

UNIVERSITIES AND ECONOMIC DEVELOPMENT

A CASE STUDY OF THE UNIVERSITY OF ZAMBIA (UNZA)

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ABSTRACT

This study explored the conditions under which the University of Zambia (UNZA) can make a significant and sustained contribution to economic development. To do so, the study explored four issues, namely, (i) national development policies, governance and coordination; (ii) UNZA institutional policies and activities; (iii) the academic core of UNZA; and (iv) externally funded projects in UNZA.

The study utilized a qualitative research strategy, using principles of case study. Data came from two sources, interviews with respondents and analysis of Zambia's national and UNZA institutional policy documents. In January and February 2010, individual semi-structured interviews were conducted with 13 respondents from UNZA, comprising heads of academic schools, Directorate of Research and Graduate Studies, externally funded projects, and the office of the Vice Chancellor. Both the data collected during the interviews and from policy documents were analyzed under each study questions within the context of the literature review and the analytical framework that was adapted from the HE Research and Advocacy Network in Africa (HERANA) project.

Based on the results, the study suggests that Zambia's current national development policies on HE depict the role of UNZA in development as being twofold: "traditional development view" and "service enterprise view". Similarly, UNZA institutional policies seem to depict its own role in development as a producer of high-level human resource for regional and national development, and as a provider of community services.

The study further finds that UNZA academic core appears to be weak. The academic core is characterized by imbalances in student enrollment across fields (more students in humanities and education) and levels of study programs (more students in undergraduate than postgraduate programs); a small number of academic-staff with PhDs; an unimpressive academic-staff to student ratio; research funding, whose proportions by UNZA itself and Government of the Republic of Zambia (GRZ) ministries are not estimated; and lack of institutional records on publications in journals by academic-staff and students. The study, however, acknowledges that UNZA, through its extended periphery activities, such as TDAU, INESOR, and commercial farms, is linked to economic activities in Zambia.

Furthermore, the study finds that lack of coordination and integration of externally funded projects seems to have reduced the possible alignment of projects with the mission of UNZA, thereby contributing minimally to the strengthening of its academic core; and that UNZA's

capacity to sustain externally funded projects seems to have been jeopardized mainly by lack of support from GRZ.

DEDICATION

To the Almighty God, who never slumbers, for enduring love and presence during my study.

To my parents, Kenworthy Mwandamena Likando (now in glory) and Catherine Namutula Musambo, who taught me to do my best, and inspired me in the idea that I could accomplish anything I set my mind to. They are the foundation of this journey; and they taught me the most valuable lessons in my life: to love, to have faith, to be honest, and to believe in people. Thank you for all the many things that you have done for me.

To my brothers and sisters, Erick Nalucha Likando, Maimbolwa Likando Shuko, Austin Manengu Muchimba, Likando Likando Chibawe, Namatama Likando (now in glory), Namunji Likando (now in Glory), Mulife Likando (now in glory), Mwandamena Likando (now in glory), Sishwau Likando Gunduza, Kabuku Likando, Mukwambwa Likando, and Sumbwanyambe Likando, whose personal qualities have always inspired me to continue pursuing greater goals and to be a better person. Thank you for always being there; you all are very close to my heart. I love you all.

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ABBREVIATIONS AND ACRONYMS

AAU	Association of African Universities
ACU	Association of Commonwealth Universities
CHET	Center for Higher Education Transformation
CSO	Central Statistics Office of Zambia
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
FNDP	Fifth National Development Plan
HERANA	HE Research and Advocacy Network in Africa
ICT	Information and Communication Technologies
INESOR	Institute of Economic and Social Research
KAM	Knowledge Assessment Methodology
KEI	Knowledge Economy Index
MoE	MoE for Zambia
MoFNP	Ministry of Finance and National Planning for Zambia
NPE	National Policy on Education for Zambia
MoU	Memorandum of Understanding
OECD	Organization for Economic Co-operation and Development
SADC	Southern Africa Development Cooperation
NASAC	Network of African Science Academics
SARUA	Southern African Regional Universities Association
UNDP	United Nations Development Program
UNZA	University of Zambia

CHAPTER 1: INTRODUCTION

Much has been written about the need for the University of Zambia (UNZA) to contribute to Zambia's economic development, and much has also been written about the need for UNZA to respond adequately to the needs of society. What has not been made clear are the conditions under which UNZA can make a significant and sustained contribution to economic development, and that is the focus of this study. The study specifically focuses on four issues: (i) national development policies, governance and coordination; (ii) UNZA institutional policies and activities; (iii) the academic core of UNZA; and (iv) externally funded projects in UNZA.

