Entrepreneurship at the University of Zambia (UNZA) Factors that have influenced the current state of entrepreneurship activities at the University of Zambia

Angela Mumbi Chileshe



Master of Philosophy in Higher Education Institute for Educational Research

Faculty of Education UNIVERSITETET I OSLO

December 2015

Entrepreneurship at the University of Zambia (UNZA)

© Angela Mumbi Chileshe

2015

Entrepreneurship at the University of Zambia

http://www.duo.uio.no/

Tryk: Reprosentralen, Universitetet i Oslo

Abstract

The study on entrepreneurship among graduates at the University of Zambia (UNZA) explores the factors that have influenced the current state of entrepreneurship activities. The study in particular, the study focuses on, funding of entrepreneurship activities and other factors in both the education and commercial aspects. The study also discusses the challenges that the institution faces in relation to entrepreneurship.

The study covers five of the nine schools at UNZA. These are the schools of Humanities and Social Sciences, Agriculture, Veterinary Medicine, Education and Mines. The study addressed questions regarding entrepreneurial activities within these schools.

The study used the case study approach and applied qualitative method. Data for the study was collected through – interviews and document analysis. Interviews were conducted with deans, academics and technicians from the schools of interest. The documents for analysis included a variety of UNZA published documents, such us strategic plans, documents on vision and mission of UNZA, the University Act, statistic information on student enrolments, and policy documents.

The study established that interpretation of the concept of entrepreneurship at the University of Zambia is not different from the way it is defined by most scholars, even though the study finds that UNZA does not have an institutional policy on entrepreneurship.

Some of the current practices on entrepreneurship at UNZA reveal that UNZA has introduced entrepreneurship courses in some of the schools. Other results revealed that UNZA has a number of income generating business ventures within and outside the institution. Funding at UNZA is inadequate due the high cost of running the institution. Therefore, in order to supplement funding a small percentage of income generated through its own business ventures. There is need to strengthen its link with the industry.

Major challenges for further development of entrepreneurship include need for finances, long procedures in having funds for projects approved, and the lack of clear policies that provide guidelines on graduate entrepreneurship at the university level, making entrepreneurship courses more practical among others.

Dedication

All the glory and the honour belong to God almighty who has seen me through this journey, for his mercy and favour upon my life.

I wish to dedicate this paper to my dear loving parents Gabriel David Chileshe and Aurelia Chileshe. Dad, your passing on this January took away a very big part of my life. You were my pride and joy always believing in me and praying for me even in your illness. It pains me that you did not leave to see my diploma but I thank God for every moment we shared together as a family. I will always cherish and hold on to your teachings, may your soul rest in eternal peace. Mum, thank you for being a loving and caring mum always praying for us and being strong for our sake. We love you, God bless.

To my siblings, Innocent, Clement, Kizito, Vincent, Joseph, Modester, Margret, Mary and Deogratias. My in- laws Angela, Fabian and Dorothy and Mulenga including my nephew Gabriel Chileshe Junior and nieces Mulenga, Katongo and Chipasha, thank you each and every one of you for your love, support and prayers love you!

I would be failing if I didn't acknowledge someone who has been by my side throughout my stay in Norway, my dear brother Joseph Mulenga Chileshe. Thank you for your big and loving heart, I always got comfort from knowing that you were always there for me. We have seen this journey through together. May God richly bless you, love you lots.

To Peter Legat and Maria Trønsdal you guys are family! I would not have made this journey without your support, love and encouragement, I will forever be grateful. Love you and God bless.

Acknowledgments

My sincere gratitude goes to Professor Peter Maassen of the Faculty of Education at the University of Oslo for being my supervisor and having been there to guide me and give me advice throughout this journey, I am so grateful. Special thanks and gratitude also go to our wonderful Higher Education Coordinator in the Department of Education at the University of Oslo, Kristi Barcus. Thank you so much for not only being our coordinator but being there for me especially in times of difficulties when I needed time to attend to my personal needs such as the illness and passing on of my beloved father. Both of you helped me to endure during these difficult times. God bless you. Many thanks also go to Mari Mjøen Higher Executive Officer in the faculty of Education.

I also wish to express my gratitude to the registrar at the University of Zambia for granting me permission to conduct the research. Other thanks go to the deans of the Schools of Humanities and Social Sciences, Agriculture, Education, Mines and Veterinary, including all the respondents for having granted me an opportunity to interview them and collect most of the data I needed for the study. I also wish to thank Mr Nkumbu Nkonde Director, Business Development UNZA and Mr Joseph Siwo Marketing Manager at UNZA Press. Thank you all for your time and cooperation, without which, I would not have collected the data.

Other thanks go to Mr Innocent Mulenga lecturer at UNZA in the School of Education, Dr Twambo Hachibamba lecturer at UNZA in the School of Agriculture and, Dr Kelvin Simuchimba Dean of School of Education at UNZA, Dr Hangoma M. Mumba Department of Development Studies in the School of Humanities and Social Sciences at UNZA, Dr Felix Masiye Dean School of Humanities and Social Sciences at UNZA, Mr Simasiku Nawa Ministry of Education Zambia and Mrs Jennifer Banda PESO Central Province. Thank you all for your help at different stages of my study.

I would also like to thank Professor Abdel Magid Al-Araki at Oslo University College from the faculty of Public Management and Ramona Bernard of Oslo University College, thank you both for your discussions and for encouragement.

Many thanks go my dear friend Sanja Kanazir who has been there for me throughout my studies, thank you for your encouragement and help. I also wish to acknowledge Mandana Yousefi and family for their love and kindness during my stay in Norway. Other thanks go to

Sahle Smur from Oslo and Professor Oscar Mwaanga lecturer at Southampton University in the UK.

Finally special thanks go to all my wonderful friends who were there to encourage me and pray for me, you know yourselves. God bless you all!

Table of Contents

Abstract	III
Dedication	IV
Acknowledgments	V
1 Introduction	1
1.1 Context	1
1.2 Brief historical overview of universities in Zambia	3
1.2.3 Zambia's 1989 White paper on new policy measures for financing higher educ	
1.2.4 Current policy on financing universities in Zambia	
1.2.5 Autonomy and independence of UNZA	
1.3 Rationale	
1.4 Research problem and research questions	9
1.5 Significance of the study	9
1.6 Structure of the thesis	10
2 Literature review	11
2.1 The concept of entrepreneurship	11
2.2 Importance of entrepreneurship	12
2.2.1 Entrepreneurship in higher education	12
2.3 Integrated entrepreneurial culture	15
2.4 Concept of a business plan	16
2.5 Resource access	16
2.6 Challenges in entrepreneurship education	17
2.7 Importance of donors in African higher education	18
2.8 Recent study on entrepreneurship at University of Twente	19
2.9 University of Twente study and analytical framework	21
2.9.1 Reasons for adapting the University of Twente analytical framework	24
3 Methods	25
3.1 Study design	25
3.2 Data collection	26
3.3 Validity	31
3.4 Potential ethical issues	31
4 Findings and discussion	33

4.1 National context	
4.2 Entrepreneurship activities at UNZA	
Strategic interpretation	
Institutional interpretation	
4.3 Actual practice in relation to entrepreneurship education	41
4.3.1 School of Humanities and Social Sciences	
4.3.2 School of Agriculture	
4.3.3 School of veterinary of Medicine	
4.3.4 School of Education	
4.3.5 School of Mines	
4.4 Income generating ventures	
4.5 Challenges concerning entrepreneurship activities at UNZA	
4.5.1 School of Agriculture	
4.5.2 School of Humanities and social Sciences	61
4.5.3 School of Mines	
4.5.4 School of Education	
4.5.5 School of Veterinary Medicine	
4.6 Discussion	
4.6.1 Interpretation of entrepreneurship	63
4.6.2 Role of Ministry of Education in Universities	64
4.6.3 Concerns about funding	
4.6.4 Entrepreneurship education in national policies	
Institutional and strategic policies	
4.7 Commercial activities	74
4.8 Practice regarding entrepreneurship	76
4.8.1 Course Plans	76
4.8.2 Linkage with industry	
4.8.3 Relationship with donors	
4.9 Barriers to entrepreneurship activities	
5.1 Conclusion	
5.1.1 Interpretation of the concept of entrepreneurship at UNZA	
5.1.2 Practice with respect to entrepreneurship activities at UNZ	A 90
5.1.3 Challenges in relation to entrepreneurship activities at UNZ	ZA92

Study limitations	95
5.2 Recommendations	96
5.2.1 University of Zambia	96
Bibliography	
Appendix A: Questions for schools	
Appendix B: Questions at Institutional level	
Appendix C: Checklist for analysing policy documents	
Appendix D: abbreviations and acronyms	
Appendix E: Definition of Key Terms	112
Appendix F: Student enrolment and staff at UNZA	

LIST OF TABLES

Table 1: Student enrolment at University of Zambia 2009-2013

1 Introduction

1.1 Context

The entrepreneurial paradigm is by no means confined to newly invented technologies or research intensive universities. It can be enacted at teaching as well as research universities through innovations in undergraduate education and continuing education. Relatively independent of the stage of development of industrial and academic systems, governments in virtually all parts of the world are focusing on the potential of the university as a resource to enhance innovation environments and create a regime of science-based economic development (Etzkowitz et al. 2000: 314).

According to Zambia's Sixth National Development Plan, "the mining sector remains the major contributor to Zambia's economic growth with its average share being 9.1 percent between 2006 and 2009. Further, the sector's contribution to foreign exchange earnings and the country's formal employment levels is at 70.3 percent and 8.5 percent respectively. There is, therefore, high potential for the sector to contribute to poverty reduction and wealth creation in the country" (SNDP, 2011: 120).

It is further stated that the economic growth experienced during the last decade has not translated into significant reductions in poverty and improved general living conditions of the majority of the Zambians. "Job creation was not commensurate with the gains registered from economic growth. Among the factors that attributed to this phenomenon were low labour productivity, low absorption capacity of the labour market for new entrants, particularly the youth and the concentration of growth in highly capital-intensive and urban-based sectors like mining, construction and services" (SNDP, 2011:6).

Like many African countries, Zambia has been working towards building a middle-income nation. This is stipulated in its first national policy document *Vision 2030*. This document outlines the socio- economic indicators with respect to the desirable long paths outlined to satisfy the peoples' aspirations. One of the conditions for building a middle income nation mentioned in the document is having strong entrepreneurial capabilities, self-reliant, outward looking and enterprising, where nationals take advantage of potential and available opportunities (Government Republic of Zambia, 2006). Zambia's universities and other

higher learning institutions, have over the years greatly contributed towards the training of skilled labour which is potentially an essential asset for the nation's economy.

However, in the past few years unemployment has risen among youths, both higher education graduates and non-graduates. The youth expect to be employed either by the government or by the private sector, but the available positions are limited. As a result, graduates have left and are leaving the country in search of employment. This has led to a loss of skilled labour that could have contributed to the development of technology and innovation, which are potentially important components of the nation's economy. Mtonga has described this situation as follows: "among graduates in Zambia very few will have opportunities to find stable employment soon after graduating, a situation that has led many students especially those studying abroad to remain for greener pastures" (Mtonga, 2010).

To help solve the issue of unemployment among youths, in 1995 the Zambian Government launched a policy of integrating technical and vocational training with entrepreneurship development. According to a review made by the OECD, the idea behind this approach was to strengthen the match between technical training and the needs of the job market in the provision of basic skills to those graduates who cannot be absorbed by the formal sector and therefore, need to engage in self-employment. This was supported by the development of the Technical Education Vocational and Entrepreneurship Training (TEVET) policy in 1994 (OECD, 2012:172). This policy addressed unemployment among youths in technical and vocational training colleges as opposed to university graduates.

Hofer and Potter (2010) argue that university graduates have enormous potential for innovation and economic development. Therefore, "mobilizing them for entrepreneurial careers, enhancing their entrepreneurial skills, and providing support for business start-up are important, and often new, tasks for higher education institutions that are only now being fully recognized" (Hofer and Potter, 2010:5).

In its 2008-2012 UNZA strategic plan, the University of Zambia recognizes that "employers expect the university to produce graduates who are enterprising, critical thinkers and life-long learners who are able to adapt to the complex and rapidly changing requirements" (UNZA, 2012: 28). However, concerns were expressed over the inability of the university to prepare its graduates adequately for the industry. Furthermore, in a bid to address these issues UNZA in its 2013-2017 Strategic Plan has outlined intentions to develop capacity to engage in

entrepreneurship business for sustainability and competitiveness in knowledge economy. In the same vain UNZA's 2013-17 Strategic Plan Objective 3.1 outlines the university's intention to develop capacity to engage in entrepreneurship and business for sustainability and competiveness in knowledge economy. Furthermore, equally intends to "establish a fully functioning Business School" (UNZA, 2013:27).

Taking the above considerations into account, the study focuses on how the University of Zambia (UNZA) prepares its students for life after university. The study presents an insight of how the concept of entrepreneurship is interpreted at UNZA. It focuses on five of the nine Schools (faculties) at the University of Zambia, namely; the Schools of Humanities, Agriculture, Mines, Education and Veterinary sciences. It aims at studying what is happening on the ground floor level where entrepreneurship education is concerned. It also wants to analyse the commercial aspect of entrepreneurship at the institution. It finally looks at the challenges that UNZA faces in relation to entrepreneurship. Although the study does not investigate all the nine schools at UNZA, it is hoped that the study in the schools covered, will help to explore some of the factors that have influenced the current state of entrepreneurship activities at UNZA in general. It is assumed that the findings might be useful for improving and facilitating graduate entrepreneurship as well as job creation in the country.

The appendix contains, among other things, all the abbreviations and definitions of key words. However, important abbreviations are in parentheses inside the text.

1.2 Brief historical overview of universities in Zambia

According to SARUA, at the time of independence in 1964, Zambia had just over 100 university graduates and no public university. The University of Zambia, the first public university of the country, was established in 1966 and opened its doors to 310 students in its first year. By 1994, the University of Zambia and the newly established Copperbelt University had a total enrolment of almost 6 000 students, with 4 592 enrolled at the University of Zambia and 1 393 enrolled at the Copperbelt University. By then both universities had cumulatively awarded more than 16 000 degrees, diplomas and certificates (UNESCO 2007; Bloom, Cunning and Chan 2006).

The University of Zambia is currently the country's largest university with a student population of over 15 000 on its two campuses. The University of Zambia has nine schools

(known in some universities as faculties): Agricultural Sciences, Education, Engineering, Humanities and Social Sciences, Law, Medicine, Mines, Natural Sciences, and Veterinary medicine (SARUA, 2012).

1.2.1 Funding at the University of Zambia

To have a better understanding of the current state of funding at UNZA, this part gives a brief background on funding at UNZA from its establishment and how the 1970s economic decline affected funding at the institution. It will also touches upon the Structural Adjustment program (SAP), its effect on funding and some measures that were taken to improve funding in the Zambian universities such as the introduction of the 1989 White paper. Lastly, this part also touches upon the current policy on University funding in Zambian Universities governed under the 1996 *Educating Our Future Policy* document.

The University of Zambia is a public university and the Government is the key stakeholder in both policy direction and financing. Majority of the Government funding for UNZA comes in form of tuition fee paid for sponsored students. Government funding for students (GRZ financing) is in the form of grants and bursary remittances (J.A Menon, 2012). Menon equally mentions that, there have been challenges over the disbursements of both the GRZ grants and bursary remittances, especially regarding timing. The negative budget variances, usually accompanied by delayed disbursements, have in the past negatively affected the management of UNZA. For example, World Bank reduced its funding for higher education from 17% to 7% between the years 1985 to 1989 (Bloom et al., 1997 cited in Menon, 2012).

Structural Adjustment Program (SAP) and its effects on higher education

As stated earlier, from the time of establishment, UNZA was fully funded by the Government whose major export was copper. In the late 1970s, commodity prices are said to have boomed but unfortunately this was short lived owing to the global economic slowdown which led to stringent economic policies at the international level in the early 1980s.Consequently, many African countries are said to have suddenly found themselves squeezed between falling of national revenue and increasing debt payment. Therefore, "on the 29th of January 1985 Zambia embraced SAP as a means of obtaining the International Development Association (IDA) loan, CR -1545 A -005 ZA to rehabilitate agriculture. And the loan was expected to close on 30th June 1988" (Babalola, Lungwangwa & Adeyinka, 1995:83).

Each of these measures had either direct or indirect impact on every government institution, including education. Babalola, Lungwangwa and Adeyinka (1995) further state that, wherever SAP was implemented, it was observed that the program had contributed to retrenchment, retirement, unemployment, social inequality, poverty and reduction in the quality of life. Inability to bear the cost of education and poor academic performance among school children was also part of the impact the SAP had on education.

To deal with these changes, the Zambian Government adopted certain strategies such as cost sharing measures that were a result of the Structural Adjustment program. The strategies that were adopted to cope with declining resources had negative impacts on the quality of the education and training provided in the majority of institutions and centres through large classes, reduced hours of classroom instruction, and shortages of teaching and learning materials. Other impacts included inappropriate methodologies inability to place technical students on industrial attachments and difficulties in retaining capable and trained staff. All these contributed to jeopardizing quality within the sector (Ministry of Education, 1996).

Although structural adjustment policies advocate shifting expenditure from higher to primary levels of education, pressures to reduce overall government spending meant that educational spending was more often simply cut rather than shifted (ILO, 1996).

Sanyal, Saito and Kotey mentioned that, in this situation, where little increase in higher education budgets can be expected, a major drive was undertaken to improve management efficiency in which national governments, universities, the Association of African Universities (AAU) and aid agencies are all taking part. "In Nigeria, universities were to be motivated by formula funding covering course balance, enrolments, student staff ratios, staff quality and mix. A loan package for the rehabilitation of universities establishes the eligibility criteria, which aim at achieving greater efficiency in resource utilization. Zambia's 1989 White Paper sets out which expenditures are to be met by fees and gives the norms for student staff ratios and administrative and support staff" (1995:30).

1.2.3 Zambia's 1989 White paper on new policy measures for financing higher education

As earlier stated Sanyal, Saito and Kotey mentioned that Zambia's 189 White Paper sets out which expenditures are to be met by Government. Therefore, this part further looks at the Objectives of the White paper policy as stated below;

- I. Rationalizing the level of state aid to higher educational institutions
- II. Rationalizing the award of Government bursaries at the university level and introducing some competitiveness in these awards
- III. Arresting the decline in the quality of education due to beneficiaries to make a contribution towards the cost of their tuition and by shifting public resources from student welfare to educational provision.

Mulamfu argues that, the white paper policy took effect immediately after it was announced in 1989. He further states that the Government's intention had been to phase out financial support to the institutions of higher education so that such support ceased completely by December 31, 1992. He said that "discovering that the majority of government sponsored students were unable to raise the part of the tuition they were required to pay to the universities, government extended loan facilities to such students who requested for loans" (1998:24). To register their sentiments against the policy, students at the then two major public universities UNZA and CBU staged demonstrations, which resulted in closures.

However, the Government is said to have stood its ground on the implementation of the policy, emphasizing financial constraints the country was going through as the major justification for completely phasing out its financial support to these institutions.

Taking such measures meant that there would be fewer if any untargeted grants from the Government and that the only funds over which the institutions would have discretion were those that the institutions would themselves generate (Ibid, 1998).

1.2.4 Current policy on financing universities in Zambia

Following the 1989 white paper policy, the Ministry of Education in Zambia came up with a new policy which governs how the education sector in Zambia and gives guidelines on how it

is supposed to be run. The Ministry of Education policy document entitled, *Educating Our Future* came into being in May 1996. Menon states that this policy created a path for educational development that is in line with the country's political, economic, and social direction. The yardsticks of the policy were decentralization, partnership, equity, efficiency, quality, democratization and effectiveness.

Menon equally gives a brief explanation on funding during the early years of the universities. She states that higher education was fully funded but since 1970, the share of the education sector in the national budget as a percentage of the gross national product has been on the decline. World Bank (1998) cited in Menon revealed that the percentage of the total public budget spent on education in Zambia varied between 7 to 13.4 percent, compared to 20 to 25 percent in neighbouring countries. Saluseki (2000 cited also in Menon), further state that due to the decline in public finances for education, the Ministry is unable to fulfil its obligation of providing the necessary facilities to ensure universal availability of quality education. The major reasons for the decrease in availability of funds in education include poor economic development, structural adjustment requirements, and increasing debt servicing requirements (Menon, 2012).

The 1996 policy on financing higher education states that, Government funding to higher education will be limited to staff costs, staff and capital development, program development and research all within agreed limits and to the extent justified by national needs. Students at the universities and teacher training colleges will meet a proportion of their tuition and maintenance costs. Lastly, institutions are expected to meet their general running costs and overheads through fees and income generating activities (Ministry of Education, 1996).

1.2.5 Autonomy and independence of UNZA

Although UNZA is an autonomous University, the *2013-2017 UNZA Strategic Plan* states that the university could be more self-sustaining through fee payments. However, Government has not allowed the university to charge economic fees on account that there has been a public outcry every time the University has tried to increase fees.

In addition to the above, the strategic plan also states that the University of Zambia is influenced politically by all kinds of political players and that there is a need to build a politically neutral and academically focused liberal institution.

The University of Zambia Council is currently appointed in line with the universities Act No 11 of 1999. However, it has been observed that some councillors representing certain stakeholder interest groups are comprised in terms of their objectivity in decision making on matters that may involve their interest groups vis a vis those of the university as a corporate entity. As a consequence, it can be argued that to prevent conflicts of interest the Council should be appointed from eminent and respected senior members of society, independent of any political or affiliation pressure.

The strategic plan equally states that the Sixth National Development Plan (SNDP) provides a national planning framework. The objective for the university education in the SNDP is to increase access, participation and equity in provision of university education. This means that the university has to take into account the provisions of the national framework in its development of the Strategic Plan (UNZA, 2013: 11).

1.3 Rationale

The importance of this study lays in the fact that in recent years the country (Zambia) has had a good number of university graduates who do not get an opportunity to get formal or other kinds of employment upon graduation. For instance, an article by one of the local organisations states that,

"in Zambia, there has been a real focus on improving educational standards in recent years. As a result, more and more young people are able to attain the educational standards required by employers. However, many young people are finding themselves unable to find employment due to lack of work experience and unable to gain work experience due to lack of employment. Lack of work experience is also a common complaint by employers when looking to hire new employees. Is there a way that all stakeholders involved, including policymakers, educators, individuals and employers can resolve the problem of this missing link?" (Go Zambia, 2013).

Entrepreneurship has been seen as a tool for stimulating job creation in most parts of the world. It is against this background that the study analyses how the University of Zambia is preparing its students for life upon graduation. Is the institution instilling values that can help students think entrepreneurial? Graduate entrepreneurship can be expected to not only reduce

unemployment levels among graduates, but also contribute towards the individual and economic development of the country.

1.4 Research problem and research questions

As discussed above the main objective of the study is to investigate issues of entrepreneurship at the University of Zambia. Consequently, the research problem is formulated as follows: *What are the main factors that have influenced the current state of entrepreneurship activities at the University of Zambia*? The overall research problem forms the basis for the following set of specific research questions addressed in the study:

- How is the *concept* of entrepreneurship interpreted at the University of Zambia?
- How is the *practice* with respect to entrepreneurship activities at the University of Zambia?
- What are the main *challenges* faced by the University of Zambia in relation to entrepreneurship activities at the university?

In looking into entrepreneurship I have mainly focused on entrepreneurship education in addition to commercial activities. Part of the role of the University of Zambia is to prepare students for future employment. Therefore it is assumed that both the education and commercial activities are of relevance in the context of entrepreneurship activities at UNZA.

