shifted from a predominantly state-run economy to one that is in the hands of the private sector. The MSME sector's legal framework, ICTs policy and infrastructure have been put in place. Loan facilities for entrepreneurial and management training have been made available to MSMEs through the Citizen Economic Empowerment Fund (CEEF) and training institutions. It is argued that this extensive investment coupled with Zambia's comparative advantage should result in the MSME sector in Zambia having a competitive advantage.

The researcher believes that, if MSMEs in Zambia could better utilize knowledge creation and application they will be more innovative, effective and competitive and this could lead to substantial growth. Although the Zambian business community is fairly well endowed with information communication technology and has a fair grasp of information management the researcher believes that there is generally very little understanding of the benefits of knowledge utilization and its management. International organizations and the world's greatest nations have become knowledge societies and the application of knowledge and KM has become strategic in every sector. It is thus important that Zambian businesses should embrace KM and increase their knowledge about the ever-changing business environment in order to adapt or innovate.

A multi-party democracy in Zambia and the 1991 law which facilitated an open-market economy has brought international competitors into the domestic market and this has meant that all the business sectors of the nation have to be more competitive. The researcher is in agreement with Burns (2007:22) when he stated that sustainable economic growth, continued job creation and poverty alleviation depends upon the flourishing of the Micro, Small and Medium Enterprise (MSME) sector.

This research project is aimed at ascertaining the levels of knowledge usage and KM maturity among MSMEs in Zambia. The need to apply knowledge in business was explicitly expressed in a workshop held in Ndola on 'the MSME sector in Zambia' by Melu, the Zambia Development Agency's (ZDA) Copperbelt Provincial Officer. He advised MSME entrepreneurs '...to be vigilant and have their ears to the ground and to remain updated on various issues related to business.' This study therefore seeks to assess to what extent the MSME's in Zambia are utilizing knowledge and available knowledge resources in Zambia.

In more specific terms the objectives of the study are to

- establish the current state of knowledge use and its effect on MSMEs in Zambia
- ascertain MSMEs' readiness to implement KM programmes
- identify impediments to KM implementation among MSMEs in Zambia
- provide baseline empirical data against which to assess KM maturity among MSMEs in Zambia
- provide the sector with an operational model that can be used by MSMEs, trainers and partners as well as the Zambian government for KM promotion in the knowledge economy
- provide contextual material that can be used in MSME seminars and conferences in Zambia.

## **1.6. Research Problem and Research Questions**

The research problem that this study will investigate is based on the following factors:

- The political and economic policy shift in Zambia in 1991 resulted in wide-scale privatization of the national economy and the subsequent extensive development of the Micro, Small and Medium Enterprise (MSME) sector.
- Further factors that stimulated MSME growth were the institution of a national ICT infrastructure and policy, favourable MSME legal framework, as well as monetary and other incentives to develop MSMEs.
- This sector, although in many aspects larger than other economic sectors and despite the incentives provided, is still the weakest in terms of innovation and competitiveness and has therefore not developed its full potential.
- The shift to an open-market economy has brought international competitors into the domestic market and this has meant that local businesses have to devise new ways to become more competitive.
- It is argued that only by recognizing the value of knowledge in the global knowledge-based economy that the Zambian economy and specifically the MSME sector will be able to foster creativity, innovation, new markets, better production and delivery processes and create wealth and prosperity for all.

- It is further proposed that sustainable economic growth, continued job creation and poverty alleviation depend on the flourishing of the Micro, Small and Medium Enterprise (MSME) sector.

The researcher believes that if MSMEs in Zambia were to better utilize knowledge creation and application they will become more innovative, effective and competitive and this could lead to substantial economic growth and sustainability- the effective management of all forms of knowledge in the MSME sector is therefore crucial. The researcher is, however, of the view that there is generally very little understanding of the benefits of knowledge utilization and its management. It is thus important that the Zambian MSME sector should embrace KM and increase their knowledge about the ever-changing business environment in order to adapt and innovate.

The research problem being investigated is, therefore:

**Whether and to what extent the Zambian MSME sector captures, organizes, shares, uses and applies knowledge to achieve business goals and objectives. A further concern is the extent to which the typical working behaviours of managers and other employees support KM objectives, strategies and processes and the MSME sector's readiness to implement KM programmes.**

It is for this reason that this study will investigate the levels of knowledge use as well as KM maturity in the MSME sector in Zambia and that the following research questions were formulated:

- Do MSMEs in Zambia capture, organize, value, share and apply knowledge from within and outside their organizational structure to achieve business goals and objectives?
- To what extent do the typical working behaviours of managers and other employees in MSMEs support KM objectives, strategies and processes?
- What is the potential growth in the use and application of KM among Zambian MSMEs?

## **1.7. Scope and Limitation of the Study**

The researcher is aware of the limitations of the study and difficulties in investigating the research problem. KM is a new and emerging discipline in Zambia and very few MSMEs are even aware of the concept let alone have they formally implemented it. Though the issue at hand is of national interest, it was practically impossible for the researcher to cover the entire country. A further factor was that, national elections were held in 2011 in Zambia and this made it difficult to explain that the data collection exercise was not part of some political campaign.

## **1.8. Key Concepts Used in the Study**

The following is a brief summary of the key concepts used in the study:

**Micro, Small and Medium Enterprise Sector:** the Micro, Small and Medium Enterprise sector will generally be referred to as the MSME sector. According to the new enterprise stratification in the Zambian MSME development policy of 2008, micro enterprises have 0 – 10 employees, small enterprises 11 – 49 employees and medium organizations have 51 – 100 employees.

**Knowledge:** Knowledge is processed information that is used to make key decisions or to act intelligently. Knowledge Management (KM) is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization's objectives.

## **1.9. Structure of the Dissertation**

This dissertation consists of the following seven chapters.

**Chapter one: Introduction.** The chapter has the following content: Introduction, background to the study, Zambia's socio-economic profile, profiles of Lusaka, Kafue, Kabwe and major towns of the Copperbelt (Kitwe, Ndola, Chingola, Mufulira, Chililabombwe and Kalulushi), rationale, problem, objectives, research questions, scope and limitation of the study, key concepts used in the study, and the structure of the report.

**Chapter two: The development of the Micro, Small and Medium Enterprise sector in Zambia.** This chapter provides a background to entrepreneurship and the global context of the MSME sector together with the development of the MSME sector in Zambia.

**Chapter three:** In this chapter the development of knowledge management in the knowledge economy is outlined together with an outline of its underlying concepts of data, information, knowledge, and definitions of the various types of knowledge. It concludes with the use and application of knowledge in the business environment.

**Chapter four: Theoretical framework for the research project.** The theoretical framework, research propositions and research model are discussed in this chapter.

**Chapter five: Research design and methodology.** In this chapter the research design and methodology are outlined. It includes a discussion of survey research, survey population, validity and reliability, the data collection methods used and their administration.

**Chapter six:** This chapter outlines the data analysis process for the study, the statistical methods used and finally summarises and tabulates the results obtained.

**Chapter seven:** The final chapter discusses the results obtained, provides recommendations, indicates further research that could be conducted and concludes the study.

## **CHAPTER TWO: DEVELOPMENT OF THE MICRO, SMALL AND MEDIUM-SIZED ENTERPRISE SECTOR IN ZAMBIA**

### **2.1. Introduction**

This chapter discusses the development of the micro, small and medium-sized enterprise (MSME) sector in Zambia. The researcher, however, first provides a brief introduction to the concept of entrepreneurship and the global development of MSMEs. These aspects are directly related to development of the MSME sector in Zambian context.

### **2.2. Enterprises and Entrepreneurship**

Various definitions have been given for 'enterprise' as a concept, but it is generally accepted that it is an organization that has been created to engage in business ventures (Carter & Jones-Evans, 2006). Further clarification that is required is how to categorize an enterprise; i.e. whether to distinguish between Micro and Small Enterprises (MSEs), Small and Medium Enterprises (SMEs), and Medium and Large Enterprises (MLEs) (Bluhm & Schmidt, 2008). The decision was taken to focus this study on the Micro, Small and Medium Enterprise sector

(MSMEs) as this sector has made a significant contribution to the economy in southern Africa (Ligthelm, 2007 ) and particularly Zambia.

A great deal of attention has been paid to the subject of entrepreneurship over the past few years. This is generally because economic analysts have realized that entrepreneurs play an important role in creating dynamic enterprises and that such firms contribute considerably to economic growth and vitality (Stokes & Wilson, 2006). According to Larson (2000: 305), although the term ‘entrepreneur’ dates back to the 1700s, the theory of modern entrepreneurship can be attributed to Joseph Schumpeter’s work during the 1930’s. Larson refers to his well-known phrase ‘the process of creative destruction’ which suggests that entrepreneurs stimulate fundamental change in society and that entrepreneurial behaviour relates to “discovery of new means–ends relationships” and the “ability to control and organize productive processes under conditions of risk and uncertainty” (Larson, 2000: 306).

Writers on entrepreneurship worldwide often find it difficult to agree on a specific definition for this concept (Nieuwenhuizen, C; De Beer A.A.(Z); Zeelie, J(Z); Groenewald, D.(L); Watson, H(Z); Rossouw, D(L); Jacobs, H(Z), 2008). Kirzner (2009:145), the well-known Austrian economist, refers to entrepreneurship as “competitive behaviors that drive the market process”. According to Stokes & Wilson (2006:31), the French economist Jean-Baptist Say defined an entrepreneur as “someone who consciously moves economic resources from an area of lower, and into an area of higher, productivity and greater yield”. This means that an entrepreneur consciously takes existing resources, such as people, materials, buildings and money, and redeploys them in such ways as to make them more productive and give them greater value (Burns, 2011: 9).

Various authors have noted common characteristics that most entrepreneurs possess, the most significant being the need to achieve, competitiveness, an orientation towards intuitive thinking, and a tendency for risk taking (Larson, 2000: 307; Nieuwenhuizen et al. 2008; Stokes & Wilson, 2006:31). Entrepreneurship is the key to the successful launch and innovative development of any business (Kirzner, 2009:145). An entrepreneur is a person who perceives the market opportunity and then has the motivation, drive and ability to mobilize resources to meet it. Entrepreneurship is therefore often associated with innovation (Larson, 2000:307). This innovation could be process innovation, market innovation, product innovation, or organization innovation.

Network organization and entrepreneurship are further closely related and explains how enterprises get established, how entrepreneurs mobilize resources and how small to medium-sized companies can be highly innovative. Larson (2000:307) states that entrepreneurship should therefore be seen as a process that is based on a network of ties and that entrepreneurial leadership is “about designing, cultivating and refining (including paring back and augmenting) these networks of relationships with other firms and individuals who come to see their own visions and economic aspirations achieved through union with a team of like-minded people and organizations”.

### **2.3. MSMEs in the Global Context**

The industrial revolution in the 18<sup>th</sup> and 19<sup>th</sup> centuries saw the growth of very large enterprises and it was only by the late 1970s and 1980s that medium-small size enterprises (MSEs) were seen to be important contributors to western economies (Stokes & Wilson, 2006: 7). It is now recognized that MSEs play an important role in most economies across the world and that this can largely be attributed to the large contingent of entrepreneurs working in small firms (Kirzner, 2009:145). Stokes & Wilson (2006: 13) argue that in Japan 56% of people work in MSEs and that in New Zealand 97% of the business population is in the MSE sector.

The same trend in development can be traced for micro small and medium enterprises (MSMEs) as for MSEs. Burns (2007:12) states that the growth of MSMEs can be traced back to 1971 when the definitive Bolton report on the state of MSMEs in Britain was issued. It is further also recognized that MSMEs are closely related to an integrated with entrepreneurship and that they are key elements in national economic growth and job creation (Bluhm, 2008:10).

According to Burns (2007: 12) it is often difficult to define MSMEs because of the variation of interpretation of what is micro, small or medium, particularly between developed and developing countries. The European Union and the World Bank's International Finance Corporation have defined MSMEs in terms of employment numbers where enterprises with 1 - 9 employees are classified as micro, 10 - 49 employees as small, and those with 50 - 249 employees as medium (Kushnir, Mirmulstein & Ramalho, 2010:2; Stokes & Wilson, 2006:5).

Burns (2007:23) argues that the growth in numbers of MSMEs is the natural result of increased competition and a drive to prevent the monopoly of the economy by large companies. There is further a focus on change and the role that knowledge and innovation

plays in the formation, growth, and survival of MSMEs (Burns, 2011). Burns (2007:23) suggests that a further reason for MSME growth relates to the number of employees in large companies that leave their organization to start their own small enterprise to develop an innovative idea that was disregarded by their employers. There is, therefore, a clear link between MSME development and entrepreneurship. Burns (2007: 23-25) emphasizes the following aspects of entrepreneurship that encourage MSME growth:

- being competitive;
- the skill to apply knowledge derived from various sources;
- ability to identify opportunities and innovate;
- aptitude to encourage diversity and variety.

The MSME sector has played a vital role in sustaining the economies of many countries, and according to the data gathered by the World Bank's International Finance Corporation, (Kushnir, Mirmulstein & Ramalho 2010: 6) the formal MSME sector employs more than one-third of the global population, contributing around 33% of employment in developing economies. It is for this reason that most countries worldwide are implementing or continuously improving their MSME policy frameworks to encourage MSME development. Within Africa and particularly the Southern African Development Community (SADC) the issue of establishing MSME's policy frameworks has become an important factor in poverty alleviation. This has given rise to the establishment in 1996 of the Small Enterprises Promotion Advisory Council (SEPAC) to enhance collaboration among SADC member states to encourage MSME development and to create policy frameworks that would promote development (Briscoe & Oesterdiekhoff, 1996; Chidzomba, 2002). The Common Market for Eastern and Central Africa (COMESA) is also committed to promoting SMME development amongst member states and is planning to hold a business forum entitled "Enhancing Intra-COMESA Trade through Micro, Small, and Medium Enterprise Development" in Kampala, Uganda towards the end of November 2012.

Developing MSMEs is therefore considered to be an important method to stimulate employment creation, increase the utilization of local raw materials, and to develop entrepreneurial capacity.

## **2.4. The Development of MSMEs in Zambia**

In April 1968, Zambia's economic structure was changed with the Mulungushi Reform and Zambia nationalised all of the key sectors of its economy in the 1970s, including the mining

sector. It adopted a socialist-based economic policy (African Forum and Network on Debt and Development, 2007).

Historically, Zambia's economy was based on the copper-mining industry with copper prices reaching very high levels a decade after Zambia gained independence in 1964. However, the price of copper rapidly decreased after the oil crisis of 1974 and 1979. This forced Zambia to borrow money and when interest rates increased drastically this resulted in a severe debt crisis (Cornia, Van der Hoeven, & Mkandawire, 1992: 11).

Zambia's economy collapsed over the following two decades as copper prices continued to decline relative to the price of imports bringing about a national economic crisis. This resulted in the International Monetary Fund (IMF) intervening and insisting that Zambia should introduce restructuring and reform programmes to stabilise. Zambia thereafter severed relationships with the IMF in 1987, but introduced a New Economic Recovery Programme in 1988 to diversify the national economy and reduce dependence on the copper mining sector (Bates & Collier, 1995: 121). The plan targeted the manufacturing sector, with the highest priority given to the development of small scale and rural industries. This, however, did not improve the situation, and the Zambian government came to a new agreement with the IMF in 1989 (Cornia, Van der Hoeven, & Mkandawire, 1992: 11). In 1991, the Zambian Government started to privatize the economy and this led by the late 1990's to new foreign investment and donor support (African Forum and Network on Debt and Development, 2007; Walters, 2010:1-3).

After the adoption of an open market economy the Zambian government enacted a number of laws that were to serve as the framework to stimulate the economy. In 1995 the Zambian government with the support of the United Nations Development Programme (UNDP) implemented the Private Sector Development Programme (PSDP). The specific focus of this programme was on promoting the micro and small business sector. This was followed by the proclamation of the 'Small Enterprise Development (SED) Act' of 1996 and the 'Investment Act' of 1997 to promote small business and industrial development. Prior to this Zambia had no specific legal framework for promoting the small and micro business sector in Zambia (African Forum and Network on Debt and Development, 2007; Gewalt, Hinfelaar & Macola, 2008).

A number of agencies were further instituted to assist the process, the most significant of which were the Zambia Privatization Agency (ZPA) and the Zambia Investment Centre

(ZIC). Most state owned enterprises were sold to private operators who had the capacity and competence to run them and new investors, both local and foreign, were encouraged to invest in Zambia (Cornia, Van der Hoeven, & Mkandawire, 1992: 15). A further boost was provided to the economy when Zambia qualified for the ‘Multilateral Debt Relief Initiative’ in 2006 and in 2007 became part of the IMF’s Poverty Reduction and Growth Facility Programme (Walters, 2010: 2). This has resulted in the considerable reduction of Zambia’s foreign debt and according to Walters (2010:3) this has “freed resources for domestic re-investment” which has stabilised the economy.

The move to privatize almost all sectors of the economy initially also had a number of negative results. New owners of privatized companies embarked on streamlining their workforce resulting in considerable job losses and escalated poverty levels. This has, however, resulted in many persons starting their own businesses in the MSME sector and led to the subsequent growth of the sector (African Forum and Network on Debt and Development, 2007). Chishala (2008:7) has noted that MSMEs in Zambia are mainly found in four industries, namely manufacturing, trading, services and mining.

The Small Enterprises Development Act of 1996 has more recently been replaced by the Zambia Development Agency (ZDA) Act of 2006 and the ‘Micro, Small and Medium Enterprise Development Policy’ (GRZ-MCTI, 2008: 10). The new MSME development policy defines the sector based on four business variables: (i) Total fixed investments. (ii) Sales turnover. (iii) Number of employees and (iv) Legal status.<sup>10</sup> The 2008 Zambian MSME policy has further made a provision for an informal enterprise<sup>11</sup> category.

---

<sup>10</sup>**Micro Enterprises:** “A micro enterprise shall be any business enterprise registered with the Registrar of Companies: (i) Whose total investment excluding land and buildings shall be up to Eighty Million Kwacha (K80, 000,000). (ii) Whose annual turnover shall be up to One hundred and Fifty Million Kwacha (K150, 000,000). (iii) Employing up to ten (10) persons”. (GRZ-MCTI,2008: 12)

**Small Enterprises:** “A small enterprise shall be any business enterprise registered with the Registrar of Companies: (i) Whose total investment, excluding land and building - In the case of manufacturing and processing enterprises, shall be between Eighty Million and Two Hundred Million Kwacha (K80, 000,000 – K200, 000,000) in plant and machinery; In the case of trading and service providing enterprises shall be up to One Hundred and Million (K150, 000, 000) Kwacha. (ii) Whose annual turnover shall be between One Hundred

With the move to privatization and the growth of MSMEs, many proprietors were confronted with the following challenges:

- having little or no business experience;
- lack of prior strategic planning for their businesses;
- no programmes to enhance their capacity;
- insufficient funds; and
- having to adapt to a new entrepreneurial culture rather than the previous dependency on the government.

Chiluba, president of Zambia in 1992, mentioned these challenges in an address to the Southern Africa Labour Commission (SALC) (Times of Zambia, 1992a). A consequence of these challenges was that businesses were poorly managed and not being run effectively. This forced banks to introduce strict loan conditions. MSMEs were further often producing products of an inferior quality and because several producers did not disclose product information to consumers they were in many instances being confronted with legal action (Times of Zambia, 1992d; Times of Zambia, 1993).

---

and fifty Million and Two Hundred and Fifty Million (K151, 000- K300, 000,000) Kwacha. (iii) Employing between eleven and forty nine (11- 50) persons” (GRZ-MCTI, 2008: 12-13).

**Medium Enterprises:** “A medium enterprise shall be any business enterprise larger than a small enterprise registered with the Registrar of companies; (i) Whose total investment, excluding land and building; - In the case of manufacturing and processing enterprises, shall be between Two Hundred Million and Five Hundred Million (K201,000,000 –K500, 000, 000) Kwacha in plant and machinery, - In the case of trading and service providing shall be between One Hundred and Fifty One Million and three Hundred Mullion (K151, 000,000 – K300,000,000) Kwacha. (ii) Whose annual turnover shall be between Three Hundred Million and eight Hundred Million) (K300, 000, 000 - K800, 000, 000). (iii) Employing between Fifty One and One Hundred (51 -100) persons” (GRZ-MCTI, 2008: 13-14).

<sup>11</sup>**Informal Enterprise:** “An informal enterprise shall be any business enterprise **not** registered with the Registrar of Companies. (i) Whose total investments excluding Land and Building shall be up to Fifty Million (K50, 000,000) Kwacha. (ii) Employing less than Ten (10) persons. To qualify as a small micro or medium enterprise under the above mentioned categories, the legal status and total investment criteria must be met together with at least one other criterion” (GRZ-MCTI, 2008: 15).

More recently, the World Bank's Finance and Private Sector Development Unit (2011) reports that poor productivity of Zambian enterprises is undermining their ability to generate income and employment. They further state that most of Zambia's informal businesses are trapped in a web of constraints from which it is difficult to escape. They lack basic infrastructure – both hard (energy, water, transport and ICT) and soft (education, finance and information) – that might otherwise enable increased productivity. Their lack of knowledge, coupled with poor social capital, means that they are unable to improve their products' quality, finance business expansion or influence regulation and competition in their favour (World Bank, Finance & Private Sector Development Unit, Africa Region, 2011:1).

The MSME sector constitutes by far the largest business sector in Zambia and 80% of private-sector businesses have fewer than 50 employees. Most of these firms are very small informal operations, with less than five employees (Conway & Shah, 2010; World Bank, Finance & Private Sector Development Unit, Africa Region, 2011:1). Statistics from the 2005 Labour Force Survey indicated that 73% of the total labor force is employed by the MSME sector (Zambia CSO, 2005).

This being the case, the Zambian government had in the recent past initiated a number of interventions meant to address some of the identified problems in the sector (Zambia millennium development goals, 2008). In order to address the problem of capital and economic empowerment, the Development Financial Institutions (DFIs) were established and funded by government. By the end of December 1996 there were five DFIs registered with the Bank of Zambia whose primary function was to provide finance for development purposes to specific sectors of the economy<sup>12</sup>. Later, the Citizen Economic Empowerment Act 9, 2006 was put in place with the principle task of promoting the empowerment of citizens who were or had been marginalized or disadvantaged and whose access to economic resources and development capacity had been constrained due to various factors including race, sex, educational background, status and disability. The Act had the following objectives:

---

<sup>12</sup>These were: the Development Bank of Zambia (DBZ), the LIMA Bank, the EXIM Bank, Zambia Cooperatives Federation Financial services and the Small-Scale Enterprise Promotion Ltd (SSEP).

Encourage competition in the economy; protect consumer welfare; strengthen the efficiency of production and distribution of goods and services; secure the best possible conditions for freedom of trade; expand the base of entrepreneurship, and regulate monopolies and concentration of economic power.

In 2007 an Information and Communication Technology (ICT) policy was launched to outline guidelines for ICT's in Zambia. The World Bank has further implemented its Jobs and Prosperity: Building Zambia's Competitiveness (JPC) Program to help increase productivity in all economic sectors (World Bank, Finance & Private Sector Development Unit, Africa Region, 2011:1).

The researcher, however, argues that in addition to these supportive initiatives, the development of entrepreneurship also requires subjective mindsets of individuals. These subjective mindsets are usually shaped by a broad cultural framework, and cultural factors that hinder change are found both at the individual level and the societal level. Culture has a great influence on the entrepreneurial capacity of a society; and societies usually do not have homogeneous cultural settings. Entrepreneurship is embedded in culture and therefore the focus should be more on the cultural distinctions of the entrepreneurial phenomena, and how differences in values, beliefs, attitudes, shared norms and particularity of conditions influence what they do. It for this reason that Montano (2005: 257) argues that innovation will only emerge in MSMEs when links with Higher Education Institutions and business services (that can assist MSMEs' in making choices and implement innovations) are established and strengthened. The Mulungushi University which was recently opened started offering courses in entrepreneurship. However, no Zambian institution is currently offering a course in KM neither is the creation of a knowledge society highlighted in any government policy document.

## **2.5. Conclusion**

Entrepreneurship like KM has drawn the attention in recent years. An entrepreneur takes existing resources, such as people, materials, buildings and money, and redeploys them in such ways as to make them more productive and give them greater value. Entrepreneurs are competitive, innovative and they drive the market process. Agmon and Drobnick (1994:2) argued that there is an advantage in being small in terms of flexibility and sharing knowledge and further that if MSMEs were to excel and have a competitive advantage then they should first identify and exploit the comparative advantage within their locality.

MSMEs are valued because of their potential to foster national economic growth, job creation and poverty alleviation. Worldwide, nations support MSMEs by financial assistance, creating a good ICT infrastructure and policies, MSME-friendly policy frameworks, training and by promoting the concept of a knowledge-driven economy and society.

The Zambian MSME sector developed rapidly after the implementation of a more market-oriented economy and the privatization of state-owned companies in the 1990s. However this has not come about without challenges. To overcome these challenges a number of initiatives have been implemented by the Zambian government as well as organizations such as the World Bank and the International Monetary Fund.

It is however argued that only by promoting the importance of leveraging knowledge can Zambia grow economically. Chapter three therefore discusses the importance of knowledge and knowledge management.

University of Cape Town

## **CHAPTER THREE: THE DEVELOPMENT OF KNOWLEDGE MANAGEMENT IN THE KNOWLEDGE ECONOMY**

### **3.1. Introduction**

Chapter three provides a more detailed discussion of the literature on knowledge use, various aspects of knowledge management and related concepts.

It is generally accepted that the so-called ‘knowledge era’ has emerged and that businesses worldwide operate in a knowledge-based economy where social and economic activities are dependent on the use of knowledge. In this section the development of knowledge management as a discipline and role in the knowledge economy are thus explored. The knowledge age came about because of the explosive growth of information over the last few decades. However, knowledge is more than information and today knowledge is not only changing the way people live but it is also being converted into material wealth. Knowledge is the most unique and valuable resource that any person or organization can have. Although many modern economists have often tried to down-play the strategic role of knowledge in business (while rather valuing information) it is interesting to note that as early as 1959 James Hadfield, an economist, stated that:

“ideas, whether those of art or science, or those embodied in practical appliances, are the most real of the gifts which each generation receives from its predecessors. The world’s material wealth would quickly be replaced if it were destroyed, but the ideas by which it was made were retained. If, however, the ideas were lost, but not the material wealth, then that would dwindle and the world would go back to poverty” (Hadfield, 1959:28).

Knowledge management (KM), as a discipline, has only fairly recently evolved to manage this unique and valuable resource. Its exact date of origin is often disputed and claims for its starting date range between those that acknowledge that mankind has always had to ‘manage’ its knowledge to those that state that it a modern phenomenon. This variation of views is typically represented by those of Klobas, who traces its origin to the 1990s (Raitt, 1997:39 and Fuller, 2002:2) who trace its initial developments to 2500 years ago when the pursuit of

knowledge was valued by philosophers such as Socrates, Aristotle and Plato<sup>13</sup>. Though Fuller has narrowed the pursuit of knowledge to about 2500 years ago, it is suggested that it can be traced much further back in time. For example, Hebrew sacred writings present Jewish myths of how their deity had established a garden in which two types of trees were planted, a tree of life and a tree of knowledge.

Little, Quintas & Ray argue that although the recognition of knowledge as an important source of economic wealth and political power is not a new idea, it is only recently that the management of its principles and practices, i.e. aiming to increase an organization's ability to exploit knowledge, has emerged (Little, Quintas & Ray, 2002:1). The general consensus is therefore that the active discipline of knowledge management emerged during the 1990s.

### **3.2. Defining Knowledge Management**

Knowledge Management (KM), according to Prichard, (2001:1) has many facets and therefore does not have a standardized definition. Each definition points to its many facets and varies according to the emphasis placed on these facets and the perceptions of its proponent. Davenport and Prusak, for example, define KM as that which concerns the exploitation of and development of the knowledge assets of an organization with a view to furthering the organization's objectives. The knowledge to be managed includes both explicit (documented knowledge), and tacit (subjective knowledge). They further contend that management entails all those processes associated with the identification, sharing and creation of knowledge (Davenport & Prusak, 1998). Sveiby provides a much shorter definition that states that KM is the art of creating value by leveraging intangible assets (Sveiby, 1997). What is clear from these definitions is that KM is a perspective that relates to the management of knowledge in an organization or the organization as a whole and that it impacts on all the activities in an organization.

---

<sup>13</sup>Aristotle's ethics offers a fine example of his constant effort at classification of all types of knowledge ... where Plato contemplates ceaselessly on virtue; Aristotle bypasses such agonizing determinations by classifying virtue into two types: moral and intellectual. He then further categorizes the intellect or the rational part of the soul, into two parts: the contemplative ... (Notes on the methods of inquiry of Plato and Aristotle by Phillip Vassallo).

KM is often not distinguished from information management (IM) (Wilson, 2002) and this is a further aspect that needs clarification. Definitions of IM, as with KM, also vary considerably. Dawson (2000), for example, states that IM is the management of anything that is, or can be digitized, while KM deals with all aspects of how people in organizations are enabled to perform knowledge-based functions. Other authors again refer to IM as all processes in an organization that manages information as an organizational resource to enhance its effectiveness and functionality (Bouthiller & Shearer, 2002; Kirk, 1999). It relates to the capturing, organization, analysis, use, and sharing of information resources available to the organization.

Although IM is similar in scope to information management, knowledge management relates to broader issues that allow people in an organization not only to work with information, but also to create and share knowledge. This suggests the mutual interdependence of people in a particular organization who work towards achieving a common goal. KM thus ensures that an environment is created where employees may feel empowered or motivated to begin to generate knowledge and feel rewarded for doing so. Such conditions are very important because knowledge resides inside people's heads and cannot be managed without devising a way in which this knowledge can be accessed and be retained by the organization.

Liebowitz further suggests that the functioning of KM is highly influenced by three factors - managerial, resource, and environmental influences. Managerial influences are concerned with administering the practice of KM in an organization which includes four kinds of factors: leading, coordinating, controlling, and measuring the practice of KM. The resource influences relate to financial, material, human and knowledge resources which can both limit and enable the conduct of KM. The environmental influences are factors external to the organization that can affect KM and includes factors such as the organization's competitors, technology, markets, and regulators (Liebowitz, 1999:7-3).

KM is therefore a discipline that specializes in the production of ideas rather than goods and services. The main work of KM is to enhance the potential of the other factors of production. The basic assumption is that those organizations that are good at managing organizational as well and individual knowledge will have a competitive edge in the new business environment.

### **3.3. Underlying Concepts of Knowledge Management**

KM scholars have been debating the nature of knowledge and many have come to the conclusion that it forms part of a knowledge hierarchy with data having the lowest value while knowledge is higher up the hierarchy (Fuller, 2002). There is a need to differentiate between data, information and knowledge. April and Ahmadi-Izadi are in full support of the idea of making a theoretical demarcation between the three elements. They explain that the reason for doing so is to draw attention to each element's value and the different kinds of investment and resources each one of them require. They argue that technology, for example, plays a significant role in the data and information processing dimensions of KM. However, knowledge, i.e. the processing and wisdom dimensions are much more related to human activities of KM (April & Ahmadi-Izadi, 2004:3). Under this section we shall therefore discuss the crucial elements of KM namely: data, information, knowledge, and the different types of knowledge.

#### **3.3.1. Data**

English dictionaries define data as factual information (measurements or statistics) used as a basis for reasoning, discussion, or calculation. However, Davenport and Prusak defined data as discrete, objective facts (such as pictures, figures, numbers etc.) about events that have not been interpreted, are still raw and are presented without a context (Davenport & Prusak, 1998:2). For Meadow (2000:35), data refer to a "string of elementary symbols, such as digits or letters". Nevertheless, data can be observed, measured and/or calculated without any element of human interpretation or analysis and it is usually easy to store and manipulate on computers. Data is the important and essential raw material or building blocks for the creation of information (April & Ahmadi-Izadi, 2004:3). They are signals about human events and activities and have the lowest level of known facts with no interior/inner meaning.