This introductory chapter is organized as follows. Section 1.1 provides a background to the study, followed by section 1.2, which presents the statement of the problem. Section 1.3 presents the purpose of the study and study questions. Thereafter, section 1.4 highlights the significance of this study. Finally, section 1.5 outlines the organization of the thesis.

1.1 Background to the study

That higher education (HE) plays an important role in economic development is uncontested. This position is related to the worldwide focus on the knowledge economy. The World Bank (2003: 7) emphasizes, for example, that knowledge has become the most important factor in economic development; that knowledge is increasingly at the core of a country's competitive advantage; and that the process of knowledge accumulation just like capital accumulation is significant to economic growth. Views like these views imply that the ability of a society to produce, select, adapt, commercialize, and use knowledge is very important for sustained economic growth and improved living standards (Angula 2003). In these views HE forms the core knowledge institution.

Several studies have been conducted on the role of HE in economic development in Africa. Examples include World Bank (2003), Lin (2004), Bloom et. al (2006) and Gyimah-Brempong et. al (2006).

Recently a study on *'Universities and Economic Development in Africa'* was conducted under the HERANA project. The level of the study was two-fold: macro and micro. The macro (country) level comprised three case studies of North Carolina, South Korea and Finland. The aim of the macro study was to explore the relationship between economic policy and development, on the one hand, and HE system development on the other. The micro (institutional) level comprised case studies of eight African universities, namely Nelson Mandela Metropolitan University (South Africa); University of Botswana; Eduardo Mondlane University (Mozambique); University of Nairobi (Kenya); University of Dar-es-Salaam (Tanzania); Makerere University (Uganda); University of Mauritius, and University of Ghana. The micro-level study was aimed at understanding the ways these selected universities are responding to calls for a stronger engagement with the socio-economic development of their country and surrounding regions (CHET 2009).

The analytical argument of the HERANA study was that higher education's role in and contribution to development is influenced by three inter-related factors: (i) the nature of the

pact between the universities, university leadership, political authorities, and society at large; (ii) the nature, size and continuity of the academic core; and (iii) the nature, management, size and institutionalization of externally-funded projects (CHET 2009).

What can be argued to be highly relevant outcomes of this study to both African policy makers and academics are the preliminary findings of the micro-level part of HERANA study. The study finds that there is limited evidence in the African countries of pacts around HE, development and the knowledge economy; the contradictory notions of the role of the university are not resolved (weak infrastructural power); national education departments are generally weak; there was limited co-ordination between government departments in funding projects in universities; the national policies reflect traditional or new instrumental notions of higher education; there were at each university a number of examples of excellent projects managed by outstanding academics; there were very limited attempts to integrate external funding with government priorities and efforts to strengthen the university's academic core; there were numerous attempts to institutionalize projects but limited support from governments or donors for these attempts; the desire for HE to contribute to development was hampered by weak or absent enabling frameworks; and the institutional leadership reflected competing notions of HE (CHET 2009).

These preliminary findings of the HERANA study are a clear indication that the relationship between "*universities and economic development in Africa*" is an issue that each African country should deal with seriously so that African universities are steered towards economic development more effectively. In this vein, the findings seem to be good frames of reference for analyzing the conditions under which universities can make significant and sustained contribution to economic development in the African countries not included in the HERANA study. Among these countries is Zambia.