1.5 Significance of the study

This study is important due to the following reasons: Firstly, it raises the question of the significance of entrepreneurship skills that should be among the acquired learning outcomes at graduate level. This research emphasizes the relationship between *the concept of entrepreneurship policies*, as interpreted by UNZA and *practical activities* related to the development of the same concept.

Secondly, the study investigates challenges related to entrepreneurship among graduates of five schools within the University of Zambia, which contributes to the development of a broader picture of the situation at the university. Additionally, the study provides more

detailed information about the challenges faced by UNZA which affect the development of the institutional (and national) entrepreneurship policy agenda.

Thirdly, some studies have shown that universities are expected to take a new role apart from the traditional teaching and research. Etzkowitz and Leydesdorff, for example, suggested that the increasingly close links between universities, government and industry can be couched in terms of a 'triple helix' model. In this, universities are seen as taking on a new third mission (in addition to the two traditional missions of teaching and research) of contributing to the economy. According to these authors, the taking up of this third mission represents the 'second academic revolution'. The result is the emergence of the 'entrepreneurial university' which combines teaching, research and contributing to the economy particularly in the local region (Etzkowitz and Leydesdorff, 1997; Etzkowitz et al., 2000). Therefore, this study will help in assessing whether UNZA is taking on the 'second academic revolution'.

Finally, the findings and insights of this study are relevant to all stakeholders involved in graduate entrepreneurship and job creation. It is hoped that some issues and concerns raised in relation to entrepreneurial activities at UNZA can to some extent be used to improve and facilitate graduate entrepreneurship and job creation in the country.

1.6 Structure of the thesis

Chapter one presents the context of the study, given the statement of the research problem, research questions, rationale and the significance of the study. Chapter two discusses the literature used for the study and the analytical framework used in the study on the factors that have influenced the current state of entrepreneurship at UNZA (funding, human resource, teaching plans, culture, donors and contact with industry).

Chapter three presents the methodology used in the study design. Firstly, the chapter discusses the study design used in the research. Secondly, it presents the sampling technique which was applied and discusses the instruments used for data collection (recordings, interviews, and questionnaires), and finally, this chapter looks at validity and potential ethical issues, while chapter four presents and discusses the findings on the study.

The final chapter, chapter five, presents the conclusions and recommendations on the study.

2 Literature review

Entrepreneurship is a concept with a certain history within the social sciences literature, but it is relatively new when it comes to its application in the area of higher education. While there are a growing number of academic publications on entrepreneurship in higher education in OECD countries, including Etzkowitz and Leydesdorff, 1997; Etzkowitz et al., 2000; Clark 1998; and Unachukwu, 2009, at the same time, there is hardly any African literature on entrepreneurship in higher education available. Therefore, the study about factors that have influenced the current state of entrepreneurship activities at the University of Zambia will mostly rely on western literature, covering core aspects of entrepreneurship, such as funding, human resources, culture, teaching plans and contact with industry.

2.1 The concept of entrepreneurship

To understand the concept of entrepreneurship, it is important to define who an entrepreneur is, after which the term entrepreneurship will be defined. Wickham (2006: 223) refers to an entrepreneur as "the individual who lies at the heart of the entrepreneurial process, that is, the manager who drives the whole process forward". Another definition formulated by Chell and Ozkan (2010: 1, cited in Ekmekcioglu) refers to an entrepreneur as "someone who is willing to bear the risk of a business venture where there is a significant chance for making profit". Yet another definition refers to an entrepreneur as "a person who creates a new business in the face of risk and uncertainty for the purpose of achieving profit and growth by identifying significant opportunities and assembling the necessary resources to capitalize on them" (Zimmerer and Scarborough, 2005:3). Bwisa and Ndolo state that an entrepreneur is seen as an independent, risk-taking maverick who boldly organizes the people and resources necessary for creating new business ventures (Bwisa and Ndolo, p23).

A variety of definitions exist on the term entrepreneurship. Among the definitions is one by Barringer and Irenland, who define entrepreneurship as a process by which individuals pursue opportunities without regard to the resources they currently control (Barringer and Irenland, 2006:5).

The European Commission refers to entrepreneurship as "an individual's ability to turn words into action. It includes creativity and risk taking as well as the ability to plan and manage projects in order to achieve objectives. It further stated that entrepreneurship provides a foundation for entrepreneurs to establish a social or commercial activity" (European Commission, 2012:7).

2.2 Importance of entrepreneurship

Scholars like Ekmekcioglu have argued that entrepreneurship plays a critical role in the development of the economy as it is the key contributor to innovativeness and product improvement. It is further stated that, entrepreneurship "is one of the important ingredients to the creation of new employments and in the building of communities in ways of offering them jobs" (Ekmekcioglu, p.6).

Furthermore, Barringer and Irenland argue that entrepreneurship has a tremendous impact on the economy and society. According to a report by the Global Entrepreneurship Monitor cited in Barringer and Irenland "the national level of entrepreneurial activity has a statistically significant association with the national level of economic growth" (2006:14). Therefore, different scholars assume that entrepreneurship does have a positive impact on an individuals and societies economy. It is believed that if entrepreneurs are successful, their innovations may improve the people's standard of life.

Zambia's *Vision 2030* policy document equally identifies entrepreneurship as one of the tools that can help towards building a middle income nation. According to the document, this can be achieved by having strong entrepreneurial capabilities, self- reliant, outward looking and enterprising, where nationals take advantage of potential and available opportunities (Government Republic of Zambia, 2006).

2.2.1 Entrepreneurship in higher education

There has been a growing attention for entrepreneurship in higher education. For instance, the European Commission states that, "entrepreneurship education is on the agenda in almost all countries, either being in development, or already articulated in some form" (European Commission, 2011:11). Further reports indicate that, entrepreneurship education has a positive impact on the entrepreneurial mind-set of young people, their intentions towards entrepreneurship, their employability and role in society and the economy (European Commission, 2012: 8). In addition to equipping young people with skills needed for the 21st

Century, entrepreneurship education is a means to increase social inclusion. It can also be a gateway for greater integration of the framework for key competences for lifelong learning (European Commission, 2012: 7).

The European Commission recommends that providing entrepreneurship in higher education should become obligatory and should be extended to all disciplines (European Commission, 2012: 18). It further states that, entrepreneurship education is now a part of a national strategy in most countries. However, partnerships involved in its development and implementation are in need of more systematic development especially with regards to the involvement of social partners. One of the recommendations is that, "entrepreneurship education needs to become more commonly treated as a key competence across subjects rather than a business related and/or separate subject. Individual teachers are key but the evidence shows that they also need external support" (European Commission, 2011:18).

Furthermore, Paul (2005) and Ojeifa (2013) cited in Ayatse, argue that entrepreneurship education is structured to achieve the following objectives;

Firstly, it offers functional education for the youth that will enable them to be self-employed and self-oriented. Entrepreneurship is also expected to provide the youth graduates with adequate training that will enable them to be creative and innovative in identifying novel business opportunities.

Secondly, entrepreneurship serves as a catalyst for economic growth and development and at the same time it offers tertiary institution graduates with adequate training in risk management, to make certain bearing feasible. Furthermore, entrepreneurship also viewed as a means of reducing high rate of poverty as well as creating employment generation.

Thirdly, entrepreneurship is also expected to reduce high rates of poverty, create employment generation as well as help provide the young graduates with enough training and support that will enable them to establish a career in small and medium sized businesses. Lastly, Ayatse (2013) urges that entrepreneurship is expected to "inculcate the spirit of perseverance in the youths and adults this will enable them to persist in any business venture they embark on" (Ayatse, 2013: 85).

Chell (2001) equally states that colleges and universities have discovered that entrepreneurship is an extremely popular course of study. She argues that, "disillusioned with

corporate America's downsized job offerings and less promising career option, many colleges and universities have difficulty meeting the demand for courses in entrepreneurship and small business" (Chell, 2001:15). She further explains that "entrepreneurship and the establishment of an enterprise is a process, so the enterprise curriculum should reflect this" (Chell, 2001: 352).

The dynamic process of new firm creation introduces and disperses innovative products, processes and organizational structures throughout the economy. Entrepreneurship objectives and policies nevertheless differ considerably among countries, owing to different policy needs and diverse perspectives on what is meant by entrepreneurship. Furthermore, countries want to understand the determinants of and obstacles to entrepreneurship and they need to analyse the effectiveness of different approaches (OECD, 2008).

Entrepreneurship education is thus about life-wide as well as life-long competence, development and helps to ensure a number of positive social benefits (European Commission 2011:2). The Organization for Economic Cooperation and Development (OECD) states in one of its reports that, governments increasingly consider entrepreneurship and innovation to be the cornerstones of a competitive national economy. In most countries, there is a close connection between entrepreneurship policies and innovation policies, which share many characteristics and challenges (OECD, 2008). Wickham noted the significance of entrepreneurs that "they have an important effect on the World economies; as they play a critical role in maintaining and developing the economic order we live under" (Wickham, 2006: 9).

Furthermore, entrepreneurship is believed to have a positive impact on the entrepreneurial mind-set of young people, their intentions towards entrepreneurship, their employability and finally on their role in society and the economy. Furthermore, "Entrepreneurship education is expected to improve the entrepreneurship key competence, which will have an impact not only on the role of the individual in the economy (working life) but also in society (social and personal life). Thus, the effect of entrepreneurship programs on the role of society differs" (European Commission, 2012:14).

2.3 Integrated entrepreneurial culture

Enterprising universities, much as firms in the high tech industry, develop a work culture that embraces change (Clark, 1998). Clark further stated that the new culture may start out as a relatively simple institutional idea about change that later becomes elaborated into a set of beliefs which, if diffused in the heartland, becomes a university-wide culture. Strong cultures are rooted in strong practices. As ideas and practices interact, the cultural or symbolic side of the university becomes particularly important in cultivating institutional identity and distinctive reputation.

Clark (1998:3) equally states that without doubt, significant innovation in the character of a university means that some core tasks and some deep structures are altered to the point where the long-term course of the organization is changed. Such transforming work must be done locally, in the university itself. It must extend over years that often become decades. The sustained work calls for collective action leading to new practices and beliefs, steps that are entrepreneurial in character, with much risk-taking and flexible adjustment along the way. When traditional habits are not enough, universities need to develop an entrepreneurial response (Clark 1998).

Bwisa and Ndolo argue that "for such a role to emerge within a culture, at least two social conditions must exist: (1) entrepreneurs must be granted social acceptance so that the activities associated with new venture formation are accepted as legitimate and socially beneficial, and, (2) entrepreneurs must be able to gain access to and control of financial, material and educational resources necessary to initiate new ventures" (Bwisa and Ndolo, p23).

Lee and Peterson (2000) cited in Abimbola and Agboola, argue that entrepreneurial success is not only a condition of traits and behaviours of individuals, but also of the environment in which entrepreneurship takes place Similarly, Wilken (1979) corroborates the imperatives of a conducive socio-economic environment to the growth of entrepreneurial activities. Abimbola and Agboola further state that Wilken's analysis attributes a major causal influence to government actions on conditions that are conducive to entrepreneurship development. They also mention that, "environment, in this sense, is encompassing of such factors as infrastructure, cultural, economic, social and political environments" (Abimbola and Agboola, 2011: 168). These environmental forces have been found to be capable of either impeding or facilitating entrepreneurial activities in any society.

Gnyawali and Fogel (1994) also cited in Abimbola and Agboola define the entrepreneurial environment as "the overall economic, sociocultural and political factors that influence people's willingness and ability to undertake entrepreneurial activities" (Abimbola and Agboola, 2011: 168).

2.4 Concept of a business plan

Barringer and Irenland refer to a business plan as a written document describing all the aspects of a business venture, which is usually necessary to raise money and attract highquality business partners (Barringer and Irenland, 2006: 459). According to Katz and Green, a business plan is a document designed to detail the major characteristics of a firm, its product or service, its market, its manner of operating and financial outcomes with emphasis on the firms present and future (Katz and Green, 2005: 198). Chell (2001) points out the need to equip graduates with the knowledge of preparing business plans; she states that, preparing a business plan can be very important if start-up funds are being sought. However, the business plan is also important because it forces the business founder to think through the issues and problems associated with starting a business. She also outlines some fundamental questions that one needs to ask when writing a business plan such as: What is the mission or purpose of the venture? What do I need to know about the industry, including suppliers and the market? Am I to work on my own or employ others-if so, how many personnel, with what skills, functioning in what capacity? She also points out the need to consider where the funds for the venture will come from and how to use the finances (Chell, 2001:59). Zimmerer and Scarborough sum up a business plan as a written summary of an entrepreneur's proposed business venture, its operational and financial details, its marketing opportunities and strategy, and its managers skills and abilities (Zimmerer and Scarborough, 2005:359).

2.5 Resource access

Barringer and Irenland outline the importance of getting financing or funds when setting up a business venture. They argue that the need to raise money catches some entrepreneurs off guard. Many entrepreneurs start their firms with the intention of funding all their needs internally. Commonly though, entrepreneurs discover that operating without investment capital or borrowed money is more difficult than they anticipated. They further argue that because of this, it is important for entrepreneurs to understand the role of investment capital in survival and subsequent success of a new firm (Barringer and Irenland, 2006).

2.6 Challenges in entrepreneurship education

The demand for entrepreneurial education has been and is still steadily increasing. However, "there are a number of obstacles hindering the uptake of entrepreneurship education such as a shortage of human resources and funding for this type of education" (European Commission, 2012:7). Unachukwu outlines some of the problems that hinder the development of entrepreneurship education in Nigeria as follows: the need for substantial funds, inadequate equipment and technology, entrepreneurial attitude, lack of data on entrepreneurship education and inadequate infrastructure (Unachukwu, 2009). In the case of Zambia, Konayuma (2009) points out a number of challenges being faced in the provision of entrepreneurial education such as: Inadequate entrepreneurship trainers, lack of appropriate training materials, lack of appreciation of entrepreneurs and a poor entrepreneurial culture. Konayuma also states that there are a number of existing opportunities for entrepreneurship in Zambia, such as the "growing number of successful entrepreneurs who can be used as role models and as trainer, entrepreneurship training materials available on internet, availability of space or workshops in training institutions and industries that can be used as business incubators and the best practice of models of entrepreneurship within Zambia and internationally" (Konayuma, 2009:5).

UNZA acknowledges that it has faced a number of challenges in fulfilling its functions of teaching, research, research, consultancy and public service. In order "to overcome some of these challenges, the university will continue to forge partnerships of mutual benefit with relevant players in both the public and private sectors" (UNZA, 2013:20).

Challenges affecting entrepreneurship activities in institutions can also be attributed to bureaucracy due to centralization. Chell (2001) argues that "the problems this kind of system presents include Headquarters usurping divisional powers by centralisation product-market decisions and that it tends to protect vulnerable parts of its operation and its control systems

encourage steady improvements in financial performance but tend to discourage entrepreneurialism" (2001:8).

Taking the literature review as a starting-point, next the analytical framework for this study will be discussed which adapts a study undertaken by academic staff from the University of Twente. It is important to note that the Twente study is just used as a guideline to help obtain information for this particular study on the factors that have influenced the current state of entrepreneurship activities at UNZA

It is important to note that the issue of donors does not feature in the study from the University of Twente. However, in the context of Zambian universities the role of donors can be assumed to be an important factor in studying entrepreneurship activities. Therefore, before discussing the Twente study, I will first briefly reflect upon the role of donors in African higher education.

2.7 Importance of donors in African higher education

UNZA and universities in other African countries have contributed much towards capacity building in the continent. Overall it can be argued that universities are the principal source of the skilled leadership and technical expertise needed to guide national development. These human resources constitute fundamental inputs for national capacity building that is a requirement for development and economic growth.

It is essential that these universities' basic functioning is assured if countries are to have the human resource competence that they need to manage their development effectively. Donors have urged for institutional strategic planning exercises in response to university initiative (Cloete et al. 2015). These exercises should seek to develop a mission statement for the university which responds to present and anticipated future national circumstances, and to accompany this with appropriate cost projections. At a minimum, the resulting statements should integrate attention to educational quality, finances, curriculum, and distribution of students among principal disciplines, staff development, research, access, governance and management (NORRAG, 1991).

A study that was undertaken at African universities in eight countries (Cloete et al. 2015) urges that with inadequate income for direct research funding, the academics have relied

mainly on donor funding to support their research projects through organisations such as the Swedish International Development Cooperation Agency, the Norwegian Agency for Development Cooperation, the United States Agency for International Development and the Carnegie Cooperation of New York. Furthermore Maassen (2012 cited in Cloete et al. 2015) equally argues that, "for all Sub-Saharan African countries, the level of research funding is still considerably below the level invested in the OECD countries and is mainly provided by foreign donors" (Cloete et al. 2015:121).

2.8 Recent study on entrepreneurship at University of Twente

The study on entrepreneurship that was undertaken by staff at the University of Twente sought to understand under what conditions universities, which are primarily concerned with teaching and research, might be willing to support university entrepreneurship programmes and allow them to operate within their institutional boundaries. The study seeks to contribute to the understanding to what makes a good university entrepreneurship programme (UEP) and lead to better-designed, longer lasting UEPs. The study is concerned with the long-term survival and evolution of UEPs, and critically towards an apparent failure of many programmes to thrive despite following the well-understood best-practice recipe for providing necessary entrepreneurship resources. They characterise this as an administration issue and that it is not enough for entrepreneurship programmes to be successful in terms of creating new businesses, but rather these programmes have to support the core missions of the universities. The study also reveals that despite increasing emphasis placed on the supposed rise of the third mission of societal relevance and business engagement, universities' core funding mechanisms depend on two primary process, teaching and research and on managing their physical and staff bases. Potter (2008), cited in Benneworth and Groen argues that "the issue for UEPs is that they are best tangentially related to these core mechanisms and certainly do not provide enough in the way of income to justify university effort in this area" (Benneworth and Groen, 2010:5).

The study at the University of Twente uses a resource-based approach to entrepreneurship in which the determining factor for rates of entrepreneurship are *finance, technology, human capital, managerial skills, and premises.* Resource access is conceptualised in terms of inter-

personal networks and social capital which are exploited by potential entrepreneurs to access those resources given limited time frames to create new business.

Furthermore, university entrepreneurship programmes are conceptualised as assisting entrepreneurs by developing skills and facilitating relationships which allow entrepreneurs to access those resources, rather than providing them directly to the firms. University entrepreneurship programmes are also conceptualised from a public administration perspective as forming part of universities' extended development peripheries and requiring continually rebinding to the core university elements to ensure their survival. The study addresses questions on the mechanisms and connections that anchor a spin-off programme within the university and how these mechanisms can be conceptualised in terms of university organisational theory. Finally the study also addresses the question on the policy implications for university entrepreneurial programmes.

This study begins from the paradox that UEPs are part of university's extended periphery and always risk being eliminated because they do not deliver core university outputs, teaching and research. Through the study the researchers seek to understand the conditions under which UEPs can thrive by using a case study of one UEP, the Temporary Entrepreneurs Scheme (the TOP programme) of the University of Twente in the Netherlands, which had celebrated its silver jubilee and offers a good example of a UEP which has evolved to continue to meet stakeholder needs. Bennewo¹rth and Groen (2010:8) urges that in 1984 the Technische hogeschool Twente (THT)¹ launched the temporary entrepreneurs' position (TOP) "funding, mentoring and supporting graduates to develop a business idea. The programme exisits today and continues to result in around 20 new companies a year, as part of a wider portifolio of programmes university."

The study identifies three main stakeholder groups whose needs UEPs must meet, the university management, regional economic policy makers and enterprising entrepreneurs. In addition, the paper also identifies how UEPs can respond to the needs of those three groups and concludes by setting out the ways in which UEPs can meet those needs, providing the basis for a more nuanced understanding of what constitutes a good UEP (Benneworth and Groen, 2010).

¹The University of Twente was founded in 1961 as the Technische Hogeschool Twente, the Netherlands' third higher vocational institute of technology later to become a university (the other two being Delft and Eindhoven).

Furthermore, Feldman and Desrochers (2003) and other scholars cited in Benneworth and Groen, demonstrate how even where universities seek to prevent spin-offs, universities cannot completely suppress this process. The reality is that universities retain a range of linkages back to their spin-off activities that influence the way that they regard these activities. They argue that spin-offs do not contribute to these core university missions, rather that this contribution is not systematic enough for universities to be able to exploit it with certainty. This therefore makes universities unwilling to support entrepreneurship programmes except where there are external resources made available and unwilling to continue extant programmes where that funding expire (Benneworth and Groen 2010).

2.9 University of Twente study and analytical framework

This study addresses the factors that have influenced the current state of entrepreneurship activities at the University of Zambia. The analytical framework used in this study is to a large extent based on the Twente study discussed above.

The study undertaken by the staff at University of Twente has examined the conditions under which universities, which are institutions primarily concerned with teaching and research, might be willing to support entrepreneurship programs and allow them to operate within their institutional boundaries.

Clark (1998) argues that university entrepreneurship forms part of the extended development periphery of the entrepreneurial university. The extended development periphery provides a secure institutional space which allows activities to be encouraged and their benefits harvested in the field of entrepreneurship and business engagement. Peripherality provides an advantage in allowing a decoupling of those transferring knowledge from those generating it and allowing knowledge to be created which does not have immediate scientific value. Clark's extended development periphery is a solution to the problem of encouraging non-core university activities, giving the universities the certainty that they are not wasting resources on non-core missions, but allowing those that wish to behave entrepreneurially the opportunity to exploit their ideas commercially (Benneworth and Groen, 2010).

The study about entrepreneurship at the University of Twente argues that the weakness of this arrangement is that the decoupling process necessary to allow entrepreneurship activities the freedom to innovate also runs the risk of detaching the business development office from the

university. They argue that the problem of projection of entrepreneurship reflects this peripherality that universities naturally support projects as long as there is no direct cost to the institution, but once direct costs accrue, universities no longer provide that support. "The issue for universities can be reframed not as whether particular entrepreneurship programmes are better or worse at creating-off numbers, but rather how far they help university managers to achieve their particular goals" (Benneworth and Groen, 2010:6).

Furthermore the Twente study seeks to shed some light on the conditions under which spinoff programmes can align themselves with institutional managers' goals without at the same time undermining the flexibility which peripherality brings to allow individuals to exploit knowledge in non-academic ways to create valuable new business. The study raises the question of how peripheral activities, such as spin-off programmes, which create indirect benefits for universities, can become anchored within universities despite not directly contributing to universities' immediate targets. To address this issue the study by Benneworth and Groen (2010:6) poses three research questions: - What mechanisms and connections anchor a spin-off programme within the university? How can these mechanisms be conceptualised in terms of university organisational theory? What are the policy implications for university entrepreneurial programmes?

Alongside this primary research, an analysis of local, regional and national economic development strategies, policies and legislation was conducted to explore how successful the University of Twente was persuading others of the value of the TOP process, alongside the extent to which these external supporters provided moral, financial, institutional and other kinds of support. TOP is an entrepreneurship programme providing key resources to potential entrepreneurs interested in establishing a high business linked to a University of Twente. TOP provides other elements of support pillars as well as the funds with applicants proposing to establish a new company to work with a university professor, that proposal is evaluated by a committee. Approved proposals are entitled to a loan guaranteed by the entrepreneur to fund their first year in business, to develop a business plan for an idea, prove the concept and begin generating revenue phase. The scheme provides physical space (within the research group), a business mentor and formal business training through the University of Twente's Business faculty.