#### **3.3.2. Information**

On the other hand, once data is organized, analyzed, synthesized, interpreted and structured, it becomes information. Information is data that has been altered, modified, contextualized, categorized, calculated and condensed (Drucker, 1988:46). Wiig defines information as facts and data that has been organized to characterize a particular situation (Wiig, 1999). Therefore, information can be seen as data made meaningful by being put into a context. Other authorities have, however, argued that information can also exist without or independent of context. The latter would however be an exceptional situation. Information is

the vehicle used to express and communicate knowledge in our daily lives and in the work environment. In conclusion, information "has no universally accepted meaning, but generally it carries the connotation of evaluated, validated or useful data" (Meadow, 2000:35).

### **3.3.3. Knowledge**

Though information has substance and purpose, it has no meaning. It is only when it has been internalized and contextualized by an individual that it acquires meaning and becomes knowledge (Skyrme, 1999:47-49). Knowledge is the condition of knowing something gained through experience. It is a set of truths and beliefs, perspectives and concepts, judgments, expectations, methodologies and know-how. Knowledge is mostly subjective and abstract and it is usually seen to have higher value than information and data. It is a signal that human interventions have taken place, i.e. ordering, interpretation, understanding, discussion, adding value and meaning to information. As Fuller puts it, knowledge is the mind's representation and is the result of the mind's receptiveness to what lies outside it (Fuller, 2002:16). It is therefore the whole body of learning and skills that individuals (not machines) use for solving problems and is always related to people (April & Ahmadi-Izadi, 2004:8). It is this knowledge which brings about all intelligent activities in human beings. Peter Senge further contends that knowledge is the capacity for effective action (Senge, 2000:56). Knowledge is therefore processed information that is used to make key decisions or to act intelligently. Knowledge is said to be applied in four different forms – idealistic, systematic, pragmatic and automatic (Little et al, 2000:55-57, 72-76).

### **3.3.4. Different Types of Knowledge**

Knowledge is perceived to exist in two forms: explicit and tacit (Little et al, 2002: 42-43). Nonaka and Takeuchi (1995) have probably provided the most extensive outline of the underlying elements and differences between these two concepts.

Explicit knowledge is that knowledge that has been coded or recorded and can be acquired or formally delivered either in physical or electronic formats. This kind of knowledge is thus transferable, portable and can easily be accessed through books, manuals and other coded or recorded formats. It is very reliable as it has been tested and proved. Explicit knowledge, because it is codified, can therefore more easily be communicated and shared. Explicit knowledge, because it is structured, can easily be stored, transmitted and manipulated by means of information technologies (Martensson, 2000). This type of knowledge, in conclusion, is often equated with information.

Tacit knowledge, although it cannot easily be explained or described is considered to be the fundamental type of knowledge on which organizational knowledge is built (Nonaka & Takeuchi, 1995). It is generally agreed that tacit knowledge is that which resides in people's heads and it is this aspect that makes it difficult to easily access (Skyrme 1999: 60-62). Tacit knowledge is therefore personal and comprises of the 'know how' usually displayed in the form of skills, special competencies, talents and expertise (Little et al, 2002:23). Such knowledge is often action-based, entrained in practice and its access depends on being able to interact with the person who has the knowledge (Abell, 2001:56; Little et al, 2002:5).

A substantive component of KM is concerned with how to leverage and capture tacit knowledge and to enable all individuals in an organization to derive benefit from individual 'know-how'. Natural, informal and friendly environments that allow social interactions are conducive to enabling its transfer from one person to another. Collaboration over computer networks or informal social environments such as corridor and break/lunch-time meetings therefore provides good settings to transfer such knowledge.

The theory of tacit knowledge was first explored by Michael Polanyi in 1958 in his well-known work on personal knowledge. Nonaka and Takeuchi (1995) have more recently developed their theories relating to how tacit knowledge can be transmitted through social interactions or socialization and made explicit through externalization. They further emphasize the value that it holds for organizations.

### **3.4. Knowledge Management in the Knowledge Economy**

From the discussion above and if it is accepted that knowledge-related activities and investigations have been around for centuries, the question could be asked: why the recent interest in knowledge management, particularly in the business environment? Ruggles (1999:5) argues that in our time there have been major changes in life and in the general business environment. Lehaney, Clarke and Jack (2004:14) endorse this view by stating that "in the last decade business success and survival have become increasingly difficult to ensure due to the emergence of a new era of organizational forms that embrace change". "Organizations are changing from traditional, 'permanently' structured organizations, to more porous businesses across a wide range of sectors" (Lehaney et al, 2004:14). The emphasis is now on adaptability in the business environment and on proactively addressing market and customer needs and on continually monitoring external indicators of change in order to guide future directions and initiatives Debowski (2006:5).

It is argued that the changing environment has created an even greater need for active KM than has ever existed before. Ponzi (as quoted in Koenig & Srikantaiah, 2004:18) contends that knowledge management is at least living longer than other typical 'fads' and perhaps is in the process of establishing itself as a new aspect of management. This is a rational prediction which needs to be supported and further that people are beginning to reshape their world models even as they prepare to step into the emerging knowledge age. We have thus entered a new era that is generally known as the knowledge economy where knowledge is capable of opening new worlds and new opportunities.

There has been a revolution that has greatly affected the world economic environment. The economic world has witnessed the birth of immense liberalization, new emerging markets, alliance capitalism and the knowledge economy (Skyrme, 1999: 7, 16-17). All these have been brought about by globalization. Globalization is a new way in which all nations of the world have developed interdependence and interconnections between themselves (April, Ahmade-Izade 2004: 1; Dick, 2002: 75). The mergers that have taken place between two technologies, computers and telecommunications has translated into the birth of Information

Communication Technologies (ICTs) and this has brought about a major breakthrough in the creation and enhancement of globalization (Abell, 2001:6). With improved means of transportation, individuals can now travel to several places in one day. On the other hand, telematics, teleconferencing, videoconferencing technologies and information flows now allow teleworking, i.e. where people exercise control and do whatever they want to in other countries or places without themselves physically being there. Little suggests that though physical borders or boundaries continue to exist they do not in any way hinder or interfere with the flow of ideas, objects and people (Little et al, 2002:7).

This is the new work culture which knows no time or distance. Time limitation which has traditionally impacted negatively on development has mostly been conquered and time cost has equally been compressed in relation to distance covered (Wim, 2003). Our world has now witnessed massive mobility of ideas, objects and people. This situation has given rise to a number of inter-organizational/intra-organizational, and global investments. Mainly the management of organizations based in foreign countries is done through virtual offices and telematics or teleworking (Skyrme, 1999:16-17).

Nations of the world are freeing their economies. Some of such moves are self-imposed while in other instances global institutions like the World Bank (WB) and the International

Monetary Fund (IMF) dictate such conditions for continued financial support. Much of the world's wealth therefore is now in private hands. This has given rise to a surge in the establishment of Micro, Small and Medium Enterprises (MSMEs). There is an increase in the cross-border financial flow, financial integration and cross-border communication channels. Regional, continental and global institutions have been formed to spearhead such activities among nations. International competitors are now brought into the home market with varying effects on local economies. Exposure to new customers and greater competition has increased the pressure on organizations to be creative and innovative, as well as responsive to competitive cost models, innovations, and emerging global trends (Debowski, 2006:3). The mobility of ideas therefore has resulted in a knowledge-based economy which enhances competition among businesses. Through knowledge networking new markets are being discovered and explored. The knowledge economy highlights the importance of knowledge and the fact that it should be considered to be a critical factor for quality production and service delivery i.e. business entrepreneurs create and use knowledge to improve on, or to create new goods and services (Dunning, 2000).

### **3.5. The Use and Application of Knowledge in Business**

#### **3.5.1. The Business Environment and Knowledge Application**

An organization is not an island. Its activities are highly influenced by both controllable and uncontrollable factors. Nieuwenhuizen observes that these factors occur in the environment in which a business functions (Nieuwenhuizen, 2004:18). The business environment comprises of all the factors that can positively and /or negatively affect the organization's establishment, growth and survival. It therefore promotes or impedes the organization's goals and objectives. The entrepreneur needs to be aware of the events occurring in the proximity of the business environment, as these events can present certain opportunities for, or threats to the organization (Handzic & Zhou, 2005:17). Business environments are unpredictable; the factors that are significant today may be irrelevant tomorrow (Debowski, 2006:3). Organizations are therefore not only in the business of creating wealth but knowledge as well and they should be aware of the fact that they need to create new knowledge in order to create wealth.

The internal environment is the organization itself, which Nieuwenhuizen calls its micro environment. The external environment is the part of the business environment outside the organization and it mainly consists of the market and the macro environments. Unless one is

kept abreast of these environments it is difficult to respond to them adequately. The monitoring of these environments needs to be a continuous process (Handzic & Zhou, 2005:25-28). The Micro environment consists of three major elements: i) the mission and objectives of the organization; ii) the functions of the organization and iii) production factors. These three elements need to be sustained by a body of knowledge in order for them to function well. The mission and objectives of the organization streamline the broad terms of the organization; i.e. what the organization wants to achieve and how these objectives can be achieved (Davenport & Probst, 2002:26). Usually this knowledge is generated during strategic planning for the organization.

The macro environment includes the organization and market environment which is made up of all the uncontrollable events and factors outside the organization that have a favourable or adverse effect on the organization (Nieuwenhuizen, 2004:26). Such external factors which can operate both nationally and internationally need to be recognized and accommodated by the organization (Debowski, 2006:4). The most powerful forces in the macro environment include: economic conditions, technological changes, social and cultural forces of the market. There is a need to constantly know what constitute the market and where the market is situated. Political and legal changes may influence the way a business conducts its activities. The above business environments that have been described determine the knowledge that the organization needs, creates, uses, and further defines the depth of a KM strategy and speed of KM implementation to ensure that the organization not only survives, but also gains a competitive edge.

Paul Gamble and John Blackwell argue that if knowledge creation is a necessary condition for the creation of wealth, an organization can then be viewed as consisting of three knowledge processes, viz. the generative, productive and representative processes. According to them, the generative process comprises of all the usual marketing, operational and logistic activities by which products and services are created and sold. In the process knowledge is transferred and each product sold or service provided reflects the knowledge used to produce the product or service (Gamble & Blackwell, 2001:111-114). The productive process relates to where knowledge is transformed into products and services and value is created. The representative process is concerned with the relationship between the organization and its customers. Knowledge-driven business entities should always familiarize themselves with their business environment and align their KM strategy with their business environments.

### **3.5.2. The Political and Economic Nature of Knowledge**

Debowski warns that although knowledge is a vital component that determines the success of an organization, other factors such as the international political and economic standing of the country in which it operates can also heavily influence its success (Debowski, 2006:5). As far back as 1984, Jean Francois Lyotard stated that it could be conceivable that nation-states will fight for control of knowledge, just as they battled in the past for control over territory, and afterwards for control of access to and exploitation of raw materials and cheap labor. He further added that knowledge and power are “two sides of the same question: (Lyotard, 1984: 4-5, 9). Political and economic decisions may, for instance, result in policy formulation and the establishment of an ICT infrastructure that can to a large extent determine the cost of knowledge creation and its transfer. This may finally result in such costly knowledge creation and transfer that certain people and organizations may technically be barred from accessing it. In the ICT age, knowledge creation and dissemination is now more than ever influenced by political factors. In a similar way, economic factors have a considerable impact on knowledge exchange, e.g. knowledge is now being produced in order to be sold, or it becomes a significant cost item in production. Ultimately knowledge will no longer be free.

The widespread adoption of ICT has had a significant impact on nations and work in general. Work which was previously done by humans has to some extent been taken over by computers and ICT systems. The function of the state has changed and the power to make decisions has increasingly been determined by questions of access to knowledge. Lyotard therefore predicted that ICTs would become instruments for controlling and regulating the market system and this could expand to include knowledge itself (Lyotard, 1984: 9, 14, 53).

Knowledge creators can now easily restrict access to the knowledge they have created. A further restrictive factor is that the trend of knowledge commodification (i.e. the process whereby it is packaged and repackaged as a commodity) has now made knowledge much more of a private rather than a public good (Kingma, 1996:114-115). Trade secrets, patents, copyright, brands and trademarks are relevant examples of knowledge commodification. This factor has given power to those who have the means to access knowledge and to control it. This has resulted in many ‘Knowledge Hubs or Centres’ that were initially established to make knowledge readily available to everyone free of charge now having to recover some of the costs incurred by charging for access to information. The world has therefore been

divided into two societies, the knowledge rich and the knowledge poor (Abell, 2001:6; Dick, 2002: 75).

### **3.6. Knowledge Management Strategy, Processes and Systems in a Business Environment**

It is suggested that the success of KM depends very much on the adoption of a good KM strategy, system and processes that can guide and facilitate smooth implementation of the programme.

#### **3.6.1. KM Strategy**

A strategy is generally referred to as a plan that will achieve a specific long-term objective. For KM processes and systems to work well they need to be directed by a strategy. It is a deliberate initiative taken by the organization to spell out its destiny and this involves planning and allocation of both time, human and financial resources to meet future demands and challenges. Ellis (2005), in trying to relate KM processes to strategy, explains that knowledge is a new form of asset capable of transforming the way things (and entire organizations) are configured, delivered and developed. By this he means that the KM strategy maps out the processes of KM and guides the design of KM systems.

Davenport & Probst are of the view that a knowledge strategy is a dedicated instrument used by business owners and their management team to plan, implement and control management actions concerning business-relevant knowledge (Davenport & Probst, 2002: 25). Some KM proponents have viewed a KM strategy as a dichotomy comprising of codification and personalization, insinuating that organizations need to deliberately decide to focus or emphasize codification or the personalization of knowledge (e.g. 80% codification and 20% personalization or vice versa). But Koenig has refuted this as a false dichotomy since he argues that a KM strategy should always be aligned with the business operations, goals and objectives of the organization (Koenig and Srikantaiah, 2004: 8). It should be in harmony with the vision and mission statements of the organization. He therefore suggests that codification can be the KM strategy when the organization's products are standardized and mature, and when people rely primarily on explicit knowledge. On the other hand personalization can be the KM strategy when the organization's products are innovative and customized, especially when people primarily rely on tacit knowledge.

It is argued that organizations that wish to survive in the current knowledge economy need to set up effective KM strategies. Such strategies would normally result in changes in the

organization's structure, processes, systems, management and employee behaviour. Bierly and Chakrabarti (1996:123-135) suggest that the strategy will not be complete without organization learning in which the learning speed and the breadth of the knowledge base should be determined. Skyrme further proposes that employee and customer requirements, processes, relationships, products and services should also be included in a KM strategy.

Therefore, to ensure the effective application of KM, it is suggested that the following aspects should be considered:

**Knowledge creation and knowledge learning:** The organization should always motivate its employees to innovate, learn from past experiences and obtain new and better knowledge to enhance competitiveness (Abell, 2001:12-13). The organization should further ensure that the organization considers both external and internal learning. Internal learning occurs when members of the organization generate and share new knowledge within its boundaries. External learning is when boundary spanners bring in knowledge from an outside source through either acquisition or imitation and the knowledge is then distributed throughout the organization. It is however argued that the focus should be more on internal learning, which allows the organization to develop its own core competencies. External learning is, however, also required for the organization to develop a broad knowledge base and to keep abreast of cutting edge technologies (Schwartz, 2000:12-13).

**Knowledge transfer:** The organization should ensure the systematic transfer of knowledge across the organization. Newly created, captured, well organized and renewed knowledge should be shared with the entire organization so that the new knowledge becomes part of the organization's work culture (Davenport & Prusak, 1998:88-89).

**Personal knowledge:** Each employee should be motivated to be responsible for enhancing KM. It is not the preserve of the senior management alone though their support is needed in all KM activities and will require changes in thinking and behaving at all levels. Each individual should have the desire to broaden his/her knowledge-base and be prepared to share their knowledge (Little et al, 2002:72-76). There could, for example be a deliberate policy where all employees sign a knowledge sharing agreement.

**Organizational repositories:** Skyrme refers to the 'organizational memory', which exists in many places of the organization. This includes records, files, the 'heads of the organization's people' and in external sources (Skyrme, 1999: 46, 54,202; Abell, 2001:30-33; 50-51). Here

the most important knowledge is captured and entered into a knowledge database or repository with meta-data appended. The organization needs to consider how broad or narrow the organization's knowledge base should be and the number of resources required. With limited resources, it is usually best to focus on specific areas of knowledge (main competencies) so that the organization can become a leader in those areas.

**Knowledge of products, and services:** Organizations generate and accumulate extensive knowledge as part of product and service development. This includes knowledge relating to market development, problem-solving and product development and testing. These are sources of knowledge are generally under-utilized in most organizations. Examples of such resources are those that are generated from market research, user interviews, prototype results, application experience, problem solutions, user observation, service feedback, customer help lines, etc. This knowledge should be captured and saved in repositories and used for new product development, user guides, and procedure manuals (Skyrme, 1999:53-54).

**Knowledge of processes:** This is where knowledge is matched with business processes giving access to expertise at crucial points. Every business process contains embedded knowledge and activities that should be codified and captured as routine processes (Skyrme, 1999:55-56; Abell, 2001:25-26).

**Customer knowledge:** Customer knowledge is supposed to be an organization's most important knowledge because by developing knowledge through various means, the organization can enhance customer satisfaction through improved products and services. Skyrme argues that most organizations know more about the manufacturing of the product than they know about their customer's needs (Skyrme, 1999:52-53). This should be the opposite. Good customer knowledge should aim at gaining new and deep insights about the customer. Close working relationships with customers needs to be pursued so that knowledge about how and which products and services are used can be realized. Focus groups are useful tools here (Little et al, 2002:126-128).

**Knowledge relating to relationships:** Individual relationships that organizations have with customers, suppliers, business partners, etc. are a further important source of knowledge. The relationship does not only encompass shared knowledge and understanding of needs or factual information, but also aspects such as behavior, motivations, characteristics and ambitions. This is where employees develop relationships within and outside the organization

and where networking takes place through collaboration teams and virtual organizations (Skyrme, 1999: 57-58). Organizations should assist such relationships by providing their employees with mobile phones, e-mail, Facebook, tele/videoconferencing, and fax facilities to communicate and interact for business purposes. Corridor and lunch time chatting should further be encouraged.

### **3.6.2. KM Processes**

From the above discussions it is clear that KM processes would generally relate to developing new knowledge, combining such knowledge with already existing knowledge, valuing knowledge, sharing and using it. Gamble and Blackwell state that KM is not about managing knowledge in a mechanical sense; it is rather about the processes to leverage tacit knowledge. They specifically refer to undocumented information, intuition, empathy and experience that enable employees to take decisions. (Gamble & Blackwell, 2001:13)

In 3.2.4 reference was made to Nonaka and Takeuchi's (1995) distinction between tacit and explicit knowledge. They further develop the interrelation between these concepts by referring to the knowledge creation spiral that views organizational knowledge creation as a process involving a continual interplay between the explicit and tacit dimensions of knowledge. Here four levels of knowledge carriers in organizations are assumed, namely the individual, groups, organizational and inter-organizational carriers. The spiral model describes a dynamic process in which explicit and tacit knowledge are exchanged and transformed through four modes. Socialization enables tacit knowledge to be transferred from one individual to another. Combination allows existing explicit knowledge to be combined into new explicit forms. Externalization converts tacit knowledge into explicit knowledge in the form of concepts and models. Internalization allows individuals to absorb explicit knowledge and broaden their tacit knowledge so that new knowledge can be developed (Nonaka & Takeuchi, 1995). To achieve this, organizations need to take advantage and make use of the multi-disciplinary and cross-functional backgrounds of its employees. It is thus recommended that project team members should be selected from different age groupings, genders, professions and departments.

### **3.6.3. KM and ICT Systems**

As far back as 1999 Brooking suggested that ICT applications in business enable employees to more effectively connect with each other, share expertise and experiences, and connect to the organizational memory (Brooking, 1999: 125-126). ICT can thus be used across all

business and knowledge processes to ensure that cost effectiveness and efficiency is realized throughout the organization. Debowski argues that a well-planned and relevant ICT system can help employees to contribute to KM (Debowski, 2006:141).

Ellis further suggests that ICT systems provide the potential to create a unified and functional platform on which many different knowledge activities may flow and intersect thereby increasing the organization's learning activity and competitiveness. He argues that by incorporating ICT in KM a revolutionary reduction of cost and time has occurred. An ICT platform that is fully integrated with KM can assist the organization to implement a range of additional features other than efficient documentation (Ellis, 2005:43)<sup>14</sup>. Ellis therefore suggests that when designing an ICT platform for KM an organization should at the initial stages outline the requirements of its learning strategy and the full scope of what it could do for the organization (Ellis, 2005: 44). Gamble & Blackwell, in a similar way, have stated that it is only a well-designed ICT platform than can enable knowledge capturing and exchange to occur freely, readily and openly across the many different stakeholders in the organization (Gamble & Blackwell, 2001: 168). An effective ICT platform can therefore ensure that good knowledge practices are supported and that employees can more easily seek, acquire or share knowledge from the many sources that are available (Debowski, 2006:141).

Cavaleri & Seivert (2005:262) however warn that to ensure the effective application of ICTs sound systems and policies should be developed. This would assist in providing guidance on what principles to apply to a particular activity and to establish uniformity in application, predictability and good practices. Clear policies would further assist in aligning the use of ICT's in KM to the established values and standards of the organization (Ellis, 2005: 43).

Having outlined the advantages of applying ICT's in knowledge management, the researcher would also argue that KM can be established and practiced in an organization, especially in a small organization, without having access to a formal ICT platform. Gamble and Blackwell, for example, warn that while ICT can provide the technological basis to ensure an efficient

---

<sup>14</sup> ICT systems in KM fulfill many critical purposes and operate from a number of fundamental principles. Added value of an effective system is that it has the potential to assist an organization to provide a tailored, individual learning pathway, provide online access to external training resources, set-up best-practice forums and online knowledge spaces for group learning, virtual classrooms, and in general assist employees to meet their learning objectives.

KM system, it should not be seen as the driver of the knowledge agenda, but rather a supporter of it (Gamble & Blackwell, 2002:168). It should only exist to facilitate knowledge interactions, distribution, retrieval and retention.

### **3.7. Organizational learning and Culture**

#### **3.7.1. Organizational Learning**

According to Wallace an organization's "norms, strategies and assumptions are embedded in its practices that constitute the organization's theory of action" (Wallace, 2007:80). Each of its component activity and programme area represents the organization's own theory of action. Such a 'theory of action' consists of the norms relating to organizational performance, strategies to adhere to these norms, and statements that indicate the link between norms and strategies. The organization's theory of action is not always formalized in any official document, but often indicated indirectly in corporate documents such as organization charts, policy statements and job descriptions. Wallace therefore states that organizations "may layoff all its employees and engage new ones but it will still retain its essential character and identity" (Wallace, 2007:81). From this it is clear that the essential norms, strategies, and assumptions of an organization, i.e. those characteristics that define the organization's theory of action, essentially always remain constant. Each employee can, however, construct his or her own representation, or image, of the of the organization's 'theory of action'. These individual views are always incomplete and employees would thus constantly try to rectify the situation and change their picture of the organization. "It is through the collective re-visioning of individual pictures of the organization that the organization's knowledge of its own theory-in-use is developed and through which organizational learning occurs" (Wallace, 2007:81).

It is for this reason that managers should always create an environment in which such learning is directed towards achieving the goals and objectives of the organization in as natural a state as possible. Organizational learning is very important in any business and it is, therefore, suggested that only organizations that have a learning and knowledge-centred culture will be able to react effectively and more rapidly to changes in the business environment. Therefore if organizations or individuals in these organizations cannot increase their 'learning power' (i.e. by developing new skills, knowledge and attitudes), or the motivation to change (use resources to transform business processes based on what is learnt), then that organization will lose its market impact (Davenport & Probst, 2002:242). Without

sufficient 'learning power', organizations and individual would not be able to adapt swiftly enough to what is happening in the world.

The central task therefore of those concerned with KM is to determine ways to better cultivate, nurture, and exploit knowledge at individual and group levels, i.e. by means of organizational learning. It is organizational learning that, in turn, develops an organizational culture. April and Ahmadi-Izadi believe that 'learning' improves the potential for effective action and that this occurs by means of experience in settings that matter to the learner. Such learning further always takes place over time and in a 'real life' context, not in a classroom or during training sessions. 'Training' by contrast, is typically episodic and often unrelated to the context of the workplace (April & Izadi, 2004:18-19). The workplace is therefore the best learning environment for an employee. Ellis suggests that the traditional model which tended to separate work from learning is obsolete and that the development and expansion of the knowledge economy continues twenty-four hours, seven days per week. This means that just keeping abreast of industry developments is now almost a full-time job in some sectors (Ellis, 2005:33-34). In this type of setting knowledge is perceived to be a key resource, but it is also recognized that it needs to be evaluated and renewed through on-going learning. In view of this, organizational learning is the process that enables an organization to adapt to change and move forward by acquiring new knowledge, skills or behaviours and thereby transform itself.

### **3.7.2. Networking and Collaboration**

Organizations should create environments that are conducive to and enable the natural flow and sharing of knowledge. The idea of networking has therefore become the main feature of modern business organizations replacing hierarchies (Skyrme, 1999: 15). Hierarchically structured business organizations typically rely on vertical and particularly top - down communication and therefore do not promote knowledge sharing, nor do they stimulate innovation. Networking is about connectivity within and outside the organization (Abell, 2001:8-9). This kind of knowledge sharing can be formal or informal, in person or virtual and can reduce many interpersonal communication barriers and bureaucratic tendencies. In such an environment, employees can interact freely and instantly share what they know with others. Networking has, according to Skyrme, greatly improved corporate intelligence because it stimulates new idea creation and its rapid distribution across the organization (Skyrme, 1999:109-110,220).

In KM, a specific form of networking and collaboration platform has developed by means of the process known as 'Communities of Practice' (CoPs). A CoP comprises of people who have a common interest that they share on a regular basis and whose interaction may be formal or informal, physical or virtual (Little et al, 2002:25-26). CoPs can, according to Little et al, (2002:353), exist in different forms such as virtual teams, virtual organizations, virtual communities, knowledge collaborators, and teleworkers. Virtual organizations are electronically networked organizations that go beyond conventional organizational boundaries and where linkages may exist both within and between organizations (Schwartz, 2000:224). CoPs stimulate innovation; they initiate change and assist with developing corporate intelligence (Abell, 2001:56-58).

A number of tools can be used to facilitate networking and these include the use of faxes, e-mail discussion lists, the Internet, the organization's intranet, newsgroups, social media, teleconferencing and GroupWare systems.

### **3.7.3. Organizational Culture**

Brooking defines organizational culture as 'the way we do things around here'. She observes that organizational or corporate culture is invisible yet powerful as it provides the context within which business is done. Culture is powerful because it is "intimate, motivating and embraces the values of the business which in turn will determine how employees feel about deadlines, quality, unhappy customers and so on", i.e. it consists of the rituals, ceremonies, measures of success, corporate beliefs and values (Brooking, 1999, 109-113). Gamble and Blackwell refer to its organizational and human dynamics and state that "culture is a habitual way of behaving and acting, often motivated from deeply engrained presumptions about the right way to act which is a set of behaviours or qualities that are valued not because they are enforced from outside or even from within but simply because that is the way that influential members of the enterprise prefer them to happen" (Gamble & Blackwell, 2001:93).

The organizational culture not only influences internal business processes and employees' relationships, but also external relationships and services with suppliers and customers. It is therefore clear that the organizational culture sets the work mood and environment of an organization and if a knowledge culture is instilled in the workplace, employees would begin to think, feel, behave, talk and act according to that culture. As new knowledge is created, stored, developed, and distributed throughout the organization all employees will have access to this knowledge and so what was previously held as personal knowledge would then

become part of the organization's knowledge base. The organizational culture can therefore lead to the success of the business or to its downfall (Morrow, 2001:402-405).

The organizational culture is greatly influenced by the hierarchical structure and as mentioned above structure determines the way knowledge would flow within the organization. From the above it is clear that the concepts of organizational learning and culture together with networking are strategic to business competitiveness and evolution. Since business environments are constantly changing, the organization needs to constantly learn, meaningfully innovate and adapt.

### **3.8. Leadership, Management Techniques and People Skills**

#### **3.8.1. Emerging Knowledge Leadership**

Handzic & Zhou indicate that in order to shape an organization's strategic values and its organizational culture there should be a strong and focused leadership to stimulate its values and culture to support its key priorities (Handzic & Zhou, 2005:36). Such leaders should be action oriented and ready to reward behaviours that have been identified as productive among employees of the organization (Debowski, 2006: 16). The development of a strategic culture depends to a large extent on the development of values which are reflected in the way employees interact and work. In modern organizations these relate to factors such as collaboration, effective communication, flexibility, adaptability, teamwork, service orientation and a focus on quality. Thus leaders should determine the organization's future knowledge requirements, ensure that the knowledge that exists is known by those who need it, and find ways to assess and value the organization's knowledge assets. They must also determine who shall be responsible and accountable for generating such knowledge assets.

Cavaleri and Seivert contend that it is important for knowledge leaders to use both 'science' and 'art' to develop and improve the practical knowledge that they have accumulated over the years to create knowledge-based organizations (Cavaleri & Seivert, 2005:4). Liebowitz citing Wiig in 1966 said, "We need to develop a cadre of knowledge professionals with a blend of expertise that we have not previously seen" (Liebowitz, 1999:4-3). He therefore emphasizes that the very essence of KM is teamwork, a mix of skills and experience, a new approach to organization development, and a new focus on the management of people (Liebowitz, 1999:4-3). This kind of a leader should be able to understand the fact that knowledge

leadership is ‘a people business’ and this entails that the development of people within a sharing culture is key to the success of the organization. In other words there is a need to be people-centred as it is the people who hold the much needed knowledge. Handzic and Zhou further indicate that to create a supportive organizational structure for KM also means establishing a set of KM roles and positions within an organization. The leadership should be able to identify and appoint particular individuals to be responsible for KM and the mentoring of others (Handzic & Zhou, 2005:41)

### **3.8.2. Management of Intellectual Capital in a Knowledge Driven Organization**

Intellectual property may be defined as the result of intellectual effort and creative commitment that is displayed in the form of articles, ideas, and designs and which may be protected by means of intellectual property rights (Drahoš, 2005:139). Though such intangible assets are difficult to identify and measure, the original creator may claim ownership of that intellectual property because it was drawn from his or her intellectual activity. Drahoš further argues that economic theory suggests that a society that has no intellectual property protection at all would almost certainly not be allocating resources to invention and creation at an optimal level (Drahoš, 2005:139). Intellectual property rights come in two forms: statutory and non-statutory systems of protection. Statutory intellectual property rights include patents, copyright, trademarks, and design protection rights. The non-statutory forms include protection for trade secrets and the protection of commercial reputation. Intellectual property is also referred to as intellectual capital assets or intangible assets.

It is argued that the success of any business is directly related to the generation and management of its intellectual capital. Intellectual capital is often described as a system or model with three elements, namely human capital, structural capital and customer or relational capital, or dichotomously as the combination of structural and human capital (Abell, 2001:27-28; April & Ahmadi-Izadi, 2004:51; Skyrme, 1999:58). These three elements represent the organization’s stock of intellectual capital. Human capital can therefore be defined as the capabilities of individuals and it includes the experience, expertise, know-how, innovation etc. that resides with the workers of an organization.

Structural capital relates to the infrastructure capabilities of the organization (Little et al, 2002:55-57) and is generally referred to as that which remains behind when all employees go

home or when the employees who developed the capital are no longer with the organization. This consists of anything that gives the organization internal strength e.g. organizational culture, management and business processes, policies, training programmes, software, proprietary databases, the organization's image, patents, trademarks and information technology systems (April & Ahmadi-Izadi, 2004: 52-58).

Customer or relational capital is generated by an organization's ability to continually create mutually beneficial relationships with its customers as well as customer-valued solutions. Customer capital promotes customer loyalty and is therefore the asset that gives an organization power in the market place. Brooking refers to it as a market asset (Brooking, 1999:17) and it includes customer relationships, trademarks, brands, positioning, customer base, the organization's name, collaborations, various agreements and favourable contracts. According to April and Izadi an employee's attitude can be directly correlated to customer satisfaction (April & Ahmadi-Izadi, 2004: 52-58).