Using the HERANA study as a frame of reference, it is prudent to ask the following questions: Under what conditions are universities expected to make significant and sustained contribution to economic development? To clarify this general question, this study uses UNZA as a case study. The scope of the study is limited to addressing four issues: (i) national development policies, governance and coordination; (ii) UNZA institutional policies and activities; (iii) academic core of UNZA; and (iv) externally funded projects in UNZA

Having presented this background, I will now present some background considerations to the main issues underlying the study.

1.2 Background

That all universities in African countries must be *development universities* is expressed in the legendary Accra Declaration by the Association of African Universities (UNESCO, quoted in CHET 2009). In the same vein, Kofi Annan, the former secretary general of United Nations, declares the university as a primary tool for African development (Kofi Annan quoted in Bloom *et. al* 2005).

Despite these declarations, the urgent need for assessing the role of universities in development in Africa is not new. For example, Geremie Sawadago, in his study on “*The Future Missions and Roles of the African Universities*” contends as follows:

Dissatisfaction and general disillusionment over the value of university education and the increasing politicization of the universities have often led to university unrest and calls for an assessment of the assigned roles and missions of universities in order to better prepare these institutions to meet Africa’s development needs for the twenty-first century (Sawadago 1994).

Furthermore, Sawadago observes that assessing universities’ roles in Africa’s development is urgent for the following reasons:

First, universities absorb a proportionally high percentage of the African countries’ national budgets and it is only economically sound that there be demands for accountability; second, unlike in the “developed” world, where national research activities are not exclusively carried out by universities but also by industries and businesses, African universities remain the sole centers for research as well as the principal training centers for skilled civil servantsThus, African universities play important roles in policy analysis as well as national development and national cultural identity... (Sawadago 1994).

Similarly, a recent study sponsored by the World Bank indicates that “more research into the role of HE in development is certainly warranted” (Bloom *et al.* 2006: iv). Specifically, Bloom and others contend that for Africa to benefit substantially, new research must point to specific actions that African governments can take to strengthen the ability of HE to enhance economic growth.

Another recent study by the World Bank emphasizes that:

It is now far more appropriate for governments, together with their stakeholders and development partners, to seek country-specific solutions to the challenges of linking human resource development strategies with economic growth strategies (World Bank 2008).

Despite these declarations about the importance of HE in development and the call for the urgent need of assessing universities’ role in Africa’s development, little has been done to analyze the conditions under which universities in Zambia can make significant and sustained contributions to economic development. This is a serious omission particularly when put into consideration that knowledge has become a core factor for economic development (World Bank 2003), and therefore there is an urgent need for linking universities to development also in developing countries such as Zambia.

As already indicated the HERANA study reports several problems in eight African countries that hinder HE from making significant and sustained contributions to economic development. Indeed, the findings of the HERANA study are an indication that if the issue of *universities in development* is not dealt with seriously it will in the long run be difficult for Zambia to achieve adequate levels of economic development.

Having elaborated the seriousness of the problem, I have in the next section stated the purpose of this study and four questions aimed at addressing the purpose.

1.3 Research questions

1.3.1 Research problem of the study

Based on the above considerations, the overall research problem of the study is formulated as follows:

How can the main conditions under which UNZA is expected to make significant and sustained contribution to the economic development be interpreted?

1.3.2 Research questions

To address that overall research problem, the following four questions guide the study:

- What role of the university in development is depicted by national development policies and strategies?
- What role of the university in development is depicted by UNZA's institutional Policies and strategies?
- What are the main developments with respect to the academic core of UNZA? To what extent is the academic core becoming more economy-oriented?
- To what extent does UNZA institutionalize externally funded projects?

1.4 The significance of the study

This study is important for various reasons. Firstly, there is overwhelming evidence that high levels of education in general and university education in particular, are indispensable for the design and productive use of new technologies. In this light, De Gast (2005) emphasizes that a well-functioning HE system is a necessary condition for development, and that institution and capacity development in general are prime goals of development co-operation. Therefore, the study will highlight the conditions under which universities in Zambia can design and produce new technologies for economic development.