TOP was created at a time of general academic hostility to university commercialisation, but its early demonstrable success convinced many of its wider potential applications. Part of its success has been this allure promising greater future returns and ensuring that the programme continues to deliver a steady stream of companies. The underlying tensions have become particularly acute at three moments in the life of the programme. The study also reveals that university managers quickly realised that TOP provided a useful lever for accessing external resources.

Despite celebrating its silver anniversary in 2009, TOP has faced a number of serious challenges to its survival. Responding to those challenges has forced changes to make TOP more effective. The challenges at the University of Twente, its responses and the evolving TOP programme allow for better understanding of what constitutes a good entrepreneurship promotion programme from a university institutional perspective.

TOP has evolved to meet the needs of external sponsors, "it has also evolved ensuring that it remained a university activity, which has driven a set of changes which are again not directed to improving the provision of entrepreneurship resources, except in the broadest sense of ensuring the project's survival" (Benneworth and Groen, 2010: 12).

According to the study at the University of Twente, the TOP programme has adopted three anchoring strategies to ensure its retention within the university and at the same time these strategies have also changed the nature of the programme without regard for the provision of entrepreneurship resources. The three anchoring strategies are:-

- Staying light-touch, closely focused on promoting university entrepreneurship,
- Ensuring the programme was accepted as central to university missions
- Building wider political support for the activity, ensuring that others within the university appreciate the value of the continuation of the project (Benneworth and Groen, 2010:13).

A core strategy explicitly pursued by the TOP team was to ensure that TOP contributed to what was important to the university at each moment. Part of this has been directly contributing to the primary purpose of the university, creating linkages to companies to facilitate placements in business administration programmes, involving alumni in teaching activities and as users for applied research proposals (Benneworth and Groen, 2010: 14).

From the literature review and the Twente study about entrepreneurship, the researcher learnt that the core factors that influence entrepreneurship activities at universities of relevance for this study's empirical work are funding, culture, teaching plans, human resource and contact with industry. In addition, in the context of UNZA an important factor is the role of donors.

The study undertaken at University of Twente together with other literature is used as a point of reference to provide a guideline to this particular study.

2.9.1 Reasons for adapting the University of Twente analytical framework

One of the reasons for using the University of Twente's study, as well as other studies as the foundation for the analytical framework of this study is they take into consideration the conditions under which universities, which are institutions primarily concerned with teaching and research, might be willing to support entrepreneurship programs and allow them to operate within their institutional boundaries.

The factors identified in the literature and presented above, are important to the study because they help in understanding which factors influence entrepreneurship activities at UNZA.

Therefore, it is assumed that the analytical framework used in this study will make it possible for the researcher to identify some of the factors that affect entrepreneurship activities at UNZA.

3 Methods

3.1 Study design

Having presented the literature review and the analytical framework this chapter proceeds to discuss the study design that was used in this study. Firstly, the research undertook a case study approach, and applied the qualitative method.

According to Bryman (2008), the case study approach presents an orderly way of studying events, collecting data, analysing information and reporting the results. "It entails detailed and intensive analysis of a single case" (Bryman, 2008:52).

Denzin and Lincon (2000) defined qualitative research as a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices turn the world into a series of representations including field notes, interviews, conversations, photographs, recordings and memos to the self. They further explain that this means that "qualitative researchers study things in their natural settings, attempting to make sense of or to interpret, phenomena in terms of the meanings people bring to them" (Denzin and Lincon, 2000:3).

Furthermore, other scholars have stated that qualitative methods are used to address research questions that require explanation or understanding of social phenomena and their contexts. They are particularly well suited to exploring issues that hold some complexity and to studying processes that occur over time (Ritchie and Lewis, 2003).

Therefore, the researcher found this method suitable for the study because the study required getting in-depth information on the current state of entrepreneurial activities at UNZA. This was done by collecting data from the available documents that relate to entrepreneurship at UNZA, as well as by undertaking interviews with respondents from UNZA, from the following schools Humanities and Social Sciences, Agriculture, Education, Mines and Veterinary Medicine.

3.2 Data collection

In order to collect relevant data on the factors that are assumed to have influenced entrepreneurship activities at UNZA (funding, donors, culture, teaching plans, human resource and contact with industry) for this particular study, the researcher used interviews, which were conducted through recordings and questionnaires. Each of these was used according to what was suitable for each particular respondent.

Data collection procedures

Prior to the interviews, the researcher asked for permission from the university's Registrar to conduct the particular study. The permission was granted and the schools of interest were asked to assist where they could. To ensure that there was cooperation from the respondents, the researcher had to explain the purpose of the study to the respondents and made appointments with them according to their schedules.

To get more information on the factors that had influenced entrepreneurship activities at UNZA, the researcher conducted interviews with academics in the schools of Humanities and Social Sciences, Veterinary Medicine, Mines, Education and Agriculture. Other respondents included Technicians from the Schools of Veterinary Medicine and Agriculture and an official from the Business Development Section. In total, there were 17 interviewees.

Sampling method

The study used purposive sampling, and the respondents at UNZA were chosen based on their knowledge on the subject matter, as they were able to shed more light on the factors that have influenced entrepreneurial activities in the schools of interest as well as at institutional level. Some questions were suitable for academics or technicians and others for UNZA officials. Each of the respondents was either recommended by the Dean of schools or chosen, because of their knowledge on the subject matter. This accorded me a chance to obtain relevant information. I also intended to interview some academics that have been consultants on the subject matter and have written papers on entrepreneurship but was unable to because they were busy or not in office at the time I conducted the interviews.

Bryman (2008) states that, such sampling is essentially strategic and entails an attempt to establish a good correspondence between questions and sampling, and that the researcher

samples are based on wanting to interview the people that are relevant to the research questions. A number of reasons contributed to the selection of each of the schools that were included in the research. Firstly, the School of Education is one of the schools at the university that produces many graduates and most of them have to wait for the government to employ them. Secondly, mining has been the Zambia's main foreign exchange earner, preparation for students after graduation was of interest. While agriculture is also another important industry in the country, therefore, the preparation of graduates in the school of Agriculture was also of importance. The researcher also selected the School of Humanities and Social Sciences because UNZA's 2013-17 Strategic plan indicated that there were intentions of building a business school (see point 1.1). Lastly the School of Veterinary Medicine was included in the study because it is one of the schools that offer courses that are practical and some people in this field have set up their own veterinary clinics.

Most deans that were contacted for interviews preferred that I interviewed academics who were in charge of entrepreneurship programs because it was not their area of expertise. Upon recommendation from the Dean of Schools, the researcher interviewed assistant Deans in the schools included and other respondents that were chosen according to the courses they offered in the departments. Therefore, to ensure that the respondents were prepared for the interviews I informed them beforehand and gave enough time to prepare for the interview.

Assurance of confidentiality

To get cooperation from the respondents, the researcher presented a recommendation letter from the registrar. Thereafter, the researcher ensured that the respondents were informed beforehand about the academic purpose of the study in this way, it became easier to get cooperation from the respondents and this enabled them to participate freely and make informed decisions concerning the study.

Duration of the interviews

Firstly, the field work lasted for six weeks. At the time of the interviews the university was preparing for examinations. Therefore, most of the respondents preferred to have the interviews recorded instead of answering questionnaires. The interviews lasted from 30 minutes to an hour. It all depended on the information that the respondents could give regarding the subject matter. Some departments and schools did not have any

entrepreneurship courses, which meant that the interviews with them were much shorter, compared to the respondents who are involved in offering entrepreneurship programs within

UNZA.

All the interviews were conducted in English and each interview was conducted according to the time and schedule that the respondent preferred. All the interviews were conducted at UNZA from the departments of interest.

As indicated, 17 interviews were conducted. In total 15 respondents were recorded, while only one chose to fill the questionnaire. One other interview was conducted through phones and emails. One final interview with an academic involved in teaching an entrepreneurship course at UNZA and was not available during my research period was held in Oslo. This interview helped in getting clarification on some information that was given during my research period at UNZA. Above all it added more information to the subject matter.

In order to get clarification on certain issues from the respondents, I tried to repeat what I heard so that the respondent agreed or stated it in the way they meant it. In some cases I used probing method to help the respondents shed more light on the subject matter. Where the respondent could not offer enough information on the courses I took the liberty to analyse the university calendar this in turn helped in getting more information.

In order to get clarification on certain issues from the respondents, I tried to repeat what I heard so that respondents agreed or stated it in the way they meant it. In some cases I used probing method to help the respondents shed more light on the subject matter. Where the respondent could not offer enough information on the courses I took the liberty to analyse the university calendar, which in turn helped in getting more information.

For the purpose of this study the interviews with the respondents were based on open-ended questions. Ritchie and Lewis (2003:141) state that "a key feature of the interview is interactive in nature. The researcher asks an initial question in such a way as to encourage the interviewee to talk freely when answering the question; the next intervention will usually be determined by the participants answer". During the interviews, the researcher was able to create rapport with the respondents, which allowed the respondents to answer questions in the way they felt comfortable.

Ritchie and Lewis (2003) also state that it is highly desirable to audio- record the interview and for the researcher to take few if any notes during the interview. This allows the researcher to devote his or her full attention to the interviewee and probing in-depth. They further state that it provides an accurate, verbatim record of the interview, capturing the language used by the participant including their hesitations and tone in far more detail than would ever possible with note taking.

All recorded interviews were transcribed and analysed according to entrepreneurship activities.

Analysis of documents

The study required analysis of some policy documents including; *Zambia's 2006-2010 Fifth National Development Plan*, *Vision 2030* and the 1994 *National Youth Policy* which addresses issues pertaining to creating better employment opportunities for the youth and the Ministry of Education's *Educating our Future* Policy document. The researcher also reviewed UNZA policy documents such as the 2008-2012 and 2013- 2017 UNZA Strategic plans, the 2011-2013 UNZA Calendar and a draft of the UNZA Business Policy 2012 which was availed to me by one of the respondents.

It is important to note that most of the documents that were analysed were accessed on line because the researcher could not easily access them within the University.

When analysing the policy documents the following were the guidelines;

- Does the concept of entrepreneurship feature at national level? If so to what extent, is entrepreneurship at university level addressed?
- Does UNZA have a policy on entrepreneurship?
- To what extent is graduate entrepreneurship addressed in UNZA's strategic plans and other university policies?
- How is funding at the University of Zambia?
- What factors have affected funding at UNZA over the past years?
- Does UNZA have links with industry?

- What role does the Ministry of Education play towards universities?
- The role of donors at UNZA, does UNZA have donors in entrepreneurship related activities?

The analysis of the policy documents not only provided the researcher with more information on the factors that have influenced entrepreneurship activities at UNZA, but also helped in detecting the changes that have taken place in relation to entrepreneurial activities in the past few years.

Some statistical data on student enrolment for both full-time and distance students at UNZA over the past 5 years was collected to support the study. The data was collected from UNZA press. The data was collected to have a general picture of the changes that have taken place in recent years.

Limitations

The six weeks in which the field work for the study was conducted at the University of Zambia was not sufficient, due to the following reasons;

- At the time of the research the University of Zambia was preparing for examinations, therefore it was quite difficult to access the respondents due to their busy schedules. In some cases, I had to check on the respondents several times before getting a chance to talk to them.
- It was also not easy to access some staff who had written some academic papers or articles on entrepreneurship as they were reported to be busy or out of office. Interviewing such people would have shed more light on the subject matter.
- Other respondents talked to had some information pertaining to entrepreneurship activities within the university but declined to give more details because they were not authorised to speak on behalf of the university.
- It was equally difficult to get access to some statistical data in areas such as the university budget. As a result I ended up finding alternatives and making a lot of calls just to get part of the statistical data I have in my study.

• Lastly, not so much was written on entrepreneurship at the university level, which was also a limitation on my part.

3.3 Validity

Validity plays an important role in the research design in that, it helps the researcher to ensure that the study and the instruments for data collection correspond. "Validity is the term used to refer to the extent to which our measures correspond to the concepts they are intend to reflect" (Brains et al, 2011:105). Therefore, before undertaking the research or making an analysis the researcher must ensure that he/she knows the content and conduct the kind of data collection such as interviews that will suite the particular study. This was done by the researcher.

According to Bryman, validity is concerned with the integrity of the conclusions that are generated from a piece of research (2008). Hence, it is important for the researcher to ask himself/herself the following questions in relation to the study he/she intends to conduct:

- Can the same process of data collection be conducted by other researchers and obtain the same results when repeated?
- Does the research design help in answering the research questions?
- Do the research questions relate to each other and to the intended study?

Therefore, the researcher also ensured that, the documents analysed related to the study of interest and were able to bring out what was required for this particular study.

3.4 Potential ethical issues

When undertaking any research it is important for the researcher to ensure that she/he observes certain ethical issues. In this case, before carrying out any interviews the researcher ensured that the participants were informed beforehand on the purpose of the study.

Confidentiality is important in order to ensure that everyone involved in the study is able to give information freely, and can make informed decisions concerning the study. The respondents of the study were given this information before interviews, which allowed them to make informed decisions.

To obtain correct information, anonymity was stated so that the respondents did not have to fear for their safety upon giving their opinions. The respondents were also aware that they could withdraw if they felt that they could no longer participate in the study. This way of communication was chosen as a tool to help in building trust.

To show credibility when conducting interviews at certain points the researcher rephrased the respondents' views in order to capture the exact views.

Lastly, in order to ensure that there was fairness, different viewpoints among the respondents were captured in the study.

3 categories of respondents (Deans, Academics and Non-Academic staff)

Respondents have been coded in this way as used in the presentation in chapter 5

Academic (A)	Deans (D)	Non – Academic staff (N/A)
		(Includes, Administrators(a) or (o) and Technicians(t))
		or (0) and reenherans(t))
School of Agriculture (A1)	D1	N/A 1
School of Humanities and Social Sciences (A2)	D2	N/A 2
School of Education (A3)	D3	N/A 3
School of Mines (A4)	D4	N/A 4
School of Veterinary Medicine	D5	N/A 5

In order to differentiate between two respondents from the same School or department the respondents are coded by (a) for first respondent and (b) for second respondent. Administrators who are not part of the schools or faculties are coded as N/A (o) 1 or 2.

4 Findings and discussion

In this chapter the findings are presented followed by a discussion that focuses on the factors, introduced in chapter 2, that have influenced the current state of entrepreneurship activities at UNZA (funding, teaching plans, donors, culture, human resource and contact with industry). The findings are based on both the education and commercial aspects of entrepreneurship at UNZA. For a clear understanding of the situation, the researcher also analysed policy documents that relate to entrepreneurship focusing on both the national and institutional level.

4.1 National context

In order to understand the nature and relevance of the state of the art of entrepreneurship activities at UNZA, I will start with discussing some national policies, then institutional policies

National policies

Zambia's Poverty Reduction Strategy Paper states that Zambia experienced a rapid decline in the performance of its economy from the mid-1970s and this seriously affected its ability to generate employment opportunities for its labour force. The situation became worse by the rapid growth of the labour force, which was at that time about six million. Of particular concern was the large numbers of youths, about 200,000 per annum, leaving the school system without any opportunities for acquiring skills for personal improvement. In view of the foregoing, the government initiated the Technical Education, Vocational and Entrepreneurship Training (TEVET) Reforms in 1994 that saw the formulation of the TEVET Policy (1996) the Strategy Paper (1997) and the TEVET Act No. 13 of 1998. For effective management of TEVET and other forms of training, the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) was established as a TEVET fund and measures were being considered for sustaining the fund.

Ultimately, it was expected that industry (which is the major beneficiary of TEVET graduates) would begin to contribute to financing training. This partnership between industry and government presents the feasible long-term solution for sustaining the TEVET subsector. There are also other skills training in other line ministries (Government Republic of Zambia, 2006).

In a bid to reduce unemployment among youth, the Zambian government came up with the 1994 National Youth Policy. The policy document addresses issues pertaining to the creation of better employment opportunities for the youth. The strategies applied are: development of youth enterprise programs incorporating small business management, basic skills and business training; provision of basic skills training facilities (through consolidation of existing skills training centres), infrastructure, finance, business advisory services and extension services to youth and incorporation of basic skills and business training in school curriculum (Government of the republic of Zambia, 1994).

Furthermore, in 2006, Zambia's first long-term national policy document, Vision 2030 Policy, whose goal is working towards building a middle income nation, outlines socio-economic indicators concerning the desirable long-term paths aimed at satisfying the people's aspirations. As earlier stated Zambia's Vision 2030 Policy, whose goal is working towards building a middle income nation, outlines socio-economic indicators concerning the desirable long-term paths aimed at satisfying the people's aspirations. As earlier mathematical economy which is competitive, self-sustaining, dynamic and resilient to any external shocks, supports stability and protection of biological and physical systems and is free from donor dependence. In addition, it should have stable social and cultural systems that support human capital formation. Among other things, the nation Zambians aspire for should be characterized as follows, "strong entrepreneurial capabilities, self-reliant, outward looking and enterprising, where nationals take advantage of potential and available opportunities" (Government Republic of Zambia 2006:2).

According a review undertaken by the OECD on investment policy in Zambia, limited formal sector employment opportunities are also resulting in large numbers of youths joining the growing volume of the unemployed population. The review further states that this situation "increased investment in economic activities that will result in accelerated job creation, and that limited technical skills amongst Zambians are also a distinctive to investors seeking to employ highly productive local labour but a regionally competitive cost and this has been identified as one of the main constraints to national development and requires urgent attention by all key stakeholders, especially the private sector and government" (OECD 2012:173).

4.2 Entrepreneurship activities at UNZA

From some policies that relate to entrepreneurship at national level, the next part will proceed to discuss the strategic interpretation of entrepreneurship at the University of Zambia referring to the factors are assumed to have influenced the current state of entrepreneurship at the institution.

Strategic interpretation

To answer this question the researcher analysed the UNZA's 2008-2012 and 2013-2017 strategic plans including the UNZA Business policy draft. Analysing these documents helped in making a connection on the issues relating to income generating ventures within the university.

Sub-section 4.9.1 from UNZA's strategic plan states that, teaching and learning are the core activities and are a major determinant of the extent to which UNZA is able to fulfil its mandate of helping overcome the social, economic and scientific challenges that Zambia faces, through the provision of high quality, high-level human resources to manage the economy (UNZA, 2008).

However, as the University of Zambia moves towards providing the nation and the region with skilled labour that can help contribute towards the economy, UNZA's 2008-2012 *Strategic plan* outlined some of the challenges that were faced by the institution towards achieving this goal. One of the concerns raised was the inability of the university to prepare its graduates adequately for the industry. The strategic plan further stated that, "employers expect the University to produce graduates who are enterprising, critical thinkers and life-long learners who are able to adapt to the complex and rapidly changing requirements" (UNZA, 2012: 28).

As a follow up to this, the 2013-2017 UNZA Strategic Plan has also outlined some of the activities related to entrepreneurship and how the institution intends to carry them out. According to objective 3.1: Under the strategic direction 3, on investment in new and existing business ventures the strategic plan outlined intentions of developing capacity to engage in entrepreneurship and business for sustainability and competiveness in the knowledge economy by the end of 2014. Activities included: Identifying business investment

opportunities, conducting feasibility studies and preparing business plans, they also intend to mobilize funds for establishing business and investment, maximize income on investment from business ventures and build capacity in engaging in entrepreneurship activities.

Apart from developing the capacity to engage in entrepreneurship and business for sustainability objective 3.2 in the strategic plan states that, UNZA also has intentions of operationalising the Business and investment policy. It is envisaged that this policy will be used as an instrument that will act as a business and investment radar for the Directorate of Business Development and as a tool kit for the management of commerce at UNZA. Activities include identifying and developing business plans with local industry and other investors.

While objective 3.3 states that, by December 2017 the university will have increased selfgenerated income by at least 50 per cent of the total revenue from self – generated sustainable sources.

As a follow up to this, the researcher interviewed an official from the university in order to find out more on the practice of entrepreneurship at UNZA.

When asked whether the university has any entrepreneurship activities, the business and development official replied that the university does have entrepreneurship activities in a number of areas, which include providing hospitality services such as the Marshlands Village, farming activities on the farms. The respondent explained further that the farms have crop and animal production and they are working towards fish farming. "We have the printing section which is under a label called UNZA Press which combines production and publication; currently these are the main activities" (N/A (o) 1).

Asked whether UNZA had any policy related to entrepreneurship, the response was, "As at now no, but a policy has been developed which is going through the approval process, so it is just a matter of time, the policy in this area will definitely be there" (N/A (o) 1).

When asked if UNZA teaches the majority of students to think entrepreneurial, the respondent said that the university was in a process of incorporating two things in the main stream of teaching- the gender issues being done in almost all the schools as well as entrepreneurship which is actually in the process of being implemented. "What was done in the recent past was

basically to agree on the contents of what was to be taught, but the principal of incorporating these has already been done" (N/A (o) 1).

When asked whether the university budget allowed for entrepreneurship related activities. The answer given by the UNZA official was, "not as at the moment, but as the concept is basically acknowledged and accepted by everyone at the university level this will be incorporated" (N/A (o) 1). The respondent further stated that at the business directorate level entrepreneurship was co-active so this is incorporated.

The researcher also asked whether the university had a board that was concerned with entrepreneurship, if so, did it have representatives from the private sector? Sources from the administration revealed that such a board was not yet in place however the terms of reference for establishing such a board had been developed and was going through the approval process. "Once approved, the thinking principal in them is that, representation will be there with the membership being put at seven; four of the members will come from outside the university and three members will come from within the University. Students will definitely be represented" (N/A (o) 1).

The respondent further stated that UNZA has come up with a business policy (Business and Investment Policy) which was in draft form, but was later made available for purpose of this study. Some of the objectives in the draft of the Business and Investment Policy have been outlined below.

University of Zambia Business and Investment policy (draft)

By looking at this draft policy, the researcher was interested in finding out what was laid down on the business side of the university (commercial activities).

The business and investment policy was to take effect from October 1, 2013 and was to replace any previous Business and Investment Policy at University of Zambia (UNZA, 2012).

Scope and Policy Objective

The purpose of the business and investment policy (draft) is to ensure that business and investments across the University of Zambia are well coordinated, effectively managed and responsive to the diverse needs of UNZA. The draft of the business and investment policy outlines the following objectives:

- (I) To provide a strategic and logical framework within which business development and investment activities shall be undertaken.
- (II) To provide a benchmark against which business development and investment initiatives should be implemented, monitored, and evaluated
- (III) To provide guidance on the management and administrative systems and procedures to be applied in business development and investment activities
- (IV) To ensure that the business development and investment initiatives make an effective contribution towards actualizing the vision of the University
- (V) To ensure that all business and investment decisions add real value to the development of UNZA

According to the situational analysis in the *Business and investment policy* since its establishment until the late1980s, all functions at UNZA operational costs and tuition fees for students, were fully funded by the government. However, since the late 1980s, the government introduced the concept of cost sharing in running the affairs of UNZA and subsequently funding has been on the decline. The policy document further states that, while the funding from government has declined, the operational costs have steadily increased owing partly to inflationary pressure and partly due to other strategic factors such as excessive use of limited capacity arising from increasing enrolments (UNZA, 2012).

It was against this background that the UNZA council decided to establish a Business Development Directorate. Its mandate is to identify, establish and manage diverse sources of income that should finance part of the guidance and part of the operational and administrative costs of UNZA.

According to the business policy, business shall mean and imply both current and future activities undertaken by the University of Zambia.