The concept of intangible assets has become important as organizations increasingly become more knowledge driven. Intellectual capital is far more of a significant factor in determining the future of a business than the more short term traditional assets. The knowledge economy has required that every organization radically rethinks what constitutes its organizational value. It is therefore important that the balance sheet of an organization should not only reflect tangible assets but also include intangible assets in order to measure its growth, renewal, efficiency and capabilities. An organization is thus not merely a collection of physical, human resources and systems but rather a place where human assets are valued and considered as a key resource (April & Ahmadi-Izadi, 2004: 52-53).

Intellectual capital is not a new phenomenon and according to Brooking it has been around since the first organization established a good relationship or 'good will' with a customer. She further suggests that what has happened in our time is that ICTs have given us new capabilities and tools that have been used to good effect to build the global economy (Brooking, 1999:15-16). Many of these tools bring intangible benefits without which organizations cannot function and thus provide a competitive advantage.

Within the work context, many knowledge workers are employed to generate intellectual property and often it is the organization that legally owns that intellectual property (Debowski, 2004:44). Such organizations invest in intangibles and according to Lehane an organization's research, development, innovation and training policies should include actions

aimed at stimulating innovation, creativity, and the competitive development of the organizations (Lehaney et al, 2004: 26). It is therefore important that knowledge management should not only relate to the storage and manipulation of data and information but also recognize the value of the intangible assets contained in human minds and leverage them as organizational assets that can be accessed and used by a broader set of individuals on whose decisions the organization depends. Lehaney emphasizes the need to include the management of intellectual assets on the strategic management agenda (Lehaney et al, 2004:28).

### **3.9. Conclusion**

Knowledge Management (KM) as an emerging discipline in the knowledge economy has been explored followed by an outline of the knowledge hierarchy. The various uses of knowledge in a business environment have been highlighted together with a definition of KM and an exploration of its strategy, processes and systems. Organizational learning and culture, and the kind of leadership needed in the knowledge economy have been discussed before concluding with a presentation on the management of intellectual capital in a knowledge driven organization.

## **CHAPTER FOUR: THEORETICAL FRAMEWORK**

### **4.1. Introduction**

Chapter four presents the theoretical foundation of the study. It introduces the research framework and model as well as the research propositions.

### **4.2. Theoretical framework**

This section outlines the framework that served as the basis for the development of the research instruments that were implemented to address the research questions of this study. It further highlights the role of knowledge use and knowledge management (KM) maturity from an MSME perspective in the knowledge economy. It focuses on ways in which knowledge and its management revolutionize the MSME sector's practices. The critical concepts and values of knowledge and KM that were discussed in Chapter three serve as a foundation for this chapter.

The international literature shows that MSMEs in any country in the world cannot operate in isolation as they are not exempt from the global knowledge economy and ongoing general trends in the business world. It is argued that unless MSMEs apply the knowledge principles, values and practices promoted by knowledge management they will not survive the current competitive business environment. After an analysis of the relevant literature on KM and MSMEs, the researcher therefore puts forward a number of propositions that he suggest would be beneficial to the development and invigoration of the MSME sector in Zambia. Ruggles (1999:5) suggested towards the end of the previous decade that there have been major changes regarding perceptions relating to the general business environment. The emphasis is on adaptability to the business environment and on addressing market and customer needs proactively. He further proposes that organizations would be able to open up new worlds and new opportunities if they were to engage more effectively with knowledge and adopt knowledge management principles. There should also be a change in organizational structure from the more traditional hierarchical and permanent structures to a more flexible and porous organizational structure (Lehaney et al, 2004:14).

As businesses encounter constant change in business principles, practice, consumer demands, research and innovation, there is a need to continually monitor external indicators of change in order to guide future directions and initiatives (Debowski, 2006:5). For example, the general applications of ICTs have brought international competitors into the home market.

Exposure to new customers and greater competition has therefore increased the pressure on organizations to be creative and innovative (Debowski, 2006:3). Knowledge should be seen as the driving factor in the current highly competitive knowledge economy and it is therefore critical that each organization should understand its knowledge needs and encourage employees to generate, use and share knowledge to minimize the effect of business uncertainty (Dunning, 2000). It is clear that in addition to cost efficiency and effectiveness, the adoption of human-centred knowledge management practices becomes strategic to an organization's competitive edge (Brooking, 1999:125-126; Gamble & Blackwell, 2001:119).

In the knowledge economy, a KM strategy in terms of KM policy formulation and planning, processes, systems and leadership for the rational direction of an organization's intellectual assets is indispensable (Liebowitz, 1999:3-4; Cavaleri & Seivert, 2005:120). Morrow and Little argue that learning organizations that have a work culture based on collaboration and networking have a distinct edge over those with rigid bureaucratic organizational structures (Morrow, 2001:402-403; Little et al, 2002:147-156). Finally it has been noted that the most successful organizations worldwide are those that emphasize their intangible rather than tangible assets (Lehaney et al, 2004: 26). It is suggested that by adopting the knowledge-oriented approaches outlined above, many of the problems facing MSMEs in Zambia may be resolved.

Many of the principles on which MSMEs are based, can be related to the theoretical input from two notable economists, Jean-Baptist Say and Kirzner. Their conceptual contribution to the understanding of entrepreneurship is therefore of great importance to this study. Say defined an entrepreneur as 'one who consciously moves economic resources from an area of lower into an area of higher productivity and greater yield' (Stokes & Wilson, 2006:31; Burns, 2001: 9). It is suggested that the key elements of Say's definition of an entrepreneur relate to

- deliberate action in response to environmental influences, i.e. action takes place after scanning and understanding or gaining knowledge of the environment (consciously moves)
- economic resources are those resources that result in profitability or provide good value for money, such as stock, materials, plant or other assets, the most important of which are an organization's people

- gaining comparative advantage as a result of leveraging resources, i.e. going from lower to higher productivity and greater yield.

Therefore, in order for an entrepreneur to survive and succeed he/she needs to create new ideas that are based on constant knowledge inputs. Kirzner (2009:145-152) in turn perceived entrepreneurship as ‘competitive behaviours that drive the market process’ (Stokes & Wilson, 2006: 31). It is therefore important to be aware of ‘competition’ and environmental changes and then be able to react or innovate. Innovation again is a byproduct of new knowledge or ideas. It is therefore suggested the interaction between an entrepreneur and knowledge is the important factor that leads to the unique attributes of an entrepreneur. These attributes include self- confidence, being multi-skilled, being confident in the face of difficulties and discouraging circumstances, having innovative skills, being result-orientated, being willing to take risks and having total commitment.

Successful entrepreneurs perceive market opportunity and then have the motivation, drive and ability to mobilize resources to take the opportunity. There are two types of entrepreneurs: the visionary (creator of fresh ideas and owner of the enterprise) and the hired professional manager (trained in managerial skills). Both these categories have an important role to play in MSMEs and it is thus proposed that MSMEs could not survive without the contribution of entrepreneurial skills.

The MSME sector plays a significant role in sustaining the economies of a number of developing nations. It is therefore not surprising that many countries (particularly in Africa) have supported and promoted the development of their MSME sector by means of technological infrastructure development, financial input and MSME-friendly policy frameworks. It is argued that KM could play an important role in advocating innovative practices as well as in ICT policy and infrastructure development in the knowledge economy (Migdadi, M. 2009).

From the above discussion the researcher has identified seven factors that are critical in the knowledge economy:

- To survive in the knowledge economy organizations should actively seek and use knowledge in their quest to meet business goals and objectives. Both types of knowledge, tacit and explicit, are important. An organization’s quest for knowledge determines its knowledgebase and the rate at which they acquire and

use it. Organizations can ensure efficient knowledge flows by means of networking by means of both technological and conventional social communication/interaction. Organizations should also pay particular attention to employees' attitudes towards knowledge, their behaviours concerning knowledge and skills in knowledge sharing and use.

- Cost effective and efficient KM processes and systems are vital to ensure active knowledge creation and sharing in order to meet business goals and objectives. KM systems and processes are used to create collective knowledge repositories (databases) and the enhancement of intra/inter personal/departmental/organizational communication.
- The new form of knowledge leadership emphasizes the importance of knowledge and employs leadership dynamics to motivate employees to contribute knowledge. Strategic planning and timely implementation further characterize this style of leadership in managing the enterprise, competitors, customers and market changes.
- An organization's viability is sustained by continuous learning (i.e. being a learning organization) and implementing a culture in which KM values and knowledge contribution are rewarded and encouraged. Knowledge flows, social communication networks, the development of virtual teams, CoPs and cooperation are thus facilitated.
- Organizations that prioritize intellectual asset management, market leveraging and competitive intelligence for creativity and innovation tend to be leaders in their field and have a competitive edge over their competitors. Packaging and re-packaging of knowledge and the capturing of best practices and capabilities result in new/innovative products and services that can create extra revenue.
- The MSME sector's success depends on good knowledge policy and ICT frameworks that promote knowledge use, provides technological infrastructure and acquisition incentives, and provides legal protection.
- Support systems and institutions that governments institute to enable MSME development should be seen to be vibrant and proactive.

From the discussion above, and according to Khatibian, Pour and Jafari as well as Skyrme the following KM-specific factors were identified as being critical for the development, growth and survival of the MSME sector in the knowledge economy (Khatibian, Pour & Jafari, 2010:

59; Skyrme, 2007): tacit and explicit knowledge; availability of effective knowledge resource centres and libraries; good KM processes and technology infrastructure; the right leadership; leveraging an organization's people and their skills; an appropriate organizational culture and structure; implementing KM measures; ensuring market leveraging by means of KM; and ensuring a good MSME policy framework. These factors are discussed in greater detail below:

**Tacit and explicit knowledge** refer to an organization's ability to generate, capture, leverage, organize, and share both tacit and explicit knowledge. These factors relate to Wiig's (1993:20) three pillars of knowledge management, i.e. exploring knowledge and establishing its adequacy, eliciting and codifying knowledge, and organizing knowledge; determining and showing the value that knowledge and its proper management would add to an organization; and managing knowledge actively by leverage knowledge, ensuring that knowledge related activities are integrated, implemented and monitored. An important factor in knowledge transfer is motivating employees and encouraging interacting with knowledge (Cruz, Perez, & Cantero, 2009; Lucas, 2005).

**Knowledge resource centres and libraries:** Skyrme (2007) emphasizes the importance of establishing well organized knowledge centres or hubs to ensure effective knowledge management in an organization. These can be physical (e.g. a library) or virtual (e.g. a portal) and will either contain the sources of knowledge / information or point users to relevant sources.

**Implement effective KM processes and technology infrastructure.** The processes of creating, storing, sharing, using and re-using knowledge are generally regarded as being fundamental to good KM practice and necessary for organizations and individuals to act intelligently (Skyrme, 2007; Wiig, 1993). Organizations that engage in these activities indicate that they are aware of the importance of tapping into the intangible assets of their organizations. Takeuchi and Nonaka (2004) clearly illustrate by means of their SECI model the importance of knowledge utilization and the benefit that both individuals and the organization get out of it.

Computer-based technology is generally regarded to be an important enabler for KM (Holsapple, 2005: 48; Revilla, Rodríguez-Prado & Prieto, 2009). The warning is, however, also expressed by Mohamed, Stankosky and Murray (2006: 104) that technology can only improve knowledge management activities if properly used. Technology should thus be part of a balanced and integrated set of components because on its own it cannot make a KM initiative successful. Technology is particularly useful if it is used to improve communication and interaction among employees with similar interests, manage content and measure KM initiative performance (Mohamed, Stankosky et al and Murray, 2006: 109-111).

**Good leadership** is an important factor that ensures the success of KM (Wiig, 1999 & S kyrme, 1999). McShane and Von Glinow (2010: 360) have defined leadership as “influencing, motivating and enabling others to contribute towards the effectiveness and success of an organization”. Based on research they had conducted in Malaysia, Jayasingam, Ansari and Jantam (2009: 145) suggest that leadership has a direct effect on knowledge management activities in organizations, particularly in smaller organizations and that knowledge workers emulate the behaviour of knowledge sharing from leaders who have expertise. Leaders should thus be aware of the value of knowledge, have people skills and appreciate the value of their work-force and the contribution that they can make to the organization (Lakshman, 2005; Whitton & Roy, 2009).

**Organizational culture and structure** are other important factors that determine the success of KM initiatives (Chen & Huang, 2007; Zheng, Yang, & McLean, 2010). For example, Leidner, Alavi and Kayworth’s research indicated that in an organization where the culture is bureaucratic and not open, individuals do not want to be noticed, they are afraid of being criticized if they share their ideas and the emphasis then focuses on individual survival. In organizations where the culture is collaborative and open, work is undertaken in an innovative and cooperative manner, teamwork is highly regarded (more so than individual work), individuals are given autonomy over their work and they are thus loyal to the organization because they have a feeling of ‘belonging’ (Leidner, Alavi & Kayworth, 2006: 27-33). Holste and Fields (2009: 135) further refer to the importance of trust as a factor to ensure a good knowledge management culture in an organization.

Claver-Cortes, Zaragoza-Saez and Pertusa-Ortega (2007) investigated the characteristics of organizational structures that support knowledge management and suggest that a horizontal organizational structure with few hierarchical levels was the most conducive to good KM programmes. A horizontal structure enhances communication, encourages decentralization of decision-making and therefore empowers employees.

**KM measurement** is very important as failure to do so results in failure to account for resources invested in it. According to Rumizen (2002: 207-208) the following aspects further provide motivation to implement KM measurement: the organization can establish its return on investment for knowledge management projects; identify barriers to knowledge sharing; establish the maturity level of knowledge management initiatives; determine efficiency of KM implementation; determine progress in meeting KM goals; establish KM needs; and assess what the organization's intangible assets are. However, KM measurement is not easy - the very nature of knowledge and the complexity, multi-dimensional and process orientated nature of knowledge work and hence KM makes measurement difficult (Iftikhar, Eriksson and Dickson, 2003: 57). Jacob and Hellström (2003: 56), however, suggest that the establishment of KM performance measures and evaluation is possible if there are clearly stated goals.

**People and skills:** Knowledge management is primarily about people, i.e. the people working in the organization, their customers, other stakeholders and the processes and structures that affect them. Davenport (1999: 188), for example, placed particular emphasis on the importance of people by stating that "when we seek to understand knowledge, to interpret it within a broader context, to combine it with other types of information, or synthesize various unstructured forms of knowledge, humans are the recommended tool". The focus is thus on the value of the know-how and skills contribution of the people in organizations. It further relates to creating an environment and culture in which people are willing to share their knowledge (Skyrme, 1999) and where every individual's contribution and role in knowledge management is recognized (Skyrme, 2007).

**Market leveraging:** Knowledge management should, in the business environment, ensure that it focuses its efforts on leveraging an organizations knowledge to enhance

products and services and using KM practices to increase market share and satisfy customer needs (Skyrme, 2007).

**Good MSME policy frameworks.** This factor relates to whether an organization operates in an environment that has a good MSME policy framework and whether the organization actually derives benefit from such an infrastructure (GRZ MCTI, 2008).

It is therefore suggested that only by implementing and developing the critical KM factors outlined above that any enterprise and particularly the MSME sector in Zambia will be able to develop a competitive edge in the economy. In summary, it is argued that the MSME sector in Zambia should pay specific attention to the following:

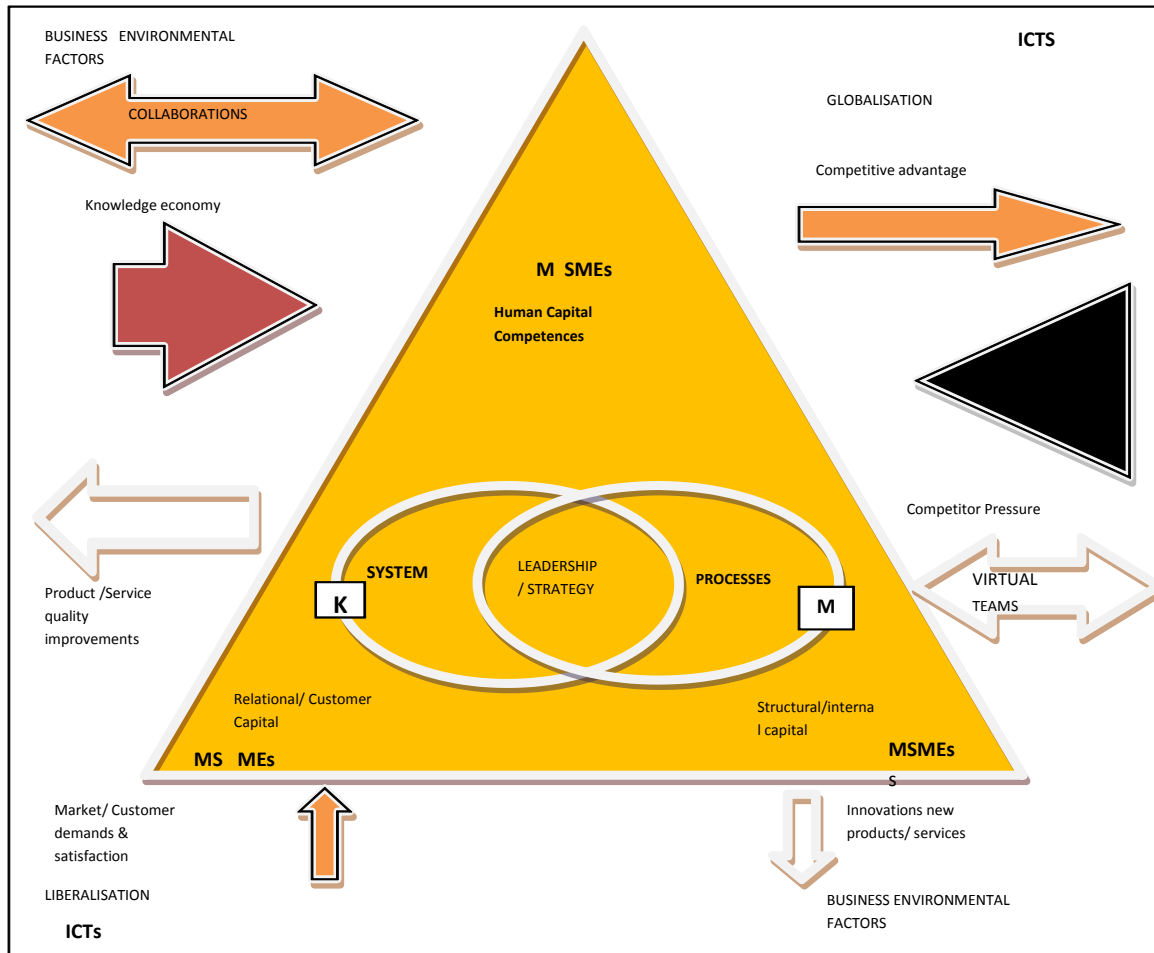
- MSMEs form a constituent component of the knowledge economy and they therefore have to develop clear knowledge strategies
- Knowledge use and the positive nurturing of KM processes and systems is therefore a pre-requisite for the growth and even survival of MSMEs
- Strategic leadership is critical to the success of MSMEs in the new marketplace
- MSMEs must become true learning organizations in order to develop a body of knowledge that culminates in an organizational culture in which learning and re-learning is motivated by networking
- It is only by good management of its intellectual assets that this sector will realize its full potential.

The critical KM factors outlined above were used as the basis to establish the level of KM maturity in the Zambian MSME sector. The questionnaire and the interview schedule that were administered to collect the primary data during the empirical study were developed using these principles.

### **4.3. Research Model**

The research model depicted in Figure 4.3-1 below outlines the MSME sector's macro and micro environment and the pressures encountered within the business environment. It further indicates how these enterprises can be empowered by a well-developed KM programme that assists to mitigate both controllable and uncontrollable factors. The continuous cycle of creating, capturing, storing, sharing and use/application of new knowledge, translates into an MSME's KM maturity. It is argued that by applying good KM principles organizations can,

in the midst of uncertainty, create certainty and despite severe business competition flourish and gain a competitive edge. This theoretical framework has been termed the “inside out–outside in model” based on an organization’s responses to adapt to internal and external environmental pressure in order to adapt and gain a competitive edge.



**Figure 4.3-1 ‘Inside out - outside in’ Research Model**

This framework is supported by several authors and is based on the premise that any given business entity operating in a knowledge economy needs to be a learning organization. For example, Gamble and Blackwell (2001) argue that during Galileo’s time a scientist was able to become the master of everything that was known in a particular discipline, but with the current knowledge explosion this is not possible. Both people and entire organizations therefore need to learn on a continuous basis. It is further argued that learning and education are interactive processes that engage with a number of activities over a period of time until

learning is achieved. This particularly applies to a business entity when it interacts with an intelligent market.

‘Inside-out– outside-in’ learning refers to the situation where an MSME is expected to deliberately take stock and account of its capabilities and competences, even before it learns of external challenges. This is very important as it has to take account of the intellectual capital, i.e. the experience, expertise, know-how, innovation, etc. that resides within the workers of the organization as well as its structural capital, i.e. the infrastructure that supports human capital and includes factors such as quality of IT systems, an organization’s image, databases, patents, trademarks, copyright, etc. (April & Ahmadi-Izadi, 2004: 52-58). These factors assist an organization to determine the level and speed of external learning required.

Therefore, only after acquiring inside learning can an organization go for outside learning. In this instance the organization learns from customers, suppliers, competitors and its business partners. This learning may take different forms ranging from direct person-to-person interaction to indirect interaction by means of networking using electronic and related technological systems. Examples of the latter would be CoPs, virtual teams and other forms of collaboration. During these learning processes new knowledge has been captured, created, stored, shared and subsequently used. It is argued that this kind of learning is not triggered by external pressure, but is motivated by a KM strategic plan.

The organization may, in turn, become the ‘educator’. Typically this is achieved by means of advertising, running promotions, innovations and improvement to the quality of goods and services, and by being responsive to the demands of customers. This illustrates the interaction between education and learning where organizations and customers can both be educators and learners. As mentioned the organization learns from customers’ experience by means of its products or services.

Organizations are subject to a number of factors that require change and adaptation. In the one instance businesses experience external pressure initiated by the industry in general and more specifically by customer and market demands - these can be seen as external pressure from the business environment. Then there is pressure from within an organization to change or adapt. Such an internal need to adapt or change can be initiated by the introduction of new processes or systems, a typical example would be a new KM initiative. In these instances good change management programmes would assist or guide an organization and its employees to adapt to changing circumstances or new processes.

Organizations that wish to adapt to change therefore need to be creative and innovative. The level and speed at which this is done will in turn relate directly to the organization's ability to compete, i.e. its competitive edge. Once an organization has successfully adapted to change it needs to package and repackage the new knowledge it has acquired (latest experience and innovation) into tangible products and services that can be marketed (market leveraging). In the process the organization's internal systems, processes, and strategies should be updated and standardized and employees need to be re-educated so that they can be re-aligned to the new demands of the organization and the market.

The model therefore indicates that an organization is responsive to the pressure or demands that come from the external business environment and that it, in turn, is sending out lessons in the form of new products and services. To summarize, the following quote from Jack Welch when he was at General Electric is appropriate: 'learning inside must be equal to or greater than change outside the organization – or the organization is in decline and may not survive'. The findings from the survey will therefore be analyzed against this model to establish whether knowledge is being used effectively or not in the MSME sector in Zambia.

#### **4.4. Conclusion**

The chapter has discussed the theoretical underpinnings of the study and relate to the research framework and research model used for the study.

## CHAPTER FIVE: RESEARCH DESIGN AND METHODOLOGY

### 5.1. Introduction

This chapter is a presentation of the research design, methodology and the survey research method used for this research project. The chapter outlines the survey population and the units of analysis that were investigated, aspects of validity and reliability, sources of data, data collection methods and design, pre-testing, administration of the instruments, data entry and data processing procedures followed. It concludes by discussing ethical issues relating to the study.

It is argued that many of the research methods generally used in the social sciences can equally well be applied to conduct research in knowledge management (KM). KM is generally regarded to be a management technique that is particularly concerned with the interaction between humans and knowledge as well as the flow of knowledge between individuals<sup>15</sup>. These latter aspects, according to Mann (1985:1) relate specifically to social science investigation. This is also in accordance with Babbie's view that research in the social dimension should attempt to connect meaning and structure to the social world of individuals (Babbie, 2011).

Payne and Payne (2004:148) describe research methodology as the underlying "philosophical approach" adopted while the specific techniques used to conduct research should be seen as the methods or tools used. Bailey also (1994:32) describes research methodology as the philosophy or the perspective that relates to the entire research process. Myers and Avison, (2002:7) likewise state that "a research method is a strategy of inquiry which moves from underlying philosophical assumptions to research design and data collection".

Babbie and Mouton (2005), however, refer to research methodology as the methods or techniques used during the research process. They further refer to the logic of scientific enquiry and suggest that all empirical research should include the following components: a

---

<sup>15</sup>IT and ICT's are therefore not its main concern and are only used as an enabler.

research problem that is formulated as research questions or hypotheses; a research design that outlines the research process during which empirical evidence is collected to resolve the problem; and finally an outline of the findings and the conclusion.

## **5.2. Research Problem and Research Questions**

According to Babbie and Mouton (2005:75), the research methods that a researcher employs in a study, as well as the succession in which they are used, depend greatly on the research problem and the type of evidence that is needed to deal with the problem. They further argue that the research process can only begin after a researcher has identified and clearly formulated the research problem. Research questions or hypotheses are generally used to conceptualize the problem being investigated and provide the framework to systematically collect the evidence to answer the questions and resolve the problem (Babbie & Mouton: 2005; Locke, Silverman & Spirduso, 2004).

Hypotheses are mostly used to direct research projects that follow a very structured quantitative framework as would typically occur in the natural sciences. Research questions are more frequently formulated to provide the framework for more qualitative studies (Punch, 1998). Since this research project is significantly embedded in a qualitative research paradigm, research questions rather than formal hypotheses were formulated to serve as the framework for the research project. The rationale, the research problem and research questions for this research project were outlined in chapter 1.5 and 1.6.

In summary the underlying research problem that motivated this study related to the need for the growing MSME sector in Zambia to better capture, share, use, apply and manage all categories of knowledge to ensure that this sector better aligns itself to the global knowledge economy and in the process become more competitive and economically sustainable. It is therefore argued that it is important that the Zambian MSME sector should embrace KM to increase their knowledge about the ever-changing business environment.

Therefore, the research problem being investigated is

Whether and to what extent the Zambian MSME sector captures, organizes, shares, uses and applies knowledge to achieve business goals and objectives. A further concern is the extent to which the typical working behaviours of managers and other employees support KM objectives, strategies and processes and the MSME sector's readiness to implement KM programmes.

The following research questions served as the framework for this study:

1. Do MSMEs in Zambia capture, organize, value, share and apply knowledge from within and outside their organizational structure to achieve business goals and objectives?
2. To what extent do the typical working behaviours of managers and other employees in the MSME sector support KM objectives, strategies and processes?
3. What is the potential growth in the use and application of KM among Zambian MSMEs?

### **5.3. Research Design**

Babbie and Mouton (2005) refer to a research design as the blueprint that outlines all the steps and decisions in the research process. It indicates the techniques and processes to be used to achieve maximum validity of the research findings (De Vaus, 2001:9). It therefore formalizes the research process and indicates the “set of decisions regarding what topic is to be studied among what population with what research methods” (Babbie, 1999:104).

A well-structured research design helps a researcher to determine the kind of evidence he or she needs to collect to resolve the research problem and successfully conclude a research project (Babbie & Mouton: 2005). The aim of a research design, therefore, is to have a planned structure and strategy for collecting and utilizing data so as to meet objectives and clarify the research problem and obtain accurate answers to the research question or questions.

An important initial decision that a researcher has to take is to decide whether the research project will follow one of the two predominant research approaches in social science research, i.e. whether a qualitative or quantitative research design will be followed (Daly, 2003; Payne & Payne 2004). Leedy and Ormrod (2010:94) typify quantitative research as looking at numbers, or “quantities” of variables under study, and qualitative research as the study of features, or “qualities” of the particular phenomenon being studied. Daly (2003) distinguishes between these approaches in a very similar manner, and further states that qualitative research seeks to build understanding by depth investigation rather than by condensing information (Daly, 2003).

A quantitative approach is therefore concerned with measuring the properties of phenomena by using measurement techniques. According to Babbie and Mouton (2005:49) these can vary from measures of the “physical world” to measuring “psychological characteristics or

behaviour” by using amongst others tests, questionnaires, and rating scales. Quantitative research generally processes large quantities of data and summarises the output in statistical format. It is often used in surveys where the data is collected by means of questionnaires or structured interviews. This type of research, while reaching many people, has less contact with those people and does not probe to the same level of depth as in qualitative research. Emphasis is often placed on establishing the accuracy of results and the degree of certainty with which the researcher can claim accuracy of the results if sampling methods have been used (Rea & Parker, 2005:73). A further feature of quantitative research is establishing relationships between variables and using statistical methods to test the significance of observed associations (Fouché & Delport, 2002). In such instances the research process is driven by hypothesis testing. In summary, the focus in quantitative research is on objectivity, control and accuracy.

Qualitative research, in contrast tries to get an in-depth view of participants attitudes, behaviour and experiences. The intricacies of a specific phenomenon is studied and the researcher, according to Babbie & Mouton (2005:53), therefore follows an insider perspective and is more concerned with understanding than explaining or predicting human behaviour. Myers and Avison (2002) further indicate that qualitative researchers seek answers to questions that stress how social experience is created and given meaning. The researcher tries to get close to the research subject and data collection methods such as unstructured interviewing, focus group interviews, participant observation and the examination of personal documents would therefore be used (Babbie & Mouton, 2001:49-54). Qualitative methodology is therefore based on the assumption that individual researchers can gain an understanding of their research topic by analysing a wealth of accumulated knowledge (Fouché & Delport, 2002).

A research project need not, however, be aligned to only one or the other of the above approaches, but can utilize a combined or mixed methods approach where the most appropriate attributes of both are used, i.e. by using a triangulated or multi-method method approach to increase objectivity and validity (Babbie and Mouton, 2001:274). The reason why more than one approach is generally used is to overcome the limitations that a specific research method might have. According to Leedy and Ormrod (2010: 99) researchers could then increase the probability that their explanations are the most appropriate deductions that can be made from the evidence collected. Combining more than one approach could result in the weaknesses of one approach being countered by the strengths of the other. Triangulation

could therefore increase the level of objectivity, reliability and validity of a study (Leedy & Ormrod, 2010; Mouton & Marais, 1990).

The research approach adopted for this study used such a multi-method approach and drew from both qualitative and quantitative techniques. Qualitative techniques were used to capture complexities of phenomenon by conducting in-depth interviews with a sample of the population investigated, while a more quantitative approach was used during the questionnaire survey.

Babbie and Mouton (2005) further suggest that the researcher should clearly indicate whether the purpose of the study is to explore, explain or describe the phenomenon under investigation. Exploratory research is used to initiate research into fairly unknown or new study areas to obtain an understanding of the phenomenon being investigated (Babbie, 1990: 53). The main purpose of descriptive research is to observe and collect data about situations and then to analyse the data to describe situations and events. This is done in a scientific way to provide verifiable and accurate descriptions of the situation (Babbie & Mouton, 2005:81). The most important aim of explanatory research is to explain given phenomena in terms of “specific causes”, that is, to point towards causality between variables or events (Mouton & Marais, 1996: 45). This study was primarily descriptive and exploratory by nature (causal relations were however explored to a limited extent).

#### **5.4. Survey Research Method**

Survey research methods are one the most commonly used methods in the social sciences and was selected as the main research method for this study. Babbie (2011) indicates that this method can be used equally well for descriptive, explanation and exploration purposes.

Powell and Connaway (2004) in addition to the above purposes suggest that it is appropriate for studying personal factors.

Survey research is, therefore, regarded as one of the basic research methodologies to use to obtain information about the characteristics, perspectives, opinion or attitudes of people (Leedy & Ormrod, 2010: 183). Individuals are often used as units of analysis to ‘observe’ in a particular setting and this gives the researcher an understanding of the situation, or individuals can be asked to provide information about their attitudes, behavior, opinions and beliefs about the topic of enquiry (Babbie & Mouton, 2006; Payne & Payne, 2004; Powell & Connaway, 2004). It is thus a good method to use to collect contemporary information to

describe and explore relationships or significant factors related to the issue being investigated.

According to Powell and Connaway (2004), the basic premise of survey research is to make inferences about large groups of people, often by means of a selection of a smaller group within the larger group. This selection process is often based on one or other sampling method.