Secondly, the study is significant in validating the findings of HERANA study using UNZA as a case study. It is imperative to compare the study findings with HERANA study, because the social, political and economic settings of Zambia might not be homogenous with eight countries sampled by HERANA study.

From early 1990s Zambia has experienced radical changes in social, political and economic environment. In 1991, Zambia radically shifted from a socialist state to a democratic state. The shift was coupled with the liberalization of the economy. This led to the formulation and implementation of educational policies based on values of liberal democracy - rational and moral autonomy, equality, fairness and liberty (MoE 1996: 2). Besides, the main aim of HE has since been guided by the principles of liberalization, decentralization, equality, equity, partnership, and accountability. Most important, Zambians are expected to participate fully

and rationally in the affairs of HE because “their consent is the only legitimate justification for their being governed” (MoE 1996: 2).

With such radical changes in the social, economic and political environments, it is useful to investigate how UNZA has positioned itself to contribute to economic development. The study will provide policy makers with information on the conditions under which the University can contribute to national development.

Thirdly, there are countries like Finland, South Korea and North Carolina, which have succeeded in linking HE to development through having a strong national agreement on the role of the university; institutionalizing projects by universities; and strengthening the academic core of the universities (CHET 2009). In this light, there seems to be an urgent need to explore how these factors relate to economic development in the Zambia.

1.5 Contents of the thesis

This thesis is reported in six chapters. Chapter 1 presents the background to the study, statement of research problem, research questions, and the significance of the study. Chapter 2 provides statistical as well as non-statistical information about Zambia, and basic information about UNZA.

Chapter 3 discusses the study methodology. Specifically, Section 3.1 focuses on sample design, sampling techniques used and the instruments. Section 3.2 discusses data collection methods. Section 3.3 addresses the methods employed in analyzing Section 3.4 finally highlights how trustworthiness in the study is assured.

Chapter 4 presents the analytical framework and literature review. Section 4.1 discusses the analytical framework, and Section 4.2 discusses the literature relevant to the study. Thereafter, Chapter 5 presents and discusses the study results by addressing individual study questions. Section 5.1 addresses the role of the University in development as depicted by Zambia’s national development policies. Section 5.2 covers the role of the University in development as depicted by University institutional policies. Section 5.3 focuses the strength of UNZA academic core and on whether the academic core is becoming economy-oriented. Section 5.4 addresses the extent to which UNZA institutionalize externally funded projects

Finally the thesis winds up with Chapter 6 on study conclusions, implications, study limitations and recommendations. Section 6.1 summarizes and concludes salient points emanating from Chapter 5. Section 6.2 presents some of the possible policy and practical implications of the study. Section 6.3 presents the study limitations, and finally Section 6.4 presents the recommendations.

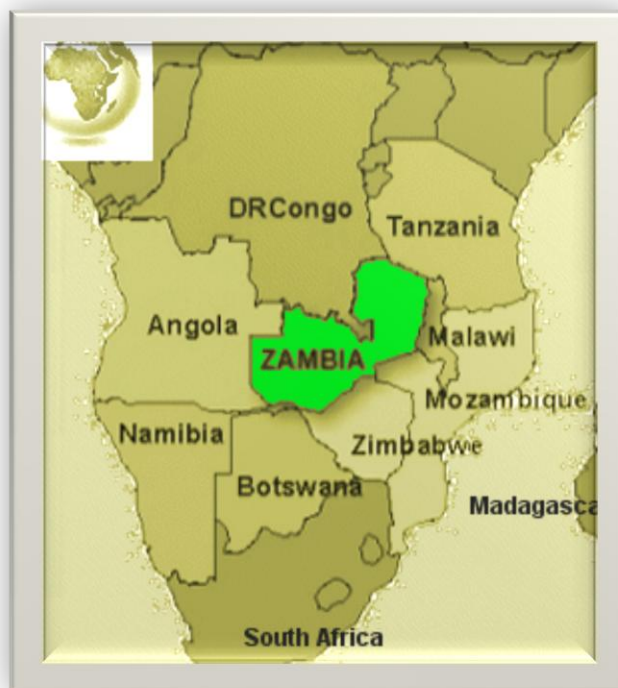
CHAPTER 2: BASIC INFORMATION ON ZAMBIA AND UNZA

Zambia is part of the global village whose entities (countries) are engaged in competitive development activities. In this respect, this chapter provides quantitative information on performance of Zambia on development related global indexes and indicators which are connected to education in general and HE in particular. The chapter also introduces UNZA by providing some basic information.