Nature and Types of Business

UNZA through the directorate of Business Development shall source and engage in any type of business activity for as long as it shall not be in conflict with the University Act.

The policy document also states that in this respect, each business activity shall be considered and evaluated based on its capacity to substantially generate reasonable revenue, has growth potential and is amply self-sustaining in both the short and long terms and makes positive financial contributions (dividends) to UNZA administrative costs.

Organization Structure

To function effectively and efficiently as a resource mobilization unit for the university, the Business Development Directorate shall have three broad levels of management. These shall be the UNZA Council, Business Steering Board and the Directorates management (UNZA, 2012).

Institutional interpretation

A number of issues have been raised from the analysis of the national and institutional policies. Therefore, this part went further to find out how the concept of entrepreneurship is interpreted at UNZA. The study finds that UNZA does not have one agreed upon definition on the meaning of entrepreneurship. However, the following were different responses from the academics and the university officials that were interviewed.

When asked how they defined the concept of entrepreneurship as a university the respondents stated that they did not have a policy that defined entrepreneurship at the university but defined the term in the way they understood it. Therefore, various responses were given. One of the respondents stated, for example, that the University of Zambia was in charge of higher learning and their role as a public institution is to provide skills and knowledge that would help people to enhance their employability and to influence public policy. Furthermore, the respondent mentioned that UNZA does operate under a strategic plan. According to the respondent, the current strategic plan (2013-2017) is looking at entrepreneurship as, "a way through which students will be provided with critical skills to innovate things" (A2 a). The respondent equally stated that the university has different faculties that have different roles. The role of his department was mostly about influencing development policy outcomes.

According to the respondent, UNZA recognizes the challenges that the country is facing in the area of employment creation. Therefore, rather than expect students to look for the existing institutions and sell their labour, the respondent mentioned that "this time around we are shifting in the direction of preparing students; we are encouraging them to create their own employment by developing certain innovative ideas" (A2 a). The respondent further explained that in this way UNZA looks at entrepreneurship as a way through which they can also create their own employment in different ways. The respondent further stated that entrepreneurship is not institution based, "In my own understanding entrepreneurship has to do with the promotion of private investment especially at a small scale" (A2 b). The respondent further elaborated that entrepreneurship was a practice where individuals take risks, by starting business ventures in various products and services and at the same time employ others (A2 b).

One official from UNZA stated that, "entrepreneurship at UNZA is not anywhere different from the general understanding of what entrepreneurship is elsewhere, which is basically the process of developing, managing and of course organizing business with the view of making profit taking into consideration the number of risks" (N/A .o1). So the definition of entrepreneurship is not unique to UNZA but a standard one which is applicable anywhere. Entrepreneurship is about risk taking and being innovative (A2. c).

Further responses were that an entrepreneur was someone who uses their own skills to generate resources for their survival or livelihood, "that's how I take it not that we have defined this term in that area not at all" (A4). Entrepreneurship is the ability to equip an individual with skills to set up a business in his/her area of interest (A3). "Entrepreneurship is a way of running projects that can be self-sustaining, it is not like the school or university has defined it" (N/A (t) 5). Another respondent referred to entrepreneurship as, "taking up opportunities to run a business (provision of animal healthcare) in order to make money as well as to provide a much needed service to the community" (A5 .b).

Another academic referred to entrepreneurship as, "the ability of individuals to stop thinking about looking for employment after graduation, but have the ideas of creating their own jobs and are able to employ others" (A1). The respondent explained further that they had been discussing with some colleagues in the university on the need to change the mind-set from believing that once someone is trained they are expected to find employment waiting for them. This was because there are few employment opportunities in government. Therefore, there is need for the private sector to grow to accommodate more graduates.

Lastly, other responses were that entrepreneurship is not institution based. According to the opinion of other respondents, entrepreneurship had to do with the promotion of private

investment especially at a small scale, "it is a practice where individuals take risks and start various business ventures and employ themselves, offer products and services according to their understanding" (N/A (o) 2).

Having analysed both the national and institutional policies that relate to entrepreneurship activities and how the concept of entrepreneurship is interpreted at UNZA, the next part will discuss the aspect of funding in relation to entrepreneurship education at universities. Firstly, the discussion will look at the importance of funding in universities after which it will focus on funding at the University of Zambia. This part also considers the factors that have affected funding at the institution and some of the concerns and measures that were undertaken to solve the problem of funding at Zambia's largest public university.

4.3 Actual practice in relation to entrepreneurship education

Entrepreneurship education at UNZA

According to the Ministry of Education 1996 policy *Educating Our Future*, academically each university is responsible for determining its own programs of instruction at all levels, determining and regulating the requirements for admission (Ministry of Education, 1996). This section addresses two areas, which are the commercial (Income generating ventures) and educational aspects of entrepreneurship at UNZA. From the literature review some of the core elements of entrepreneurship education are funding, culture, human resource, donors and contact with industry. This section addresses entrepreneurship education at UNZA in five schools namely; the schools of Humanities and Social Sciences, Mines, Agriculture, Education and Veterinary Medicine, focusing on the main elements.

4.3.1 School of Humanities and Social Sciences

4.3.1.1 Department of Development studies

Entrepreneurship courses

According the respondent the Department of Development studies offers a course at bachelor level in Entrepreneurship and Development under the course code DEV 9850. He further

stated that the course was offered to students at third and fourth year levels of the study programs. The respondent also mentioned that the course in entrepreneurship was offered as an elective course, "students who enrol for the course are not exclusively Development Studies students but students from both within and outside the school. For instance, we do have students from the School of Education who are enrolled in this particular course" (A2 a). The findings also revealed that this course is credited and the points are added to the students' respective programs.

Research and contact with industry

The respondent referred to the strategic plan, he stated that as a university they run on the motto; teaching, research and public service. "What we have done as a university is to ensure that we maintain our relevance to society and ensuring that our products in the name of students are credible out there. We are forging a lot of collaboration with industry" (A2 a).

The respondent equally mentioned that they had an agreement with the Ministry of Commerce Trade and Industry through which they introduced a course in Trade and Policy, "we have even introduced a course Trading Policy and Development which is also meant to help students understand intricacies of trade both domestic and foreign" (A2 a). The respondent further stated that in the process they help link students to what is happening in the industry, because, they are operating in the new environment where market forces are taking centre stage.

The findings from the Department of Development Studies also revealed that through the Ministry of Trade and Industry, the school is finding ways in which a private sector is coopted and at the same time appreciate what they were doing. The respondent also mentioned that through this same initiative the Department of Development Studies is apparently in charge of the global monitoring which conducts research throughout the country in terms of the extent to which they are able to handle issues of entrepreneurship within the country. This is made possible through support from the Danish International Development Agency (DANIDA) and IDRC from Canada. Lastly the department also writes an annual report which fits into the global monitoring reports, a comparative study with about a hundred and seventy countries. According to the findings, research in entrepreneurship courses is done more at a personal level. This is up to individuals, "it is not something mandatory, it is up to individuals to make their own initiatives to meet up with those institutions. So this becomes more informal than formal it is not something we initiate as a University" (A2 a). The respondents also agreed that personality was developed by exposing students to real life experiences.

Funding in relation to entrepreneurship

On the aspect of availability of funds for entrepreneurship, the respondent mentioned that it is some kind of a challenge in the sense that, university funding is controlled at the centre. Challenges about funding entrepreneurship activities can be illustrated by the following quote from the respondent, "we have one central administration and as the school, there is not anything that I would say is reserved in terms of funding for entrepreneurial activities" (A2 a).

Human resource

The respondent stated that they had qualified staff in the department who had obtained degrees in entrepreneurship.

Role of donors

In this department, donors play a single role of providing funding for entrepreneurship related activities. External donors include, DANIDA and IDRC from Canada who supported the Global Entrepreneurship Monitor report which is a comparative study of more than hundred countries.

4.3.1.2 Department of Economics

Entrepreneurship courses

According to the respondents at the Department of Economics, the department did not have a course in entrepreneurship at undergraduate instead; they have a course in entrepreneurship at Master level. "We have a course on entrepreneurship in the economic policy management (EPM) program that is Master of Arts and policy management; it is a one year program. The primary target is the public sector, mid-career employs but we also have a sizeable number from people from the non-governmental organizations and also the private sectors participating into this programme" (A2 (C1)). The respondents equally stated that the purpose

of the course was to enhance the student's understanding of the critical role of entrepreneurship in national economic development and also help them in understanding some of the policy challenges that are faced in that part of the world. This was done through promoting entrepreneurship and small businesses as key aspects of economic policy processes. However, the course was not meant to turn students into entrepreneurs.

However, the respondents further stated that they also had an entrepreneurship course at doctoral level known as the Doctorate in Business Administration (DBA) program, which UNZA is running in conjunction with Binary University from Malaysia.

The respondents also explained that in the DBA program entrepreneurship is taught more on the pedagogical side of things as opposed to providing rule training.

Research and contact with industry

According to the respondent research in entrepreneurship was not being conducted. When asked if the school had any guest lecturers or practitioners involved in the entrepreneurship programs. The respondent stated that in certain occasions they invited people with real life experience in entrepreneurship activities to come and talk to students, many of them shared very innovative business ideas. He further stated that, when guest lecturers talk to students on how they started their businesses it provides inspiration to the students.

The respondent also stated that Ministry of Commerce Trade and Industry had intentions of having collaboration with UNZA in a course linked to industrial incubators. The respondent was hopeful that once it worked out, there was likelihood that the university may see some of their students train within that facility (incubators). The respondents also mentioned that the school did not have any internship programs for their students.

Funding in relation to entrepreneurship

According to the respondent, the African Capacity Business Foundation and the World Bank institution funded the Economic Policy Management course at Master level.

Human resource

Firstly, the department would like to have their own building as well as expand on personnel especially that UNZA was planning of introducing a business school. The respondents further

explained that the number of lecturers was very small compared to student numbers they receive at first year. Therefore, lecturers have to teach about 300- 400 first year students at undergraduate. Furthermore, the respondents stated that there was need to have more personnel to teach in the doctoral course, "the Doctorate of Business Administration (DBA) course is taught by people from Malaysia, the plan is to involve the locals in teaching but we do not have the capacity to teach" (A2 (C2)).

Role of donors

The results from the study have indicated that apart from playing a role in various projects in the school, some external donors (World Bank and African Capacity Building Foundation) are also involved in sponsoring entrepreneurship courses at masters and PhD level but no entrepreneurship course is sponsored by the university. Since the two courses in the department are 100% sponsored by external donors, does it mean that this department is vulnerable when it comes to funding of entrepreneurship courses?

4.3.1.3 Department of Political and Administration Studies

Entrepreneurship courses

According to the findings, the Department of Political and Administration studies did not have a course in entrepreneurship at undergraduate during the time of the study. However, the respondent mentioned that they had designed a course for undergraduate in entrepreneurship and was still on the pipeline waiting to be approved for teaching. "As a department we understand the need for entrepreneurship because our system is such that our students are trained to look for work but we realize that there is need to broaden the way we do things so that the student can look forward to employ themselves upon graduation"(A3).

The respondent also mentioned that they had an international program in the school of Economics at Master degree level, Economic Policy management (EPM) which is a course specifically for entrepreneurship. He equally stated that the course had students from Namibia, Zimbabwe, Lesotho, Swaziland, Malawi, Tanzania and Zambia.

Research and Contact with industry

The findings revealed that master students do no go through internship because their program is just one year and very intensive. However, they are in contact with private companies when they undertake their research. The respondent stated that since the students did not have a chance to do internship they made sure they subjected them to many case studies for them to deepen their practical understanding on how things are done.

Regarding issues relating to research, the respondent said that students were encouraged to undertake site visits to go and find out what exactly entrepreneurs in the country are doing. When asked whether the school had internship programs for their students the respondent said that such programs were not yet in place but looked forward to having such programs in the school.

Funding in relation to entrepreneurship

The department did not have funding that was related to entrepreneurship activities only what concerned teaching, however, the respondent in the Political and Administration Studies Department stated that they needed more funds to acquire more materials for their department

Human Resource

All lecturers qualify to teach only based on their qualification. Therefore, there is no course taught by a person who is not qualified. The respondent stated that they needed more qualified staff.

Role of donors

In this department, external donors do not play any role in sponsoring any entrepreneurship courses or activities.

4.3.2 School of Agriculture

4.3.2.1 Department of Agricultural Economics

Entrepreneurship courses

In reference to entrepreneurial courses, the respondent stated that the Department of Agricultural Economics had a course in entrepreneurship at fourth year, which was under the course code AGE 4212 Intermediate Agribusiness Management. The aim of the course is to provide students with entrepreneurial skills: how to plan for a new venture; carry out market research; develop business strategies; market products; plan and manage production and logistics.

Research and contact with Industry

On the aspect of research and contact with industry, the respondent stated that, "as agricultural economics there is nothing in particular that we are doing to generate income, consultations are done by individuals but the money does not come to the school" (A1). The respondent further stated that the Department of Agricultural Economics had a research project called Pulse Value Chain, which was looked at value addition to beans. The project had been going on for some time and that was the area that they were trying to see how the market would go. When asked whether the school had any internship programs for their students, the respondent stated that nothing was in place at that moment.

Funding in relation to entrepreneurship

When asked on whether the school received any funding towards entrepreneurial activities, the respondent stated that the School of Agriculture had signed a memorandum of understanding with Zambia National Commercial Bank (ZANACO) as part of their cooperate responsibility, where the school was expected to get funds for entrepreneurial activities. Further reports from a local paper also revealed that, "UNZA acting Vice-Chancellor Enala Mwase thanked ZANACO for investing in the rehabilitating program, mainstreaming financial education and entrepreneurial training in the curriculum 4003 courses and facilitating student field trips." She also stated that with the numerous challenges facing UNZA, the gesture by the ZANACO was timely and would go a long way in assisting the institution (Lusaka-Star, 2013). However, by the time of the research things had not yet been put in place due some logistics that were not put in place, but the respondent was hopeful that once that was done such activities will be funded.

Human Resource

When asked if the school had people who were trained in entrepreneurship, according to the respondent the department did have people who were trained in entrepreneurship but was not certain about the actual number. However, the respondent also mentioned that as Agriculturists most of them had trained in various practical skills which may not necessarily be referred to as entrepreneurship.

Role of donors

When asked whether the school had any donors, the respondent stated that they had various projects that were run by different organizations ranging from infrastructure to capacity building. The Canadian International Development Agency (CIDA) had assisted in building the new wing of the School of Agricultural Sciences. Apart from that, Michigan State University was sponsoring two MSc. students each year up to the end of 2015. The respondent also mentioned that Michigan State University were assisting the school in various areas stating that they had bought ten computers for the school, as well as offer teaching services when requested. Previously, the School used to have the German Academic Exchange Service (DAAD) where they brought their own people to teach at the university, but the program came to an end, however University of Zambia graduates do benefit from the scholarships offered by DAAD. So far there is an indication that there have been external donors involved in funding projects, supporting staff development, university rehabilitation. However, to what extent are donors involved in supporting entrepreneurship activities in the department?

4.3.2.2 Animal Science Department for Research and Production Unit

Entrepreneurship courses

When asked if the department was offering any courses in entrepreneurship, the respondent stated that there was a course, which had a component in entrepreneurship in the school but not in their department.

The respondent gave an in depth explanation on how the unit operates. He further explained that the Animal Science research and Production Unit was established for teaching and research to both students and lecturers. However, at a certain point it became difficult to raise funds for research, therefore it was difficult to qualify the unit as a research unit due to the fact that, it did not have certain facilities as well as enough finances to maintain it in good order.

Therefore, "it became necessary to bring in the component of production, so as to raise money to maintain the facilities but as we went into production we found that we could take a step further rather than just raise enough money for maintenance of the station" (N/A (t)1). Apart from that, they also discovered that it was actually possible for the production unit to run as a business unit to get some extra money, which can help, in the day-to-day running of their academic activities.

The respondent also stated that the production had been running like that in the past few years. He further explained that the unit was established around the year 2000 although they only brought in the business aspect after a number of years, "we came to realize the potential around 2010 that's when we decided to do more than just maintain our equipment" (N/A (t) 1) It was from this realization that they came up with three enterprises, namely broiler production that is poultry, pig production and dairy production.

Broiler Production

According to the respondent when they started to raise broiler chickens, they were doing hatches of 1000 but when they realized the potential, they increased to hatches of 2000 in the year depending on other activities such as research. For instance, when there is lot of research activities the production has to be reduced to allow for that.

When the research is over the chickens are sold to the university community, lecturers, members of staff and the students. The market is also open to the surrounding communities.

According to the respondent the profit margin is quite good due to the fact that the unit makes their own feed which reduces on the cost of the feed." We make our own feed so we reduce the cost of the feed instead of buying the already made feed, we buy the ingredients like maize, soya beans, sunflower and minerals to make feed. It makes the feed cheaper because we sale our chickens cheaper than the market price but we still make a good profit" (N/A (t) 1).

Pig Production

The respondent also mentioned that, a small piggery was part of the unit, "the piggery accommodates about 8-9 breeding females, we cannot expand because of the limited space" (N/A (t) 1). He also said that infrastructure was not enough for them to expand and that they could do more if they had the infrastructure.

According to the respondent, the unit was working towards writing a proposal to UNZA management to enable them get funding to expand the infrastructure. He also stated that the current strategic plan 2013-2017 encouraged entrepreneurship units where it is possible to generate income. Therefore, they intended to take advantage of this in order to show the potential by expanding not only the piggery but the broiler and dairy production units as well.

For the pig production, the main products are pork chops, which they package and sell to the surrounding communities while some other pigs are sold alive upon request from the consumers. The respondent also stated that the profit was okay and the consumers wanted more of their pigs which are sometimes sold as breeding stock, breeding boars to farmers around Lusaka. The only limiting factor was the capacity to produce more due to infrastructure.

The respondent stressed the need for the unit to expand because they had received a lot of support from farmers and there was growing demand for their products from the consumers.

Dairy Production

On the part of the dairy production, the respondent mentioned that they had a small heard of dairy cattle, whose main product was milk. He also stated that the milk was not processed but sold as a raw product, this was because they had no processing factory .Therefore; immediately they milked the cows the milk is taken to the sales point where the demand is high. "There is high demand, actually it is the production that is low, we are unable to meet the demand, people have to queue and wait for their turn to come" (N/A (t) 1).

The third production is the dairy production. According to the respondent all the three enterprises were doing well and were able to generate money for the maintenance of the animals and the facilities as well as make profit for the unit.

The respondent also mentioned that apart from using money towards the maintenance of the animals and facilities, they also make extra income which the school and the department can use for other activities such as stationery, field trips for students sometimes as allowances for members of staff who wish to go for other duties.

Research and Contact with industry

When asked if students were involved in any way at the Animal Science and Research Production Unit, the respondent stated that students get involved during their practical period, because some courses demand for them to go and practice the skills they are taught in their lecturers. Therefore, they do their practical periods at the Animal science and research production Unit. The respondent further elaborated that there was a course- vacation practical where students are attached to the unit for a month and work with the staff at the unit. Involvement of students is dependent on the kind of research they conduct. According to the respondent, some types of research are on the treatment that is given to chickens. This treatment may render some chickens not fit for consumption in this vein such chickens are destroyed at the end of the research, meaning they cannot be sold to raise money.

Funding in relation to entrepreneurship

The results from the study have revealed that the unit does not receive any external funding but relies on its own production to sustain entrepreneurship activities.

Human Resource

The findings revealed that the department had enough human resource; the respondent stated that the issue regarding human resource had been sorted out about two years ago. Prior to that, the department had only one technician but now it had three technicians, which was enough for them.

Role of donors

Results from the study have indicated that the department of Animal Sciences and department of Research and Production unit in the school of Agriculture do not have any external donors involved in running or sponsoring activities in the unit. But the question is, does it mean that the department does not need external help in running and sustaining their projects such as transportation?

4.3.3 School of veterinary of Medicine

Entrepreneurship courses

When asked if the school offered any entrepreneurship courses the respondents answer was, "Our school where I work is actually a school where with training and skill (Vet medicine) one can start a business himself and can even be an employer in Vet clinics, Agro vet shops, or consultancy (clinical)" ((A5 a). Another respondent stated that animal health care is a commodity which veterinarians are providing in the public and private sector therefore students are taught basics of entrepreneurship in 5th year. "This is because a veterinarian is an entrepreneur by default though provision of a much needed commodity" (A5 b).

Research and contact with industry

On the aspect of research on entrepreneurship, the respondent stated that there was none. He however, he elaborated that there were some entrepreneurial activities going on in the school-the Vet clinic, smallholder dairy, poultry, pig production and laboratory diagnosis. With regard to internship, the respondent stated that the school did not have internship programs for their students.

When asked if their student had any contact with private companies, the respondent stated that, those from the field and running vet private practices do occasionally come to address their final year students.

However, the researcher went further and looked into UNZA calendar, which has outlined some practical courses taken by students in the School of Veterinary at different levels. It states that, before a student is allowed to qualify at the end of the sixth year he/ she will have satisfactorily undertaken vacation practicals as stipulated below:

- VMB 303: Farm practicals at a selected farm within Zambia for eight weeks during the vacation after the second semester of third year.
- VMP 403: Laboratory practical periods at either the government diagnostic research stations or the School of Veterinary Medicine for eight weeks during the vacation after second semester of fourth year.
- VMC 503: Veterinary clinical practical periods in government or private practice and abattoirs within Zambia for eight weeks during the vacation after the second semester of fifth year (UNZA, 2011: 434).
- VMD 532 (Veterinary Economics), Animal Health Economics and Veterinary Practice Finance. The course introduces veterinary students to micro and macroeconomic principles applicable to animal health; various veterinary services a veterinarian can offer and entrepreneurial skills (A5 b).

Funding in relation to entrepreneurship

When asked whether the school had any funding towards entrepreneurial activities, the respondent stated that, there was "no funding except the teaching where funding comes from the university, however the school has production unit to teach students things like poultry, dairy, pig and vegetable growing as a means of income generation" (A5 a).

Human Resource

On the aspect trained human resource in entrepreneurship, the respondent stated that those from the field and running veterinary private practices do occasionally come to address their final year students. However, he equally stated that most of them are not qualified to be appointed as per university qualification requirement and they do not show keenness to be an academic staff.

On the aspect of having enough human resource another respondent spoken to mentioned that, when compared to other schools they were okay, because they even had some expatriate lecturers from Japan.

Role of donors

Another respondent talked to said that their school had donors such JICA he also mentioned that the school was built with the assistance from JICA. Additional sources also revealed that, the school of Veterinary also has some programs sponsored by NORAD (NUFU, NORHED) at Master and PhD level that involve sponsoring Veterinary graduates for studies in some African countries while other programs are done in Norway. The question is, to what extent are external donors involved in the running of entrepreneurship activities in the school?

4.3.4 School of Education

Entrepreneurship courses

In response to the above question, the respondent stated that the core business of the school of Education was to produce graduate teachers for the country. "You know, education is a big industry in the country, and when the university was established in 1966, one of the main reasons was to provide graduate teachers for senior secondary school because expatriates were leaving the country after independence therefore government needed to train senior secondary teachers" (A3). He further explained that nothing much has changed the school still needs to produce many teachers as such; most of their programs are teacher education related.

Therefore, business planning in teachers is almost none existence, the respondent further stated that the school had a department of Adult education and extension studies that offered some courses in Project Planning and Monitoring. He clarified that the program was not meant for teachers but was meant for adults who want to sharpen their skills in whatever they were doing.