Survey research is, however, not without problems. Bailey (1994:288) refers to the fact that although it is an effective method to examine the products of social activities, it is not the ideal method to use to examine the activities themselves. There is also the problem that the method relies on a respondent's understanding of the situation as well as possible subjective bias that both the researcher and respondent might introduce. These problems are, however, found in most social science research methods, and the best means of resolving them are to counteract them by being aware of their existence. It further helps if respondents are encouraged to fully participate and to identify themselves with the value of the research project.

Having considered the good aspects of surveys as well as its inherent problems, the researcher is of the opinion that the survey method was the most appropriate to use for this study.

## **5.5. Survey Population and Sampling**

It is not always possible to survey all respondents or units of analysis when the survey covers a large population because of time, cost and other constraints. Sampling is then often used to select a representation of a large number of elements by only a few numbers (Babbie & Mouton, 2005; Leedy & Ormrod, 2010; Strydom & Venter, 2002). If scientific sampling methods are used, a researcher can infer characteristics relating to the whole population from the data collected from the sample.

A study population is that "aggregation of elements from which the sample is actually selected" and about which information or data is collected (Babbie, 2011:180). To ensure accurate data analysis and generalization of results all elements in the population should therefore have the right attributes required by the research project (Powell & Connaway, 2004). It is therefore important during the planning and design stage of the research project that the researcher clearly defines and specifies the population to be studied.

There is often a difference between the targeted population and the actual population studied. Theoretically, the two types should be identical, but in practice it is not always possible to ensure that every element meeting the theoretical definitions specified can be studied. The actual list of the elements composing the study population is known as a sampling frame and in practice this often determines the study population. (Babbie, 2011:194). Babbie and Mouton therefore warn that it is important to ensure that the sample from which one generalizes really represents the population and that the sampling frame is therefore accurate and representative (Babbie & Mouton: 287).

The two main types of sampling types are known as probability and non-probability methods. With probability sampling, each segment of the population is represented and by using a random selection process, each entity in the population stands an equal chance to be selected (Leedy & Ormrod, 2010:200). Non-probability sampling is often used where the researcher cannot predict that each person will have representation in a sample. Purposive sampling techniques are then used to ensure that the respondents selected have some or other specific characteristic that will best meet the objectives of the study (Bailey, 1994:99; Powell & Connaway, 2004).

For the purpose of collecting data for this study, participants for the research project were chosen by means of purposive sampling to ensure that the significant, diverse elements of the study population are included. The study was therefore conducted in the following cities and towns in Zambia: Lusaka, Kafue, Kabwe, Kitwe, Ndola, Kalulushi, Mufulira, Chingola and Chililabombwe. Their socio-economic and political attributes have been presented in Chapter 1.4. These cities and towns were selected for the following reasons:

- These were the cities and towns where there was a significant growth in the MSME sector when Zambia privatized the national economy in 1991 and moved to a more market-related economy.
- These cities and towns represent a good cross spectrum of the economy and include both mining and non-mining businesses.
- These areas are better placed in terms of ICT infrastructure and this was considered an important requirement for the development of MSMEs.
- These areas are strategic to job creation and the economic development of the country.

The cities and towns were further grouped into two zones. Zone A comprised Lusaka, Kabwe and Kafue and were non-mining areas. Zone B comprised Kitwe, Ndola, Kalulushi, Mufulira, Chingola and Chililabombwe and were predominantly mining areas.

## **5.6. Units of analysis and Sample Size**

In survey research it is imperative to identify the object of investigation. A thing or things under review in a given survey are units of analysis. They consist of individuals, groups, organizations, social objects etc. According to Babbie and Mouton (2006:174) a sample frame outlines the elements from which a researcher selects the study population, also known as the list of sampling units.

The determining of the sample size is largely dependent upon the nature of the population and the purpose of the study. However Bailey suggests that samples should not be less than 100 to achieve fairly accurate levels of validity (Bailey, 1994: 96).

The study was therefore undertaken among the Micro, Small and Medium Enterprise (MSME) sector in the abovementioned cities and towns. 'Micro' enterprises are defined for the purposes of this study as firms with 0 – 9 employees, 'Small' have 10 – 49 employees, and 'Medium' have 50 – 249 employees. The sample selected constituted 180 MSMEs in the defined catchment area. They were selected from the four major industries namely: Services, Construction, Manufacturing and the Extractive industry. Lists provided by local chambers of commerce for each region were used as the sampling frame from which specific enterprises were selected.

## **5.7. Validity and Reliability**

Reliability relates to the consistency, or the degree to which a research method or instrument measures in a consistent way each time it is used under the same condition with the same subjects. A measure is therefore considered to be reliable if it were to give the same result every time it is used in the same way and if the measuring technique has not changed. Reliability also refers to whether a study can be repeated at a later stage, by the same or a different researcher, and still produces the same results (Yin, 2009). The higher the consistency, the higher the degree of reliability (Robson, 2002). Reliability could be achieved through proper documentation as the study progresses, thus enabling the researcher to give full account of observations made (Babbie & Mouton, 2001; Yin 2009).

Validity relates to whether the measuring instrument used is in fact measuring what it is intended to measure (Leedy & Ormrod, 2010). Kvale and Brinkmann (2009: 246) further state that it “refers to the truth, the correctness, and the strength of a statement.” Validity thus establishes whether the results obtained meet all of the requirements of the research method and whether the research project has measured what it set out to measure. Yin (2009:41) refers to the following three categories of validity:

- Internal validity when a research project accurately identifies causal relationships.
- Construct validity relates to whether the research project has adequately identified the variables or operational measures used in the study; it also proposes the use of multiple sources of evidence and for stakeholders to review draft reports.
- External validity relates to the extent to which a study’s findings can be generalised. It is therefore important to compare the evidence with external literature.

In summary, validity and reliability of research is about enhancing the credibility, transferability, and dependability of the results and this can best be achieved through triangulation and using multiple sources of evidence, checking and rechecking data, following the guidance of previous researchers, and making sure that procedures for the research are well documented so that anyone can follow them in order to replicate the same study (Babbie & Mouton, 2001; Yin 2009).

To increase the levels of validity and reliability of the results of the study, the researcher put in place the following measures:

- more than one technique was used to collect data (triangulation), e.g. interviews were conducted to supplement the results obtained from the questionnaires;
- the researcher adapted a standard questionnaire from David Skyrme’s ‘Know-All 50’ questionnaire which has gained international recognition (Skyrme, 2007);
- a number of fixed-choice answers were provided in the questionnaire to maximize the chances of getting similar responses from the respondents;
- questions were tested to ensure that they were clear and free of unnecessary ambiguities; proper documentation was kept on the research methods used; and
- where causal relations were measured between the dependent and independent variables by means of cross tabulations the results were checked for significance and only results with a significance level  $\leq 0.05$  were accepted for discussion.

## **5.8. Data Collection**

The study's research problem and questions outlined in section 5.2 guided the collection of data for this project as well as the development of the data-collecting instruments. In summary this study investigated the use and application of knowledge and knowledge management practices in the Zambian MSME sector.

As mentioned, a triangulated approach has been adopted whereby more than one method was used to collect the data, questionnaires, interviews and observation. While questionnaires were the primary method, it was supplemented with, and enhanced by interviews and an analysis of documentary sources.

### **5.8.1. Questionnaires**

Questionnaires are the most frequently used method to collect data in the social sciences, particularly when conducting a survey (Babbie, 2011). A questionnaire consists of a series of predetermined questions that can be open-ended or closed-ended. Questionnaires can further be self-administered (the respondents answers the questions on their own) or interviewers can ask the questions.

It is recommended by Leedy and Ormrod (2010) that questionnaires should be concise and comprehensible to ensure easy completion and to prompt accurate responses from the respondents. Clear instructions should therefore be provided on how to fill out the questionnaire. They also emphasize that the questionnaire should be tested to ensure accurateness.

#### **5.8.1.1. Construction of Questionnaires**

As mentioned above, questionnaires usually consist of either open-ended (i.e. unstructured), or closed-ended (i.e. structured) or a combination of the two kinds.

Closed ended questions provide a range of fixed responses and the respondents are expected to choose among several answers that are designed to reflect possible answers related to the research problem. This list of answers can also further provide a rating scale to indicate the strength of the response (Delpont, 2002). Open ended questions allow respondents to reply freely without having to select from one of several responses.

For this study (see Appendix A) the researcher adapted Skyrme's 'Know-ALL 50' (Skyrme, 2007) questionnaire format and aligned the questions to the MSME sector in Zambia and the KM factors that were identified in chapter 4.2 as being critical for this study, viz:

tacit and explicit knowledge; availability of effective knowledge resource centres and libraries; good KM processes and technology infrastructure the right leadership; leveraging an organization's people and their skills; an appropriate organizational culture and structure; implementing KM measures; ensuring market leveraging by means of KM; and ensuring a good MSME policy framework.

A close-ended format was therefore adopted for the questionnaire and each of the statements in the questionnaire represents one of the factors outlined above. A rating scale of 0 – 10 was used for measurements, where 0 is doing nothing at all, and 10 is doing exceedingly well. The respondents were asked to choose the best rating for their firm's situation.

The researcher was further careful to ensure that he phrased the questions as unambiguously as possible and in such a way that he did not lead the respondents to provide only favourable responses (Babbie & Mouton, 2001). To ensure there was no misunderstanding of concepts footnotes were provided where some of the special terms used in KM were explained.

The questionnaire has three sections:

- the introduction and instructions for administering the questionnaire
- the second part where respondents were asked to provide the background information of the firm being represented
- the third part that related to knowledge and knowledge management attributes

#### ***5.8.1.2. Testing of the Questionnaire***

A number of experts in research have highlighted the importance of pre-testing the questionnaire, particularly self-administered questionnaires before it is administered to check its strengths and weaknesses (Babbie & Mouton, 2001; Strydom & Venter, 2002). Oppenheim (1992: 47, 49) for example stated that "questionnaires do not emerge fully-fledged. During the pre-testing exercise the researcher gets an opportunity to identify questions that are not clear, repetitive etc. and then they can be corrected. The researcher, therefore, undertook a pilot study amongst five retailers, furniture manufacturers, restaurants owners, and tailoring shops in Chimwemwe. It was found that the questionnaire was well understood by all respondents to the pre-test.

### **5.8.1.3. Administration of the Questionnaire**

Self-administered questionnaires can be administered by mail, some electronic method, or personally (Babbie, 2011; Delpont, 2002). The researcher decided to distribute the questionnaires in person as this was regarded to be the most effective method in Zambia.

The questionnaires were administered during June 2011 to 180 MSMEs in Kitwe, Ndola, Kabwe, Lusaka, Kafue, Kalulushi, Mufulira, Chililabombwe and Chingola. Of these 134 were completed and returned giving a 74.4% response rate.

### **5.8.2. Interviews**

Interviews, according to Kvale and Brinkmann (2009) are a good technique to use to obtain respondents' personal viewpoints and thoughts on a given subject or phenomenon. They give the researcher the opportunity to interact personally with the respondent and ask face-to-face questions. They help to further clarify issues dealt with during the questionnaire survey. Interviews further allow the researcher to collect more in-depth data about the topic being investigated and to probe and follow-up on any interesting issues that may crop up during the course of the interview (Yin, 2009).

Bailey (1994), however, also identifies certain disadvantages of face-to-face interviews. They can be costly, time-consuming, and there is the possibility of interviewer intrusion and respondent bias. However, the researcher was of the opinion that the advantages of conducting follow-up interviews were more important than the disadvantages.

It was for these reasons that the researcher decided to conduct interviews with a sample of the questionnaire respondents. He therefore examined all returned questionnaires and from that data selected respondents for further personal questioning and observation. This selection was based on completed questionnaires that contained important information for the study and which needed further clarification. These respondents were therefore revisited for an interview and observation. A total of ten respondents were interviewed.

The researcher decided to use a structured interview scheduled (see Appendix B) to ensure uniformity of responses. He further also tried to counteract the problem of bias and intrusion by conducting all interviews with care and awareness of confidentiality aspects and other personal factors (Yin, 2009). Responses were manually recorded as a recorder was considered to be too intrusive.

### **5.8.3. Observation**

It is recommended that a researcher should not only obtain direct opinions from the respondents but also understand the environment of the respondent (Yin, 2009). During the interviews the researcher therefore carefully observed the workplace settings of the respondents. This related to Brooking's observation that organizational culture is 'the way we do things around here' (Brooking, 1999:109). This was done in a structured and uniform way.

### **5.9. Data Processing and Data entry**

The researcher used standard quantitative methods to analyze and present the data collected by means of the questionnaires (predominantly quantitative data). Qualitative techniques were used to process the qualitative data collected by means of the interviews and observation. The first step was to categorize all the data collected according to area, business classification and finally into their industry category (see Appendix A and C, chapter two and sections 1.3 and 1.4 for details). The areas consisted of two major zones, the first (zone A) contained Lusaka (the capital), and the two large towns, Kafue and Kabwe, that are on the main railway line. Zone B consisted of the major Copperbelt Towns of Kitwe, Ndola, Kalulushi, Chingola, Chililabombwe and Mufulira. The business classification that was used was that of Micro, Small and Medium Enterprise (see chapters one and two). Then each group was further divided into an individual industry, i.e. service, manufacturing, construction, and extractive industries to ensure that the responses were contextualized.

The researcher used both Microsoft's Excel and Stat Soft's STATISTICA software packages to analyze the quantitative data. As mentioned out of the 180 questionnaires that were distributed 134 were completed and collected giving a good response rate of 74.4%. The responses in the questionnaires were coded and then input into Microsoft Excel spreadsheets for processing. Section I of the questionnaire supplied the categorization data, while section II consisted of the ratings awarded to knowledge management related questions (see Appendix A for the questionnaire used). The average rating for each response was obtained and the results of the analysis were illustrated by means of tables and radar charts. Further cross tabulations were conducted between the categorization and knowledge management responses (independent and dependent variables) to see the effect of the independent variables on the dependent variables. These cross tabulated calculations were checked for significance using STATISTICA and all results with a significance (p) level  $\leq 0.05$  were accepted for discussion.

The processing of scripts of interview responses and observation results was also started by categorizing themes indicated above. The next step was to review, correct, and clarify the qualitative data by reading through each transcript and analyzing the answers provided to a particular question. The process involved combining and comparing responses to each question for each person interviewed to identify patterns and themes. The researcher looked for general trends or distinct clusters of responses until a clear picture emerged. The data from observations were treated in a similar manner. The objective was that the findings of both the qualitative and quantitative data should complement each other and more effectively help to answer the research questions.

A detailed outline of the data analyses and processing is given in chapter 6.

### **5.10. Ethical Issues**

The researcher was aware of the fact that research ethics should be observed not only to protect the respondents but also to protect the reputation of the researcher's institution. The researcher had therefore undertaken to strictly adhere to the University of Cape Town's code of ethics.

### **5.11. Conclusion**

The researcher conducted a comprehensive literature review in order to generate secondary data and to identify the main issues relating to knowledge management, MSME development and research methodology. The primary data was generated through a field survey of a sample of the MSME's in Zambia in order to obtain respondents own views on the issues identified. A triangulated data collecting approach was used to collect primary data by means of questionnaires, observation and personal interviews. The data from the literature review was integrated with the data from the survey to address the research problem and to answer the research questions.

## **CHAPTER SIX: DATA ANALYSIS AND PRESENTATION OF THE FINDINGS**

### **6.1. Introduction**

In this chapter the analysis of the data arising from the survey data gathered in June 2011 is presented. During this exercise, the researcher employed three data gathering instruments namely questionnaires, interviews and observation. This was done to facilitate the capture of both qualitative and quantitative data in order to fulfill the requirements of the triangulation

method. Data was thereafter prepared and processed. The analysis of the data proceeded in the following manner: the processed quantitative data was analyzed and presented first, and then followed by qualitative data. In this way the quantitative findings were, where possible, cross-checked with and clarified by the qualitative findings - this procedure served as a corrective mechanism.

## 6.2. Data Analysis Process for the Study

During the preparation and processing stages the completed questionnaires were sorted and categorized for data capturing. Thereafter they were transferred to Microsoft Excel spreadsheets for processing and subsequent presentation. In the following sections the results of the analysis are illustrated by means of tables and radar charts. Further cross tabulations were conducted between the dependent and independent variables using the STATISTICA software programme. These were checked for significance and all results with a p level  $\leq .05$  were accepted for discussion. The following table outlines the distribution and response rate of the questionnaires.

**Table 5.8.3-1: Distribution of questionnaires and response rate**

QUESTIONNAIRE DISTRIBUTION		
	Action Taken	Quantity
1.	Questionnaires Distribution	180
2.	Completed Questionnaires Returned	134
3.	Questionnaires not Returned	46
4.	Completed Questionnaires Response Rate	74.4%

As indicated in Table 6.2-1, out of the 180 questionnaires that the researcher distributed by hand, 134 were completed and returned. The response rate was 74.4% which according to Babbie and Mouton (2001:261) is very good for such a study.

## 6.3. Demographic Profile of the Sample

This section of the chapter is devoted to the demographic details of the respondents in order to establish their profiles and is based on Part I of the questionnaire (Appendix 1). These include enterprise category, enterprise location, enterprise turnover, and business type (Appendix 4).

### 6.3.1. Enterprise Category Distribution

The distribution of the study sample amongst the three main enterprise categories, viz. Medium, Small and Micro is discussed. According to the Micro, Small and Medium Enterprise (MSME) definition that was adopted for this study (cf. chapter 1.8. and 2.4) a ‘micro’ firm employs between one and ten persons, a ‘small’ firm has between eleven and forty nine employees and the ‘medium’ category has between fifty one and one hundred employees.

It is very clear from the results depicted in Figure 6.3.1. below that out of the 134 responses captured in the survey more than half (66%) were ‘Micro’ enterprises, a quarter (25%) were Small enterprises, and only 8% were drawn from the Medium enterprise category. The reason for the high representation of micro firms can be attributed to the relatively low capital investment required to establish them, whereas a ‘medium’ enterprise requires a far greater investment. The Zambian economy is not particularly strong and there are therefore not that many individuals or groups that can afford to establish a larger organization and hence the greater proportion of micro and small enterprises (Zambia Privatisation Agency. 2012).

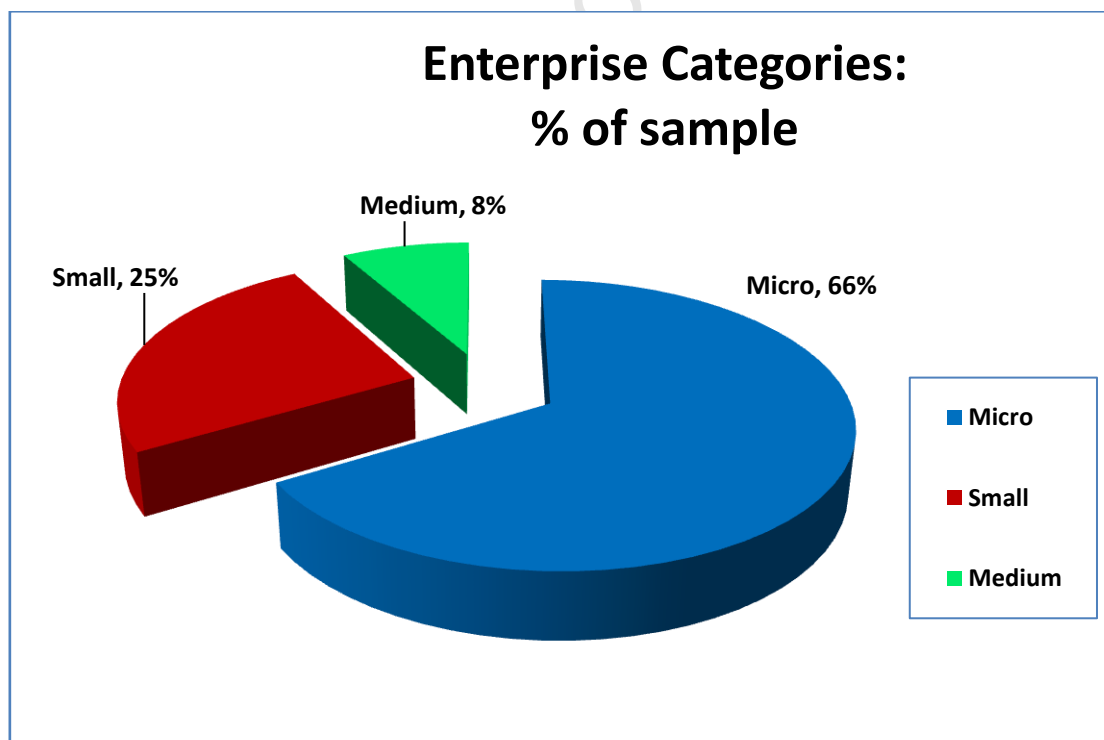


Figure 6.3.1-1: Enterprise category

### 6.3.2. Enterprise Location

In order to obtain responses that would be as representative of the overall Zambian MSME population as possible, it was decided to conduct the survey in several appropriate cities and towns in Zambia. The towns and cities were selected because they are located in places where a number of MSME's are well established. They were grouped into two Zones, the first containing major towns near to the capital city, Lusaka (in the central part of the country) and the second grouping consisted of the major towns in the Copperbelt region, which up until 1992 was at the centre of mining activities in Zambia. Zone A (capital city area) thus comprised Lusaka, Kafue and Kabwe, while Zone B (in the Copperbelt) includes Ndola, Kitwe, Kalulushi, Chingola, Mufulira and Chililabombwe. (The profile of each of these has been provided in Chapter 1.4). As can be observed from Figure 6.3.2. below, Zone B consisted of more than half of the research population (65%) and Zone A only contained 36% of the sample. This can be attributed to the fact that because of mining activities in the Copperbelt region, many enterprises were established in this region (Zambia Privatisation Agency. 2012).

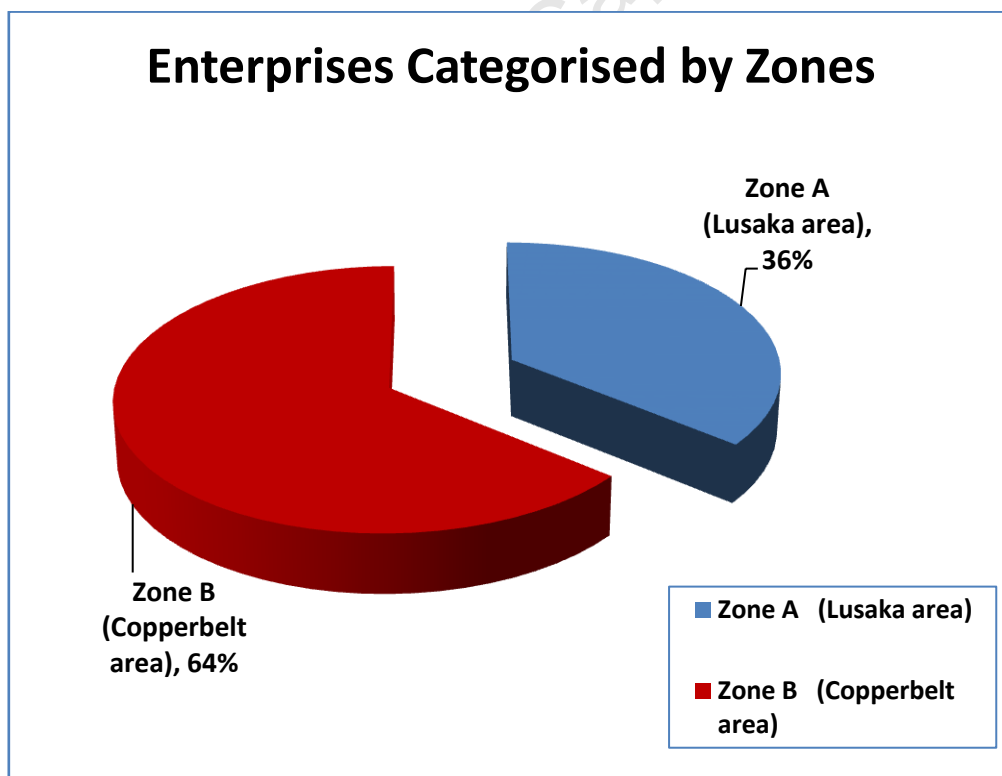


Figure 6.3.2-1: Enterprise location

### 6.3.3. The Enterprises Categorized According to Turnover

Of all the demographic data that was collected, turnover was found to be the independent variable that appeared to have the greatest influence on responses, i.e. it provided the most significant cross tabulations between the independent and dependent variables. This section thus examines the categorization of the sample population according to whether they had a ‘high’ turnover, i.e. more than ZMK<sup>16</sup>50 million, a ‘medium’ turnover of between ZMK30 million and ZMK49 million, or a ‘low’ turnover of less than ZMK30 million. It can be seen from Figure 6.3-3 below that 46% of the firms were in the ‘high’ turnover category, followed by 36% in the ‘low’ turnover category and 10% in the ‘medium’ category. Ten per cent of the respondents did not provide any turnover data (categorised as NP).

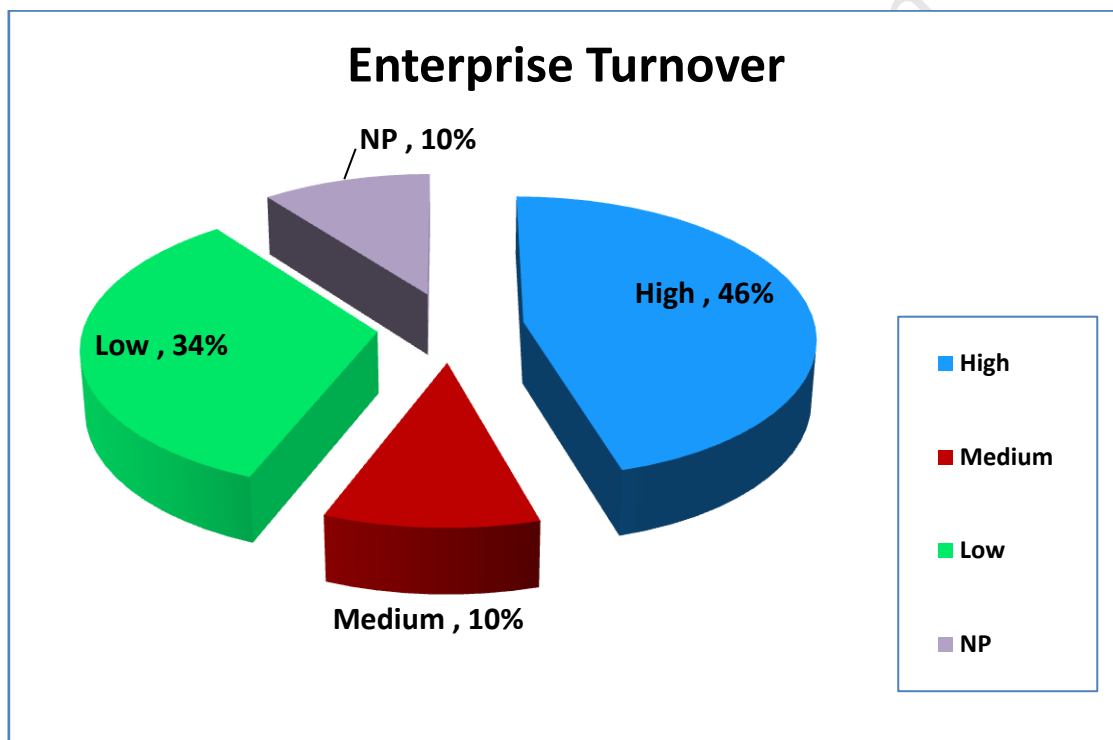


Figure 6.3.3-1: Enterprise turnover

---

<sup>16</sup> Zambian Kwacha (ZMK); 1 USD = 5,249.64 ZMK (12 September 2012)

### 6.3.4. The Type of Business

Another independent variable that provided a number of relevant results was business type. The research population consisted of four major business types: Services, Manufacturing, Extractive, and Construction. The categorisation of the sample according to business type is outlined in Figure.6.3-4-1 below and it is evident that the 'Services' business type was by far the largest of all the categories at 86.6% of the research population. The other categories ranged between 6.7% for the manufacturing category, 4.5% for the construction group and 2.2% for the extractive category. This is a clear indication that within the MSME sector, 'services' plays a significant role. A reason could be that enterprises in the mining, construction and manufacturing sectors would require more extensive capital input to establish.

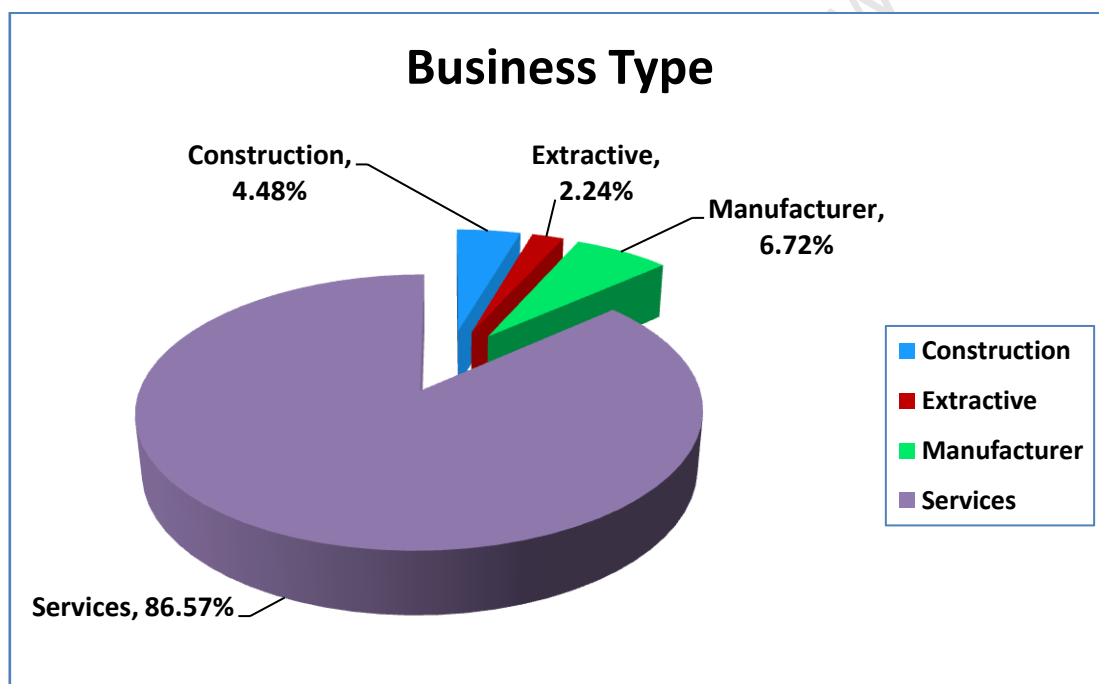


Figure 6.3.4-1: Business Type

## 6.4. Findings relating to Knowledge and Knowledge Management Attributes

### 6.4.1. Introduction

Part II of the questionnaire dealt with the MSME's Knowledge use and KM attributes. The questionnaire consisted of 45 statements grouped in eleven themes that related to how an organization interacts with various aspects of knowledge and the management thereof (see

chapters 4.2 and 5.8). The themes were: Tacit knowledge, Explicit knowledge, Knowledge resource centres and libraries, KM Processes, Technology infrastructure, Leadership, People/skills, Culture/Structure, KM Measures, Market leverage and Good MSME infrastructure.

The respondents were asked to consider each statement and choose a rating from a rating scale of 0 to 10 that best matched his/her firm's situation (0 was doing nothing at all, and 10 was doing exceedingly well). The layout and number of themes in the questionnaire was similar to those in the interview schedule making it easy for the two data findings to be compared (see Appendices 1 and 2).

#### **6.4.2. An Overview of all KM Maturity Indicators**

This section provides an overview of the study results (cf. Questions A1 – K45). Table 6.4.2-1 and Figure.6.4.2-1 below depict the average scores from all the respondents for all the KM indicators within the eleven themes outlined above. It is evident that the firms performed on average (5.0) with regard to the 'Tacit Knowledge' factor (i.e. tapping into and using knowledge in the form of skills and talents), and just below average for the KM processes aspect (4.6).