2.1 Basic statistical and non-statistical information on Zambia

2.1.1 Location and surface area

Zambia is a landlocked country in southern Africa with a tropical climate. It has a total surface area of 752,618 km². As Figure 1 shows, Zambia borders Angola, the Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania and Zimbabwe.



Source: High Commission of the Republic of Zambia in Pretoria, South Africa.
<http://www.zambiapretoria.net/> [Last accessed 4 March 2010]

Figure 1: Map showing location of Zambia

2.1.2 Sectors driving Zambia's economy

Historically, Zambia's economy has been largely driven by two sectors: mining and agriculture. During the 1920s and 1930s, progress in mining stimulated development and immigration in Zambia. However, in the 1980s and 1990s, declining copper prices and a prolonged drought disturbed the economy.

Currently, Government of the Republic of Zambia (GRZ) conceives agriculture sector as an engine for Zambia's economic growth. GRZ further identifies five complementary sectors, namely infrastructure, tourism, manufacturing, mining and energy. This conception is accurately captured as follows by the foreword in the FNDP by the former President of Zambia, Levy Patrick Mwanawasa (now late - may his soul rest in eternal peace):

The Plan focuses on agricultural development as the engine of income expansion in the economy. My Government is convinced that agriculture offers the best opportunities for improving livelihoods. To this end, the sector has received a marginally higher allocation of the resources. Among other economic sectors that complement this focus, either directly or through inter-linkages are infrastructure, tourism, manufacturing, mining and energy. The sources of economic growth as identified by the above sectors constitute the economic sub-theme of FNDP (MoFNP 2006: ii).

2.1.3 Political history and population

Zambia, as a colonial territory, was named Northern Rhodesia and was governed by the British South African (BSA) Company between 1891 and 1923, and then by British Colonial Government between 1924 and 1963. Dr. Kenneth Kaunda was the first Republican President for the independent state and the United National Independence Party (UNIP) was the ruling Party, until 1990. From 1972 to 1990, Zambia was a one-party state under Dr Kenneth Kaunda and UNIP. General multi-Party elections were held in 1991, 1996 and 2001 and a by-election in 2008, all of which were won by the Movement for Multiparty Democracy (MMD). Frederick Chiluba of the MMD was the Second Republican President and was in power from 1991 to 2000. Dr Levy P. Mwanawasa of the MMD was the third republican President and was in power from 2001 until his death in 2008. The current and Fourth Republican President, Rupiah B. Banda (MMD) took over in 2008 after winning the October 2008 Presidential by-election¹.

The population of Zambia is estimated at 12.5 million as at 2009 (CSO 2009). Table 1 presents the population projections for 2001-2009 period. The population figures for 2000 are from the 2000 census of population of Zambia. The table reviews that in 2000 the national census was 9,885,591, of which 4,946,298 were males and 4,939,293 females.

In terms of growth rate, Zambia's population has been growing at declining rates. The annual population growth rate for the inter-censal period of 1969-1980 was 3.1 percent; decreased to 2.7 percent between 1980 and 1990; and further decreased to 2.4 percent between 1990 and 2000 (CSO 2000: 28).

¹ The Bank of Zambia website (http://www.boz.zm/snapshot_political.htm) contains the summary of political history of Zambia.