Research and contact with industry

The respondent stated that all the research in the school related to education issues, such as implementation of the education policy, effectiveness of teaching, learning processes, teacher education issues and education administration issues but not entrepreneurship.

When asked if the student in the school under went through any practical experiences, the respondent stated that students in the education department do get practical experience in

various schools around the country-for at least one or two months before they graduate but the practice is not related to entrepreneurship.

Apart from department of education, the school also had the department of Library and information studies that allowed students to go out and get practical experience as part of the requirement for them to graduate. According to the respondent, by the time of the interview the school had recently introduced another course, Environmental education; which was introduced for sustainable development, the program has students who are attached to civic centres and to various organizations.

With regard to internship, the respondent stated that the school did not have any program, which allowed their students to go for internship.

Funding in relation to entrepreneurship

When asked if the school had adequate funding, the respondent stated that, there was need for more funds to help in acquiring teaching materials such as textbooks and teaching aids. Besides if, more funds were allocated to the school, it would help in buying more furniture to use in lecture theatres.

Human Resource

There was need to have more lecturers who could help in teaching some courses in the school, due to the fact that some lecturers in some school programs had to teach about 200 students in class

Role of donors

In this school, external donors have only been involved in helping with projects that are not related to entrepreneurship courses or activities since the school is not yet involved in offering any entrepreneurship courses.

4.3.5 School of Mines

Entrepreneurship courses

When asked if the school offered any entrepreneurship courses, the respondent's answer was, "yes, I think some courses are offered, not quite in my own courses. It is not issues that I say are offered as entrepreneurship skills but I normally discuss issues related to entrepreneurship skills with my students" (A4).We try to instil the idea that, as students leave school they should not be looking forward to finding jobs in already established firms- but begin to think towards applying the knowledge they acquired and the resources that are available at hand to sort out their livelihood. Although the respondent talked to, was not sure whether the school offered any entrepreneurship courses, he recognized the importance of equipping graduates with entrepreneurship skills and was encouraging students to start thinking towards setting up their own businesses instead of looking forward to getting formal employment upon graduation.

The respondent expressed concern, about the education system "I think the education system has not transformed itself so much, because we work towards getting students educated so that after they have graduated they can go and get employed and not train them to go and become managers themselves and employ other people too" (A4).

Research and contact with industry

When asked if there was any research being conducted in relation to entrepreneurship. The respondent was not aware about but stated that entrepreneurship was not something that they had embraced particularly in the curriculum these become areas of orientation by individual lecturers. However, research on other issues was definitely being conducted.

He further stated that practical periods have been part of the program in the school of mines it is a requirement. For the student to graduate they must have some attachment to an industry just to get hands on and feel on what is actually happening and marry the theory they learnt in class with the actual practice. The respondent also argued that it has not been very easy to connect their students with the industry (private sector) especially after the former state owned Zambia cooperative mine company (ZCCM) closed. The respondent expressed the need to Offer internship programs to their students stating that such programs would help in giving students a chance to gain the work experience needed by employers. Further results revealed that, practical training is an essential part of training for the degree of Bachelor of Mineral Sciences. Every student shall follow an approved program of practical training during the vacations. A degree cannot be awarded when the student has satisfied the requirements for practical training (UNZA calendar, 2011).

Funding in relation to entrepreneurship

The respondent argued that funding was a major problem for all programs in the University because they are a government-funded institution. It is up to the Government to direct money towards areas that they find a priority. He also stated that they had many ideas not just related to entrepreneurship but other areas as well yet funding was the major problem.

Human Resource

The respondent was unaware if the school had people who had gone through entrepreneurship training. However, he stated that all of the people in the school were well qualified for their positions.

Role of donors

When asked whether the school had any entrepreneurial activities funded by donors, the respondent was not aware if there were any. However, he stated that there had been some projects, which were not related to entrepreneurship in the past that were run with the help of some donors. Based on the respondent's knowledge, external donors have been involved in supporting various projects in the school and not entrepreneurship courses.

4.4 Income generating ventures

Some scholars argue that, "the reduction of research funding has forced public sector institutions, especially universities, to undertake activities that either attract industrial funding or generate income. In part responding to government policies (both conservative and most recently labour), universities have become involved in exchange activities such as licensing patents and establishing innovation centres" (Etzkowitz et al., 2000: 321).

Etzkowitz further explains that, "for universities, this has meant that we are beginning to see a shift from a grant to an exchange economy in higher education. This has required new

institutional orderings and modified academic regimes that govern and reward entrepreneurialism" (Ibid: 319). Such changes have equally affected the University of Zambia.

The study at the University of Zambia has revealed that the institution has over the years ventured in different businesses such as: The Liempe farms, UNZA press, and Veterinary school clinic, UNZA clinic, York farm, Zambia Communications System Limited (ZAMNET), Technology Development and Advisory Unit (TDAU), Catering, DOSA income, Marshlands village which is for accommodation, Bookshop and Mini mart, Horticulture Nursery including business premises for rental. Therefore, "UNZA has also tried to optimize existing income generating undertakings and also seek new ones to generate additional funds. There are various business ventures that UNZA has -York Farm, ZAMNET, Liempe Farm, University Horticultural Nursery, University Printer, University Health Services and Marshlands Guest House. Additionally, UNZA has also increased student enrolment for self-sponsored students, are running parallel degree programs, short courses. Furthermore, income from funded research/projects and consultancy needs are given priority and encouraged" (Menon, 2012: 528).

To maintain or expand resources, "faculties are increasingly encouraged to compete for external dollars tied to market-related research. Market-related research is referred to variously as applied, commercial, strategic and targeted research" (Slaughter, 2010). Inspired by the US in the 1980's many Nordic Universities have undertaken various activities to stimulate commercialization of knowledge and research findings this has led to the development of more professional management of intellectual property such as licences and patents and the provision of internal structures to stimulate spin-off and start-up companies among students, staff and researchers (Lindquist, 2012). It seems UNZA has also been working towards achieving such goals.

In October 2009, a local Zambian newspaper reported that, "A local company had been awarded a multi-million dollar contract to develop a business park on part of the 135 hectares University of Zambia (UNZA) land. UNZA, through a private public partnership, wants to develop a six storey three star hotel, a stadium with gymnasium, shopping complex and hostels in Lusaka. Recently, UNZA signed a memorandum of understanding with business partners in which business contractors will build a shopping mall at UNZA"(Lusaka Times Newspaper, 2009). The paper further noted that, the project was expected to be done in three

phases with the first phase involving the erection of a business park, student hostels, sports complex and staff house.

According to Lusaka times newspaper, the shopping mall to be the property of the University of Zambia (UNZA) Great East Road campus was expected to cost K248 million. Deputy Minister of Education, Science, Vocational Training and Early Education David Mabumba was quoted to have told parliament that the prime land in question would be leased for a period of 25 years to Gradual Properties, a contractor that won the tender and currently working as a developer.

The paper further reported that the Minister stated that UNZA would benefit five percent profit of annual returns from the shopping mall building project being constructed in its vicinity by the private firm. The Deputy Minister also said that the shopping mall project would, among others, have restaurants, furniture stores and boutiques (Lusaka Times Newspaper, 2013).

By the time of the research, construction of the shopping mall was under way at UNZA. While recent findings have revealed that, the shopping mall has since been opened and is fully functioning.

4.5 Challenges concerning entrepreneurship activities at UNZA

This section addresses various challenges faced by the schools and at the institutional level in relation to entrepreneurship, by taking into consideration the main elements of entrepreneurship that were identified in the literature: funding, teaching plans, culture, donors, human resource and contact with industry.

4.5.1 School of Agriculture

According to Zambia's Sixth National Development Plan, agriculture remains the priority sector in achieving sustainable economic growth and reducing poverty in Zambia. This is because the country has immense natural resources such as land, water and fertile soils to support agricultural activities. In addition, "over 80 percent of the rural population depends on agriculture-related activities for their livelihood. The growth of this sector is, therefore,

important for the attainment of the long-term vision for Zambia which is to become, a prosperous middle income nation by 2030" (SNDP, 2011:108). The question is, what are the challenges that this sector is facing at university level?

Department of Animal Science and Research Unit

A number of challenges relating to the factors addressed in this study (teaching plans, human resource, donors and contact with industry) were brought out during the study. Some challenges were similar, while others were unique to the schools or departments. Therefore, the part below discusses those challenges.

UNZA is a public institution that follows procedures stipulated by the government to obtain inputs such as feed or drugs for the animals. The approval process is quite elaborate because it has to pass through a number of offices before funds can be remitted. According to the technician interviewed, these procedures had sometimes resulted in delays, when purchasing goods, causing shortages of products especially in cases where one actor was out of office. The question about sustainability can be illustrated by the following quote from the respondent, "there have been occasions in the past when the units would be ready to run a project and clients are available to buy the commodities, however the delay in having funds approved, has negatively affected production and sustainability of projects in the department" (N/A (t)).

The respondent further mentioned that they also faced challenges in relation to transportation. The unit had a number of animals that is 2000 broilers, and pigs were expected to go to a hundred including forty herds of cattle. Therefore, the unit required a lot of feed for the animals and needed transport to collect the feed from the suppliers to the unit. The respondent explained further that the unit did not have its own transportation therefore they depended on borrowing from other departments in the university, "however, they do not charge us the only problem is that they will only give us those vehicles when they have no use" (N/A (t)). Hence, it becomes a challenge for them to transport their products to the market place; sometimes lack of transportation has made them miss certain opportunities. Findings from the School of Veterinary Medicine equally revealed that the School had transportation problems.

The Department of Animal Science and Research Unit needed more land to use as grazing area for their animals, reason being that the available land was not enough and was shared

with other departments such as crop science and the soil science departments. The respondent argued that the area was not enough for them to grow pasture for their cattle therefore cattle is sometimes allowed to move around the campus in search for pasture.

Department of Agricultural Economics

While the respondent from the department of Agricultural Economics stated that, they were in need of more office space to accommodate members of staff as well as more storage space for their equipment. The department also needed to purchase some books for teaching but the department lacked the finances.

4.5.2 School of Humanities and social Sciences

Department of Development studies

The department of Development Studies expressed the need for the University to create more links with the industry; He mentioned that, they would like to have more industries working with them. The department also needed funding towards entrepreneurship activities. Furthermore, the respondent argued that there was need to work on the students' attitude towards entrepreneurship. A positive attitude will enable most of them to aim high and work towards setting up their own businesses. He also argued that there was need to have a policy that that can not only make entrepreneurship courses optional, but mandatory so that upon successful completion of their studies, graduates are able to look on different pathways in terms of building their careers.

Department of Economics

The respondents expressed the need to re-introduce the business aspect in the department of economics. According to the respondents, the department of Economics used to be department of economics and business but at the establishment Copperbelt University businesses courses were taken to Copperbelt University. Therefore, the department at UNZA remained with the teaching aspect. However, the respondents also stated that currently there were efforts to establish a Business School at UNZA.

According to the respondents, there was need to employ more qualified staff for that purpose because they were more focused on economics than business. "It is a constraint in terms of

personnel and constraints of how we are defined narrowly to focus on economics. We have not focused much on the business side" (N/A(t)).

Humanities Political administration

When asked if the department had any challenges, the respondent stated that the department lacked some materials for teaching and other activities.

4.5.3 School of Mines

According to the respondent they had not really looked into the aspect of introducing entrepreneurial skills into their students, therefore, there was need to introduce a course in entrepreneurship.

4.5.4 School of Education

The School of Education is one of the schools at the university that has a large number of students. Although, the school was not offering any entrepreneurship courses, the respondent expressed concern over the lack of enough infrastructure. He referred to the large student numbers in lecture theatres. Compulsory school education courses were among the courses that had a large number of students. As a result, some of the students would either look for furniture elsewhere or attend the lecturers while standing.

4.5.5 School of Veterinary Medicine

When asked if the school had any challenges, the respondent pointed out financial constraint and transportation as the major challenges they were facing as a school.

4.5.6 Challenges at Institutional Level

The official spoken to stated that the institution had some challenges pertaining to entrepreneurship activities. Firstly, funding towards entrepreneurship activities was not adequate. He further stated that there was need for the university to work towards capacity building that is, human resource especially in the area of entrepreneurship. Having enough human resource will help in delivering the entrepreneurship programs. The respondent also argued that there was need for the university to provide spaces where students can meet and interact to share ideas. He also stated that there was need for the university to have well established incubator facilities within its space that would be used for teaching. He means that if you are teaching banking, there should be a bank within the university grounds, and the people to run this should be students so that they learn the real staff when they are still in school. Such measures are to allow for students to practice when they are still in school.

Having presented results from the findings on how UNZA interpret the term entrepreneurship; the actual practice in relation to the education and commercial aspects of entrepreneurship including some of the challenges in relation to entrepreneurship, the next part will proceed to give a detailed discussion on the same issues.

4.6 Discussion

4.6.1 Interpretation of entrepreneurship

The findings have indicated that the University of Zambia does not have its own definition of the term entrepreneurship and the university does not have a clear policy that defines entrepreneurship. However, various respondents defined the term according to the way they understood it. Some of the key aspects brought out by the respondents were that UNZA was in charge of higher learning and their role as a public institution was to provide skills and knowledge that would help people to enhance their employability, and therefore entrepreneurship is one of the means of achieving such goals. Others stated that the university was looking at entrepreneurship as a way through which students will be provided with critical skills for them to be innovative. The respondents also referred to entrepreneurship as the promotion of private investment especially at a small scale and a practice where individuals take risks and start business ventures. One of the respondents defined it as a process of developing, managing and organising business with a view of making profit besides taking into consideration the number of risks involved. Scholars such as Barringer and Irenland (2006) have referred to entrepreneurship as the "process by which individuals pursue opportunities without regard to the resources they currently control" (2006: 461). Similarly, the European Union refers to entrepreneurship as an individual's ability to turn ideas into action, which includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives (2012).

Therefore, the way the concept of entrepreneurship is understood and interpreted at the University of Zambia is not any different from how other scholars and public actors have defined it. A key aspect included is the instilling of values in students that will encourage them to be more innovative regardless of the risks involved in the business ventures. UNZA also interprets entrepreneurship as a means of encouraging its students to not only look at the already established firms or organisations as the only means of earning income but for them to set up their own businesses and create job opportunities for other graduates. On the commercial aspect UNZA looks at entrepreneurship as a way of creating income generating ventures within and outside the institution.

The researcher considers the role that the Ministry of Education plays in fostering higher education as important to the study. Therefore, the next part outlines the role Ministry of education in higher education.

4.6.2 Role of Ministry of Education in Universities

Firstly, the Government recognizes its responsibility to safeguard and uphold its role in fostering the wholesome development of individuals at university level. The ministry further recognizes its role in promoting the well-being of higher institutions, and in ensuring that the principle of academic freedom cardinal for the independent pursuit of knowledge is maintained (Ministry of Education, 1996).

The Ministry of Education also influences higher education institutions through the universities for which it has statutory responsibility. This is because the universities produce the professionals required by the economy, while the other higher education institutions produce supporting personnel. In subsequent life, the professionals cannot function without the support of technical and ancillary staff who have gained their qualifications in non-university institutions.

Furthermore, the policy document (Educating our future) also gives an outline of the of government's expectation with respect to higher education institutions' staff and students. "On the other hand, higher education institutions, and the staff and students who comprise them, have the grave responsibility of being ever responsive to the changing needs and circumstances of society, including the legitimate interests of the state" (Ministry of Education, 1996: 97).

Relevance of programs

Educating our future policy document states that, the relevance of training and programs would be ensured by extensive interaction between the higher education institutions and various sectors of the economy. Some direct involvement in the institutions' activities by bodies such as the Employers Federation, the Manufacturers Association or the Association of Commerce and industry as well as relevant government ministries and other organizations would ensure that the programs offered were what industry, commerce and society required.

However the policy document equally noted that, there was very little participation by employers in the development of curricula for higher-level institutions. They also note that, except in the case of institutions established by companies to serve their own needs, very few employers contribute towards educating their future employers (Ministry of Education, 1996).

4.6.3 Concerns about funding

From the findings, it has been established that despite being a government sponsored institution, UNZA still faces a number of challenges that have resulted from inadequate funding such as lectures strikes and student unrest including inadequate infrastructure. Such protests have resulted in premature closures raising concerns among the general public, individuals and a number of organizations. Therefore, this section tries to elaborate on some of the factors that have affected funding at Zambia's largest public university (UNZA). The discussion will refer to the factors that were already mentioned in the findings, such as the effects of the structural adjustment program on universities. It further discusses some of the measures that the government undertook to sort out financing in Zambian higher education. Apart from that, the section also looks at some of the means that UNZA has put in place to supplement funding at the institution.

As already established, all the functions at UNZA including operational costs and tuition fees for students were fully funded by government until the late 1980s. It was during the late 1980s when the government introduced the concept of cost-sharing in the running the affairs of UNZA and subsequently funding at the institution has been on the decline. The operational costs have steadily increased owing partly to inflationary pressure and partly to other strategic factors such as excessive use of limited capacity arising from increasing enrolments (UNZA, 2008). This has also been noted in the UNZA Business Policy Draft (See e g 4.3 under strategic interpretation).

Funding at universities had been partly affected by the economic recessions during the 1970s and the terms and conditions that were offered by the IMF and World Bank, to some African countries of which Zambia was part. Loxley and Young quoted in the African Forum and Network on Debt and Development (AFRODAD) research paper on Structural Adjustment Program in Zambia, give more details on loans that were obtained by the Zambian government from the World Bank and IMF in the 1970s. They state that in 1973, Zambia negotiated a stand- by credit of 19 million dollars and in 1976 another loan was given in the same amount and it carried the following conditions: a reduction of subsidies, freezing the wages of public service employers and diversification of the economy from dependency on copper (African Forum and Network on Debt and Development, 2007:12).

It was during this period that, the SAP was introduced as part of the World Bank conditions on African governments and proved to be harsh on the Zambian Government and its people. During the SAP period, universities in Zambia and other African countries experienced reduction in funding of higher education. Although developed nations may have not gone through SAP, the recession in the early 1980s can be argued to have equally affected state funding to higher institutions in the US and other developed nations. McGuinness states that, funding in the United States (US) dropped precipitously at the time of the recessions in the early 1980s, 1990s and early 2002s"(McGuinness, 2005: 3).

Brock-Utne (2006) illustrates how the World Bank (1974) in its Education sector Working Paper began the process of emphasizing the importance of primary and basic education, that the proportion of education lending to this sector be increased (from 11% to 27%) thus reducing the proportion going to higher education from 40% to 30% (Brock-Utne 2006:17). She further states that the World Bank also stressed the need for African universities to be trimmed and reconstructed to produce only those skills, which the market demands.

Many measures have been undertaken to try to sort out issues relating to funding in the Zambian higher education. However, universities do not still seem to have adequate funds to run all the programs in the institutions including those related to entrepreneurship education.

Funding plays a major role in the autonomy of the universities. Some scholars have argued that, "the way in which financial resources are located across and within disciplines determines to a large extent the research portfolio and the curricular options" (Jongbloed, Enders & Salerno 2008: 316). According to Olsen and Maassen (2007), universities should have more autonomy and greater distance to government. They argue that, intervention by public authorities should be at arm's length and not go beyond providing a levelled playing field, clear mission statements and accountability mechanisms for results achieved. The OECD (2006) equally argues that the maintenance of financial stability is an important component in achieving academic success, but this can only be attained in the modern period from a diversified funding base in which the state does not provide the major proportion of the income (OECD, 2006).

In a bid to solve these particular problems various suggestions from different sectors of society were given over the years on how to improve funding at the two universities in Zambia (CBU and UNZA), mostly encouraging the private sector to be involved. Other studies by the OECD (2001), have suggested the need for the universities to come up with its own university-generated income. Here the possibilities include income from endowment and investments; earned income from campus services, ranging from the hospital to the bookstore; student tuition and fees; alumni fundraising; and royalty income from patented intellectual property in which the university and specific faculty members share as co-holders (OECD, 2001).

The results of the study have revealed that UNZA has in the past years taken positive measures towards supplementing funds at the university by engaging into income generating ventures, such as the hospitality business in form of Marshland Village, the Liempe and Horticulture farms, UNZA clinic, ZAMNET and UNZA press. The study has also revealed that the University of Zambia recently leased out land within its premises to a company, which has since built a shopping mall, and the university is expected to be getting royalties for a period of 25 years. Such positive measures if well managed and funded will definitely help in raising more funds to supplement government funding.

However, it is hoped that more efforts will be made towards connecting the industry with the university to allow for more people from the private sector to invest money into the university. The private sector can contribute towards the university by setting up projects, sponsoring students in study programs that are of interest to them, and allowing university

graduates to do research or internship in their firms. Such measures will not only benefit the university but the private sector as well by getting skilled labour from the university.

4.6.4 Entrepreneurship education in national policies

The results from the research revealed that although there was no specific policy that addressed graduate entrepreneurship at university level, the concept of university entrepreneurship does feature in some national policies such as *Zambia's 2006-2010 Fifth National Development Plan, Vision 2030* and the *1994 National Youth Policy*, which addresses issues pertaining to creating better employment opportunities for the youth. I have realized that most of these policies do address entrepreneurship at national level, which specifically addresses youths but there seems to more concentration on entrepreneurship at vocational and technical training institutions rather than at university level. Therefore there is no relationship between the policy and practice (See point 1.4 where this relationship is raised). In as much as the national policies do address issues pertaining to youth entrepreneurship.

The policies seem to be more tailored towards empowering youths in technical colleges with entrepreneurship skills that can help them become self-sufficient due to unemployment levels at graduation. However, the study has also revealed that university graduates, who are also part of the youths in the country, are equally facing difficulties in getting job opportunities. As earlier stated in the rationale and introduction of the study, not all university graduates get an opportunity of being employed upon graduation. As more and more people acquire university qualifications the job market seem to become more saturated. Therefore, the question is, what is the government doing to solve this unemployment problem among university graduates in Zambia? Perhaps, it would be helpful if government and its stakeholders would to do more to address graduate entrepreneurship at university level as well as consider having a policy that will address graduate entrepreneurship at the same level.

Torjman (2005) states that a public policy is a deliberate and (usually) careful decision that provides guidance for addressing selected public concerns (in this case university graduate entrepreneurship). He further states that "policy development can be seen, then, as a decision making process that helps address identified goals, problems or concerns. At its core, policy development entails the selection of a destination or desired objective" (Torjman, 2005: 4). In this case the researcher finds it necessary for government and other policy makes to consider

having a policy that will address entrepreneurship at university level not only for technical and vocational training students.

Importance of entrepreneurship education

The increasing number of university graduates who fail to get jobs upon completion of their study programs in some parts of the world has been a source of worry. Therefore, entrepreneurship is viewed as one of ways through which this problem can be solved. Different scholars and people from different backgrounds have outlined some of the benefits of offering entrepreneurship courses to students.

Paul (2005) and Ojeifa (2013) cited in Ayatse (see, 3.0) argue that entrepreneurship education offers functional education for the youth that will enable them to be self-employed and self-oriented. Entrepreneurship is also expected to provide the youth graduates with adequate training that will enable them to be creative and innovative in identifying novel business opportunities. This compliments some of the responses from the respondents in this study from the Schools of Mines and Humanities under the Department of Development Studies (see e.g. 4.3.1 and 4.3.5 on the need to encourage more students to be innovative).

Secondly, the study has also revealed that entrepreneurship serves as a catalyst for economic growth and development and at the same time it offers tertiary institution graduates with adequate training in risk management, to make certain bearing feasible. Furthermore, entrepreneurship is also viewed as a means of reducing high rate of poverty as well as creating employment generation.