The scores were, however, far below average for the following five very important aspects: 'Explicit Knowledge' (0.9), 'Knowledge Resource Centres/Libraries' (0.8), 'Technology Infrastructure' (0.6), 'Leadership' (1.4.) and a 'Good MSMEs Infrastructure' (1.9.). The remaining four indicators also scored below average and ranged from 'Market Leverage' at 3.6, 'Culture/Structure' at 2.7, 'KM Measures' at 2.4 and 'People/Skills' at 2.4. The results therefore clearly show that, other than the Tacit Knowledge indicator, all the average scores were generally very poor. This is reflected by the overall average score of 2.4 for all the indicators from all the respondents. The researcher suggests that these low ratings most probably can be attributed to fact that KM is a new business concept in Zambia; that the country lacks a policy promoting the knowledge society concept; and that Zambia's ICT infrastructure is underdeveloped.

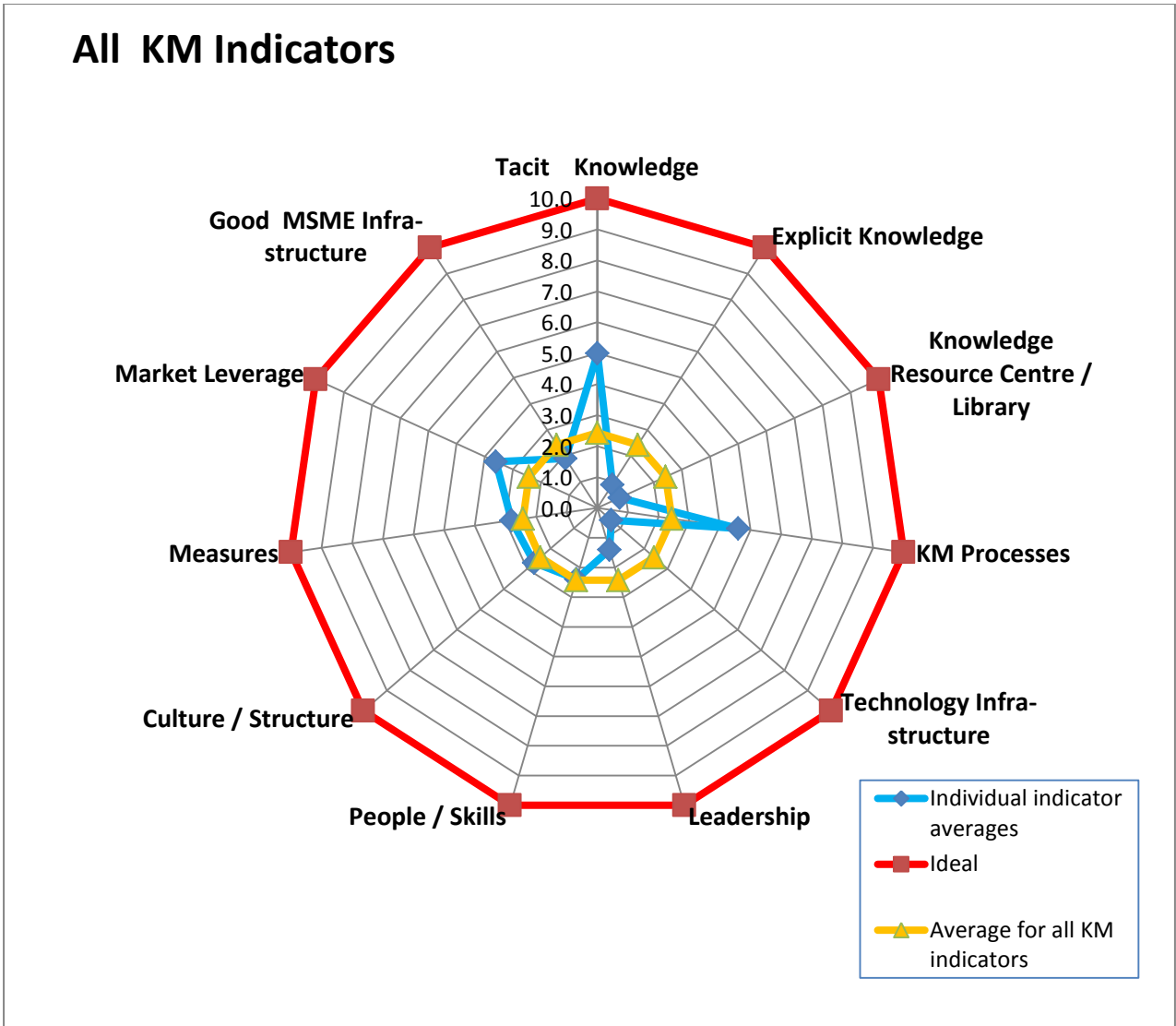


Figure 6.4.2-1: All KM Indicators (cf. Questions A1 – K45)

Table 6.4.2-1: All KM Indicators (cf. Questions A1 – K45)

Consolidated Averages of KM Indicators (Questions A1 – K45)											
KM Indicators	Tacit Knowl.	Explicit Knowl.	KRC / Library	KM Processes	IT Infra-structure	Leader-ship	People / Skills	Culture / Struct.	Measures	Market Leverage	MSME Infra-structr.
Indicator averages	5.0	0.9	0.8	4.6	0.6	1.4	2.4	2.7	2.8	3.6	1.9
Ideal	10	10	10	10	10	10	10	10	10	10	10
Overall Ave-rage	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4

### 6.4.3. Tacit Knowledge

In this section the results relating to the MSME's level of tacit knowledge leveraging and use is discussed (cf. Questions A1 – A4). Table 6.4.3-1 and Figure. 6.4.3-1 below show that while the MSMEs have a very good idea of who the best experts are in the various fields of interest to them (high score of 7.9), they rarely create an organized skills list for efficient identification and contact with such experts (low score of 2.7). It is further clear that key tacit knowledge is rarely captured, documented and stored in databases (1.9). Finally it can be seen that the MSMEs were very good at capturing knowledge at the customer interface, feeding it into their system and using it for service or product improvement (high score of 7.6). The results present a situation where there is recognition and awareness of the value of experts' knowledge and of customer feedback, but where little is done to capture this valuable knowledge or provide structured access to it.

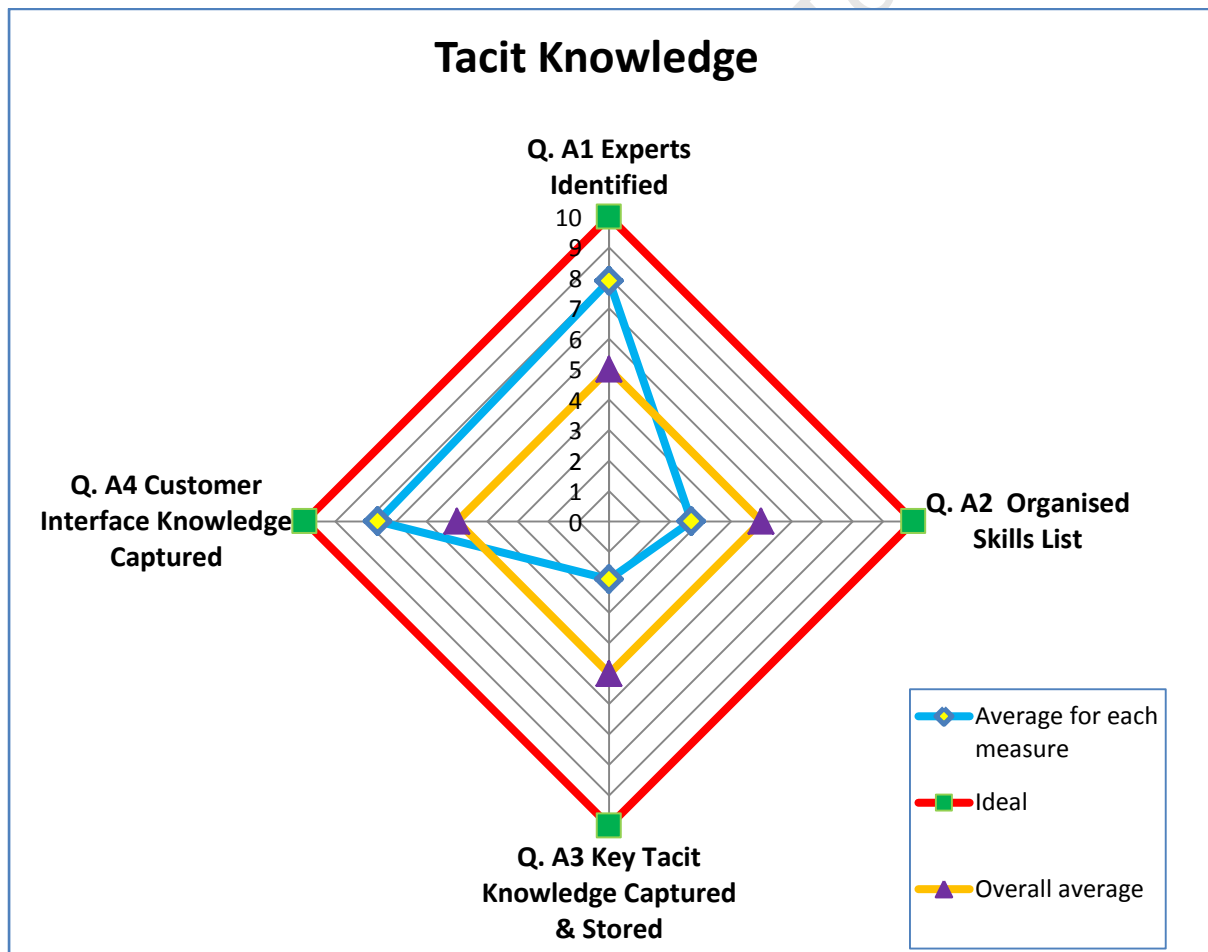


Figure 6.4.3-1: Tacit Knowledge Measures (Questions A1 – A4)

<b>Tacit Knowledge Measures (Questions A1 - A4)</b>				
<b>Tacit Knowledge</b>	<b>Q. A1 Experts Identified</b>	<b>Q. A2 Organised Skills List</b>	<b>Q. A3 Key Tacit Knowledge Captured &amp; Stored</b>	<b>Q. A4 Customer Interface Knowledge Captured</b>
<b>Average for each measure</b>	<b>7.9</b>	<b>2.7</b>	<b>1.9</b>	<b>7.6</b>
<b>Ideal</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>Overall average</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>

**Table 6.4.3-1: Tacit Knowledge Measures (Questions A1 – A4)**

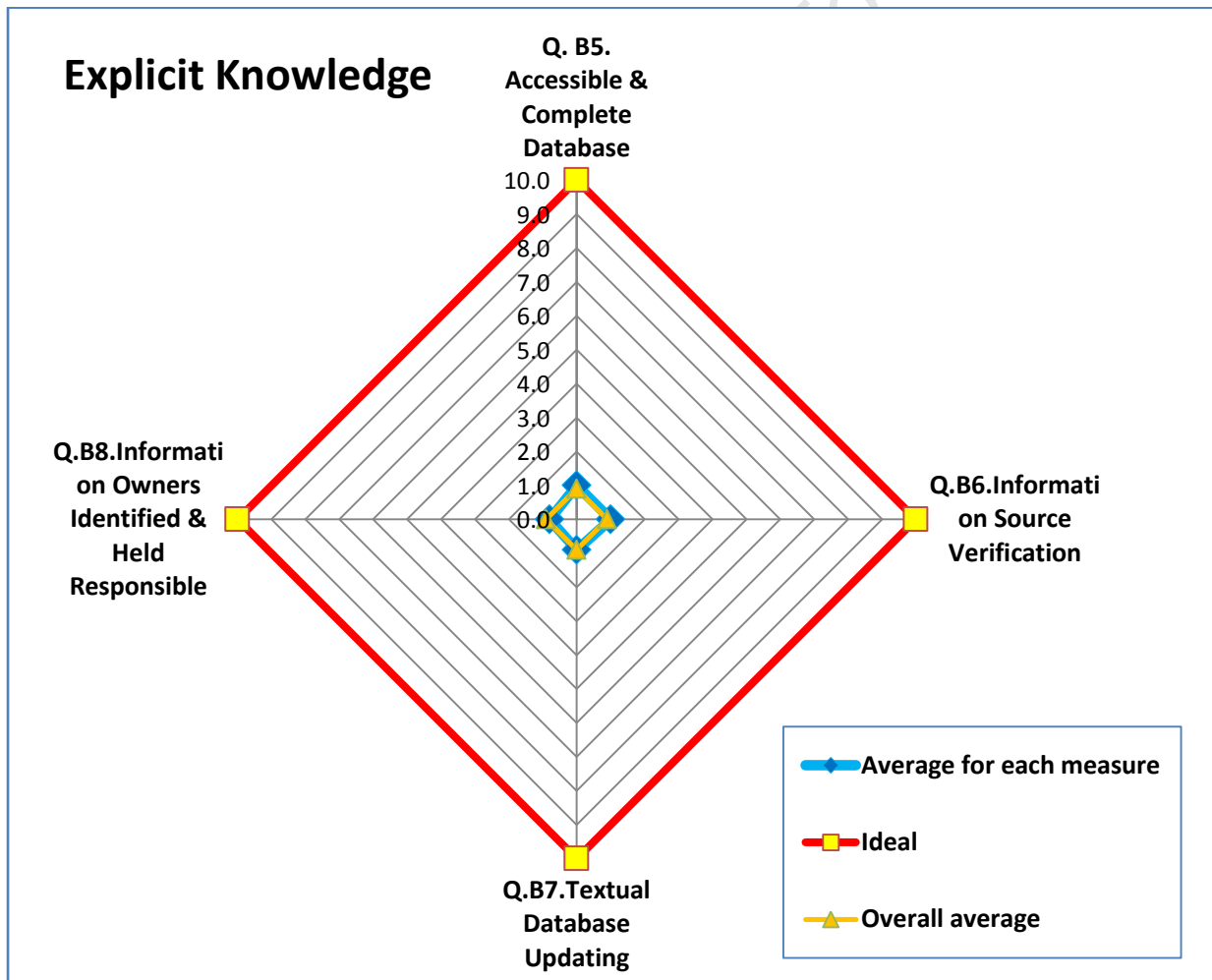
The researcher further probed respondents on these aspects when he conducted the interviews. He specifically asked the respondents whether they encouraged experts in their firms to convert their tacit knowledge into explicit knowledge, e.g. by means of seminars that are videoed, storytelling sessions, etc. The response was negative as most respondents held the view that the primary objective of their MSME was to improve turnover and increase profits and that seminars and storytelling would be a waste of time. It was also clear that the MSME's employed a number of experts in a part-time contract capacity and that the respondents thought that it would be difficult to capture their tacit knowledge as they would be reluctant to share their unique expertise.

#### **6.4.4. Explicit Knowledge**

The survey results (cf. Questions B5 – B8; Table 6.4.4-1 and Figure 6.4.4-1 below) show that very few of the MSMEs' had databases containing their firm's explicit knowledge (1.0). They further did not check or verify the quality of information sources (1.0) nor maintain and update databases containing textual information (0.9). The MSMEs further did not hold information resource owners responsible for the quality of the information contained in such resources (0.8). It can be seen from the average score for this group of measures (0.9) that the MSMEs did not in any substantive way engage with explicit knowledge capturing and retention (0.9). This trend is the same as outlined in the previous section, i.e. the MSMEs exhibit a distinct lack of a knowledge retention culture.

**Table 6.4.4-1: Explicit Knowledge Measures (Questions B5 – B8)**

<b>Explicit Knowledge (Questions B5 - B8)</b>				
<b>Explicit knowledge</b>	<b>Q. B5 Accessible &amp; Complete Database</b>	<b>Q.B6 Information Source Verification</b>	<b>Q.B7 Textual Database Updating</b>	<b>Q.B8 Information Owners Identified &amp; Held Responsible</b>
<b>Average for each measure</b>	1.0	1.0	0.9	0.8
<b>Ideal</b>	10.0	10.0	10.0	10.0
<b>Overall average</b>	0.9	0.9	0.9	0.9



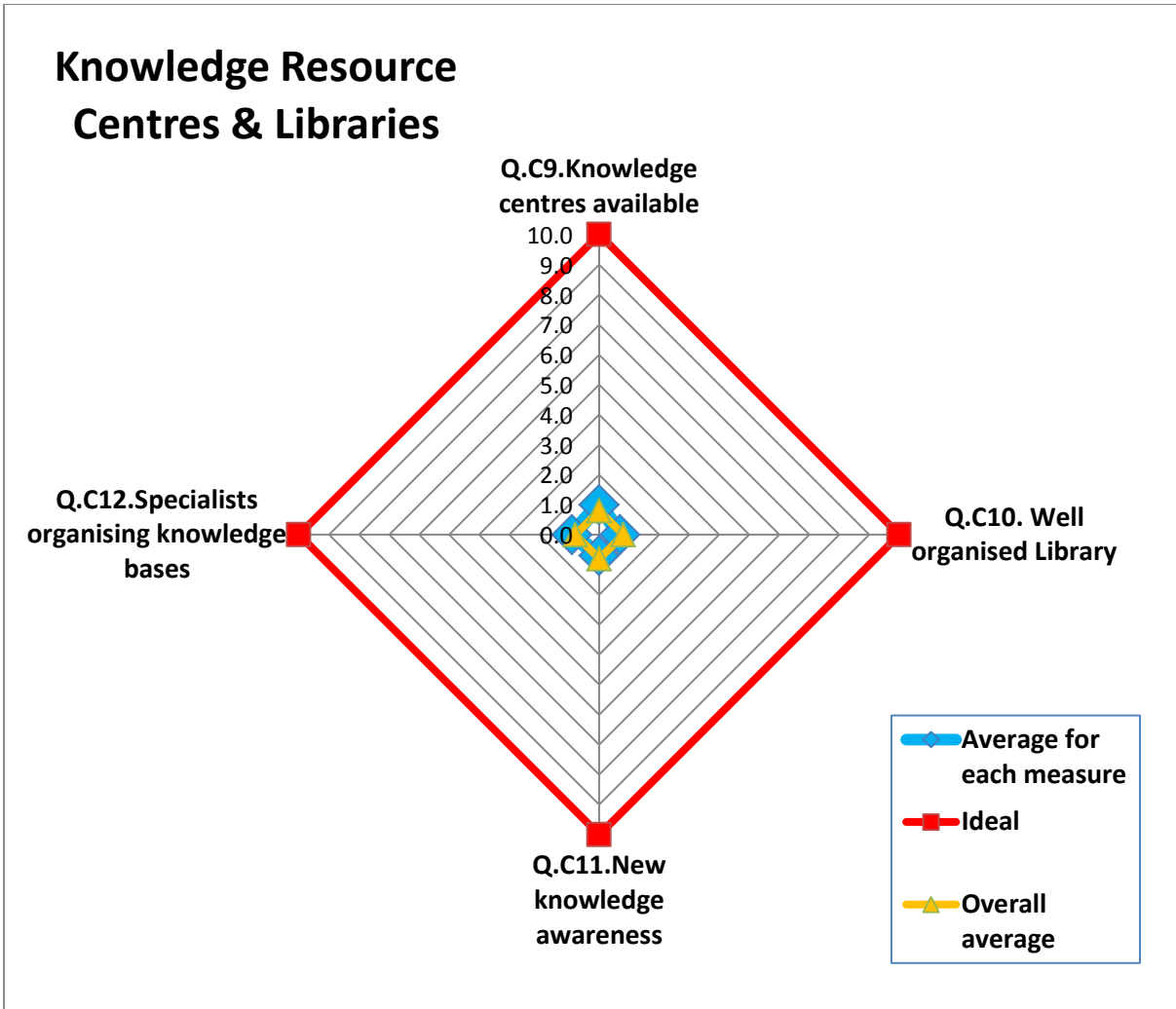
**Figure 6.4.4-1: Explicit Knowledge Measures (Questions B5 – B8)**

### 6.4.5. Knowledge Resource Centres and Libraries

The respondents gave this category (cf. Questions C9 – C12) the second lowest scores (average of 0.8) in the entire study. It is clear from Table 6.4.5-1 and Figure 6.4.5-1 below that very few MSMEs had resource centres, physical or virtual (1.0), and they also did not to any extent have well organized libraries that hold external publications (0.7). It is further evident that the MSMEs rarely alerted staff to the availability of new information, or identified essential knowledge gaps (0.7). Very few MSMEs have a specific person or particular group that is responsible for maintaining and systematically organizing vital knowledge and information (0.9).

**Table 6.4.5-1: Knowledge Resource Centres & Library Results (Questions C.9 - C.12)**

<b>Knowledge Resource Centres &amp; Libraries (Questions C.9 - C.12)</b>				
<b>Knowledge Resource Centres &amp; Libraries</b>	<b>Q. C9 Knowledge centres available</b>	<b>Q. C10 Well organised Library</b>	<b>Q. C11 New knowledge awareness</b>	<b>Q. C12 Specialists employed</b>
<b>Average for each measure</b>	<b>1.0</b>	<b>0.7</b>	<b>0.7</b>	<b>0.9</b>
<b>Ideal</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>Overall average</b>	0.8	0.8	0.8	0.8



**Figure 6.4.5-1: Knowledge Resource Centres & Library Results (Questions C.9 - C.12)**

### 6.4.6. Creating and Maintaining Knowledge-related Processes

The responses in this section (cf. Questions D 13 – D 16) ranged from fairly high scores for two of the indicators to low scores for the other two which then provided an average score of 4.6. It can be seen from Table.6.4.6-1 and Figure. 6.4.6-1 below that the MSMEs were very good at valuing the vital knowledge that is important for their core business processes (8.4). It was also evident that the MSME respondents wanted to ensure that such vital knowledge was readily accessible and integrated into their daily work flow (7.4). They, however, provided very low scores for their MSME’s ability to systematically monitor external knowledge sources and to gather and organize such knowledge (1.4). The MSMEs, further, did not really have policies in place for the protection of their intellectual property rights

(1.4). It further emerged during the interviews that most of the respondents were not familiar with KM as a business concept.

**Table 6.4.6-1: Knowledge-related Processes (Questions D 13 –D 16)**

<b>Knowledge-related Processes (Questions D.13 - D.16)</b>				
<b>Knowledge-related Processes</b>	<b>Q. D13 Recognising Value of Strategic Knowledge</b>	<b>Q. D14 Integrating Vital Knowledge into Work Flows</b>	<b>Q. D15 Monitoring External Knowledge Sources</b>	<b>Q. D16 Intellectual Property Policy</b>
<b>Average for each measure</b>	8.4	7.4	1.4	1.4
<b>Ideal</b>	10	10	10	10
<b>Overall average</b>	4.6	4.6	4.6	4.6

**Figure 6.4.6-1: Knowledge-related Processes (Questions D 13 –D 16)**

#### **6.4.7. KM-related Information Technology Infrastructure**

This section (cf. Questions E17 – E20) was aimed at establishing to what extent the MSME’s applied information technology to promote various knowledge management related activities. This included the effectiveness of their intranet as repository, its search facilities, using search engines to find external information and using social media and other tools for collaboration and inter-personal communication. The survey results (cf. Table 6.4.7-1 and Figure 6.4.7-1 below) clearly indicate that the MSMEs rarely used information technology to support knowledge management activities (average overall response of 0.6). The average ratings for the specific indicators were 0.5 for their knowledge repositories and particularly their intranet; 0.6 for the effectiveness of their search facilities; 0.3 for the use of search engines to find relevant external information; and 0.9 for the use of virtual collaboration and communication technologies such as social media to encourage knowledge exchange and collaboration in the work-place.

This was clearly the lowest rated variable in the study and the researcher therefore further probed these aspects during the interviews. It emerged that mobile phones were the only information technologies that was being widely used in the Zambian MSME sector. It is suggested that these low scores are an indication that the Zambian ICT infrastructure is not well developed. A further factor could be that many of the MSME's cannot afford to acquire and utilize appropriate information technology and that they also in general lack technological know-how.

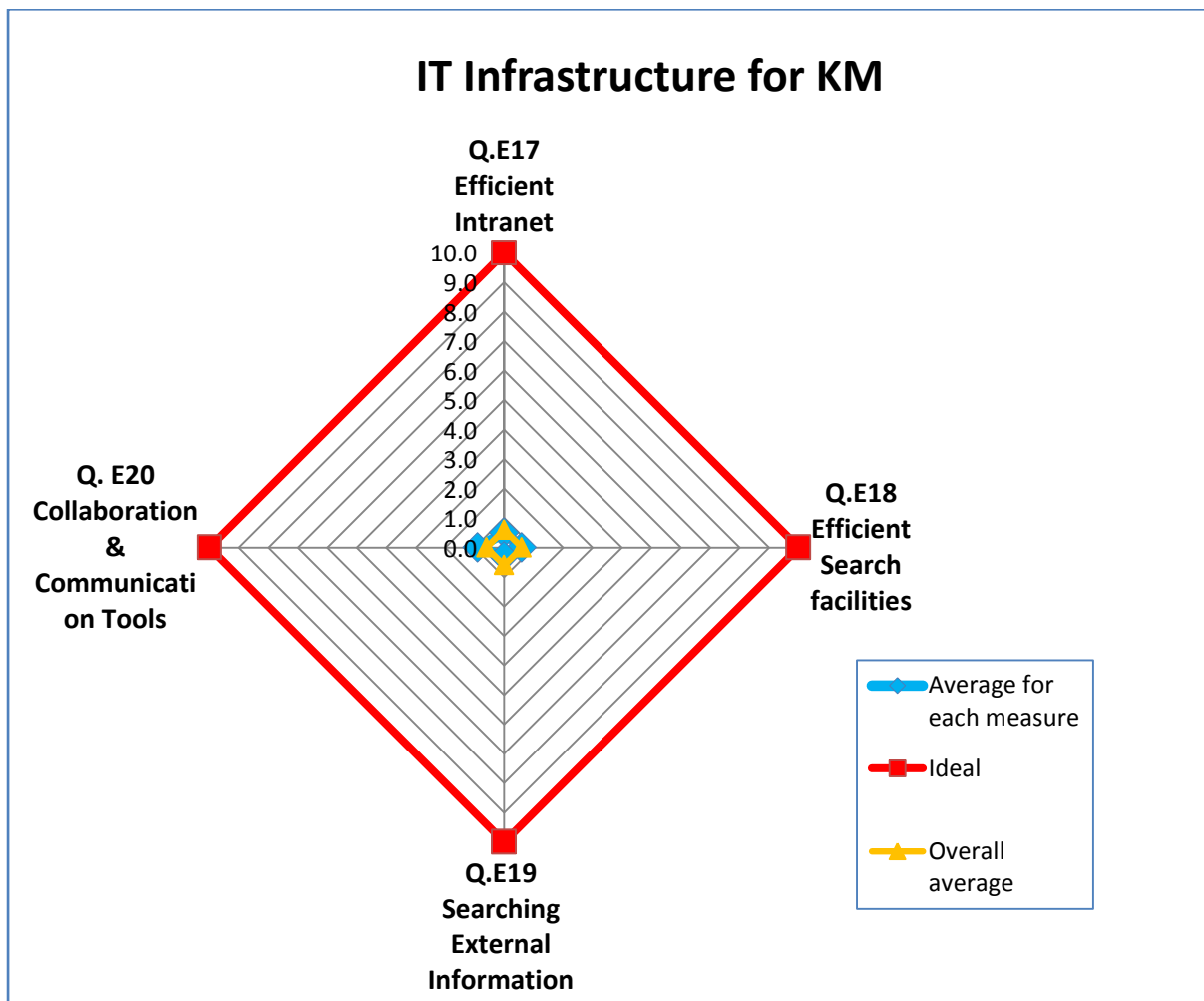


Figure 6.4.7-1: Information Technology Infrastructure Results (Questions E.17 – E.20)

<b>Information Technology Infrastructure for KM - (Questions E 17 - E 20)</b>				
<b>IT Infrastructure for KM</b>	<b>Q.E17 Efficient Intranet</b>	<b>Q.E18 Efficient Search facilities</b>	<b>Q.E19 Searching External Information</b>	<b>Q. E20 Collaboration &amp; Communication Tools</b>
<b>Average for each measure</b>	0.5	0.6	0.3	0.9
<b>Ideal</b>	10.0	10.0	10.0	10.0
<b>Overall average</b>	0.6	0.6	0.6	0.6

**Table 6.4.7-1: Information Technology Infrastructure Results (Questions E.17 – E.20)**

#### **6.4.8. Leadership and KM**

The focus of this variable was to assess top management’s readiness to promote a shared KM vision amongst their employees, motivate them to put the vision into action and articulate how their MSME can benefit from creating, sharing and applying knowledge to support business objectives and performance (cf. Questions F21 – F24). The results (cf. Table 6.4.8-1 and Figure 6.4.8-1 below) show that most of the MSME’s did not have a clearly outlined KM strategic plan that was actively followed (1.2), and that the role of knowledge was rarely embedded in their organization’s strategic objectives, mission and vision statements (2.4). It was also clear that most MSMEs did not treat knowledge as a vital resource and that it subsequently was not regularly reviewed at management meetings (1.1). The results further revealed that very few (0.7) of the MSMEs’ CEO’s and senior executives were promoting knowledge use and KM, neither within their MSMEs or to the outside world. As can be observed from the overall average score for this group of measures (1.4), employees were not being motivated by their senior management to create and use knowledge. It also became clear during the interviews that the MSMEs’ CEO’s and senior executives were more interested in production and profit margins than in promoting knowledge use in their organizations.

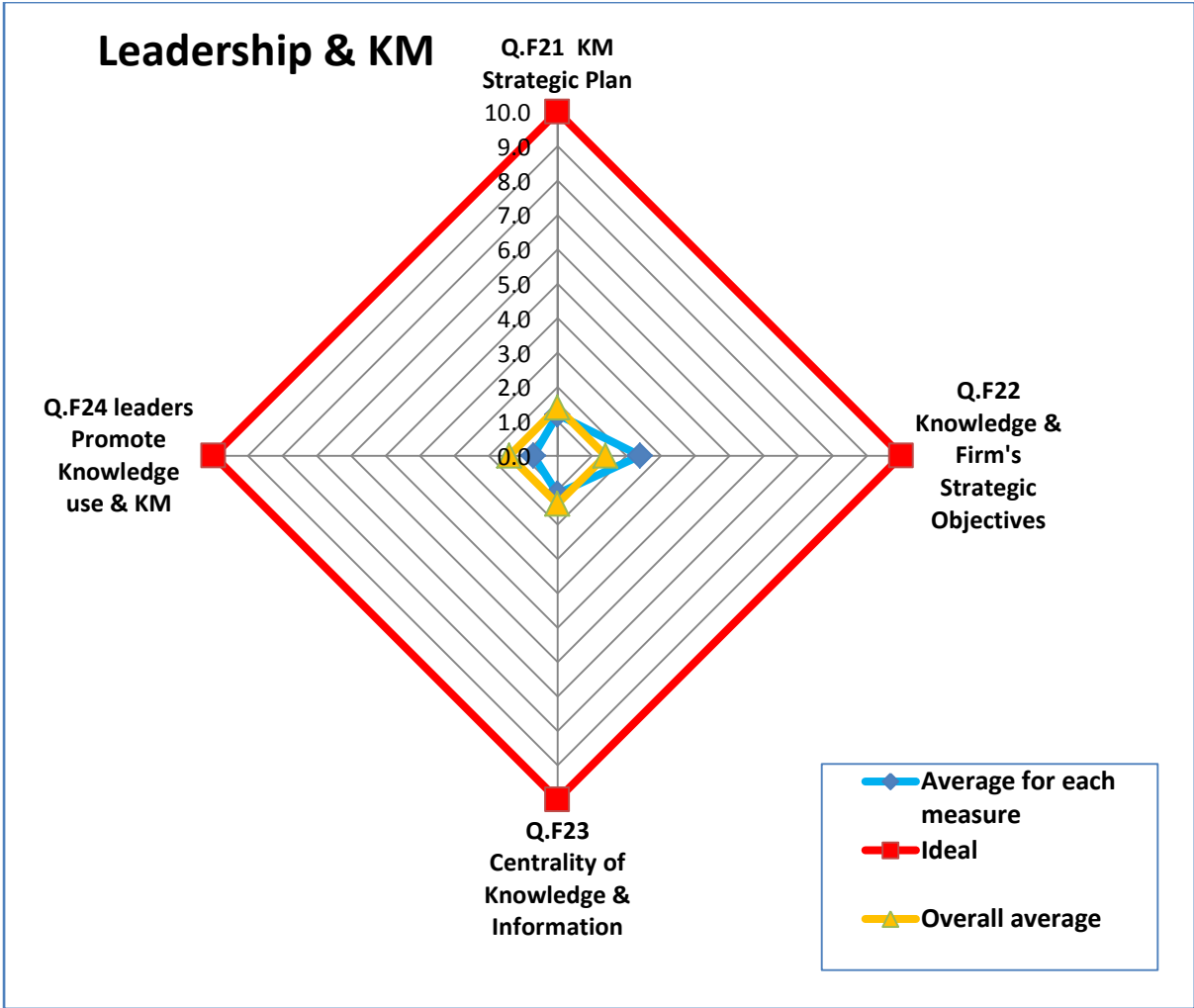


Figure 6.4.8-1: Leadership & KM (Questions F.21 – F.24)

Table 6.4.8-1: Leadership & KM (Questions F.21 – F.24)

Leadership & KM (Questions F.21 - F. 24)				
Leadership	Q.F21 KM Strategic Plan	Q.F22 Knowledge & Firm's Strategic Objectives	Q.F23 Centrality of Knowledge & Information	Q.F24 leaders Promote Knowledge Use & KM
Average for each measure	1.2	2.4	1.1	0.7
Ideal	10.0	10.0	10.0	10.0
Overall average	1.4	1.4	1.4	1.4

### 6.4.9. People and Skills Valued

The focus of this section was on assessing whether the MSME's had appreciation of the value of the know-how and the skills of the people in their organizations and whether any effort was being made to leverage such skill and knowledge (cf. Questions G25 – G28). The survey results (cf. Table 6.4.9-1 and Figure. 6.4.9-1 below) indicate that the MSMEs were not very good at identifying specific knowledge roles and assigning employees to oversee knowledge activities throughout the organization (1.1). It is also clear that the respondents did not really think that KM is an important management skill that should be acquired by every manager and professional (1.3). Individuals in the MSME's were, although not good, slightly better at mentoring those who need coaching (4.4) and at providing in-house training that is learner-centred and fully integrated into their day-to-day activities (3.0).