Finally the literature has revealed that, entrepreneurship is also expected to create employment generation as well as help provide the young graduates with enough training and support that will enable them to establish a career in small and medium sized businesses. Lastly entrepreneurship is expected to inculcate the spirit of perseverance in the youths and adults this will enable them to persist in any business venture they embark on (Ayatse, 2013).

Advantages of entrepreneurship education

It is also believed that when students acquire some entrepreneurship skills they can become self-sufficient through setting up their own businesses and employing others. This reduces the

number of graduates who wait to be employed in firms that are already established and where job opportunities are highly competitive.

Therefore, if more students at the University of Zambia are given an opportunity to take courses in entrepreneurship, it will allow for more graduates to become self-sufficient and help in job creation employment.

Institutional and strategic policies

To find out more on the factors that have influenced the current state of entrepreneurship at UNZA the researcher analysed both the 2008-2012 and 2013-2017 UNZA Strategic Plans and a *Business and Development draft policy*. The research objective for analysing both plans was to link some of the ideas that were raised in the 2008-2012 Strategic Plan with the ones in the 2013-2017 Strategic Plan. The 2008 -2012 UNZA Strategic plan revealed that, teaching and learning were the core activities and are a major determinant of the extent to which UNZA is able to fulfil its mandate of helping overcome the social, economic and scientific challenge that Zambia faces through the provision of high quality, high level human resources to manage the economy.

When analysing the two UNZA strategic plans, the researcher tried to see how the visions and mission statements in both strategic plans were presented. The vision in current UNZA Strategic Plan 2013-2017 is more precise and specific because the institution's vision is to be "a provider of world services in higher education knowledge generation" (UNZA, 2013:xii) the current vision gives an idea of the services and for what purpose. Whereas the previous vision in the 2008-2012 UNZA Strategic Plan presented UNZA as "a leader in provision of higher education in the region, and celebrated for providing comprehensive and rigorous teaching-learning, research and scholarly programs that are responsive to the needs of individuals, industry and society" when compared with the vision in the current strategic plan, the previous vision was too high, the use of rigorous from the researchers point of view seems to present a vision that is strict by the book but that is not usually the case because it is not always that things go in a particular way (celebrated for providing comprehensive and rigorous teaching-learning) Whereas the previous mission statements and the previous mission seems to be very general and does not state the means of application while the current vision specifies its intention that has to do with providing relevant higher education through teaching and research that is theoretical and practical through community service.

However, it also important to note that, both visions from the two UNZA strategic plans have indicated that the university has maintained its role of producing human resource to contribute to the development of the economy and other important sectors of the country. Therefore, community service is one of the primary roles of the university. The university is expected to provide services that will meet the needs of the community which includes engaging commercial enterprises as well as produce trained human resource in various fields, so far UNZA the study has revealed that UNZA has over the years engaged in income generating services as presented in the findings.

The University of Zambia 2008-2012 Strategic Plan has also outlined some of the challenges that were faced by the institution towards achieving this goal; one of the concerns raised was the inability of the university to prepare its graduates adequately for the industry. Their concern was that, employers expected the university to produce graduates who are enterprising, critical thinkers and life-long learners who are able to adapt to the complex and rapidly changing requirements. A number of issues arise from the study the findings have revealed that University of Zambia does not have a policy on entrepreneurship. However, in order to shade more light on reasons for this, it is important to note that UNZA has since its inception been committed to providing programs of study in teaching and learning experiences that are intended to meet the needs of the students, the economy and society. Therefore, their core activities are teaching and research.

Although there was no official policy on entrepreneurship at the time of the research, the interview with an UNZA official in the business and development section indicated that there was one which was going through the process of approval, "it is just a matter of time the policy in this area will definitely be there" (N/A (a) 1).

From the researchers' point of view it is imperative for the UNZA authorities to come up with a policy that will address entrepreneurship at the institution especially that there have been a number of entrepreneurship activities at both the educational and commercial levels. Having such a document will act as guideline that can be used at both the educational and commercial aspects. Without a guideline it becomes difficult for the implementers to perform effectively.

Other findings have also established that UNZA has taken some positive measures towards addressing the concerns about the inability of the university to prepare its graduate for industry as stated above. The study has shown that efforts have been made towards connecting policies with practice, from the findings UNZA has made efforts towards introducing entrepreneurship courses in the Schools of Humanities and Social Sciences, Veterinary and Agriculture (See point 1.4 on the relationship between policies and practice). However, it has also been established that the institution requires more staff to teach the large student numbers (see Appendix F). Having enough human resource will be useful for teaching and offering other services that relate to entrepreneurship activities.

The study has also established that UNZA is public funded institution and that financing will be on a shared basis between the Government and institutions themselves and students. Higher Education institutions are expected to develop strategies for widening their resource base. It has been further established that UNZA has over the years engaged itself in some income generating ventures such as UNZA press, ZAMNET, Marshland Village and Liempe and University Horticultural farms. However, despite engaging itself in such business ventures, the institution is still unable to meet the huge cost of running the University. Concerns about inadequate funding at the institution have been raised in both UNZA strategic plans.

However, it has also been established that the university that despite operating in a liberalised economy in which investment opportunities are numerous, the university has not effectively utilised opportunities to attract investments. UNZA's 2013-17 Strategic Plan has also indicated that "there has been a very weak linkage between UNZA and the industry over the years" (UNZA, 2013:12). As a result UNZA has not benefited much from business opportunities that could have contributed immensely towards enhancing total self- generated income.

On paper it seems that UNZA has identified some areas that need to be addressed to improve entrepreneurship activities at the institution such as linking UNZA with the industry. However, it raises question on whether there been deliberate measures taken to ensure that the university is able to have more collaboration with industry. Identifying a problem is one thing; nonetheless, what remains to be done is to make more efforts towards engaging the industry to participate in some university activities. Therefore to improve on funding, UNZA needs to not only end at identifying the weaknesses but go a step further to address the issues on the ground, only then can there be improvement in both the commercial and education aspects of entrepreneurship and other university activities. Other results have also revealed that the current strategic plan 2013-2017 has outlined intentions of developing capacity to engage in entrepreneurship and business for sustainability and competiveness in the knowledge economy. Activities include: Identifying business investment opportunities, conducting feasibility studies and preparing business plans, they also intend to mobilize funds for establishing business and investment, maximize income on investment from business ventures and build capacity in engaging in entrepreneurship activities. Strategically there seems to be a relationship between intentions as raised in the Strategic plans and practice at the University of Zambia in terms of establishing businesses that relate to income generation. From the findings, UNZA has taken a positive step by leasing out land within its premises where a shopping mall has been built with the intention of getting royalties for a period of 25 years (see point 4.4 in chapter four).

Apart from the two strategic plans, a draft of the UNZA Business Policy is another policy that will act as a guide line for business and investment at the institution.

According to the UNZA Business Policy draft, the investment Policy identifies the investment goals and objectives, sets out decision-making processes for selecting investments and specifies the procedures and relevant measurement indexes to be used in assessing investment performance (Monitoring and Evaluation). Part of the objectives are to access an ideal range of investment opportunities in various asset classes, so as to allow for diversification and cover a wide range risk/return spectrum (UNZA, 2012).

Other findings have revealed that the university did not have a board of entrepreneurship but plans of establishing such a board were in place. Although teaching and research are UNZA's core activities, the institution is making head way by incorporating entrepreneurship in both the teaching and commercial aspects. This can be seen in some schools where entrepreneurship courses are being offered. It gives an impression that, some graduates at UNZA are being taught to be innovative. The institution is equally engaged in some business ventures within and outside the university. However it has not been easy to run these activities because of financial constraints and other limitations. Therefore UNZA has to find means of addressing these issues not just on paper but through implementation.

4.7 Commercial activities

To find out more on what was actually happening at UNZA in relation to entrepreneurship, the researcher had some interviews with academics and technicians from the selected schools as well as the Business and Development section. The interviewees did shed more light on the kind of businesses that UNZA was running. These interviews revealed that the institution had the following income generating ventures: Marshlands Village, which provides hospitality services, York Farm and Liempe farm, the two farms were said to be engaged in crop and animal production and that they were also working towards fish farming. Other business ventures are ZAMNET and UNZA Clinic. Apart from that, they also have the printing section, which is under a label called UNZA Press it combines production and publication.

Apart from the ones mentioned above, UNZA also has the Technology Development and Advisory Unit (TDAU), which is primarily a consultancy unit that provides testing, designing, fabrication, manufacturing, training and marketing services. On request, TDAU modifies existing technologies or produces original designs to meet the user's needs, conducts needs assessment and investigates potential business opportunities for its clients. It provides small producers and industry with technological options that use locally available resources, are simple enough to operate and maintain by the people, are affordable and labour-intensive, and use people's existing skills and knowledge.

The unit enjoys more financial and administrative freedom from the university. The manager of TDAU has the freedom to allocate resources without express permission from the university administration. The main areas of activity include food processing, building materials and production, rural transport and renewable energy. TDAU has worked with several development agents (e.g. AFRICARE, USAID), regional bodies (e.g. COMESA), international organizations (e.g. UNDP, UNIDO and UNESCO) and the Government of Zambia (African Technology Development Forum, 2011).

Further explanation from one of the UNZA officials indicated that TDAU was an adverse unit that was established in the School of Engineering to be used by students of engineering or lecturers who invented things. According to the respondent, whatever is invented is taken to TDAU with the view of perfecting it and later commercializing it. The respondent also stated that at that moment the incubation was at a small scale however, plans were underway to expand and take it to the national level. While UNZA may not have an entrepreneurship programme like the TOP program at University of Twente which involves companies helping in setting up start-up companies within the university, the results at UNZA revealed that TDAU, which is a business within the university, did run independently from the activities of the university. Just like the entrepreneurship activities at University of Twente, employees in TDAU were not from within the university. The TDAU unit, whose main areas of activity include food processing, building materials and production, rural transport and renewable energy, enjoys more financial and administrative freedom from the university and the manager of TDAU has the freedom to allocate resources without express permission from the university administration.

Like entrepreneurship programs at University of Twente that have had links with industry and some regional programs, TDAU has also worked with several development agents such as AFRICARE, USAID and regional bodies such as COMESA including international organizations like UNESCO as well as the Government of Zambia.

A study conducted by Juma at the University of Zambia which looks at universities as business incubators revealed that in early 1994 the University of Zambia decided to establish a campus-based company called ZAMNET Communication Systems to link the institution to the Internet and provide service to commercial customers. At that point the World Bank expressed an interest in covering 80 per cent of the cost of the first year's operation. It lent ZAMNET the start-up capital, with the condition that the university would offer some shareholding in the unit to the public.

He further states that the administration worked with customers and other interest groups and intensified marketing. The university provided most of the labour and the operational space for four years. The number of commercial accounts grew from 5 to 165 between January and June 1995, and seven months before the lapse of the World Bank loan, ZAMNET was generating enough income to buy new equipment. He also argues that the commercialization of ZAMNET demonstrated that provision of internet services could be good business even in poor countries. The demand for e-mail and internet services was high and soon after its launch, the link to South Africa became overloaded and ZAMNET installed a VSAT to cope with growing demand for services. Other institutions soon followed. With the experience gained from ZAMNET, the national regulator, Zambia Telecommunication Corporation, developed a new unit that specialized in internet service provision (Juma, 2007).

The studies have also shown that although the economic impact of ZAMNET had not yet been fully assessed, a good number of the country's businesses, government departments and learning institutions and most of the internet cafés and telecentres were connecting through ZAMNET. The impact of ZAMNET in encouraging enterprise development is said to be immense because it has also contributed to the creation of employment opportunities and improving people's livelihood.

Therefore, such an initiative has not only contributed much to the country's economic development but also provided the institution with a wider knowledge base as well as creating employment opportunities for many. The case of ZAMNET is one of the many examples that show how African countries can use emerging technologies to create new business enterprises. Finally, to sustain such efforts, Juma also argues that it requires a policy environment that supports entrepreneurship on general and university-based businesses in particular. Therefore, ZAMNET's pioneering example should serve as a source of ideas on how universities can support development goals without undermining their academic missions (Juma, 2007).

4.8 Practice regarding entrepreneurship

4.8.1 Course Plans

This part discusses the educational aspect of entrepreneurship at UNZA in line with the factors that were introduced in chapter 2.

Although the study did not involve all the schools at UNZA, findings from the five schools that were selected have shown that there are some entrepreneurship courses that are offered at different study programs (Undergraduate, Masters, and PhD) in some schools. For instance, there was a course offered in the School of Humanities and Social Sciences at the undergraduate level in Development Studies (DS9850 entrepreneurship and development). The course is offered at third and fourth year level as an elective course. This course is also offered to some students from the School of Education and is credited.

Apart from that, within the School of Humanities and Social Sciences the Department of Development Studies had also signed a memorandum of understanding with the Ministry of Commerce Trade and Industry to offer a course in Trading Policy and Development. The course was meant to help students in understanding the intricacies of trade in both domestic and foreign trade. The respondent explained further that through this arrangement they were helping to link students with private sector as they were operating in a neo-liberal environment where market forces were taking centre stage.

Through the same initiative, the Department of Development Studies had been in charge of conducting research on behalf of the Global Entrepreneurship Monitor (GEM) through the support from DANIDA and IDRC from Canada. The department of Development Studies conducts an annual research throughout the country in terms of the extent to which they are able to handle issues of entrepreneurship within the country and write annual reports, which fit into the global entrepreneurship monitoring reports which is a comparative study with over a hundred countries.

The study has also revealed that the department of Political Administration had designed a course for undergraduates in entrepreneurship but it was still in the pipeline waiting to be approved. However, the respondent did mention that they did have an international program at master level called Economic Policy Management (EPM), which was specifically for entrepreneurship.

The results from the department of Economics indicated that no entrepreneurship courses were in place at undergraduate level. However, the department was offering an entrepreneurship course, Economic Policy Management EPM program, at master level. The course not only involved participants from within Zambia, but also other countries in the region. These include Namibia, Zimbabwe, Malawi, Mozambique, Lesotho and Tanzania. Apart from that, the department was also offering a Doctorate in Business Administration (DBA) which did not have local staff but guest lecturers from Malaysia.

Other results also revealed that School of Agriculture had an entrepreneurship course, which was offered in the Department of Agriculture Economics under the course Agribusiness Management AGE 4201. This course specifically provides students with entrepreneurial skills on how to plan for a new venture and carry out market research. The course also provides skills on how to develop business strategies; market products; plan and manage production and logistics. Apart from that, students in the School of Agriculture undergo practical experience at the Department of Animal Science and Research Unit where they practice skills by working in the piggery, chicken run or with dairy cows.

Furthermore, the study has also revealed that UNZA through the School of Agriculture in collaboration with Zambia National Commercial Bank had signed a memorandum of understanding in which the Bank was to provide some funds that were to be used towards empowering the students with entrepreneurship skills. At the time of the research, the agreement was still on paper. However, the respondent talked to acknowledged that the bank was just waiting for the university to finish with the logistics before the funds were released and was hopeful that this would be done in the earliest possible time. The respondent also mentioned that the School was working on the logistics and looked forward to the fulfilment of the project.

Whereas, the study at the School of Veterinary medicine had equally revealed that under the new curriculum, which was approved in 2014, the School of Veterinary Medicine has a course in animal health economics and veterinary practice finance, which introduces students to principles of micro and macro-economics of animal health and entrepreneurship. Initially the course was called veterinary economics (VMD 532), but it was found lacking in business skills. This is coupled with intensive practical skills, which the students undergo during the five-year period.

Although there was no specific course in entrepreneurship in the Schools of Mines and Education, students in both schools do go through practical training in their respective courses and these studies do equip them with the skills they need to apply in their prospective jobs.

A common and positive issue that arose from the study in the Schools of Veterinary, Agriculture and Humanities and Social Sciences on teaching in both entrepreneurship courses and other practical programs is the aspect of inviting people who are experts from various fields to address the students at the university on issues relating to their respective fields. This compliments the study that was undertaken by Ashoko Group (2014), which argues that such initiatives have produced excellent results so far because students can quickly learn and grasp real world insight that tones and tones of business literature might not deliver so pointedly. Therefore, in this aspect UNZA has taken good measures towards exposing students to reallife experience. It is hoped that such initiatives can be adopted in most study programs.

The 2013–2017 UNZA Strategic Plan states that the university intends to build a business school however, this had not yet been implemented by the time of the research. Once the school is established, it is hoped that more students will have an opportunity to take

entrepreneurship courses not only among business students but also students from other programs within the institution.

4.8.2 Linkage with industry

Linking the university with the industry has been seen as one of the means of helping source extra income or services to improve the way the institution functions. In its Strategic Plan, the University of Zambia acknowledges that it has observed and established that there is a very weak link between the industry and UNZA. The strategic plan also states that the "University of Zambia has not established strong collaborative linkages with the industry over the years. Consequently, UNZA has not benefited much from the business opportunities that ordinarily could have contributed immensely towards enhancing total self- generated income" (UNZA, 2013:12).

The question is, has the university put in place any measures to ensure that this problem is addressed practically rather than just acknowledging it on paper? In as much as UNZA has acknowledged that it has not done much to establish strong links with industry, it is imperative for the university authorities to take serious measures and ensure they work towards establishing these links by inviting the private sector to get involved in different programs at the university.

It is believed that the industry plays an important role in helping universities to realize their goals, both the institution and the students can benefit from having contact with the industry. The industry can also benefit from the university by either sponsoring students in programs of interest and employ them upon completion of the study programs or getting some students to do internship in their companies, which would ease on labour depending on the agreement they have with the institution.

4.8.3 Relationship with donors

This part tries to explore the relationship that UNZA has had with donors over the past few years. It takes into consideration both entrepreneurship related activities and other projects at the institution.

There were some courses and other entrepreneurship activities at UNZA that were sponsored by some donors, in the form of capacity building, projects and scholarships. The results from the school of Humanities and Social Sciences revealed that the department of Development Studies was offering an entrepreneurship course DV 9850 but it was not sponsored. However, the department through support from DANIDA and IDRC from Canada is in charge of global monitoring by conducting research throughout the country in terms of the extent to which the country is able to handle issues relating to entrepreneurship. The department also writes annual reports that fit in the Global Monitoring report which is a comparative study of more than a hundred countries.

While other results revealed that the department of Economics had a course in entrepreneurship at master level in the Economic Policy Management program. The program was sponsored by two organizations, the World Bank and the African Building Foundation.

Further results from the School of Agriculture in the Department of Agricultural Economics equally revealed that the department had previously had programs with the German Academic Exchange Service (DAAD) who offered teaching services and university graduates benefited from the scholarship offered by DAAD. Apart from that, other results revealed that the School of Agriculture had a wing, which was built by the Canadian International Development Agency. At a cooperate level the school had also signed a memorandum of understanding with Zambia National Commercial Bank who were expected to sponsor a course in entrepreneurship in the School of Agriculture.

Other results from the School of Veterinary Medicine revealed that the Japanese Agency JICA built the school. NORAD is also involved in offering sponsorship on capacity building. Other results from the schools of Education and Mines also revealed that the schools had some projects that were donor sponsored, but were not related to entrepreneurship.

From the schools that were investigated in the study, the results have shown that most of the entrepreneurship courses that are being offered in some departments are more theoretical than practical. Further results have revealed that the reason for not having the practical part was due to inadequate funds. The practical aspect of entrepreneurship is equally important if students are to acquire the required skills. The study has revealed that there are a number of donors at UNZA that have been involved in capacity building, and sponsorship of different programs as well as construction of infrastructure. However, the study has also shown that there has not been much donor involvement in entrepreneurship activities at the University of Zambia.

The study suggests that, involving donors in entrepreneurship courses might help in strengthening or having the practical aspect of entrepreneurship. It will also allow for students to have a chance to do research in entrepreneurship related activities. Therefore, the university should try to look into possibilities of involving donors who might be interested in sponsoring entrepreneurship courses at the institution.

To build up on the findings, the researcher further analysed documents that have outlined donor-funded projects at UNZA and the following were the results;

UNZA receives considerable donor funding, which includes inter-allia the Netherlands funded project, 'Triple S' project, working amongst others in UNZA's ICT infrastructure and the project ' Strengthening HIV- related interventions in Zambia co-operation in research and institution capacity building' funded by Norway. The ICU program at UNZA consisted of 2 phases from 1997-2001 and 2002- 2006 and was coordinated by Ghent University in Flanders (De Nooijer and Siakanomba, 2008:3).

Kisauzi, Tsutsumi and Mlangwa (1993) revealed that the UNZA Veterinary School was built using a US\$26 million Japanese government aid grant to Zambia. This grant was followed up by a Japanese funded bilateral technical co-operation project administered by the Japanese International Co-operation Agency (JICA) and complemented by the Japanese Overseas Cooperation Volunteers (JOCV) and Japanese Government training scholarships. The study also revealed that the first seven-and-a-half-year phase of the JICA project commenced in 1985.

Other long-term donors to the school included the Republic of Ireland (through its Higher Education Development Co-operation Agency - HEDCO), Great Britain through its Overseas Development Agency (ODA) and the British Council, and Belgium through the Flanders Association for Development Co-operation and Technical Assistance (VVOB), as well as a link with 697 the University of Ghent. Kisauzi, Tsutsumi and Mlangwa further state that there have also been occasional donors, such as the Danish Volunteer Services, the (West German) Committee of Protestant Churches for Services Overseas, and the Dutch Government (Kisauzi, Tsutsumi and Mlangwa, 1993).

The Review of the Ministry of Education Sector Plan shows that donors like JICA and USAID are some of the main contributors to project funding which are funds controlled outside the Ministry of Education. They operate through their own PIUs independent of GRZ

procedures. Information collected shows that at least JICA liaise with the Ministry of Education before commencing their activities. One of the main problems of project funding is the fact that they are "off-budget", implying that they do not appear in the budget presented to Parliament thus contributing to an underestimation of the Ministry of Education of the funding available.

An emphasis is placed on the issue of accountability. The Ministry of Education Sector plan, also states that if the issue of accountability is to be addressed as a sustainable governance issue then the "MOE will have to work much closer with civil society and the Civil society will have to become more knowledgeable to be consistently constructively critical. There have also been concerns that both MOE and Civil Society must take into consideration the view of the elected parliamentarians, through the relevant Sector Committees" (NORAD, 2007:91).

4.9 Barriers to entrepreneurship activities

This part discusses the challenges that are currently affecting entrepreneurship activities at UNZA and it focuses on both the educational and commercial aspect. The discussion centres on the factors that were raised in the findings and literature review (funding, human resource, donors, culture, teaching plans and contact with industry).

4.9.1 Institutional commercial and education aspects

From the schools researched, the results indicate that UNZA has introduced some entrepreneurial courses in the Schools of Humanities and Social Sciences, under the Development Studies at under graduate, School of Agriculture at undergraduate, department of Economics at master's level and PhD as well as in the School of Veterinary Medicine. However, the institution seems to be facing some challenges in the educational and commercial aspects of entrepreneurship.

Firstly, the School of Agricultural under the Department of Animal Science and Research Unit had three production units which are the Broiler, Piggery, and Dairy productions. The findings also revealed that all the production units had the potential of making profit. They were, however, not able to realize their full potential due to a number of challenges, including the elaborate procedures they had to follow before having their funds for their projects approved. These long procedures have in certain instances negatively affected the production, sometimes leading to delay in working on projects.