The overall average score of 2.4 is a further indication that the MSMEs were not very good at leveraging their people and skills potential. During the interviews these factors were reinforced and it further surfaced that in a number of instances MSMEs rather appointed consultants than develop the potential of their own staff and also that training was generally instigated by the Human Resource (HR) departments.

**Table 6.4.9-1 People and their Skills Valued (Questions G.25 – G. 28)**

<b>People &amp; Skills Valued (Questions G.25 - G. 28)</b>				
<b>People/Skills</b>	<b>Q.G25 Knowledge Roles Assigned</b>	<b>Q.G26 KM Recognised as a Management Skill</b>	<b>Q.G27 Coaching &amp; Mentoring Practiced</b>	<b>Q.G28 In-house Training Promoted</b>
<b>Average for each measure</b>	<b>1.1</b>	<b>1.3</b>	<b>4.4</b>	<b>3.0</b>
<b>Ideal</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>Overall average</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>

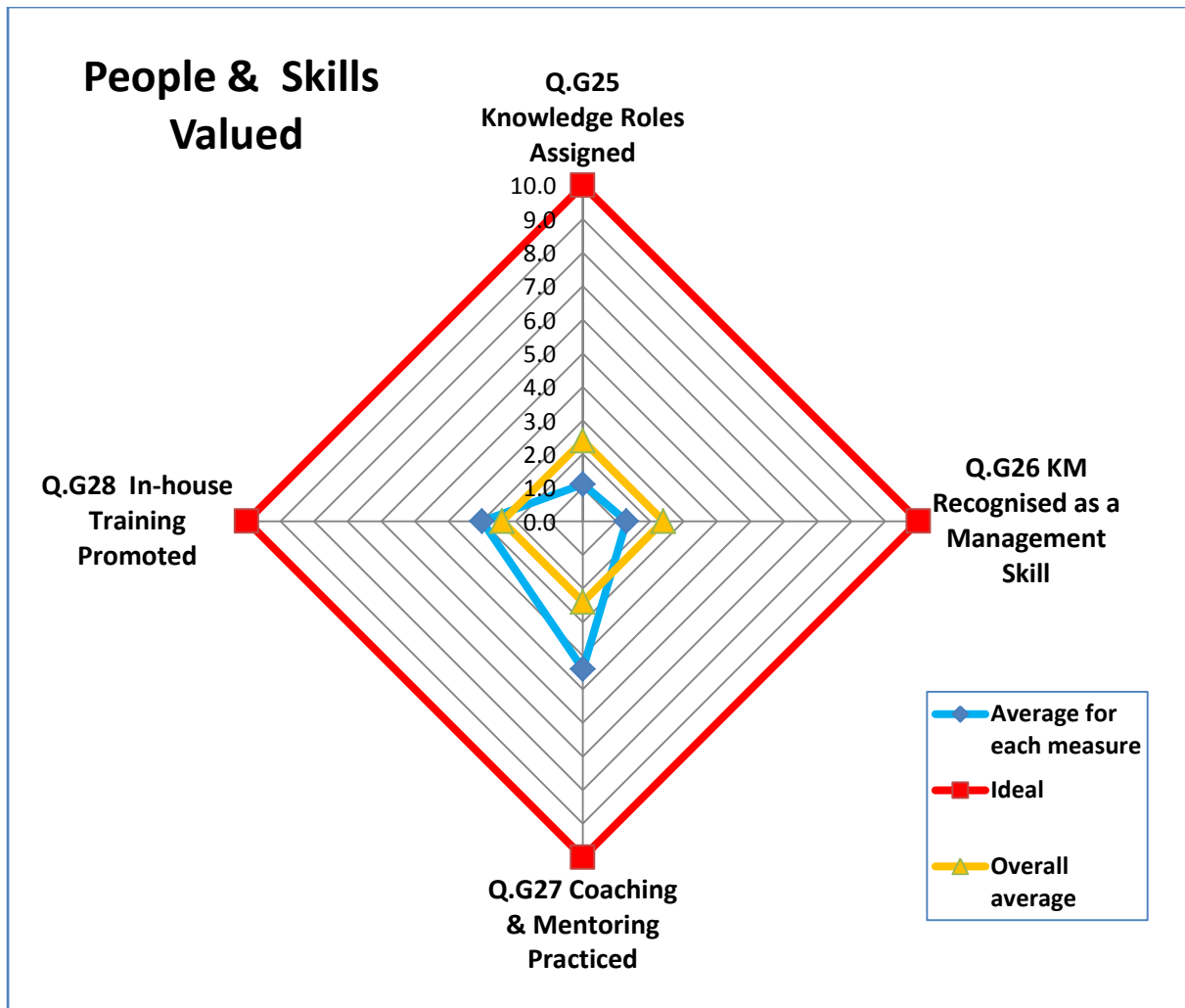


Figure 6.4.9-1: People and Skills Valued (Questions G.25 – G. 28)

#### 6.4.10. KM-related Culture and Structure

This component of the study sought to establish whether the MSME’s organizational culture and structure was conducive to encouraging knowledge interaction and the management thereof, i.e. whether they valued, promoted and rewarded knowledge contributions from their employees (cf. Questions H29 – H32). The survey results (cf. Table 6.4.10-1 and Figure. 6.4.10-1 below) indicate that the MSMEs were not good at choosing project teams that include employees with diverse professional, age and experience backgrounds (1.6). It is evident that they never promote KM values such as recognising and rewarding staff for contributing knowledge (0.0) and that they have little regard for time invested in acquiring knowledge (1.6). On the other hand, the results indicate that most of the firms were very good (7.5) at creating an environment that encourages interaction and the free flow of knowledge.

It also became clear during the interviews that with the exception of experts who were supervisors and were obliged by virtue of their positions to teach newly employed and incompetent employees, most MSMEs' experts were rarely encouraged to contribute time and expertise to support other staff members. Many experts, however, took it upon themselves to teach others in order to avoid overloading themselves with work, or to be called in after hours to solve problems. It was further noted during the interviews that in contradiction to the socially friendly environment that they had, most employees had little time or no time at all for learning, thinking and reflecting on the values of the firm.

From the results it is clear that in general the MSMEs' organizational culture and structure did not promote an environment where knowledge was actively created and used. This can be attributed to the fact that there was a general lack of exposure to KM principles. The few MSMEs that had a culture and structure that was conducive to knowledge management and encouraged knowledge sharing were mostly affiliated to or worked with large multinational MSMEs that followed good KM practices.

**Table 6.4.10-1: KM-related Culture & Structure (Questions H.29 – H.32)**

<b>KM-related Culture &amp; Structure (Questions H.29 - H. 32)</b>				
<b>KM-related Culture &amp; Structure</b>	<b>Q.H29 Diversity in Project Teams</b>	<b>Q.H30 Staff Rewarded for Knowledge Contributions</b>	<b>Q.H31. Knowledge Acquisition Considered an Investment</b>	<b>Q.H32.Workplace Environment Encourages Interaction</b>
<b>Average for each measure</b>	<b>1.6</b>	<b>0.0</b>	<b>1.6</b>	<b>7.5</b>
<b>Ideal</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>Overall average</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>

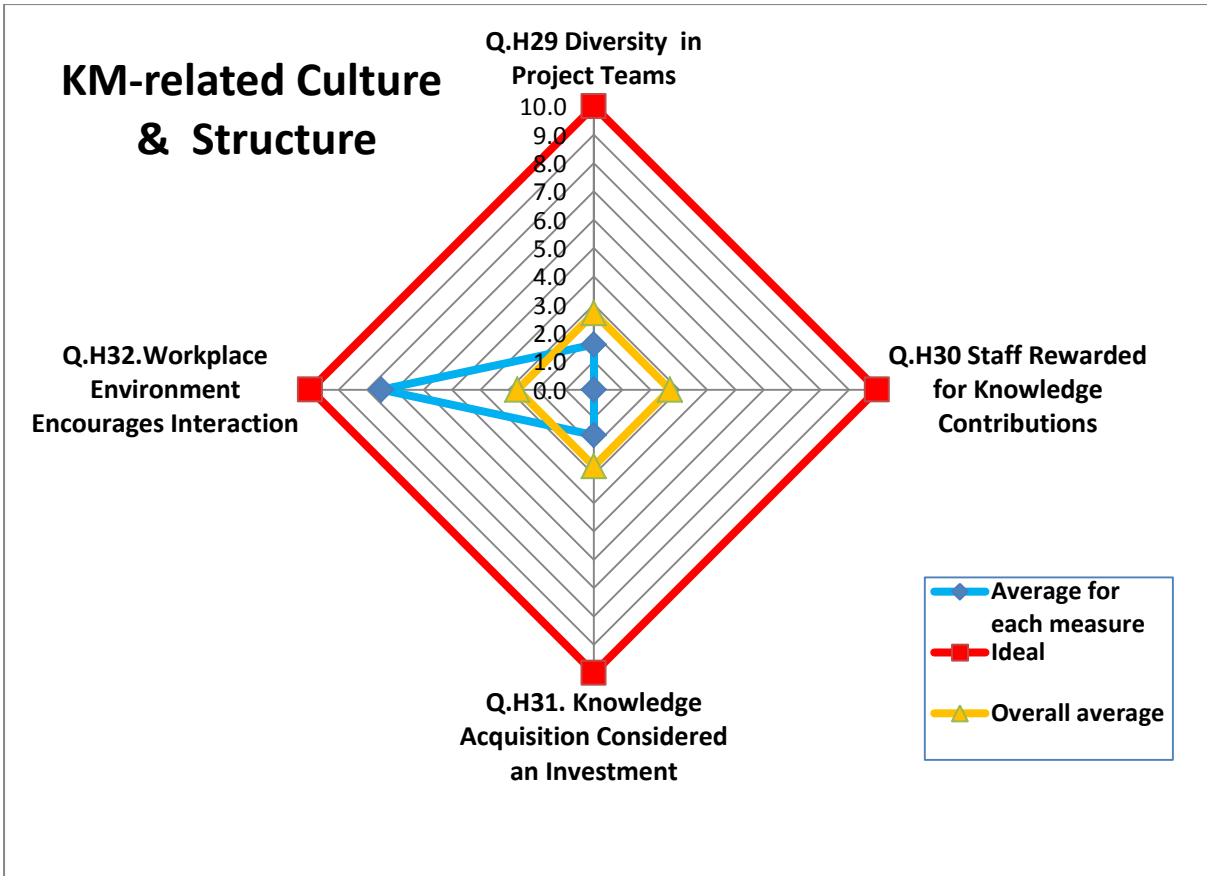


Figure 6.4.10-1: KM-related Culture & Structure (Questions H.29 – H.32)

**6.4.11. Measures**

This section intended to probe whether the MSMEs had developed KM-related performance measures that included KM as a vital factor in assessment procedures (cf. Questions I33 – I36). The results (cf. Table 6.4.11-1 and Figure. 6.4.11-1 below) show that very few of the MSMEs clearly articulate the bottom line benefits of knowledge management (0.9), or measure and manage their intangible assets in a systematic way (1.7). They also did not report regularly on their knowledge assets, such as in supplements to their annual reports (0.9). On the other hand, it was clear that they were good at including certain intangible and knowledge-based measures, such as level of customer satisfaction, levels of competence, etc. in their performance measurement systems (7.8).

The responses obtained during the interviews relating to these factors confirmed those outlined above and it was further observed that the profit and loss of the MSMEs are mostly used as the focus for dialogue and learning.

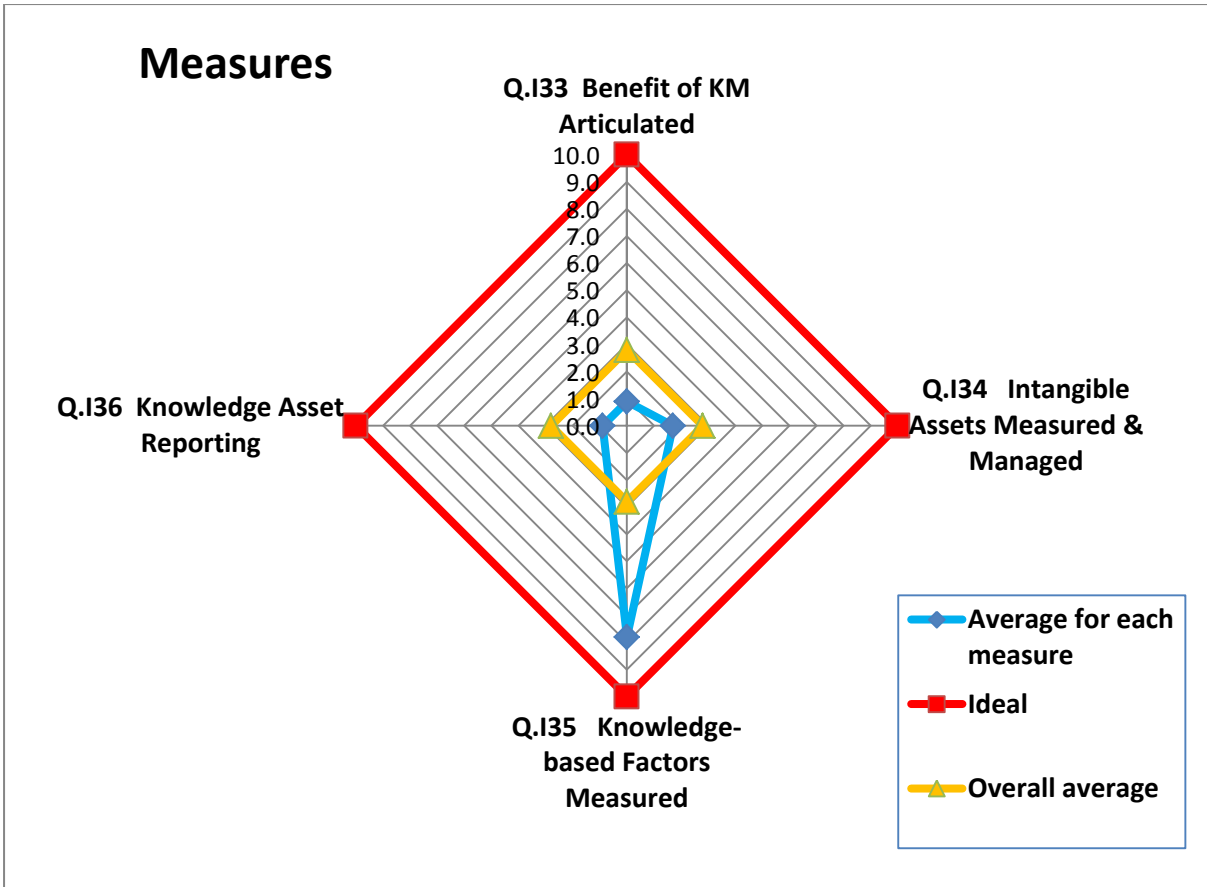


Figure 6.4.11-1 Measures (Questions I.33 – I.36)

Table 6.4.11-1 Measures (Questions I.33 – I.36)

Measures (Questions I.33 - I. 36)				
Measures	Q.I33 Benefit of KM Articulated	Q.I34 Intangible Assets Measured & Managed	Q.I35 Knowledge-based Factors Measured	Q.I36 Knowledge Asset Reporting
Average for each measure	0.9	1.7	7.8	0.9
Ideal	10.0	10.0	10.0	10.0
Overall average	2.8	2.8	2.8	2.8

#### 6.4.12. Market Leverage

The focus of this component was to establish whether the MSME's leveraged their knowledge to enhance products and services and used Knowledge Management practices to

increase their market share and satisfy customer needs (cf. Questions J37 - J40). The survey results (cf. Table 6.4.12-1 and Figure 6.4.12-1 below) show that most of the MSMEs were close to average (4.4) in making their knowledge readily available in a form that enhanced the MSME's services to their customers and other stakeholders, but were not good at packaging and repackaging their core expertise in ways that would generate new revenue streams (1.0). They were likewise not known among their clients and peers for being good at practicing Knowledge Management, and using and creating knowledge effectively (1.0). On the other hand, it can be seen that most of the MSME's made an effort to ensure that their services were 'market tailored' i.e. customized and adapted according to input received from market experiences and lessons learnt (8.0).

During the interviews that were conducted it became clear that most of the MSME's publicity and marketing messages conveyed the importance and depth of their know-how. An example is the private schools and clinics that are very good at publicizing the quality of the service they offer to their customers. The only good result in this group of indicators can be attributed to the current marketing trend that emphasizes the need to learn from past experience to adapt products and service to meet customers' needs. It is however clear that the MSME's generally do not practice KM and this makes them less effective as far as their ability to derive market leverage from innovative knowledge use.

**Table 6.4.12-1: Market Leverage (Questions J.37 – J.40)**

<b>Market Leverage (Questions J.37 - J. 40)</b>				
<b>Market leverage</b>	<b>Q.J37 Information &amp; Knowledge Used to Enhance Services</b>	<b>Q.J38 Core Expertise Repackaged to Generate New Revenue</b>	<b>Q.J39 Services Adapted According to Customer Feedback</b>	<b>Q.J40 Reputation for Good KM Practices</b>
<b>Average for each measure</b>	4.4	1.0	8.0	1.0
<b>Ideal</b>	10.0	10.0	10.0	10.0
<b>Overall average</b>	3.6	3.6	3.6	3.6

## Market leverage



Figure 6.4.12-1: Market Leverage (Questions J.37 – J.40)

### 6.4.13. Good MSME Infrastructure

This component aimed to probe whether the MSMEs that had been investigated have access to and derive benefit from the MSME infrastructure and incentives that the Zambian government has developed (cf. Questions K.41 – K.45). The results depicted in Table 6.4.13-1 and Figure 6.4.13-1 indicates that the only aspect that seemed to have any beneficial impact on the MSMEs is the legal framework that is MSME-friendly (5.5). None of the other initiatives and incentives that have been instituted to assist MSME's in Zambia seems to have

had any effect on the firms investigated. This ranged from very few of the MSME's deriving benefit from the tax waiver on technology-related products (0.4), to hardly any of the MSME's finding it easy to access the government's loan facilities (e.g. CEEF) (0.2) and utilizing the government-initiated entrepreneurship and business management training (0.3). It is further evident that most MSMEs find the government's specialized support institutions to be of little help (1.8).

A highly developed MSME infrastructure is a very necessary prerequisite to ensure the development of the national economy of any given country, particularly in Africa. Knowledge activities, furthermore, are to a large extent positively or negatively influenced by these elements and the researcher thus notes with concern the low ratings that the respondents had given for most of these aspects.

**Table 6.4.13-1: Good MSME infrastructure (Questions H.29 – H.32)**

<b>Good MSME Infrastructure (Questions K.41 - K. 45)</b>					
<b>Good MSME Infrastructure</b>	<b>Q.K41 Firm Benefits from Government Incentives</b>	<b>Q.K42 Legal Framework is SMME-friendly</b>	<b>Q.K43 Easy to Access Government Loan Facilities</b>	<b>Q.K44. Benefitted from Government's MSME-related Training</b>	<b>Q.K45. Government's Support Institutions Helpful</b>
<b>Average for each measure</b>	0.4	5.5	0.2	0.3	1.8
<b>Ideal</b>	10.0	10.0	10.0	10.0	10.0
<b>Overall average</b>	1.9	1.9	1.9	1.9	1.9

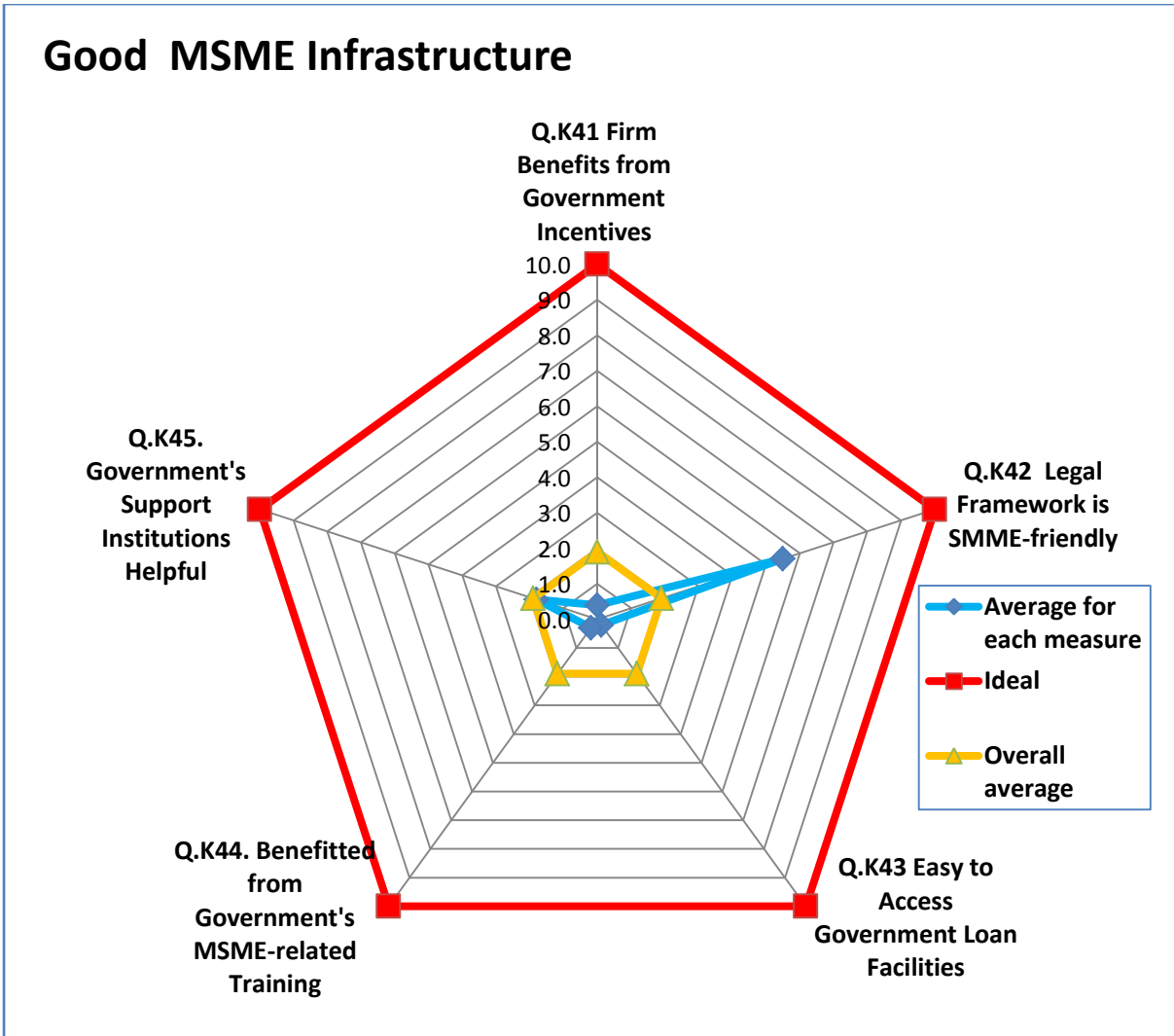


Figure 6.4.13-1: Good MSME infrastructure (Questions H.29 – H.32)

## 6.5. Presentation of the Findings Relating to the Significant Cross Tabulations

### 6.5.1. Introduction

The next step in the analysis process was to establish whether any of the independent variables had a significant effect on the dependent variables in the study. This was achieved by using the STATISTICA statistical package to produce cross tabulations of the results and to calculate significance levels of these the results. Results with a significance level of  $p \leq 0.05$  were accepted for presentation and discussion.

## 6.5.2. Enterprise category and KM Maturity Indicators

In this section the KM maturity indicators that provided significant results when cross tabulated with the enterprise categories are discussed. The significant cross tabulated results are outlined in Table 6.5.2-1 below.

**Table 6.5.2-1: Enterprise Category & KM Maturity Indicators - Significant Results**

Question	Enterprise Category - Averages (n=134)				Significance level
	Medium	Small	Micro	Overall	
Q.B5-B8. Explicit knowledge - Overall	1.7	2.2	0.4	0.9	p= .00836
Q. C9 - C12. Knowledge Resource Centres & Libraries - Overall	0.6	2.1	0.4	0.8	p= .00022
Q.D15 Monitor External Knowledge Sources?	1.6	2.9	0.7	1.4	p= .04889
Q.D16 Intellectual Property Policy?	2.0	3.0	0.7	1.4	p= .03774
Q.E18 Efficient Search facilities?	0.7	1.2	0.3	0.6	p= .04068
Q.E19 Searching External Information?	1.0	0.9	0.1	0.3	p= .03700
Q.F21 KM Strategic Plan?	1.7	3.0	0.5	1.2	p= .0029
Q.F23 Centrality of knowledge?	1.7	2.5	0.4	1.1	p= .01400
Q.G25 Knowledge Roles Assigned?	1.5	2.4	0.5	1.1	p= .00672
Q.G26 KM as a management skill?	1.3	2.5	0.8	1.3	p= .00045
Q.G28 In-house Training Promoted?	8.1	4.2	1.9	3.0	p= .0001
Q. H33 - H36. Measures - Overall	3.5	3.3	2.5	2.8	p= .00067
Q. J.37 - J.40. Market leverage - Overall	5.1	4.3	3.2	3.6	p= .00253
Q.K42 Legal Framework is MSME-friendly ?	7.8	5.4	5.2	5.5	p= .00054
Q.K44 Benefitted from Government's MSME-related Training?	0.5	0.8	0.1	0.3	p= .01964
Q.K45 Government's Support Institutions Helpful?	4.9	2.4	1.2	1.8	p= .00000

It can be seen from Table 6.5.2.1 above that in the majority of instances the small enterprises, while not good, were more actively engaged than the medium sized and micro enterprises with the following KM-related activities:

the management and organization of explicit knowledge; availability of knowledge resource centres or libraries that coordinate knowledge repositories; systematic processes for monitoring external knowledge sources; a policy to protect the MSME's intellectual property rights; appropriate search facilities that produce logically organized results; a clearly outlined and operating KM strategic plan that is embedded in a vision statement; the treatment of knowledge as a vital resource that is reviewed regularly at management meetings; a specific person allocated to a knowledge role and trained to oversee knowledge activities throughout the company; KM is regarded as a management skill which every manager and professional should be familiar with; and the benefit derived from the entrepreneurship and business management training initiated by the Zambian government.

The medium sized enterprises were, in turn, better than the other two categories at the following KM-related activities:

using search engines to find and sort external information required by the MSME; providing in-house training that is learner-centred (they were particularly good at this activity and returned a score of 8.1); the measurement of KM-related performance measures that included KM as a vital factor in assessment procedures; the leveraging of knowledge to enhance products and services and using KM practices to increase market share and satisfy customer needs (they returned a slightly above average rating of 5.1 for this measure); the Zambian government's MSME legal framework (they were once again particularly positive and returned a score of 7.8); and finally the helpfulness of the Zambian government's specialized MSME support institutions (they rated this aspect at just below average with a score of 4.9).

### **6.5.3. Location of Business and KM Maturity Indicators**

The researcher's aim in this section was to assess whether the physical location of the MSME had an effect on the various KM maturity indicators. This was done by cross tabulating the responses with the location categories, i.e. zone A (the Lusaka area) and zone B (the Copperbelt area). The significant results are outlined in Table 6.5.3-1 below.

**Table 6.5.3-1: Location of Business and KM Maturity Indicators**

Question	Enterprise Location - Averages (n=134)			
	Zone A: Lusaka area	Zone B: Copperbelt area	Overall	Significant p
Q. A2 Tacit Knowledge: Availability of an Organized Skills List	1.1	3.6	2.7	p=.00377

The only significant result was for whether the MSMEs had an organized skills list that could effectively identify the experts and other contacts they needed to communicate with. The results indicate that the respondents in the Copperbelt area are more inclined to produce a skills list (3.6) than those in the Lusaka area (1.1).

#### **6.5.4. Turnover and KM Maturity Indicators**

The cross tabulated results for turnover and the KM Maturity indicators were skewed by the 10% of the respondents that did not provide an answer to this question. The results are therefore not reported on.

#### **6.5.5. Business Type and KM Maturity Indicators**

In this section the researcher's aim was to assess whether the difference in responses between different business types had an impact on the KM maturity indicator responses. This was done by cross tabulating the KM maturity indicator responses with business types; i.e. Construction, Extractive Manufacturing and Services Enterprises. The significant results are outlined in Table 6.5.5-1 below.

**Table 6.5.5-1: Business Type and KM Maturity Indicators**

Question	Enterprise Turnover - Averages (n=134)					Significant p
	Construction	Extractive	Manufacturing	Services	Overall	
Q. B5-B8 Explicit Knowledge: Overall	3.8	2.6	1.2	0.7	0.9	p=.00000
Q.C11 Knowledge Centres: New knowledge awareness	3.8	1.3	0.8	0.5	0.7	p=.00022
Q.C12 Knowledge Centres: Specialists employed	2.2	2.7	0.7	0.8	0.7	p=.04972
Q.E19 Technology Infrastructure: Use of search engines	0.8	2.0	0.8	0.2	0.3	p=.00951
Q.F21 Leadership: KM Strategy?	4.8	3	1.6	1.0	1.2	p=.00635
Q.F23 Leadership: Centrality of knowledge	3.3	3	1.6	0.9	1.1	p=.02617
Q.F24 Leadership: KM promoted by leaders?	1.7	2.7	0.9	0.6	0.7	p=.04409
Q.H29 Culture & Structure: Diversity in project teams	5.3	1.7	1.7	1.4	1.6	p=.02432
Q.I33-I36 Measures: Overall	5.1	3.9	3.0	2.7	2.7	p=.01479
Q.J38 Market Leverage: Repackage core expertise?	3.3	1.7	1.1	0.8	1.0	p=.01790
Q.J40 Market Leverage: Good KM practices reputation?	4.3	2.7	1.3	0.9	1.1	p=.01790
Q.K43 Good MSME Infrastructure: Access to government loans?	0.3	0.0	1.0	0.1	0.2	p=.02670
Q.K44 Good MSME Infrastructure: Access to government training	1.0	0.0	0.9	0.2	0.3	p=.01386

It can be seen from Table 6.5.5.1 above that in the majority of instances the construction-based enterprises were more actively engaged than the other business types with the following KM-related activities:

All activities related to explicit knowledge management and organisation; knowledge centres creating knowledge awareness; leadership instituting a KM strategy;

leadership promoting the centrality of knowledge and KM; diversity in project teams; instituting KM performance measures; market leveraging by repackaging core expertise; market leveraging by good KM practice reputation; and effectively utilizing government training facilities.