According to the respondent delay in getting supplies on time had contributed to low production, causing their clients to look for the same products elsewhere. A few years back UNZA acknowledged that the "administrative procedures are lengthy, making it difficult for Schools to respond rapidly to emerging national needs. The financial structure exhibits the same weaknesses. The financial control system is highly centralized and leads to long and costly delays in the procurement of goods and services, even when the schools and units have sufficient funds" (UNZA, 2008:20). This compliments Chell who argues that the problems this form (bureaucracy) presents include Headquarter Usurping divisional powers by centralizing product-market decisions, " it tends to protect vulnerable parts of its operation and its control systems encourage steady improvements in financial performance but tend to discourage entrepreneurialism" (2001:8).

These findings of the study have revealed that UNZA has strategically recognised the negative effects of bureaucracy on schools and units, however, nothing yet has been done to decentralise the system (see point 1.4 on the relation between policies theory and practice). Nonetheless, what remains to be done by the institution is to address these issues not just on paper but to take action. It is anticipated that once these production units are able to access funds in good time, it will enable them to plan properly for the required materials such as drugs and feed for the livestock as well as allow them to expand and make more profits.

Secondly, the issue of transportation was another major concern that was raised by respondents from the Schools of Agriculture and Veterinary Medicine; both schools stated the need to have their own means of transportation. Both schools argued that they needed transport to not only take their students on field trips, but also transport their goods and services to the market places. One of the respondents stated that the lack of transportation has in some instances made them to ask other departments for transport, as a result the unit has not been running effectively and efficiently. From the literature, Konayuma (2009) stated a number of challenges that Zambia faced in the provision of entrepreneurship education, which included the lack of appropriate training materials. Addressing such matters will enable the schools involved in animal and crop production to increase on production as well as make more profits to invest in productive areas.

Lack of funding for projects or research related to entrepreneurship at UNZA was a common challenge that was brought out by a number of the respondents spoken to. Some respondents stated that they had a number of ideas and would like to invest in projects that would be beneficial to the students and the university. Nevertheless, there was nothing or limited funds for such projects because UNZA is a government-funded institution and it was up to the government to direct money towards areas that were of great importance to them. "We have ideas related to entrepreneurship but funding is the major problem." The issue of inadequate funding was also one of the concerns that were also raised at institutional level. The European Commission activities do not involve considerable flow of funding, for instance, involving enterprises' representatives in curricula design or offering internships and jobs. Because a limited flow of funds is present, universities' central administrations are less likely to compile such information in their annual reports (European Commission, 2008).

Thirdly, a number of the respondents from the university officials and academics as well as the 2008-2012 UNZA Strategic Plan, stressed the need for UNZA to strengthen its ties with industry. Therefore, UNZA also recognizes that the institution has not established strong collaborative linkages with the industry over the years. Consequently, the university has not benefitted much from the business opportunities that ordinarily could have immensely towards enhancing total self-generated income.

It is hoped that, more effort will be made towards linking the university with the industry. By linking the university with the industry, the university will have more chances of getting sponsorship for research and some projects related to entrepreneurship. There will be value creation in both places: the industry provides money and places for students to practice while the students go and offer their services through internships. The private sector can also come to the university to invest in very beneficial courses in the curriculum to make theory more practical. It can also get skilled labour from among the trained students but all this will depend on the arrangements they have with the university so that both parties benefit. It is also mentioned that there were some existing opportunities for entrepreneurship in Zambia such as, "availability of space or workshops in training institutions and industries that can be used as business incubators" (Konayuma, 2009:5).

The need to have more qualified human resource was among the concerns that were raised by most departments in the schools that were studied. This applied to both entrepreneurship courses and various teaching programs. Such concerns were noted in the School of Education due to large the student numbers especially in school education courses that are compulsory to most undergraduate students. With more precise information especially on the School of Education, the researcher would have had more arguments that the School has the largest enrolment numbers. But the study lacks the details since it did not have access to given enrolment numbers per school but only for the programs in the institution (table 1). I still underline that the School of Education has the largest student numbers and this is based on the responses from the interviews and my own observations and experience as a former student. Other concerns were from the department of Economics in the School of Humanities and Social Sciences, where the respondents stated the need to have more qualified staff that would help in teaching entrepreneurship courses at PhD level. The European Commission also raised similar concerns, arguing that, "there are a number of obstacles hindering the uptake of entrepreneurship education such as a shortage of human resources and funding for this type of education" (European Commission, 2012: 7). Similar sentiments were also raised by Konayuma (2009) and Unachukwu (2009). However, the School of Veterinary Medicines did not express such concerns.

The need to have adequate infrastructure, was another concern that was raised by some respondents from the Schools of Education, Agriculture and Humanities and Social Sciences (Department of Economics). Among the infrastructure was the need to equip lecturer theatres to carter for the large student numbers (School of Education), need to have a building of their own which would be used as a Business School (Department of Economics) and the need to have more office space (School of Agriculture). Inadequate and poorly equipped lecture theatres, library, laboratories and offices are among the key infrastructural related problems that have been outlined in *UNZA's 2013-2017 Strategic Plan* and these problems were attributed to inadequate funding. UNZA admits that "while the university has embarked on rehabilitation of the infrastructure, budgetary constraints have hampered progress and that most of the rehabilitation is focused on provision of temporary solutions" (UNZA 2013:9). It is possible that these problems with the budget and infrastructure may have resulted from the long term effects of the Structural Adjustment Program (see point 5.3.1 under funding). According to point 1.4 of this study it can be said that UNZA is making efforts to relate policy with practice however, inadequate funds are a major problem.

Need for adequate funding and linking the university with industry as well as the importance of having enough human resource to implement entrepreneurship activities within the university are some of the common concerns that were raised by both the university officials and some academics. Apart from that, the university also stated the need to have incubation space where students can practice or gain experience. Such facilities will give students a chance to practice by applying their skills. Konayuma (2009) stated that Zambia had existing opportunities for entrepreneurship such as availability of space or workshops in training institutions and industries that can be used as business incubators (2009:5). Utilising such spaces as incubators will definitely contribute much towards the development of entrepreneurship in the country and at the universities.

In addition, some of the academics had contact with industry with whom they had consultancy work on some projects relating to entrepreneurship and other areas but these projects were not linked to the university. Therefore, these types of interactions are also hard to assess on a formal basis. The study undertaken by the European Commission equally expresses similar sentiments, it acknowledges that informal financial involvement and informal linkages between individual academics and enterprises, involving extra payments or not, are also frequent. It argues that often UEPs are developed on an individual basis (e.g. consultancy activities). The information about these activities does not always flow to upper or more aggregated levels. Consequently, many relevant UEPs may be invisible and difficult to assess when the direct implementer of the UEPs is not approached (2008).

Furthermore, during the period of conducting the interviews, I encountered two interviewees who had worked on some projects related to entrepreneurship and were in a position to give me some data on the factors that have influenced the current state of entrepreneurship activities at the institution. However, they declined to give more details because they were not authorised to speak on behalf of the administration. For instance during an interview, when asked if the school had any entrepreneurship activities, the response given was, "yes I know there some projects but I am not the right person to talk about this, the administrators may have something on paper." According to the project funded by the European Commission on the *three dimension third mission*, cultural scepticism is one of the reasons for lack of information. They argue that, "Given that UEPs are not always well regarded within universities, academics collaborating with enterprises are reluctant to give information about these activities" (2008).

Another challenge on the study of entrepreneurship was the lack of a clear policy that addresses university entrepreneurship. The findings established that UNZA had not come up with a policy that defines entrepreneurship. Nevertheless, responses from an official revealed that the university was working towards having this policy. Other findings also revealed that some of the departments lacked materials and equipment to use not only in entrepreneurship-related activities but also other teaching and research related projects. As it has already been stated in the findings a number of the respondents mentioned that their departments lacked some useful materials, which could advance teaching and research in their respective programs. This compliments the literature from Konayuma (2009:5) who argued that lack of appropriate training materials were among the challenges that Zambia encountered in entrepreneurship education. Therefore, if many graduates are to be equipped with towards providing means and ways of ensuring that universities have adequate materials to foster entrepreneurship activities.

A study undertaken by Unachukwu (2009) in Nigeria noted that inadequate equipment and technology were among some of the challenges in the development of entrepreneurship education. According to the study, "the cost of equipment in Nigeria is quite high and cannot be afforded by most Nigerians, especially young graduates. He argues that this makes it difficult in development of entrepreneurship as technology is closely related to entrepreneurship. It therefore calls for the provision of affordable technologies" (Unachukwu, 2009:222). To some extent, Zambia also faces similar challenges, lack of materials to use in entrepreneurship were among some of the concerns that were raised by the respondents during the study therefore; to encourage more graduates to become entrepreneurial, there is need to provide adequate equipment and technology.

Finally, the academics from the School of Agriculture in the Department of Agricultural Economics stated that they needed to have more office space that would accommodate the members of staff. The academics also stated that they were in need of additional resources such as books and other materials. Similar sentiments on the need to have more materials were equally expressed in the department of Political and Administration studies in the School of Humanities and Social Sciences.

On the other hand, the academics from the School of Education expressed the need to have more infrastructure that would carter for the large student numbers. Other sentiments came from the department of Economics where the respondents argued that if the School of Business is to be introduced as stated in the *UNZA's 2013-2017 Strategic Plan* then, there was need for them to have their own building this was to allow more courses to be offered.

Analysis of some policy documents and interviews with some respondents revealed that UNZA did have a number of projects that were sponsored by various donors of which the school of Veterinary Sciences is one of them. However, the university can make more connections with donors to help set up projects that relate to entrepreneurship.

Therefore, it is hoped that once these challenges are addressed, there would be improvement in both the educational and commercial aspects of entrepreneurship at UNZA.

Having elaborated on the factors that have influenced the current state of entrepreneurship at the university, the next chapter will proceed to give a conclusion on the factors that have influenced entrepreneurship at UNZA in both the education and commercial aspects.

5 Conclusions and Recommendations

5.1 Conclusion

This chapter presents the main conclusions on the study about entrepreneurship at UNZA. The study examined a number of factors that are assumed to have influenced the current state of entrepreneurship at UNZA, Zambia's largest public university. The following factors were included in this examination: funding, teaching plans, donors, human resource, culture and contact with industry. Therefore, referring to these factors in this concluding chapter the three research questions will be addressed, as well as how UNZA interprets the concept of entrepreneurship, the practice with regard to entrepreneurship at UNZA and challenges in relation to entrepreneurship.

5.1.1 Interpretation of the concept of entrepreneurship at UNZA

The study indicates that interpretation of the concept of entrepreneurship at UNZA is not different from the way the concept is defined in the academic literature. Although the study has revealed that UNZA does not have a policy on entrepreneurship, the responses received from various actors at UNZA indicated that the concept of entrepreneurship at UNZA is interpreted as risk taking and being innovative. The responses also indicated that part of the administrators, academics and technicians that were interviewed when relating to the university understood it as a means of empowering students with skills that can help them set up their own businesses so that they are also able to employ other graduates (job creation).

Furthermore, the findings from the academic side have also indicated that UNZA is working towards equipping students with entrepreneurship skills in order to help them from moving from the mind set of believing that the only way to earn a living is by getting employment in the already saturated job market. Other findings have revealed that UNZA has included entrepreneurship in its 2013-17 strategic plan in both the education and commercial aspects. Once the ideas in the strategic plan are implemented it is assumed that more graduates will be equipped with entrepreneurship skills. From the commercial aspect the findings have also indicated that UNZA has been involved in various income generating ventures and has drafted a business and investment policy which will be used as an instrument that will act as a

business and investment radar for the Directorate of Business Development and as a tool kit for the management of commerce.

Although the study revealed that the institution was working towards developing a policy on entrepreneurship, from the researcher's perspective, it is imperative to have a clear policy that defines and addresses entrepreneurship in universities. Such a policy will act as a guideline for entrepreneurship activities at the institution.

5.1.2 Practice with respect to entrepreneurship activities at UNZA

The current practices on entrepreneurship at UNZA in the schools that were investigated reveal that UNZA has introduced entrepreneurship courses in the schools of Agriculture, Veterinary Medicine and in the School of Humanities and Social Sciences in the Departments of Development Studies and Economics. Other results revealed that plans were underway to introduce entrepreneurship courses in the Department of Political Administration under the School of Humanities. The study also indicated that the Schools of Education and Mines did not offer entrepreneurship courses to their students. While the core activities of UNZA are teaching and research, the results concerning the commercial aspect revealed that UNZA has engaged itself in a number of income-generating business ventures within and outside the institution during the past years. The business ventures are to supplement the institutional finances that have not been adequate, owing to a number of reasons such as the huge costs of running the institution. The business ventures include farms, UNZA press, Technology Development and Advisory Unit (TDAU) and Marshlands village and ZAMNET a communication system that can be seen as an example of how African countries can use emerging technologies to create new business enterprises. The study also revealed that UNZA has taken a positive measure towards dealing with business and investment at the institution by including the Business Development Directorate whose responsibility is to look into the business aspect of the university.

Further results also revealed that UNZA had recently leased out some land to a company that has built a shopping mall within the land of the university. The company is expected to be paying royalties to the institution for a period of 25 years, this venture shows a relationship between policy and practice as has been stated in chapter one under point 1.4.

Other findings from the study also indicated that UNZA had not yet developed a strong entrepreneurship culture. Some academics stated that there was need to help develop an attitude that will encourage students to engage in entrepreneurship activities (see e.g. 4.3 under the Department of Development Studies and in the School of Mines) Therefore, it is imperative for the institution to work towards developing a strong entrepreneurship culture within the university.

Table 1of the study also showed that there has been an increase in the number of student enrolments in different programs at UNZA (see Appendix F). However, not much has been done to improve the institutional infrastructure, especially in the School of Education, which has the largest number of enrolments. Therefore, there is need for the university and other stakeholders to consider planning for more infrastructure that will correspond with the increase in student numbers.

Secondly, it has also been established that graduate students at UNZA go through practice periods in their respective programs. Nevertheless, the schools that were investigated had no internship programs for the students. The study also revealed that over the years a number of university graduates do not get an opportunity to find employment immediately after graduation. Therefore, introducing internship programs might enable more university graduates to gain experience that is demanded for by most organizations before employing someone. It might also reduce unemployment among university graduates because through the same internship programs other students may get an opportunity to be employed by the same organizations they work for. To help with sponsoring the practical aspect of entrepreneurship activities UNZA can also involve more external donors and the industry in sponsoring the practical aspect.

UNZA is a government funded institution, and most funds are allocated towards the core activities teaching and research. The study has also revealed that funding at UNZA has been inadequate. This is to a large extent a result of the effects of the Structural adjustment program and its long term effects (see effects of the structural adjustment problem on higher education under chapter one). The analysis would have been much better had I gained access to the UNZA budget allocation which was my initial intention.

Thirdly, the study also revealed that UNZA had not done much to link the university with the industry. *The 2013-2017 UNZA Strategic Plan* acknowledged that the university had not

effectively utilized opportunities to attract investments, and that this is the area that requires concerted effort. Therefore, there is a need for the university to establish more links with industry to enable students getting the opportunities to undertake research and gain practical experience in their respective programs and allow the industry to invest more in the university. Such measures will not only help in producing graduates with experience of working in industries but also lead to them to become empowered. Once graduates are empowered they can own their businesses and become employers helping in job creation. The challenge lays in co-ordination and cooperation between the university and the private sector. By linking, both parties will benefit.

Finally, it is important to note that although the study did not investigate all the nine schools at UNZA, there were some indications of entrepreneurship activities in some other schools or departments. For instance, the research could have yielded more results had I studied all the schools but the period in which I conducted my research was limited. A local paper (ZedChronicle) covered a story indicating that the Physics Department in the School of Natural Sciences at UNZA intended to establish a Solar Park. According to the article, Professor Prem Jain who was also UNESCO chairperson disclosed in an interview that the park was to be an initiative towards the need for the university to play an active role in national development through technological innovation. The Renewable Energy and Environment Park would also be used for purposes of demonstration, training, teaching, research and development. The article also describes the past performance as not having been to their expectation. According to the article, UNZA through the Department of Natural Sciences had already executed a solar project on behalf of government; they also disclosed that university technicians had by that time installed solar panels in 190 Chiefs Palaces (ZedChronicle, 2013). Therefore, there might be many more entrepreneurship activities at UNZA such as in the School of Engineering and may need to be explored further.

5.1.3 Challenges in relation to entrepreneurship activities at UNZA

Other findings indicated that the Department of Animal Science and Husbandry in the School of Agriculture at the University of Zambia is engaged in livestock production (chicken, piggery and dairy). Further results revealed that the production unit was able to make some profit from the sales. However, there were concerns over the delay in having funds for projects approved (see 4.4 under the Department of Animal Science and Research Unit). Such

concerns were also raised in the 2008–2012 UNZA Strategic Plan, UNZA which acknowledged that administrative procedures are lengthy, making it difficult for Schools to respond rapidly to emerging national needs. The financial structure exhibits the same weaknesses and the financial control system is highly centralized which leads to long and costly delays in the procurement of goods and services, even when the schools and units have sufficient funds (UNZA, 2008:20).

It would be beneficial to the university if they took time to ensure that such concerns are adequately addressed. Once this is done the units are likely to be more effective and efficient in running their programs as well as in raising (additional) funds. As has already been stated, strategically UNZA acknowledges that the administrative procedures are lengthy but not much has been done to resolve this. Therefore, the acknowledgement is on paper but has not been applied in practice (See point 1.4 on the relation between policies and practice).

Additionally, the study revealed that the institution was in need of human resource in some schools. Such needs not only applied to entrepreneurship qualified staff but also to those in various teaching programs as well. Adequate human resource is of importance in running any programs and the lack of it puts a strain on the few who are available. If UNZA is to equip more graduates with entrepreneurship skills adequate staffing is essential. University of Zambia Strategic Plan states that the total establishment of lecturers stands at 879 against a total population of 12, 245 full time students (see Appendix F under Staff).

In order to make the schools and units more effective and efficient, decision makers and UNZA administration should in the near future try to address the long procedures in having funds for projects approved.

One major issue that was brought out as a challenge concerning entrepreneurship activities at UNZA in both the education and commercial aspects was inadequate funding. Funding still remains a challenge not only for entrepreneurship activities but in other programmes at the university. Most of the entrepreneurship courses are theoretical, not so much is done on the practical aspect due to lack of funds. Some possible solutions to inadequate funds include, the university engaging in various income generating ventures and incorporating the private sector in sponsoring various entrepreneurship activities at both the commercial and education level. Involving donors in sponsoring entrepreneurship activities especially the practical aspect can also help in improving the current state of entrepreneurship activities at UNZA.

Summary

The factors that were used in examining what has influenced the current state of entrepreneurship at UNZA have been useful in giving insights on what is obtaining at the both the education and commercial level. From the study it has been established that although UNZA does not have a policy that addresses entrepreneurship at the institution, the concept was well understood and the respondents acknowledged that commercially UNZA needed to engage in more entrepreneurship activities as income generating ventures. UNZA also stated the need to equip UNZA students with entrepreneurship skills. The concept of entrepreneurship is interpreted as moving away from training graduates to have a mind-set of expecting to find jobs in the already established firms to training them to be more innovative and self-reliant. This is due to the challenges that university graduates face in finding employment opportunities on the already saturated job market. On the commercial aspect, entrepreneurship is interpreted as engaging in income-generating ventures to supplement on the cost of running the university. The study has also indicated that UNZA has introduced entrepreneurship courses in the schools of Humanities and Social Sciences, Veterinary Medicine and Agriculture while results from the School of Mines and Education indicated that there were no entrepreneurship courses. Although external donors may not be an important factor in establishing entrepreneurship activities in the Western universities, the factor on the role of external donors has helped in establishing that UNZA does require help from external donors in order to run entrepreneurship activities. The factor on contact with industry equally helped in establishing that creating links with industry is important. However, the study has also revealed that UNZA still needs to make more efforts towards establishing such links at both the commercial and educational aspects. The need for human resource has also emerged as an important factor not just in executing entrepreneurship activities at UNZA but in other aspects of the university as well. Challenges from both the education and commercial aspects include: Inadequate funding for entrepreneurship activities, long procedure in approving funds for projects, inadequate human resource and inability to link UNZA with industry. The impression of entrepreneurship education at UNZA is that it is well developing from what it was in the past few years. The study has shown that UNZA is making positive efforts of instilling students with entrepreneurship skills through offering entrepreneurship courses at various study levels. However, the courses are more theoretical than practical because of inadequate funds. What remains to be done is for the university to establish links with industry and make more efforts to engage donors in sponsoring

entrepreneurship activities at UNZA. Establishing links with industry cannot only contribute positively towards instilling entrepreneurship skills in graduates but also help towards the improvement of commercial activities at UNZA.

Study limitations

Having looked at the study on factors that have influenced the current state of entrepreneurship at University of Zambia there were a number of limitations during the research.

Firstly, access to policy documents on entrepreneurship at national level and institutional level was a challenge. Therefore, there was limited data on entrepreneurship and it was also difficult to access some statistical data. The researcher accessed most of the documents online. Initially the researcher intended to include statistical data on the budget allocation at UNZA but was unable to access this data within the university due to the channels of communication.

Secondly, there was no clear guideline or policy at the university on entrepreneurship. During the interviews the researcher faced some difficulties in obtaining information on entrepreneurship from some academics that had information but were not authorised to discuss the matter. In this case the researcher tried to inquire more from the officials.

In some cases, the researcher found it difficult to access information from some academics at the university who have been consultants and written some private works on entrepreneurship. Reasons being that they were either busy or out of office at the time of the research. Talking to such people could have contributed more to the study.

Time factor was another limitation during the research period. The research was done in a period of six weeks during which the researcher expected to collect all the data, but this proved to be somehow difficult because some respondents were not easily accessible. In certain instances, the researcher had challenges in finding the respondents in offices owing to the fact that they had busy schedules. Therefore, part of the data had to be collected through emails, and phones. Nonetheless, all the respondents spoken to were very accommodating and cooperative.

Having more time to conduct the study would have enabled the researcher to explore other schools within the university, for instance, the Schools of Engineering and Natural Sciences where there were some possibilities of entrepreneurship activities, such as the Solar Park project that has been noted in the conclusion. Investigating these and the other schools would have contributed to giving a clearer picture on the factors that have influenced entrepreneurship activities at UNZA in the past few years.

5.2 Recommendations

5.2.1 University of Zambia

From the study, the researcher recommends the university to consider the following;

There is need for UNZA to come up with a policy that defines entrepreneurship at the institution.

UNZA did recognise that the financial control system was highly centralized and can lead to long and costly delays in the procurement of goods and services, even when the schools and units had sufficient funds (UNZA, 2008). The study has found that the current situation is still the same, and nothing has been put in place to change this. Therefore, there is a need for the university to look into possibilities of making the approval of projects or buying of the required materials for animal production more decentralized. UNZA should also consider improving the means of transportation in the Schools of Agriculture and Veterinary as both schools expressed concerns in this area.

The need for the university to strengthen their ties with the industry cannot be overemphasized, as such measures will enable more university students to be empowered with entrepreneurship skills.

The university should consider introducing internship programs that would involve having agreements with organizations or companies in which students will be allowed to go and do internship in the respective companies. The program can be housed in the business school which would in turn invite other schools to participate. Students themselves can apply through the internship program. UNZA should consider creating links with some universities in the

West which have effectively integrated entrepreneurship activities into their core activities of teaching and research.