The extractive-based enterprises were, in turn, better than the other categories at the following KM-related activities:

Knowledge centres employing specialists; use of search engines; and KM promoted by leaders.

The manufacturing-based enterprises, although not particularly good, were better than the other categories in finding it easy to access government loan facilities.

## **6.6. Concluding Remarks**

In this chapter the findings of the analysed data were presented. This included outlining the demographic profile and the responses to the KM maturity indicators. The results of the significant cross tabulations have also been presented for the various enterprises categories, locations and business types. The results will be discussed in greater detail and conclusions drawn in chapter 7.

## **CHAPTER SEVEN: DISCUSSION, SUMMARY AND CONCLUSION**

This chapter presents a discussion of the critical issues that emerged from the findings that were presented in chapter six, supplemented by the secondary data gathered during the literature review. This is followed by a review of the research questions (see. chapter 1.6) and an outline of the study outcomes and their implications for the field of KM. It further provides recommendations with regard to knowledge use and KM development in the Zambian MSME sector. The limitations of the study and areas for further research are briefly outlined.

### **7.1. Discussion of the findings**

According to Sveiby, Knowledge Management relates to how an organization can create value by leveraging its intangible assets (Sveiby, 1997). Within the perspective of the management of a firm, KM is seen to be relevant to a range of managerial areas. Meliha Handzic and Zhou, for example, argue that KM provides an integrative approach that combines economics (knowledge as an organizational asset), human behavior (organizational, space for socialization and strategy to facilitate knowledge sharing and contribution) and technology (i.e. the role of ICTs in KM), in a firm (Handzic & Zhou, 2005).

The discussion in this section will relate to how the MSME sector in Zambia leverages knowledge within and outside its organizational structures in order to meet its business goals and objectives. Finally it will determine the current state of KM maturity within the MSME sector in Zambia and recommend possible strategies that can be taken to improve the situation.

The discussion begins with a brief outline of the sector's demographic profile followed by a discussion of the outcomes relating to the KM maturity indicators investigated and where significant, the impact of the independent variables.

#### **7.1.1. Demographic Profile**

The demographic profile of the MSME sector in Zambia consist of four factors, business category, enterprise location, enterprise turnover and business type. The effect of these factors, where significant, were further considered in this study.

The survey results (cf. 6.3.1) indicate that a majority (66%) of the study sample were in the 'micro' category, and that much smaller proportions were in the 'small' (25%) and 'medium'

(8%) categories. A reason for the preponderance of micro firms could be because most people in the Copperbelt area (Zone B) have been largely dependent on MSMEs for their livelihood after the change of the political and economic structure in 1992. At that time the new government introduced a free enterprise system. A further factor would be that a relatively small capital investment is required to establish a micro firm, a very relevant factor in countries with emerging economies such as in Zambia.

As was discussed in chapters 1.4 and 5.5 the researcher selected the survey sample of MSMEs from two zones. Zone A encompassed Lusaka, the capital city and major towns in that area while Zone B comprised of the largest towns in the so-called Copperbelt region in Zambia. The reason for this selection was because these regions are economically the most active in Zambia. The Copperbelt region, because of mining activity, has historically been Zambia's economic power base and explains why most of the MSME's were located in Zone B (65%).

Respondents were further requested to provide business turnover data. It was seen in 6.3.3 that 46% of the MSME's fell in the high turnover category, 36% in the low turnover and 10% in the medium turnover category. Ten percent did not provide any data on this question. The turnover data provided is inconsistent with the MSME categorization and for this reason, as well as the high proportion of non-responses to this question, the researcher decided not to use this data for cross tabulation purposes.

The data collected was finally categorized by business type, i.e. whether the MSMEs investigated were in the services, manufacturing, extractive or construction business field. By far the largest number (86.6%) was in the services category (cf. 6.3.4.). The remaining enterprises were fairly equally distributed among the manufacturing, construction and the extractive categories. A probable explanation could be that it is generally accepted that in the knowledge economy most jobs are service-oriented and that less capital investment is generally required in this business sector.

### 7.1.2. Discussion of the Findings Relating to Knowledge and Knowledge Management Attributes of the MSMEs

It was seen in chapter 6.4.2 that, other than for the tacit knowledge indicator with an average score of 5.0, all the other indicators returned a below average score. The lowest was for technology infrastructure which was only rated 0.6.

Among some of the reasons that were identified to account for these low scores are that KM is a new business concept in Zambia, the country lacks a knowledge society promotion policy and the ICT infrastructure is poor. Most of the knowledge activities currently taking place in the Zambian MSME sector are as a result of knowledge spillovers from financial institutions and other large international firms that are based in countries with a knowledge driven business environment. It is, however, the researcher's view that the prospects for KM to thrive in Zambia are very high if the above mentioned impediments are addressed.

**Tacit knowledge:** The results (cf.6.4.3) show that most MSMEs know who their experts are and are good at capturing knowledge at the customer interface. They, however, do not create organized skills lists nor capture and document the tacit knowledge of these experts.

The researcher wishes to emphasize that identifying experts does not necessarily require special abilities other than simply being observant as to who does the job well. It is clear that the MSME sector needs to explore effective ways of capturing tacit knowledge.

**Explicit knowledge:** Most of the MSME's (cf.6.4.4) investigated do not provide effective access to explicit knowledge. It is clear that very little is done to create and maintain textual databases, to verify information sources, or to provide access to information. It is evident that much of the MSMEs' knowledge is in the form of personal knowledge of the employees and that very few attempts are made to make such knowledge explicit, to capture it and to organize it for effective use in the future. The interviews indicated that the only attempts that are made to transfer tacit knowledge into the explicit domain and make it accessible are by means of official daily briefings and scheduled formal meetings where outcomes are recorded as minutes. It was further clear that while most of the MSMEs have formal work procedures; these manuals are old and rarely reviewed. Very few mechanisms are being put in place to facilitate idea exchange and capture new knowledge and innovations for future use. The only procedures that closely resembled such initiatives are the practices in the private hospitals

where nurses report during a shift handover and doctors report on their rounds while a few private schools hold staff discussion forums, albeit very infrequently.

It is of concern that the MSMEs are not better at an important aspect such as the organization and provision of explicit knowledge. Explicit knowledge is that knowledge that has been tested, proved workable and it should therefore be recorded and made accessible to others. Best practices that were previously owned by individual experts should be shared amongst all employees in the MSME. By these means the MSME can be transformed into a body of knowledgeable employees with a unified work culture that enhances productivity. Annie Brooking observes that tacit knowledge is a transient asset. When employees leave the firm they take all their knowledge with them if it has not been captured and documented as explicit knowledge (Brooking, 1999: 9). The Zambian MSMEs should therefore not only concentrate on the documentation of formal or official information that has legal implications, but should also make a concerted effort to capture their tacit knowledge.

The researcher suggests that possible reasons why so few MSMEs were not actively engaged in managing explicit knowledge was their lack of understanding of its business value. A further aspect is the cost implications, since the creation of explicit knowledge repositories can be costly and requires the application of ICT. Many micro and small enterprises in Zambia are not able to afford the acquisition and maintenance of such technologies, and even if they could afford it, they often do not know how to effectively use such technology for KM purposes.

**Knowledge Resource Centres and Libraries:** It was seen in chapter 6.4.5 that most MSMEs have not established a knowledge resource centre or library of any format, let alone do not appoint skilled staff to manage such a centre. When further probed during the interviews most respondents indicated that they felt that such resources and skills were not necessary in a business environment and further that their MSMEs' restricted financial resources could be better directed towards more productive areas. It was further pointed out that they could not see why public libraries could not provide the information they required. It was, however, also mentioned that the public libraries in the regions would have to be better stocked and managed.

It is, however, the researcher's view that if at all possible, the MSMEs should consider investing in knowledge resource centres, even on a very small scale. He argues that an

organization's productivity would increase in direct proportion to its ability to access the information and knowledge it requires to operate effectively.

**Creating and Maintaining Knowledge-related Processes.** The MSMEs, despite the fact that they did not capture or organize information and knowledge resources, are aware that having access to vital knowledge is important would contribute to the success of their business (cf.6.4.6.). It became clear during the interviews that while most respondents were not familiar with KM as a business concept, they kept up to date with international business best practices. The 2008 MSME development policy in Zambia encourages large firms to subcontract to MSMEs. It was thus found that many of the MSMEs on the Copperbelt are contracted by large international mining companies to provide specialized services. It is suggested that knowledge gained from working with such international corporations has sensitized the Zambian SMMEs to the importance of having access to important information and knowledge.

**Technology infrastructure:** The results indicate that very few of the MSMEs use ICTs for Knowledge Management purposes (cf. 6.4.7). Where ICT is used it is generally not very effective or user friendly. The development of the ICT infrastructure in Zambia has been adversely affected by its weak economy. This factor, together with the high cost of using ICTs has meant that very few MSMEs engage with ICT. Where an ICT infrastructure is in place it is mostly used to create a website and for email communication. The only technological tool that is frequently used by MSMEs in Zambia are mobile phones.

**Leadership:** It emerged from the results (cf. 6.4.8) that the sector's top management rarely provides leadership with regard to knowledge-related activities and that most MSMEs do not have a KM strategy. The role of knowledge is rarely embedded in their organizations' mission and vision statements, objectives and plans and the value of knowledge is rarely promoted and discussed at management level. The success of KM depends considerably on knowledge leaders being passionate about the role of knowledge and its importance. The interviews confirmed that management was more concerned about productivity issues and profit margins than engaging with knowledge. There is thus a clear need to motivate the MSMEs leadership of the importance of KM and show them how it could benefit their business. They should be encouraged to, in turn, motivate their employees to value, create, share and use knowledge.

**People and Skills Valued:** The MSMEs investigated are clearly not committed to identifying and developing KM-related competencies among their knowledge workers (cf. 6.4.9). The MSME's in-house training is not learner-centred and does not form an integral part of their day-to-day activities. The interviews indicated that most MSME's knowledge activities relate to their interaction with consultants and in the few instances where they exist, input from Research and Development (R & D) departments. In the latter instance this is mostly if they are associated with large international companies.

As in many countries of the world where KM has not been adopted as a business strategy, the Zambian MSMEs investigated in the study exhibit an under-utilization of both knowledge and human resources. People, their skills and talents are the most powerful resources at the disposal of any organization, but unless these are properly managed the organization will not benefit. Knowledge creation is too important a resource to be entrusted entirely to the hands of a few, or a single department such as R & D. Knowledge activities should be everybody's responsibility and should be a continuous activity. The results have demonstrated that the Zambian MSME sector's leadership does not tap into or enhance the skills and talents of its employees. Employees need to be challenged to develop a sense of responsibility in respect of knowledge creation. Abell contends that the wealth of a nation no longer depends on its ability to acquire and convert raw materials, but on the abilities and intellect of its citizens (Abell, 1999:9).

**KM-related Culture and Structure:** The results (cf. 6.4.10) indicate that the MSMEs generally have a work environment that facilitates interaction, knowledge exchange and collaboration. They, however, rarely encourage diversity in project teams and provide time for learning and reflection. They further never reward knowledge contributions from employees. The respondents that were interviewed stated that experts within MSMEs are only mandated to coach newly appointed and incompetent employees and are not encouraged to support other members of staff. Encouraging experts to impart their skills to other members of staff would not only ensure consistency and the transfer of best practice, but also limit the MSME's vulnerability should the expert leave the organization. The researcher further observed during his interviews that although the physical environment might encourage knowledge sharing and interaction, the MSME employees in fact have very little or no time at all for socialization, learning, thinking and reflection. The importance of an organizational culture that promotes knowledge sharing and interaction is deeply rooted in John Locke's observation that 'each one of us is born a clean slate on which society

inscribes' (Locke, 1996: 33–36). This means that each one of us is a product of those who surrounded us or our environment. The results clearly show that the MSME sector's organizational culture in Zambia stifles knowledge creation and use.

**Measures:** The benefits of KM are clearly not recognized by the MSME sector, nor do they report on or manage their knowledge or intangible assets in a systematic way (cf. 6.4.11). They, however, do include in their performance measurement systems measures that indicate customer satisfaction, levels of competence, and the number of experts in their firms. The researcher suggests that this contradiction is because performance measurement systems have generally been taken over from large international companies that are more knowledge driven. The interviews that were conducted suggest that dialogue and learning in most of the MSMEs was initiated by customer complaints, experts' assessments, customers' goodwill, and the firm's profit and loss and not by good KM practices. KM's underlying benefits as a critical business factor are clearly not appreciated.

**Market Leverage:** This section investigated the extent to which the MSMEs used KM practices to promote their products and services to the marketplace (cf. 6.4.12). It is clear that although most of the MSMEs services and products are tailored to meet market needs and that lessons learnt are taken seriously, the other factors relating to market leveraging are either not engaged with or poorly supported. The MSMEs in Zambia rarely make their knowledge available in a form that enhances their products and services and generates new revenue streams. They are further not known among their clients and peers for their good KM practices. The personal interviews revealed that although the content of the MSMEs' publicity and marketing messages lacks substance they do convey the importance and depth of their know-how to some extent. It also became evident that the sector takes care to provide quality services and products to their customers.

**Good MSME Infrastructure:** The results (cf. 6.4.13.) indicate that the MSMEs do not benefit in any substantive way from most of the government initiatives to promote MSMEs in Zambia. Most MSMEs do not benefit from the government's tax waivers, their loan facilities or their business management training initiatives. More than half of them, however, indicated that the legal framework supported the MSME sector. The results of these questions clearly need to be brought to the attention of the Zambian government for further investigation and correction of any blockages or problem areas.

### **7.1.3. Discussion of the significant cross tabulations**

An assessment of the significant cross tabulations indicates that a number of factors did affect the MSMEs use of knowledge and engagement with KM practices in general. From the results outlined in chapter 6.5 it is apparent that enterprise category, business type, and location had an effect on a number of the MSMEs KM maturity indicators.

#### **Enterprise category:**

In the absence of empirical evidence one would assume that engagement with KM activities would be directly related to size of the enterprise. The empirical results, however, show that in the majority of instances the small enterprises, while not scoring particularly well, were more actively engaged than the medium sized enterprises with KM-related activities. The micro enterprises were, as could be expected, not really involved with KM activities.

The relatively good ratings provided by the small enterprises in terms of interacting with knowledge might be attributed to several factors. Firstly, since the enactment of the Small Enterprise Development (SED) Act in 1996, small enterprises have enjoyed the support of the government through its legal framework policy. The policy provided small enterprises with connectivity opportunities and business experience by means of the government initiated entrepreneurship and business management training programmes. If they attended such programmes they were placed in a better position to obtain loans and subcontracts. Secondly, the enterprises in the small business category were those that were generally subcontracted by large corporations and this then exposed them to KM practices that the large organisations were engaged with and this indirectly provided them with learning opportunities. Lastly, small enterprises were obliged to function according to stipulated standards outlined in government regulations. All these factors could be the reason why the small enterprises returned higher ratings for their involvement with KM-related activities than the medium sized enterprises.

Medium sized enterprises have only recently been recognized by the Zambia Development Agency (ZDA) Act number 11 of 2006 and incorporated in the 2008 MSME development policy. They previously operated without the legal protection of the government and were not monitored by any government regulation. They have, however, in recent years started to reap the benefit of the enactment of the 2008 MSME development policy.

Despite micro enterprises being covered by the MSME act and policy, most of them are rarely considered for subcontracts and substantive loan facilities because of their size and their informal approach to business. A further factor that might have had an effect on their ability to engage with KM activities could be the lack of training and lower education levels of their owners and employees. This relates to Wiig's observation that organisations, to operate effectively, need extensive knowledge and capabilities and this may be acquired through formal or informal training and education, or by work experience (Wiig, 1999:97).

It is clear that the owners of all MSMEs, but particularly those of micro firms, need to develop a positive knowledge culture. It is argued that by adopting a knowledge-centric culture the entrepreneurial capacity of these owners would improve. It is further argued that improved training and education would assist with such transformation and ensure that negative values, beliefs and attitudes are replaced with new knowledge-based ones.

**Enterprise location:**

The cross tabulation between the physical location of the MSMEs and the various KM maturity indicators produced only one significant result, i.e. the MSMEs in the Copperbelt area are more inclined to produce a skills list than those in the Lusaka area.

**Enterprise turnover:**

As mentioned in chapter 6.4.5 the cross tabulated results for turnover and the KM Maturity indicators were skewed by the number of respondents that did not provide an answer to this question and are therefore not discussed.

**Business type:**

It was clear when business type was cross tabulated with the KM maturity indicators that knowledge use is often determined by the nature of the business in which knowledge is going to be applied. In the majority of instances the construction-based enterprises were more actively engaged than the other business types with KM-related activities. The extractive-based enterprises were, while again not particularly good but better than the other categories at creating knowledge centres run by specialists, the use of search engines and their leaders promoting KM. The manufacturing-based enterprises were better than the other categories in finding it easy to access government loan facilities.

#### **7.1.4. General Conclusions Relating to the Results**

It is argued that if intangible assets are protected by intellectual property rights this may add value to the MSMEs in the market place. It is for this reason that there is need to address the Zambian MSMEs policy to include intangible assets. The policy in its current form lacks sensitivity to the emerging knowledge based economy, hence its failure to promote knowledge as an economic resource in the sector.

It is concluded that though KM activities are to a certain extent taking place in the MSME sector, it is at a very low level. It is further argued that most of the KM activities taking place are the result of 'knowledge spillovers', i.e. the process through which knowledge is transferred from areas of high concentration to areas of low concentration. This would occur between large financial institutions, multinational firms, international and local trade fairs, and to a lesser extent consultancy firms and the MSME sector in Zambia. Knowledge spillovers are, however, not a sustainable way of dealing with an indispensable business resource like knowledge. The large firms are in business for the profits they make and do not exist purely to assist MSMEs. There are also certain aspects of knowledge they would not share with others e.g. trade secrets. This means that if knowledge spillovers are the only sources of the MSMEs knowledge base, then MSMEs will never develop independently or substantively. MSMEs, therefore, need to continually create and apply their own business knowledge and only by adopting a formal KM policy will they be able to manage business challenges.

In this study a model termed the 'learner – educator' or 'inside out – in, outside in – out' has been proposed as an effective way of creating and using knowledge that guarantees continued innovation and competitiveness (see chapter 4.3).

#### **7.2. Review of the Research Questions and the Findings**

In conclusion the researcher would like to review the research questions in order to ascertain whether the questions have been answered (as outlined in chapter.1.7). The questions were:

- **Do MSMEs in Zambia capture, organize, value, share and apply knowledge from within and outside their organizational structure to achieve business goals and objectives?**

The findings clearly indicate that knowledge related activities and KM maturity among the MSMEs in Zambia are very low or minimal.

- **To what extent do the typical working behaviours of managers and other employees in MSMEs support KM objectives, strategies and processes?**

It is concluded that the typical working behaviours are reactive due to the absence of formal KM programmes. Knowledge flows have taken place in the form of knowledge spillovers from financial institutions, large corporations, and participation in international and local trade fairs, and to a smaller extent from consultancy firms (being the only available means of acquiring and using knowledge in Zambia).

- **What is the potential growth in the use and application of KM among Zambian MSMEs?**

The small enterprises are the currently the most engaged with KM (albeit still at a low level), followed by the medium enterprises. The micro enterprises are lagging far behind. There is clearly a need for all categories to engage with KM and particularly the micro sector.

Knowledge use and KM among MSMEs have been assessed in general and according to the various categories of MSME category, location, turnover and type of activity. It is very evident that KM is not being practiced in a substantive way and that KM maturity is at a very low level in the MSME sector in Zambia. The study has, however, indicated that knowledge use and KM are critical factors for the development of the sector and that the MSMEs should more proactively utilize knowledge and engage with KM practices.

The sector, however, has a number of knowledge-related challenges, the major of which are that

- the MSMEs development policy does not recognize the emerging knowledge economy hence its lack of emphasis of knowledge as an economic resource and the promotion of KM as a business strategy;
- The national ICT infrastructure is underdeveloped and this factor impedes on KM growth and application; and

- MSMEs lack skilled personnel to implement KM.

### **7.3. Recommendations with regard to MSMEs Knowledge Use and KM development in Zambia.**

From the findings of the study the researcher would like to make the following recommendations:

Re-focusing the MSMEs development policy. The current MSMEs development policy needs to refocus for the following reasons:

- The policy under 3.2.2.4 (i) – (xii) strives to strategize for innovation and the technological capacity of MSMEs. Innovation is a by-product of new knowledge and yet the policy does not focus on the centrality and importance of knowledge. The policy needs to explicitly acknowledge the emerging knowledge economy and outline the value of knowledge in the knowledge society and its economy as a major strategy. The policy therefore needs to become more knowledge sensitive and shift its emphasis from a tangible assets (plant and machinery) orientation to include intangible and knowledge based assets.
- With regard to the lack of awareness of KM as a business concept, the researcher recommends that the policy highlight its business function and that KM enhances innovation and productivity.
- It is further recommended that KM should in recognition of the centrality of knowledge in the knowledge society and economy of the 21<sup>st</sup> Century be incorporated in all policy strategies in Zambia. This is similar to the way that HIV/AIDS and Gender issues have been dealt with.

ICT infrastructure. It clearly emerged from the study that the poor ICT infrastructure is significant impediment to KM development in the MSME sector in Zambia. This KM maturity indicator had the lowest rating of all the indicators investigated in the study. The researcher therefore recommends that the Zambian government should pay serious attention to the development of the technological infrastructure. Particular attention should be given to new audio-visual technologies (e.g. video/teleconferencing), telematics and that the cost of access to acquiring ICT in general.

Training and education. In order to create a well-structured knowledge society that can fully embrace innovation, KM needs to be taught in Higher Educational Institutions as entrepreneurship and business management is done.

KM Operational model. In order to facilitate KM implementation and reduce dependence on knowledge spillovers, the researcher proposes the adoption of the ‘Inside out – in, Outside in – out’ model by MSMEs.

#### **7.4. Suggestion for Further Research**

The following is an outline of future research that it is proposed should be undertaken:

- **What is the effect of knowledge spillovers from large organisations (particularly their R&D divisions) and consultancy services on KM in Zambia?** The study has indicated that in the absence of KM in MSMEs, many enterprises have acquired and used knowledge obtained by means of spillovers from larger organizations. The researcher therefore proposes that future studies explore the effect of such knowledge spillovers on KM implementation in Zambia.
- **How can KM and Human Resource Departments effectively work together to enhance KM and people/skills development?** There is a potential role conflict between Knowledge Officers and the Human Resource Officers and this factor should be investigated in greater depth.
- **Is it possible to implement effective KM practices in MSMEs in Zambia without an appropriate ICT infrastructure?** The call for the Zambian government to develop the Zambian ICTs infrastructure and subsidize the cost of acquiring such technology may never come to fruition or may take several years to develop because of the weak global economy and especially the situation in Zambia. Is KM without ICT therefore possible for those who cannot afford it?

#### **7.5. Summary and General Conclusion**

This study aimed to answer the three research questions outlined above; i.e. whether MSMEs in Zambia use knowledge from within and outside the country to help meet their business goals and objectives; the extent to which the typical working behaviours of managers and

other employees in MSMEs support KM objectives, strategies and processes; and the potential growth in the use and application of KM among Zambian MSMEs. This study therefore asked MSME owners and managers to rate their firm's knowledge use and activities in relation to meeting their business goals and objectives. It was determined that the current state of knowledge use and KM maturity among MSMEs in Zambia is very low.

The study has further presented the major aspects outlined in the literature pertaining to knowledge use and KM maturity within the framework of the knowledge economy and entrepreneurship. It is suggested that this study is of relevance to economic growth, poverty reduction and job creation in Zambia. The paradigm shift that has taken place from the predominant economic factors of production to the knowledge based economy calls for readjustment in MSME development strategies in Zambia. The study has indicated that organizations that are active in knowledge creation and its effective application are more prone to innovation and are subsequently more competitive. Innovation cannot take place in the absence of new knowledge.

## REFERENCES

- Abell, A. 2001. *Competing with knowledge: the information professionals in the knowledge management age*. London: Library Association.
- African Forum and Network on Debt and Development. 2007. *The impact of structural adjustment programmes in Zambia*. Harare, Zimbabwe: African Forum and Network on Debt and Development.
- Al-Shammari, M. Ed. 2011. *Knowledge management in emerging economies: social, organizational and cultural implementation*. Hershey, PA: Information Science Reference.
- April, K. & Ahmadi-Izadi, F. 2004. *Knowledge management praxis*. Cape Town: Juta Academy.
- Argyris, C. 1992. *On organisational learning*. Cambridge, MA: Blackwell.
- Agmon, T. & Drobnick, R. Eds. 1994. *Small firms in global competition*. New York: Oxford University Press.
- Babbie, E. R. 2011. *Introduction to social research*. Belmont, Calif.: Wadsworth Cengage learning.
- Babbie, E. R. & Mouton, J. 2001. *The practice of social research*. SA ed. Oxford: Oxford University Press.
- Bailey, K. D. 1994. *Methods of social research*. 4th Ed. New York, NY: Free Press.
- Banda, C., Mutula, M. S. & Balulwami, G. 2004. Information needs assessment for small scale business community in Zambia: case study of Chisokone market, Kitwe. *Malaysian Journal of Library and Information Science*. 9(2): 95-108.
- Bates, R. H. & Collier, P. 1995. The politics and economics of policy reform in Zambia. *Journal of African economies*. 4 (1): 115-143.
- Bickman, L. 2000. *Validity and social experimentation: Donald Campbell's Legacy*. Thousand Oaks: SAGE Publications.

- Bierly, P. & Chakrabarti, P. 1996. Generic knowledge strategies in the US pharmaceutical industry. *Strategic management journal*, 17: 123-135.
- Bluhm, K. & Schmidt, R. Eds. 2008. *Change in SMEs: towards a new European capitalism?* New York: Palgrave Macmillan.
- Bodrow, W. 2006. *Knowledge management in small and medium-sized enterprises*. Berlin: Springer.
- Bouthiller, F. & Shearer, K. 2002. Understanding knowledge management and information management: the need for an empirical perspective. *Information Research*. 8 (1). [Online]. Available: <http://informationr.net/ir/8-1/paper141.html> [2011, August 08].
- Briscoe, A. & Oesterdiekhoff, P. 1996. Report on the 3<sup>rd</sup> Conference of the Small Enterprise Promotion Advisory Council (SEPAC). 31 October – 1 November, 1996, Gaborone. [Online]. Available: <http://spesmru.intnet.mu/sepac/about.htm>
- Brockway, D. 1996. Knowledge technologies and business alignment. *Information Management and Computer Security*. 4(1): 45-46.
- Brooking, A. 1999. *Corporate memory: strategies for knowledge management*. London: IT Press.
- Burns, P. 2007. 2<sup>nd</sup> ed. *Entrepreneurship and small business*. Basingstoke, Hampshire: Palgrave Macmillan.
- Burns, P. 2001. *Entrepreneurship and small business start-up, growth and maturity*. New York: Palgrave Macmillan.
- Burton-Jones, A. 1999. *Knowledge capitalism: business, work, and learning in the new economy*. New York: Oxford.
- Carter, S. & Jones-Evans, D. Eds. 2006. *Enterprise and small business principles, practice and policy*. New York: Financial Times/Prentice Hall, 2006.
- Cavaleri, S. & Seivert, S. 2005. *Knowledge leadership: the art and science of the knowledge-based organisation*. Amsterdam: Elsevier Butterworth-Heinemann.
- Chandak, B. L. 2006. KM and SME growth. *Financial Express*. 3 March.

- Chen, C. & Herson, P. 1982. *Information-seeking assessing and anticipating user needs*. New York: Neal-Schuman Publishers.
- Chen, C-J & Huang, J-W. 2007. How organizational climate and structure affect knowledge management – the social interaction perspective. *International journal of knowledge management*. 27(2):104-118. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/S0268401206001381>
- Chishala, C. 2008. *Unlocking the potential of Zambian micro, small and medium enterprises: learning from international best practices- the Southeast Asian experience*. (Discussion Papers No.134). Chiba: Jetro.
- Chidzomba, J. 2002. Experience on regional networking of SMEs in the case of SEPAC. *Report on the Seminar on Promotion of SMES in Angola - Experiences & Lessons Learnt*. 7-10 August, 2002. Friedrich Ebert Stiftung, Luanda, Angola. [Online]. Available: [http://spesmru.intnet.mu/sepac/luanda\\_paper.html](http://spesmru.intnet.mu/sepac/luanda_paper.html)
- Christian Liberation, Justice and Development: The Churches' Concern for Human Development in Zambia, 1987.
- Claver-Cortés, E., Zaragoza-Sáez, P. & Pertusa-Ortega, E. 2007. Organizational structure features supporting knowledge management processes. *Journal of Knowledge Management*. 11(4):45-57. [Online]. Available: <http://www.emeraldinsight.com> [2011, August 20].
- Colson, E. 1991. *The history of Nampeyo*. Lusaka: KKF.
- COMESA. 2001. Sustainability of national and sectoral information networks. *Proceedings of the National Symposium on ICT Infrastructure and strategies for Establishment of National Information Networking in Zambia*. 24-26 April, Kitwe, Zambia. 1-8.
- Conway, P. & Shah, M. K. 2010. Who's productive in Zambia's private sector? Evidence from the *Zambia Business Survey*. Lusaka Zambia Business Forum, Private Sector Development Reform Programme, FinMark, World Bank Zambia Country Office. [Online]. Available: [siteresources.worldbank.org/INTAFRICA/.../zambia\\_biz-survey.pdf](siteresources.worldbank.org/INTAFRICA/.../zambia_biz-survey.pdf).

- Cornia, G.A., Van der Hoeven, R. & Mkandawire, T. Eds. 1992. *Africa's recovery in the 1990s: from stagnation and adjustment to human development*. New York: St. Martin's Press.
- Craig, John. 2000. Evaluating privatization in Zambia: a tale of two processes, review of *African Political Economy* 27(85) 355-366
- Craig, J. 2002. *Privatization and indigenous ownership: evidence from Africa*. (Paper No.13). Manchester: CRC.
- Crawford, S. 1978. Information needs and uses. *Annual Review of Information Science and Technology*. 13: 61-81.
- Cruz, N.M., Perez, V.M. & Cantero, C.T. 2009. The influence of employee motivation on knowledge transfer. *Journal of knowledge management*.13 (6): 479-490. [Online]. Available: <http://www.emeraldinsight.com> [2011, August 20].
- Daly, M. 2003. Methodology. In *The A-Z of social research: A dictionary of key social science research concepts*. R. L. Miller & J. D. Brewer, Eds. London, England: Sage. 166-170.
- Davenport, T. H. 1997. Ten principles of knowledge management and four case studies. *Knowledge and process management*. 4(3):187-208.
- Davenport, T. H. & Probst, G. J. B. 2002. *Knowledge management case book: Siemens best practices*. Berlin: PCP.
- Davenport, T. H. & Prusak, L. 1998. *Working knowledge: how organizations manage what they know*. Boston, Mass: Harvard Business School.
- Davis, S. & Botkin, J. 1994. The Coming of Knowledge-Based Business. *Harvard Business Review*, 165-170.
- Dawson, R. 2000. Knowledge capabilities as the focus of organisational development and strategy. *Journal of Knowledge Management*, 4(4): 320 – 327.
- Debowski, S. 2006. *Knowledge management*. Milton: Wiley.
- De Vaus, D. 2001. *Research design in social research*. London: SAGE Publications.

- Delahaye, B. L. 2002. The management of knowledge: a systems theory approach for vocational education and training. *10<sup>th</sup> Annual International Conference on Post-Compulsory Education and Training*, Surfers Paradise, December.
- Delahaye, B. L. 2003. Human resource development and the management of knowledge capital. In *Human resource management: challenges and future directions*. R. Weisner & B. Millett, Eds. Brisbane: John Wiley & Sons.
- Delahaye, B. 2010. KM in SMEs. *International Journal of Organisational Behaviour*. 9(3): 604-614.
- Delpont, C. S. L. 2002. Quantitative data collection methods. In *Research at grass roots: For the social sciences and human service professions*: 165-196. 2nd ed. Edited by A. S. de Vos et al. Pretoria: Van Schaik.
- Dervin, B. 1992. *From the mind's eye of the user: the sense making qualitative-quantitative methodology*.
- Dick, Kevin, (2nd Ed). 2002. XML: a manager's guide. Boston: Pearson Education, Inc.
- Drahos, P. 2005. *Death of patents*. London: Lawtext Publishing Limited.
- Drucker, Peter. 1988. *Management: Tasks, Responsibilities, Practices*. Oxford: Butterworth Heinemann.
- Dunning, J. Ed. 2000. *Regions, globalization and knowledge-based economy*. Oxford: Butterworth-Heinemann.
- Du Plessis, M. 2006. *The impact of organisational culture on knowledge management*. Oxford: Chandos Publishing.
- Dyson, K. 1990. *Small and medium-sized enterprises*. New York: Routledge.
- Earl, M. 1997. Knowledge as strategy: reflection on Skandia International and ShorkoFilm. In *Knowledge in organisations*. L. Prusak, Ed. Boston: Butterworth-Heinemann
- Ellis, S. 2005. *Knowledge-based working: intelligent operating for the knowledge age*. Oxford: Chandos Publishing.
- Farkas-Conn, I. 2003. *Banks and SMEs relationships*. Available: <http://www.farkas-conn@cwixmail.com> [2012, February 9].

- Fouché, C. B. & Delport, C. S. L. 2002. Introduction to the research process. In *Research at grass roots: For the social sciences and human service profession*: 77-91. 2<sup>nd</sup> ed. edited by A. S. de Vos, et al. Pretoria, South Africa: Van Schaik.
- Fuller, S. 2002. *Knowledge management foundations*. Boston: Butterworth.
- Gamble, P. R. & Blackwell, J. 2001. *Knowledge management: a state of the art guide*. London: Kogan Page.
- Gewald, J., Hinfelaar, M. & Macola, G. Eds. 2008. *One Zambia, many histories: towards a history of post-colonial Zambia*. Leiden: Brill.
- Gilpin, R. 2000. *The challenge of global capitalism: the world economy in the 21<sup>st</sup> century*. Princeton: Princeton University Press.
- Government Republic of Zambia - MCTI. 2008. *The micro, small and medium enterprise development policy*. Lusaka: Zambia.
- Government Republic of Zambia - MTC. *National ICT Gateways symposium*. Lusaka: Zambia.
- Green, A. 1990. What do we mean by user needs? *British Journal of Academic Librarianship*. 5(2): 65-78.
- Hadfield, J. 1959. *Basic Economics*. Lusaka: Publication Bureau.
- Handzic, M. 2010. *Knowledge management in SMEs: practical guidelines*. Sydney: KMRG.
- Handzic, M. & Zhou, A. 2005. *Knowledge management: an integrative approach*. Oxford: Chandos Publishing.
- Hillary, R. 2000. *Small and medium-sized enterprises and the environment: business imperatives*. Greenleaf: Sheffield.
- Holmes, T. 2003. *History of Zambia*. Available: <http://www.thezambian.com/history/default.aspx> [2012, February 9].
- Holsapple, C.W. 2005. The inseparability of modern knowledge management and computer-based technology. *Journal of Knowledge Management*. 9(1):42-52. [Online]. Available:

<http://www.emeraldinsight.com/journals.htm?articleid=1603094&show=abstract>

[2011, August 30]

Holste, J.S. & Fields, D. 2010. Trust and tacit knowledge sharing and use. *Journal of Knowledge Management*. 14(1):128-140. [Online]. Available:

<http://www.emeraldinsight.com> [2011, August 20]

Hutchings, H. & Mohannak, H. Eds. 2007. *Knowledge management in developing economies*. Edward Elgar: Cheltenham.

Hutton, W. Ed. 2002. *Global capitalism*. New York: New York Press.

Iftikhar, Z., Eriksson, I.V. & Dickson, G.W. 2003. Developing and instrument for knowledge management project evaluation. *Electronic Journal of Knowledge Management*. 1(1): 55-62. [Online]. Available: <http://www.ejkm.com/volume-1/volume1-issue1/issue1-art7-zuhair.pdf> [2011, August 04]

International Monetary Fund. *Zambia classified as middle income country*. Available: <http://www.guardian.co.uk/global-development/poverty-matters/2011/jul/12/world-bank-reclassifies-28-poor-countries> [2011, July 12].

International Monetary Fund. *Zambia's HIPC completion point*. Available: <http://www.imf.org/external/np/exr/facts/hipc.htm> [2011, July 12]

International Monetary Fund. *Zambia's poverty reduction growth facility*. Available: <http://www.imf.org/external/np/sec/nb/2002/nb0245.htm> [2011, July 12].

Jacob, M., & Hellström, T. 2003. Organizing academy: new organizational forms and future of the university, *Higher education quarterly*. 57: 48-66.

Jayasingam, S., Ansari, M.A. & Jantan, M. 2010. Influencing knowledge workers: the power of top management. *Industrial Management & Data Systems*. 110(1): 134-151. [Online]. Available: <http://www.emeraldinsight.com/search.htm> [2011, August 01]

Kacou, Eric. 2011. *Entrepreneurial solutions for prosperity in BoP markets: strategies for business and economic transformation*. Upper Saddle River, N.J.: Wharton School Pub

- Kaplan, R. & Norton, D. 2001. *The strategy focused organization how balanced Scorecard companies thrive in the new business environment*. Boston: Harvard Business School Press.
- Khatibian, N., Pour, T.H.G. & Jafari, H.A. 2010. Measurement of knowledge management maturity level within organisations. *Business Strategy Series*. 11(1): 54-70. [Online]. Available: <http://www.emeraldinsight.com/search.htm> [2011, September 05]
- Kushnir, K., Mirmulstein, M. L. & Ramalho, R. 2010. *Micro, small, and medium enterprises around the world: how many are there, and what affects the count?* International Finance Corporation, World Bank. [Online]. Available: <http://www1.ifc.org/>.
- Kingman, B. R. 1996. *The economics of information: a guide to economic and cost-benefit analysis for information professionals*. Eaglewood: Libraries Unlimited.
- Kirk, J. 1999. Information in organizations: directions for information management. *Information Research*. 4 (3). [Online]. Available: <http://www.informationr.net/ir/4-3/paper57.html> (2011, August 5).
- Kirzner, I.M. 2009. The alert and creative entrepreneur: a clarification. *Small business economics*. 32(2): 145-152. [Online]. Available: <http://www.springerlink.com/content/8v470787qp3vt517/>.
- Koenig, M. E. D. & Srikantaiah, T. K. Eds. 2004. *Knowledge management: lessons learned what works and what doesn't*. Medford: American Society for Information Science and Technology by Information Today.
- Kvale, S., & Brinkmann, S. 2009. *Interviews: Learning the craft of qualitative research interviewing*. 2<sup>nd</sup> ed. Thousand Oaks, CA: Sage.
- Lakshman, C. 2005. Top executive knowledge leadership: Managing knowledge to lead change at general electric. *Journal of Change Management*. 5(4):429-446. [Online]. Available: <http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=19302077&site=ehost-live> [2011, August 30].
- Larson, A. L. 2000. Sustainable innovation through an entrepreneurship lens. *Business strategy and the environment*. 9:304-317. [Online]. Available:

<http://cob.nmu.edu/amtman/Lavras%20Course%20Materials/Sustainable%20Innovation%20through%20an%20Entrepreneurship%20Lens%202000.pdf>.

Leedy, P. D. & Ormrod, J. E. 2010. *Practical research: Planning and design*. Boston, MA: Pearson Education International.

Lehaney, B., Clarke, S., Coakes, E. & Jack, G. 2004. *Beyond knowledge management*. Hershey: Idea Group.

Leidner, D., Alavi, M. & Kayworth, T. 2006. The role of culture in knowledge management: a case study of two global firms. *International Journal of e-Collaboration*. 2(1): 17-40.

Liebowitz, J. Ed. 1999. *Knowledge management handbook*. London: CRC Press.

Ligthelm, A. A. 2007. *Small business sustainability and entrepreneurship in a changed trade environment: the Soweto case*. Pretoria: Bureau of Market Research, University of South Africa.

Little, S., Quintas, P. & Ray, T. Eds. 2002. *Managing knowledge: an essential reader*. London: SAGE Publications.

Locke, L. F., Silverman, S. J. & Spirduso, W. W. 2004. *Reading and understanding research*. Thousand Oaks, Calif.: SAGE Publications.

Locke, John. 1996 *An Essay Concerning Human Understanding*, Kenneth P. Winkler (ed.), Indianapolis, IN: Hackett Publishing Company. pp. 33–36

Lucas, L.M. 2005. The impact of trust and reputation on the transfer of best practices. *Journal of Knowledge Management*. 9(4):87-101. [Online]. Available: <http://www.emeraldinsight.com/search.htm> [2011, August 01].

Lyotard, Jean-Francoise. 1984. *The Postmodern Condition*. [Online]. Manchester University Press: Manchester.

Also available: [www.marxists.org/reference/subject/philosophy/works/.../lyotard.htm](http://www.marxists.org/reference/subject/philosophy/works/.../lyotard.htm). [2011, August 8].

- Malhotra, Y. 2001. *Knowledge management and virtual organisations*. London: Ideal Group Publishing.
- Mann, P. H. 1985. *Methods of social investigation*. Oxford: Blackwell.
- Mauzu, D. M. 1997. *SME policies and policy formulation in SADC countries*: papers presented to the workshop of the SEPAC Working Group "Policy Issues", Gaborone, September 11-12.
- Also available: <http://library.fes.de/fulltext/bueros/botswana/00552013.htm...> [2011, August 4].
- Mazumdar, D. & Mazaheri, A. 2003. *The African manufacturing firm: an analysis based on surveys in seven countries in Sub-Saharan Africa*. London: Routledge.
- Mbuta, W. 2007. *Small and medium enterprises survey 2003-2004*. Lusaka: MCTI.
- McShane, S. L. & Von Glinow, M. A. 2010. *Organizational behavior: emerging knowledge and practice for the real world*. Boston: McGraw-Hill/Irwin.
- Meadow, C. T., Boyce, B.R. and Kraft, D.H.(2000) *Text information retrieval systems*, 2<sup>nd</sup> ed. San Diego, CA: Academic Press.
- Migdadi, M. 2009. Knowledge management enablers and outcomes in the small and medium-sized enterprises. *Industrial Management and Data Systems*. 109(6): 840-858.
- Mohamed, M., Stankosky, M. & Murray, A. 2006. Knowledge management and information technology: can they work in perfect harmony? *Journal of Knowledge Management*. 10(3):103-116. [Online]. Available: <http://www.emeraldinsight.com/search.htm> [2011, August 01]
- Montano, B. 2005. *The challenge of KM and innovation: a skill and competence portfolio for the knowledge worker in SMEs*. Hershey: IRM Press.
- Morrow, N. M. 2001. Knowledge management: an introduction. *Annual Review of Information Science and Technology*. 35: 381-422.
- Mouton, J., & Marais, H. C. 1990. *Basic concepts in the methodology of the social sciences* 2<sup>nd</sup> ed. Pretoria, Human Sciences Research Council.

- Myers, M.D. & Avison, D. 2002. *Qualitative research in information systems: a reader*. London: SAGE Publications.
- Nationmaster.com. *Zambia's Industry distribution*. Available at [http://www.nationmaster.com/graph/lab\\_lab\\_for\\_by\\_occ-labor-force-by-occupation](http://www.nationmaster.com/graph/lab_lab_for_by_occ-labor-force-by-occupation). [2011, July 12].
- Neches, R., Fikes, R. & Finn, T. 1991. Enabling technology for Knowledge Sharing. *AI Magazine*. 12(3): 16-36.
- Nieuwenhuizen, C. 2004. *Basics of Entrepreneurship*. Cape Town: Juta.
- Nieuwenhuizen, C. et al. Eds. 2011. *Business management for entrepreneurs*. Cape Town: Juta.
- Nieuwenhuizen, C. (Editor), De Beer A.A. (Z), Zeelie, J.(Z), Groenewald, D. (L), Watson, H.(Z), Rossouw, D. (L) Jacobs, H.(Z), 2008. *Entrepreneurial skills*. Cape Town: Juta.
- Nonaka, I., Toyama, R. & Konno, N. 2000. SECI, ba and leadership: a unified model of dynamic knowledge creation. *Long Range Planning*, 3: 4-34.
- Nonaka, I. & Takeuchi, H. 1995. *The knowledge creating company: how Japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- Nonaka, I. & Toyama, R. 2002. A firm as a dialectical being: towards a dynamic theory of a firm. *Industrial and Corporate Change*, 11(5):995-1009.
- Payne, G. & Payne, J. 2004. *Key concepts in social research*. London. Thousand Oaks: SAGE Publications.
- Polanyi, M. 1958. *Personal knowledge: towards a post-critical philosophy*. London: Routledge & Kegan Paul.
- Powell, R. R., & Connaway, L. S. 2004. *Basic research methods for librarians*. 4th ed. Westport, CT: Libraries Unlimited.
- Prichard, C. Ed. 2000. *Managing knowledge: critical investigations of work and learning*. London: Macmillan.

- Punch, K.F. 1998. *Introduction to social research: quantitative and qualitative approaches*. London: SAGE Publications.
- Raitt, David.1997.Libraries for the New Millennium: implications for managers. London: Library Association.
- Rea, L.M. & Parker, R.A. 2005. *Designing and conducting survey research*, 3rd ed. San Francisco: Jossey-Bass.
- Revilla, E., Rodríguez-Prado, B. & Prieto, I. 2009. Information technology as knowledge management enabler in product development: Empirical evidence. *European Journal of Innovation Management*. 12(3):346-363. [Online].
- Available: <http://www.emeraldinsight.com/search.htm> [2010, August 01].
- Robson, C. 2002. *Real world research: a resource for social scientists and practitioner-researchers*. Oxford: Blackwell.
- Rooney, D. Ed. 2005. *Handbook on the knowledge economy*. Cheltenham: Edward Elgar.
- Ruggles, R. 1999. *The knowledge advantage*. Dover: Captone.
- Rumizen, M.C. 2002. *A complete idiot's guide to knowledge management*. USA: ALPHA.
- Sacchetti, S. & Sugden, R. Eds. 2009. *Knowledge in the development of economies: institutional choices under globalization*. Northampton, MA: Edward Elgar.
- Schwartz, D. G. 2000. *Internet-based organisational memory and knowledge management*. Hershey: Ideal Group.
- Senge, Peter. 2000. *Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education*. Ontario: Crown Business
- Senge, P.M. 1990. *The fifth discipline: The Art and Practice of the learning organization*. Doubleday, New York.
- Skyrme, D. J. 2007. *Know-All 50*. [Online] Available: <http://www.skyrme.com>. [2011, February 7]
- Skyrme, D. J. 1999. *Knowledge commerce: succeeding in a global knowledge market place*. [Online]. Available: <http://www.skyrme.com> [2012, February 9].

- Skyrme, D. 1999. *Knowledge management: making it work*. [Online]. Available: <http://www.skyrme.com/pubs/lawlib99.htm> [2011, May 10]
- Skyrme, D. J. 1999. *Knowledge networking: creating the collaborative enterprise*. Oxford: Butterworth-Heinemann.
- Skyrme, D. 2007. *Knowing what you know: conducting a knowledge audit*. [Online]. Available: <http://www.skyrme.com/insights/30kaudit.htm> [2011, August 14].
- Stacey, R. D. 2001. *Strategic management and organizational dynamics*. 3<sup>rd</sup> ed. London: Pitman.
- StClair, L. 2002. *Globalization: capitalism and its alternatives*. Oxford: Oxford University Press.
- Stilwell, C. 2001. *Knowledge, information and development: an Africa perspective*. Scottsville: SHSS.
- Stokes, D & Wilson, N. 2006. *Small Business Management and Entrepreneurship*. London: Thomson Learning.
- Strydom, H. & Venter, L. 2002. Sampling and sampling methods. In *Research at grass roots: For the social sciences and human service professions*. 2nd ed. edited by A. S. de Vos et al. Pretoria: Van Schaik. 197-208,
- Sveiby, K. E. 1997. *The new organisational wealth: managing and measuring knowledgebase assets*. San Francisco: Berrett Koehler.
- Tapscott, D. 1999. *Creating value in the network economy*. Boston: Harvard Business Review Book.
- Thomas, A. 2012. The inclusiveness of Africa's recent high-growth episode: how Zambia compares. *Proceedings of the Zambia Conference*. 21-21 May, 2012. International Monetary Fund, African Department. [Online].  
Available: <http://www.imf.org/external/np/seminars/eng/2012/zambia/pdf/tho.pdf>.
- Times of Zambia*. 1992a. February 18.
- Times of Zambia*. 1992b. April 29.

*Times of Zambia*. 1992c. October 10.

*Times of Zambia*. 1992d. November 30.

*Times of Zambia*. 1993. November 05.

*Times of Zambia*. 1995. April 06.

United Nations Human Settlement Programme. 2009. UN-Habitat – Zambia Urban profile. UNON Publishing services section: Nairobi.

Von Krogh, R. & Kleine, D. Eds. 1998. *Knowing in firms: understanding, managing and measuring knowledge*. London: Sage.

Wallace, D. P. 2007. *Knowledge management: historical and cross-disciplinary themes*. Westport: Libraries Unlimited.

Walters, D. 2010. *Failure of Zambia's nationalization programme: exploring the factors that precipitated the collapse*. Pretoria: Consultancy Africa Intelligence. [Online]. Available: <http://www.consultancyafrica.com>

Whittom, A & Roy, M-C. 2009. Considering participant motivation in knowledge management projects. *Journal of Knowledge Management Practice*. 10(1). [Online]. Available at <http://uctsfx.hosted.exlibrisgroup.com/uct/az> [2011, August 01]

Wiig, K.M. 1999. Introducing knowledge management into the enterprise. In knowledge management handbook. Liebowitz, J. Ed. Boca Raton: CRC. Chapter 3.

Wilson, T.D. 2002. The nonsense of knowledge management. *Information Research*. 8 (1). [Online]. Available at <http://informationr.net/ir/8-1/paper144.html> [2011, August 8].

Wim, Vanhaverbeke. & Kirschbaum, R., 2003. "Building new competencies for new business creation based on breakthrough technological innovations," Eindhoven Center for Innovation Studies (ECIS) working paper series 03.17, Eindhoven Center for Innovation Studies (ECIS).

World Bank, Finance & Private Sector Development Unit, Africa Region. 2011. *More Jobs and Prosperity in Zambia: What would it take? Based on the Jobs and prosperity: Building Zambia's Competitiveness Program*. Washington, DC: World Bank. [Online]. Available: <http://www-wds.worldbank.org>

- Yin, R. K. 2009. *Case study research: design and methods* (4th Ed.). Thousand Oaks, CA: Sage.
- Young, R. 2009. *KM principles: be both a learning organization and knowledge driven*. Available: <http://www.knowledge-management-online.com> [2012, February 9].
- Young, R. 2010. *KM principles: naturally trust, communicate, learn and share knowledge-it's a circle*. Available: <http://www.knowledge-management-online.com> [2012, February 9].
- Zacks, M. H. 1999. Developing knowledge and strategy. *California Management Review*. 41(3): 125-145.
- Zambia Central Statistical Office. 1994. *Labour Force Survey*. Lusaka, Zambia: CSO.
- Zambia Central Statistical Office. 2001. *Labour Force Survey*. Lusaka, Zambia: CSO.
- Zambia Central Statistical Office. 2005. *Labour Force Survey*. Lusaka, Zambia: CSO.
- Zambia millennium development goals: progress report*. 2008. Lusaka: Republic of Zambia.
- Zambia Privatization Agency. 2012. *Southern Africa up date. Zambia: Politics and Economics since independence*. [Online].  
Available: <http://www.zpa.org.zm/zpaintro.htm>. [2012, February 9].
- Zambiastats. 2011. *Zambia's population growth*.  
Available: [http://www.zamstats.gov.zm/media/chapter\\_3\\_population\\_comp.\\_size\\_and\\_growth\\_final.pdf](http://www.zamstats.gov.zm/media/chapter_3_population_comp._size_and_growth_final.pdf). [2011, July 12].
- Zheng, W, Yang, B. & McLean, G.N. 2010. Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*. 63(7):763-771. [Online].  
Available from Elsevier Science Direct at <http://www.sciencedirect.com> [2011, August 01].

**APPENDIX ONE: QUESTIONNAIRE**  
**THE UNIVERSITY OF CAPE TOWN**  
**GRADUATE SCHOOL IN HUMANITIES**

**DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE**

**QUESTIONNAIRE**

**INTRODUCTION:** Please take a few minutes to complete this questionnaire. The researcher is conducting a research project for his master’s degree at the University of Cape Town on the topic “An Assessment of Knowledge use and Knowledge Management <sup>17</sup>(KM) maturity among the MSME sector in Zambia”.

The information you will provide will not only assist with the research project but should also benefit the Zambian MSME sector by helping it to improve how it gathers, generates, shares and uses knowledge and information. All information that will be collected in this questionnaire will be treated as confidential. It is estimated that the questionnaire will only take twenty (20) to thirty (30) minutes to complete.

**I. Background information**

In this section of the questionnaire you are asked to please provide background information relating to your organization.

Business Name: \_\_\_\_\_

Number of Employees: \_\_\_\_\_ Turnover: \_\_\_\_\_

Type of Business/Industry: \_\_\_\_\_

\_\_\_\_\_

<sup>17</sup> Knowledge Management is the systematic application of organizational practices and approaches related to generating, capturing, disseminating and applying knowledge (Abell, 2001:33). Also: “...knowledge management is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization’s objectives. The knowledge to be managed includes both explicit, documented knowledge, and tacit, subjective knowledge. Management entails all those processes associated with the identification, sharing and creation of knowledge”. ( Davenport and Prusak, 1998)

Business Location: \_\_\_\_\_ Year of Establishment: \_\_\_\_\_

**II. Knowledge and Knowledge Management Attributes**

This part of the questionnaire consists of 45 statements relating to how your firm interacts with various aspects of knowledge and the management thereof. You are asked to consider each statement and then rate your firm on a score from 0 to 10, where 0 is doing nothing at all, and 10 is doing exceedingly well. Make sure you read and understand each statement before you choose the best rating for your situation. Refer specifically to the footnotes where some of the special terms used in knowledge management (KM) are explained.

**Score: 0 – 10**

**A. Tacit Knowledge<sup>18</sup>**

- 1. We know who our best experts are for different areas of knowledge. ....
- 2. We have an ‘ organized skills list’ so that we can quickly identify and make contact with such experts. ....
- 3. Key discussions are captured and documented in subsequent email memos or organized in storage facilities (e.g. databases<sup>19</sup>). ....
- 4. Knowledge is captured at the customer interface (e.g. call centres, customer care desks, visitor’s reception), fed back and used in service improvement. ....

**B. Explicit Knowledge<sup>20</sup>**

- 5. We have a readily accessible and complete database of information resources within our firm, e.g. on an intranet<sup>21</sup>. ....
- 6. Information and knowledge resources are checked for quality and improved through user feedback. ....
- 7. Our information databases, especially those that contain written/printed words (textual) are regularly maintained. ....
- 8. Owners of particular information resources are identified and held responsible for the quality of those resources. ....

---

<sup>18</sup> Tacit knowledge is knowledge which resides in people's heads whose access depends on interaction with the owner. It comprises of the ' know- how' usually displayed in the form of skill and expertise, sometimes difficult to explain.

<sup>19</sup> Organized records held in a computer.

<sup>20</sup> Explicit knowledge is knowledge that is acquired or delivered formally or in physical/electronic formats. It is transferable, portable and reliable as it has been tested and proven. It is found in manuals and other recorded formats.

<sup>21</sup> An internal or in-house computer network based on Internet Technology; also the company’s internal website.

### C. Knowledge Resource Centres and Libraries

9. We have resource centres - physical (e.g. library) or virtual (E.g. portal<sup>22</sup>) - that act as a source of knowledge about knowledge, i.e. that can point us to relevant information and knowledge sources. ....
10. We have a well-organized and arranged library that holds external publications. ....
11. We publicize new information that we purchase from outside our firm to avoid duplication and to help identify essential knowledge gaps and further to make known what new information is available. ....
12. A special person or particular group is responsible for creating and maintaining the systematic arrangement and classification of vital knowledge. ....

### D. Creating and Maintaining Knowledge-Related Processes

13. We know what vital knowledge is important for the business's success and underpins and contributes to our main business processes. ....
14. This knowledge is readily accessible and naturally blended into the flow of work. ....
15. The organization has systematic processes for monitoring external knowledge sources and for gathering and organizing them. ....
16. We have clear policy guidelines on the management of our vital knowledge, particularly in relation to ownership and the protection knowledge (e.g. patents<sup>23</sup>). ....

### E. KM-Related Information Technology Infrastructure

17. All important information can be quickly found by new users on our intranet (*if you have one*), e.g. within three mouse clicks. ....
18. The search facilities on our intranet/portal offer structured or logical searching of results (e.g. by concept). ....
19. We use special search engines (filters) to sift and find and sort vital external information that might not normally be available. ....
20. We use social networking and peer-to-peer facilities such as discussion forums, blogs, instant messaging, Facebook etc. to support collaborative learning and knowledge development. ....

---

<sup>22</sup> A doorway or gateway or a computer Internet site providing a directory of links to other sites.

<sup>23</sup> A governments license to an individual conferring the sole right to make, use, or sell an invention.

## **F. Leadership and KM**

- 21. Our firm has a clearly outlined knowledge management plan that is actively followed (e.g. embedded in a vision statement). .....
- 22. The role of knowledge is clearly spelled out in our organizational and departmental missions, objectives and plans (e.g. mission statement). .....
- 23. Knowledge and information are treated as vital resources and reviewed regularly at management meetings. ....
- 24. Our Chief Executive Officer and senior executives promote knowledge use and knowledge management within their team and to the outside world. ....

## **G. People and Skills Valued**

- 25. Specific knowledge roles have been identified and assigned throughout the organization, e.g. knowledge manager, knowledge broker. ....
- 26. Knowledge management is considered a management skill that every manager and professional should be familiar with. ....
- 27. There are individuals in our firm who are responsible for promoting good knowledge management practice and acting as a coach to others. ....
- 28. Our in-house training approach is learner-centred and an integral part of the day-to-day activities of the organization. ....

## **H. KM-related Culture and Structure**

- 29. Project teams are deliberately chosen to include people with a wide level of experience, different types of expertise and age ranges. ....
- 30. Staff performance reviews assess and reward individuals for their knowledge contributions and knowledge-sharing behaviours. ....
- 31. Time for learning, thinking and reflection is considered a good investment of time in our organization. ....
- 32. Workplace settings encourage interaction and free flow of knowledge and information, e.g. informal meeting areas, open plan offices, project rooms ....

## **I. Measures**

- 33. The bottom line benefits of knowledge management are clearly articulated in terms that all our managers understand. ....
- 34. Our organization measures and manages its intangible assets<sup>24</sup> in a systematic way (Patents, copyright, trademarks, goodwill, etc.). ....
- 35. Our performance measurement systems explicitly includes intangible and knowledge-based measures, e.g. customer satisfaction, levels of competence, number of outstanding experts in the firm. ....
- 36. We report regularly on our knowledge assets, such as in supplements to our annual reports. ....

---

<sup>24</sup> The non-financial assets of a firm which contribute to its success.

**J. Market Leverage<sup>25</sup>**

- 37. Information and knowledge is readily available and in a form that enhances our services to our customers and other stakeholders. ....
- 38. We package and repackage our core expertise in ways that will generate new revenue streams. ....
- 39. Our services are ‘market tailored’ - i.e. customizable and adaptable, E.g. based on lessons learnt from market experiences. ....
- 40. We are known among our clients and peers as being good at practicing knowledge management and using and creating knowledge effectively .....

**K. Good MSME Infrastructure**

- 41. Our firm benefits from government incentives such as the tax-waiver on Technology-related products. ....
- 42. The government’s legal framework is MSME-friendly. ....
- 43. Our firm finds it easy to access government-established loan facilities, E.g. from the Citizen Economic Empowerment Fund (CEEF). ....
- 44. Our firm has benefited from the entrepreneurship and business management training initiated by the government. ....
- 45. The government’s specialized support institutions are helpful to our firm. ....

**APPENDIX TWO: PERSONAL INTERVIEWS QUESTIONS**

**A. KNOWLEDGE AND KNOWLEDGE MANAGEMENT**

**Tacit Knowledge**

- 1. Are experts encouraged to convert their tacit knowledge into explicit knowledge, e.g. via seminars (videos), “how-to” guides, storytelling, etc.?

**Explicit Knowledge**

- 2. Do you have a mechanism such as an idea-exchange forum which ensures that new knowledge, not immediately usable, is not lost for future use?

**Knowledge Resource Centres and Libraries**

- 3. Do you have people with good information science and library skills that can assist with knowledge management expertise?

**Processes**

- 4. Does your organization standardize its knowledge management activities against other firms and best practice worldwide?

---

<sup>25</sup> The ability or power to get the very best out of the market or have influence on the market place than it could have been naturally.

### **Technology Infrastructure**

5. Are new audio-visual technologies used to connect dispersed locations into regular meetings? (E.g. videoconferencing, teleconferencing)?

### **Leadership**

6. Do your Chief Executive Officer and senior executives promote knowledge use and knowledge management within their team and to the outside world?

### **People/Skills**

7. Are there clear responsibilities for managing your knowledge strategy and activities?

### **Culture/Structure**

8. Are staff who are experts encouraged to contribute time and expertise to support other staff members?

### **Measure**

9. Is your KM maturity performance measurement system used as a focus for dialogue and learning?

### **Market Leverage**

10. Do your publicity and marketing messages convey the importance and depth of your know-how?

## **APPENDIX THREE: OBSERVATION GUIDE**

1. Pay particular attention to the setting of offices and work places whether they facilitate socialization or not.
2. Are there shared values and beliefs - about –
  - set task deadlines,
  - use of initiative,
  - quality of service/product
  - unhappy customers,
  - access to people who have knowledge
3. Observe habitual way of behaving and acting – are there work right ways to act or behave? Are these enshrined in any document e.g. work guide/manual. How current are they?
4. Are there any firm rituals - Daily/Weekly gathering/Communal snacks or refreshments  
Ceremonies – Prize/Award giving/mother's day/Birthday/Wedding recognition  
measures of success – evaluation and rewarding
5. Do workers work in groups?
6. Are there interacting spaces or areas for socialization
7. Do they have communication technologies? Do they have knowledge repositories and intranet links? Are the workers allowed to use them for work purposes as well as personal?

8. Is there a knowledge centre or library. What is its state, is it managed by trained staff?
9. How is the relationship between management and the rest of the workers is, is it interactive or bureaucratic.

#### APPENDIX FOUR: DEMOGRAPHIC DATA CODES

The following codes were generated for the interpretation of the demographic data. The 134 MSMEs were grouped into four main business categories; four categories representing the years in business; three categories of number of employees engaged in the enterprise; four turnover categories; and two location zone categories.

<b>Business/Industry category</b> <b>Code no. allocated</b>	Services 1.	Manufacturing 2.	Extractive industry 3.	Construction 4.
<b>Enterprise age</b> <b>Code no. allocated</b>	15-40 years (Old establishment) 1.	10-14 years (Maturing) 2.	05-09 years (Developing) 3.	01-04 years (New) 4.
<b>Enterprise size category according to Number of Employees</b> <b>Code no. allocated</b>	1 to 10 employees 'Micro' 1.	11 to 49 employees 'Small' 2.	50 to 100 employees 'Medium' 3.	
<b>Enterprise turnover</b> <b>Code no. allocated</b>	ZMK 50 million and above (High) 1.	ZMK 30 million to 49 million (Medium) 2.	Less than ZMK 30 million (Low) 3.	Not provided  NP.
<b>Enterprise location</b> <b>Code. allocated</b>	<b>Zone A</b> Lusaka, Kafue & Kabwe		<b>Zone B</b> Copperbelt Towns: Kitwe, Ndola, Kalulushi, Chingola, Chililabombwe and Mufulira	