Since UNZA intends to build a business school, the school can house a program that would involve organizations offering internships to the students from the schools interested in the program. Students can apply through the internship program and the job of the university becomes to filter both the organization and students. Organizations can in turn provide transport and lunch for students during internships. Internships will in general help more graduate students to get the practical experience that most employers require before employing candidates thereby enabling more graduates to get a chance of being employed upon graduation.

The university should also consider creating better links with the mining and agriculture sectors so that they can either provide graduate students with a chance to do internship or offer sponsorship in their studies.

Access to funds is yet another challenge that graduate entrepreneurship faces. The study that was supported by First National Bank (FNB) in South Africa on the State of Entrepreneurship in South Africa revealed that the country's financial and operating environment was not supportive of entrepreneurs, particularly in terms of regulations, policies and access to capital. The banking system remains the main source of capital to start and grow businesses, whereas in other emerging countries, different financial structures play this support role (FNB Commercial Bank, 2009). In line with this South Africa study also the study at University of Twente revealed that the success of the entrepreneurship projects at the institution was not only entirely from government sources but also due to the involvement of other stakeholders that helped to provide funds for the business projects at the institution. Similar challenges may apply to Zambia where prospective entrepreneurs have to apply for loans in banks and can only obtain these loans with collateral (property) making it difficult for newly graduates to obtain these loans.

The university can also source funds from the civil society and organizations such as Small Industries Development Organization (SIDO) and the Small entrepreneurship Development Board (SEDB). This would enable more graduate students to undergo training in entrepreneurship related short courses. Such initiatives will help instil values that will allow more graduates to think entrepreneurial and look forward to owning their own businesses and employing others.

Suggestions for future studies

Courses in entrepreneurship skills at UNZA are provided in other disciplines but not in teaching careers (School of Education) where the prospective teachers and proprietors of different learning institutions are natured; suggestion is on a further study which could help in designing such a course for providing entrepreneurship skills for teachers.

Future studies can also look at graduate entrepreneurship and empowerment. A follow up on university graduates who set up their own businesses. What kind of challenges do they face?

Other studies can also look at the extent to which the funding of various projects at UNZA has been affected by bureaucracy. Are there any measures to address these effects?

Bibliography

Academic Literature

Abimbola, O.H and Agboola, G.M. (2011). Environmental factors and Entrepreneurship Development in Nigeria, *Journal of Sustainable Development in Africa*, 13(4),pp 166-176 http://www.jsd-africa.com/Jsda/Vol13No4_Summer2011_B/PDF/Environmental%20Factors%20and%20Entr epreneurship%20Development1.pdf (Accessed 15/12/14).

African Technology Development Forum (2004). TDAU Products Zambia. http://www.atdforum.org/spip.php?article59 (Accessed 08/08/14).

Ayatse, F. A. (2013). Driving Entrepreneurship Education in Nigeria: Issues and Challenges. *International Journal of Business and Management Review*, 1(4), pp.83-90.

Babalola, J. B., Lungwangwa, G. and Adeyinka, A.A. (1999). *Education under Structural Adjustment in Nigeria and Zambia*. http://mje.mcgill.ca/article/viewFile/8460/6393 (Accessed 14/08/14).

Barringer, B. R. and Irenland, R.D. (2006). *Entrepreneurship Successfully Launching New Ventures*. New Jersey: Pearson Education Inc.

Benneworth, P. and Groen, A. (2010). No Longer the Sparkling New Idea. http://proceedings.utwente.nl/35/1/Benneworth.pdf (Accessed 05/05/13).

Brains, C. L., Willnat, L., Manheim, J. B and Rich, R. C. (2011). *Empirical Political Analysis: Quantitative and Qualitative Research Methods* (8th ed.). Boston: Longman

Brock-Utne, B. (2006). *Whose Education for All? Re-colonization of the African mind*. South Korea: HOMI Publishing CO.

Bronte-Tinkew, J., Brown, B. Carrano, J., and Shwalb, R. (2005). Logic Models and Outcomes for Youth in the Transition to Adulthood. http://www.childtrends.org/wp-content/uploads/2014/05/2005 (Accessed 24 /08/14).

Bryman, A. (2008). Social Research Methods (3rd edition). Oxford: Oxford University Press.

Bwisa H.M and Ndolo M.J. (n.d) Culture as a factor in Entrepreneurship Development: A Case study of the Kamba Culture of Kenya

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.301.7694&rep=rep1&type=pdf (Accessed 24/05/2015).

Chell, E. (2001). *Entrepreneurship: Globalization, Innovation and development*. London: Thomson learning ltd.

Clark, B. (1998). Creating Entrepreneurial Universities. Oxford:AU and Elsevier Science. http://www.oktemvardar.com/docs/BRC_entrepreneurial.pdf_ (Accessed 15/ 03/ 14).

Clark, B. R. (2003). Sustaining change in universities: Continuities in case studies and Concepts. Tertiary Education and Management, 92, pp. 99-116.

Cloete, N., P. Maassen and T. Bailey (eds.) (2015) Knowledge Production and Contradictory Functions in African Higher Education. Cape Town: African Minds.

Denzin, N. K., and Lincoln, Y.S. (2000). *Handbook of Qualitative Research*. Thousand Oaks, C A: Sage

De Nooijer, P., and Siakanomba, B. (2008). *Final Evaluation of the IUC partnership with University of Zambia*. http://www.vliruos.be/downloads/IUS_final_evaluation_UNZA.pdf. (Accessed 7/03/2013).

Etzkowitz, H. and Leydesdorff, L. (1997). Universities in the Global Economy: A Triple Helix of University–Industry–Government Relations. London:Cassell Academic.

Etzkowitz, H., Webster, A., Gebhardt C. and Cantisano Terra B. R. (2000). The Future of the University and the University of the Future: Evolution of Ivory Tower to Entrepreneurial Paradigm. Research Policy, 29 pp313–330. http://www.oni.uerj.br/media/downloads/1-s2.0-S0048733399000694-main.pdf. (Accessed 28/04/14).

Jongbloed, B., Enders. J. and Salerno, C. (2008). Higher Education and its communities: Interconnections, Interdependencies and a Research Agenda. *Higher Education*, 56(3), pp. 303-324.

Juma, C. (2007). Universities as Business Incubators. *Business Daily (Africa)*. 4.05.2007. http://belfercenter.ksg.harvard.edu/publication/1685/universities_as_business_incubators.htm. (Accessed 20/03/2015).

Katz, J. A and Green, R. P. (2005). Entrepreneurial Small Business. New York: McGraw-Hill

Kisauzi, D. N, Tsutsumi, Y., and Mlangwa, J. E. D. (1993). Co-operation in veterinary education between sub-Saharan Africa and the developed countries: Experience of the University of Zambia. http://www.oie.int/doc/ged/D8745.PDF. (Accessed 20/09/14).

Konayuma, G. S. (2009). National curriculum Review Symposium Relevance of Entrepreneurship Training in a Market Driven Economy. Lusaka: Ministry of Science and Vocational Training. http://www.scribd.com/doc/16299038/Relevance-of-Entrepreneurship-Training-in-a-MarketDriven-Economy-Konayuma. (Accessed 6/5/13).

Lindquist, M. (2012). The Roles of Universities in Regional Development.

http://www.nordregio.se/en/Metameny/Nordregio-News/Issue-22012/The-Roles-of-Universities-in-Regional-Development/. (Accessed 29/4/13).

McGuinness, A. (2005): Changes in Financing and State Policy Related to American Public Research Universities. Paper presented at a seminar on "University Management and Higher Education Policies- Trends, Issues and Prospects" in Tokyo, September 2005, organized by Centre For University Management and Policy Studies, the University of Tokyo and Centre for National University Management, Japan.

Menon, J. A. (2012). The Role of Higher Education Funding in National Development http://interesjournals.org/full-articles/the-role-of-higher-education-funding-in-national-development.pdf?view=inline. (Accessed 21/06/2014).

Morse, E. A and Mitchell, R. K. (2006). *Cases in Entrepreneurship: The Venture Creation Process.* New Delhi: Sage Publications Ltd.

Mulamfu, J. (1998). Empirical Evaluation of Financing University Education in Zambia.

http://dspace.cbu.ac.zm: 8080/jspui/bitstream/123456789/166/1/MULAMFU, % 20 JOHN0001% 20 -

%20Empirical%20evaluation%20of%20financing%20University%20Education%20in%20Za mbia.PDF. (Accessed 24/09/14).

Olsen, J. P., and Maassen, P. (2007). European debates on the knowledge institution: The modernization of the University at the European level. In: P. Maassen and J. P. Olsen (eds) *University Dynamics and European Integration*, Dordrecht: Springer, pp. 3-22.

Ritchie, J. and Lewis, J. (2003). *Qualitative Research Practice; A Guide for Social Science Students and Researchers*. New Delhi: Sage

Sanyal, B. C, Saito M., and Kotey, N. (1995). Institutional Management in Higher Education in West Africa. http://unesdoc.unesco.org/images/0010/001009/100952eo.pdf. (Accessed 20/06/14).

Sarua (2012). Zambia.

http://www.sarua.org/files/Country%20Reports%202012/Zambia%20country%20profile%20 Eng.pdf. (Accessed 22/11/2014).

Slaughter, S. (2010). Research Commercialization.3rd Edition, Elsevier. 300-306. http://www.sciencedirect.com/science/article/pii/B9780080448947008824.(Accessed 28/5/13).

Torjman, S. (2005). What Is Policy? Ottawa: Caledon Institute of Social Policy. http://www.caledoninst.org/Publications/PDF/544ENG.pdf (Accessed 25/11/14).

Unachukwu, G. O. (2009). Issues and Challenges in the Development of Entrepreneurship Education in Nigeria. http://www.ajol.info/index.php/afrrev/article/viewFile/51153/39830. (Accessed 16/08/14).

Wickham, P.A. (2006). *Strategic Entrepreneurship* (4th ed.). England: Pearson Education Limited.

Zimmerer, T. W., and Scarborough, N. M. (2005). *Entrepreneurship Essentials of Small Business Management* (4th ed.). New Jersey: Person Education Limited.

Other Literature

African Forum and Network on Debt and Development (2007). The Impact of Structural Adjustment Programe in Zambia. Lusaka: AFRODAD.

Ashoko Group (2014). 10 Ways in which Universities can improve Entrepreneurship Education. Forbes Online Magazine, 09.10.2014.

http://www.forbes.com/sites/ashoka/2014/09/10/10-ways-universities-can-improve-education-for-social-entrepreneurship/ (Accessed 14/12/14).

European Commission (2008). Needs and Contraints Analysis of the Three dimensions of Third Mission Activities. http://www.e3mproject.eu/docs/Three-dim-third-mission-act.pdf. (Accessed 04/07/14).

European Commission (2011). Entrepreneurship Education: *Enabling Teachers a Critical Success Factor*. Bruxelles: European Commission.

European Commission (2012). Effects and Impact of Entrepreneurship programs in Higher Education.http://ec.europa.eu/enterprise/policies/sme/promoting entrepreneurship/files/education/effects_impact_high_edu_final_report_en.pdf. (Accessed 8/08/13).

Ekmekcioglu, E. (n.d) The Impact of Entrepreneurship on Economic Growth http://www.academia.edu/1600957/The_Impact_of_Entrepreneurship_on_Economic_Growth (Accessed 2/05/2015).

FNB Commercial Bank (2009). Entrepreneurial Dialogues: State of Entrepreneurship in South Africa.

http://www.gibs.co.za/SiteResources/documents/The%20Entrepreneurial%20Dialogues%20-%20State%20of%20Entrepreneurship%20in%20South%20Africa.pdf. (Accessed 15/12/14).

Government Republic of Zambia (1999). University Act of 1999. Chapter 11. Lusaka: Government Printers.

Government of the Republic of Zambia (1994). Zambia National Youth Policy. Lusaka: Government Republic of Zambia.

http://planipolis.iiep.unesco.org/upload/Youth/Zambia/Zambia_National%20Youth%20Polic y.pdf_ (Accessed 21/06/13).

Government of the Republic of Zambia (2006). *Vision 2030 A Prosperous Middle- income Nation by 2030* Lusaka: Government Republic of Zambia.

Government the Republic Zambia. (2006). Zambia's Fifth National Development Plan 2006-2010. Lusaka: Government Republic of Zambia.

http://www.thegef.org/gef/sites/thegef.org/files/documents/ZAMBIA-FNDP.pdf (Accessed 20/10/2014).

Go Zambia Jobs (2013). *Youth Unemployment* 13.09.2013 http://gozambiajobs.com/youth-employment/ (Accessed 16/07/2014)

Hofer, A. and Potter, J. (2010). "Universities, Innovation and Entrepreneurship: Criteria and Examples of Good Practice", OECD Local Economic and Employment Development (LEED) Working Papers, No. 2010/10, OECD Publishing, Paris.

DOI: http://dx.di.org/10.1787/5km7rq0pq00q-en (Accessed 24/3/15).

ILO (1996). Teachers' Salaries, Class Sizes at Risk under Structural Adjustment Policies, ILO Says. http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_008052/lang--en/index.htm. (Accessed 14/08/14).

IMF (2007). Zambia: Poverty and Reduction Strategy Paper. Fifth National Development Plan,2006-2010 https://books.google.no/books?id=_iAatckEiIQC&pg=PA148&lpg=PA148&dq=acquiring+sk ills+for+personal+improvement. (Accessed 14/06/14).

Lusaka-star (2013). ZANACO and UNZA sign K180, 000 MoU, 30.09.2013http://lusaka-star.com/business/zanaco-and-unza-sign-k180000-mou (Accessed 14/ 08/2014).

Lusaka Times Newspaper (2009). UNZA to have a Business Park, 12.10.2009 http://www.lusakatimes.com/2009/10/12/unza-to-have-a-business-park/. (Accessed 08/03/13).

Lusaka Times Newspaper (2013). UNZA shopping mall to cost K248m 18.10.2013 http://www.lusakatimes.com/2013/10/18/unza-shopping-mall-to-cost-k248m/. (Accessed14/07/14).

Ministry of Education (1996). *National Policy on Education: Educating Our Future* .Lusaka: The Ministry of Education.

Mtonga, D. (2010). Zambia's Youth Unemployment Soars, 06/10/2010. http://africabusiness.com/2010/10/06/zambia%E2%80%99s-youth-unemployment-soars/. (Accessed 14/4/13).

NORAD (2007). Independent Review of the Ministry of Education Sector Plan Zambia. http://www.norad.no/globalassets/import-2162015-80434-am/www.norad.nony/filarkiv/vedlegg-til-publikasjoner/review-of-moesp---final-report-14-05-2007.pdf. (Accessed 24/11/2014).

NORRAG (1991). Higher Education: Donors to African Education Working Group Higher Education NORRAG News, December 1991 pp 44-46

http://www.norrag.org/de/publications/norrag-news/online-version/highereducation/detail/donors-to-african-education-working-group-on-higher-education.html (Accessed 26/6/14).

OECD (2001). The Entrepreneurial University: New Foundations for Collegiality, Autonomy, and Achievement. http://www.oecd.org/edu/imhe/37446098.pdf. (Accessed 20/10/14).

OECD (2006). *Higher Education Management and Policy* Volume 18, No. 2 OECD / IMHE. https://www1.oecd.org/edu/imhe/42348780.pdf. (Accessed 14 /12/14).

OEDC (2008). The Importance of Enterprise.

http://www.oecd.org/dataoecd/53/24/41664503.pdf. (Accessed 16/4/13).

OECD (2012) OECD Investment Policy Reviews: Zambia 2012

https://books.google.no/books?id=NB-SnRNtz5AC&pg=PA172&lpg=PA172&dq=teveta+policyzambia&source=nepage&q=teveta%20policy-zambia (Accessed 12/08/2014).

OEDP (n.d) Encouraging Future Innovation: Youth Entrepreneurship Education http://www.dol.gov/odep/pubs/fact/entrepreneurship.htm (Accessed 24/04/14).

SDNP (2011) Sixth National Development Plan 2011-2015 "Sustained Economic Growth and Poverty Reduction"

http://siteresources.worldbank.org/INTZAMBIA/Resources/SNDP_Final_Draft_20_01_201 1.pdf (Accessed 20/11/14).

The Post Zambia (2012). Zambia: Unemployment is hitting Very Hard, 07/12/2005. http://www.afrika.no/Detailed/10988.html. (Accessed 2/5/13).

University of Zambia (2008). The University of Zambia Strategic Plan FY 2008-2012. Lusaka: UNZA Press.

University of Zambia (2013). The University of Zambia Strategic Plan FY 2013-2017. Lusaka: UNZA Press.

University of Zambia (2012). The University of Zambia Business Policy Draft.

University of Zambia (2011). The University of Zambia Calendar FY 2011-2013. Lusaka: UNZA Press.

ZedChronicles (2013).UNZA to establish solar energy park. http://zedchronicle.com/?p=15339. (Accessed 14/12/14).

Appendix A: Questions for schools

Education Scope

- 1. What is entrepreneurship according to University of Zambia?
- 2. Does the school offer any courses in entrepreneurship or Business Planning?
- 3. Does the school have a diversified supply of entrepreneurship courses at undergraduate level (5 or more)?
- 4. If yes, what kind?
- 5. If not why?
- 6. Does the school offer a BA-degree in entrepreneurship?
- 7. Does the school have a diversified supply of entrepreneurship courses at graduate and postgraduate level (5 or more)?
- 8. Does the school offer a graduate degree/MBA in entrepreneurship?
- 9. Is executive education/management training relevant for entrepreneurs offered?
- 10. . Is research on entrepreneurship-issues being conducted?

Education set-up

- 1. Are guest lecturers/practitioners with practical experience used in entrepreneurship classes?
- 2. Do some of the lecturers have entrepreneurship background themselves?
- 3. Are guest lecturers/practitioners coached to be teachers?
- 4. Is a longer lasting internship or practical experience part of the education?
- 5. Are the entrepreneurship students in ongoing contact with a private company?
- 6. Is there personality of the students developed by exposing them to real life entrepreneurship problems?
- 7. Is there an Incubator as part of the school environment?
- 8. Does the school have any challenges related to entrepreneurship? If so what are the challenges?

Appendix B: Questions at Institutional level

- 1. Does the university have any entrepreneurial activities?
- a) If so, what kind?
- b) If not why?
- 2. Are there any policies related to Entrepreneurship at UNZA?
- 3. If so, how is entrepreneurship defined by the University of Zambia?
- 4. Does the university teach the majority of the students at the university to think entrepreneurial?

Institutional characteristics

- 5. Do incentives at the university encourage lecturers to take (new) initiatives relevant for entrepreneurship students (less teaching, higher salary, a grant/fellowship, prizes, etc.)?
- 6. Does the budget allow new entrepreneurship related initiatives?
- 7. Are students actively involved in student run entrepreneurship activities venturing, networking, seminars?
- 8. Are private representatives represented on the board of the entrepreneurship education/involved in planning and coordinating the entrepreneurship courses/education?
- 9. Is there frequent informal/formal interaction between entrepreneurship Students through seminars, conferences or speeches?
- 10. Are there cross-disciplinary entrepreneurship activities?
- 11. Does a centre or a similar physical space exist where entrepreneurship students can meet (reading room, computer room, café or the like)?
- 12. Can students from other faculties take entrepreneurship courses and have them credited to their education at other faculties within the same university?
- 13. Is an incubator part of the environment at the University?
 - a. Does the university have any challenges in relation to Entrepreneurship?

Appendix C: Checklist for analysing policy documents

Does the concept of entrepreneurship feature at national level? If so to what extent, do they address graduate entrepreneurship at University level?

Does UNZA have a policy on entrepreneurship?

To what extent is graduate entrepreneurship addressed in UNZA's Strategic Plans and other University policies.

How is funding at University of Zambia?

What factors have affected funding at UNZA over the past years?

Does UNZA have links with industry?

What role does Ministry of Education play towards Universities?

The role of donors at UNZA, does UNZA have donors in entrepreneurship related activities?

Appendix D: abbreviations and acronyms

AFRODAD	African Forum and Network on Debt and Development			
AAU	Association of African Universities			
CIDA	Canadian International Development Agency			
CBU	Copperbelt University			
COMESA	Common Wealth for East and Southern African			
DAAD	German Academic Exchange Service			
DBA	Doctoral of Business Administration			
DANIDA	Danish International Development Agency			
EU	European Union			
EPM	Economic Policy Management			
FNDP	Fifth National Development Plan			
GRZ	Government of the Republic of Zambia			
HE	Higher Education			
ILO	International Labour Organization			
IMF	International Monetary Fund			
IDA	International Development Association			
JICA	Japan International Cooperation Agency			
JOCV	Japanese Overseas Co-operation Agency			
MOE	Ministry of Education			

NORAD	Norwegian Agency for Development Cooperation			
OECD	Organization for Economic Co-operation and Development			
SAP	Structural Adjustment Program			
SEDB	Small Entrepreneurship Development Board			
SIDO	Small Industries Development Organization			
SNDP	Sixth National Development Plan			
TDAU	Technology Development and Advisory Unit			
TEVETA	Technical Educational and entrepreneurship Training Authority			
UEP	University entrepreneurship program			
USD	United States dollars			
UNESCO	United Nations Educational Scientific and Cultural Organization			
UNZA	University of Zambia			
ZANACO	Zambia National Commercial Bank			
ZCCM	Zambia Cooperative Mine Company			
ZMK	Zambian Kwacha (Zambian currency)			

Appendix E: Definition of Key Terms

Business Plan – is a formal statement of business goals, reasons they are attainable, and plans for reaching them. It may also contain background information about the organization or team attempting to reach those goals.

Entrepreneurship - is the process of starting a business or other organization. The entrepreneur develops a business plan, acquires the human and other required resources, and is fully responsible for its success or failure.

Mission – The fundamental purpose of the University that describes the reason of its existence, what it does and how it does its business to achieve its vision

Schools – Known as faculties in some Universities.

Strategic direction – is an area of focus which defines the direction that a university will take in order to realize the mission.

Strategic plan/ Strategic objective – Strategic plan or strategic objective presents a measurable statement of intent that will be implemented within a given time frame in Pursuit of the strategic objective.

Vision – Vision is described as a long-term projection and desire of what the university would like to be, in the high education and knowledge environment.

Appendix F: Student enrolment and staff at UNZA

Student enrolment

According to the statistics below (Table 1), student enrolments for the past five years show an increase in the number of full-time and distant students that were enrolled between 2009 and 2013. The results show that there has been an increase of between 500 to at least 1000 students in both programs. While the figures of students in the evening, part-time and parallel programs indicate that there has been a considerable variation in the enrolment numbers, there has been an increase in some years as well as a decrease in other years.

Type of students	Number of students						
	2009/1	2010/1	2011/1	2012/1	2013/1		
Full-time students	9042	9505	10344	11333	12430		
Distance students	2971	3812	4674	6080	6965		
Evening students	124	92	62	77	104		
Part-time students	352	233	275	1211	289		
Parallel students	314	597	861	305	1230		
Total	12803	14239	16216	19006	21450		

Table 1: Student enrolment for 2009–2013

Source (UNZA academic office)

Staff

According to UNZA 2013-17 Strategic Plan, the core resource of the university lies in its diversity of highly qualified and skilled, academic, administrative and technical staff. It states that, currently the university has a total of 621 full-time lecturers. The strategic plan also states that, the total number of lecturers stands at 879 against a total population of 12 450 full-time students, translating into a lecturer - student ratio of 1: 20 (UNZA, 2013). The student teacher ratio may vary from school to school depending on student numbers. Furthermore, the university mentions the need to develop and implement staff retention schemes for various categories of staff (UNZA, 2013).