Table 1: Zambia's Projected Mid-Year population 2000-2009²

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Population	9,885,591	10,089,492	10,409,441	10,744,380	11,089,691	11,441,461	11,798,678	12,160,516	12,525,791	12,896,830
Population Growth Rate	2.5	3.1	3.1	3.1	3.1	3.1	3.0	3.0	2.9	2.9
Life Expectancy at Birth	50.0	51.8	51.9	52.4	52.4	52.6	51.9	51.4	51.3	51.2
POPULATION BY PROVINCE										
Central	1,012,257	1,032,574	1,066,992	1,103,387	1,141,256	1,180,124	1,219,980	1,260,491	1,301,776	1,343,835
Copperbelt	1,581,221	1,611,569	1,662,155	1,714,225	1,767,165	1,820,443	1,874,081	1,927,576	1,980,824	2034012
Eastern	1,306,173	1,348,070	1,391,690	1,436,120	1,482,290	1,530,118	1,579,960	1,631,890	1,684,910	1,740,180
Luapula	775,353	791,067	817,326	845,076	873,969	903,746	934,317	965,605	997,579	1,030,572
Lusaka	1,391,329	1,413,010	1,453,690	1,495,730	1,538,000	1,579,769	1,620,730	1,660,070	1,697,730	1,733,830
Northern	1,258,696	1,277,250	1,315,650	1,357,540	1,401,340	1,445,730	1,490,330	1,534,170	1,577,310	1,619,980
North-western	583,350	596,010	616,496	638,004	660,322	683,367	707,074	731,351	756,261	781,800
Southern	1,212,124	1,235,134	1,275,470	1,318,161	1,362,382	1,407,433	1,453,324	1,499,462	1,545,880	1,592,864
Western	765,088	774,929	795,247	816,983	839,757	863,294	887,540	912,226	937,419	963,107
Zambia Surface Area										752,612 Sq.Km

Source: Central Statistics Office of Zambia, "June, 2009 Monthly Report".

2.1.4 Human Development Index (HDI), Global Hunger Index (GHI) and poverty

The Human Development Index (HDI) for Zambia was 0.481 in 2007, which gave the country a rank of 164 out of 182 countries. The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and gross enrolment in education) and having a decent standard of living - measured by purchasing power parity, PPP, income (UNPD 2009).

According to the International Food Policy Research Institute, the Global Hunger Index (GHI) for Zambia was 25.7 in 2009, giving the country a rank of 72 out of 88 countries. The GHI is a multidimensional approach to measuring hunger and malnutrition. It combines three equally-weighted indicators: (i) the proportion of undernourished as a percentage of the population (ii) the prevalence of underweight in children under the age of five and (iii) the mortality rate of children under the age of five (International Food Policy Research Institute 2009).

The Human Poverty Index (HPI) is an indication of the standard of living in a country, developed by the United Nations. For developing countries, like Zambia, the United Nations uses the Human Poverty Index (HPI-1), which is a composite index measuring deprivations in the three basic dimensions captured in the Human Development Index — a long and healthy life, knowledge and a decent standard of living.

The formula for calculating HPI-1 is given as:

$$HPI-1 = \left[\frac{1}{3} (P_1^\alpha + P_2^\alpha + P_3^\alpha) \right]^{\frac{1}{\alpha}}, \text{ where } P_1 \text{ is the probability at birth of not surviving to age 40 (times 100); } P_2 \text{ is the adult illiteracy rate; } P_3 \text{ is the un-weighted average of population}$$

² It should be noted that the 2000 figures are from the 2000 Census of Population and Housing while the 2001 to 2009 figures are the Population Projections.

without sustainable access to an improved water source and children underweight for age; and the value of parameter α is 3.

The HPI-1 for Zambia was 35.5% in 2007, giving the country a rank of 164 out of 182 countries (UNDP 2009).

Despite the economic growth Zambia has registered in recent years, poverty still persists. This is evidenced by the lamentation of GRZ that:

The persistently high income poverty observed in 2004, is in sharp contrast to the rapid acceleration in economic growth experienced since 1999. This implies that the country's improved economic performance over recent years has not translated into significant declines in poverty (MoFNP 2006: 14).

In the same vein, the Financial Standards Foundation (2009) reports that about 68.0% of Zambia's population lives below the national poverty line. Besides, 87.2% of the population lives on less than \$2 a day. The probability of dying between the ages of 15 and 60 is 61.7%.

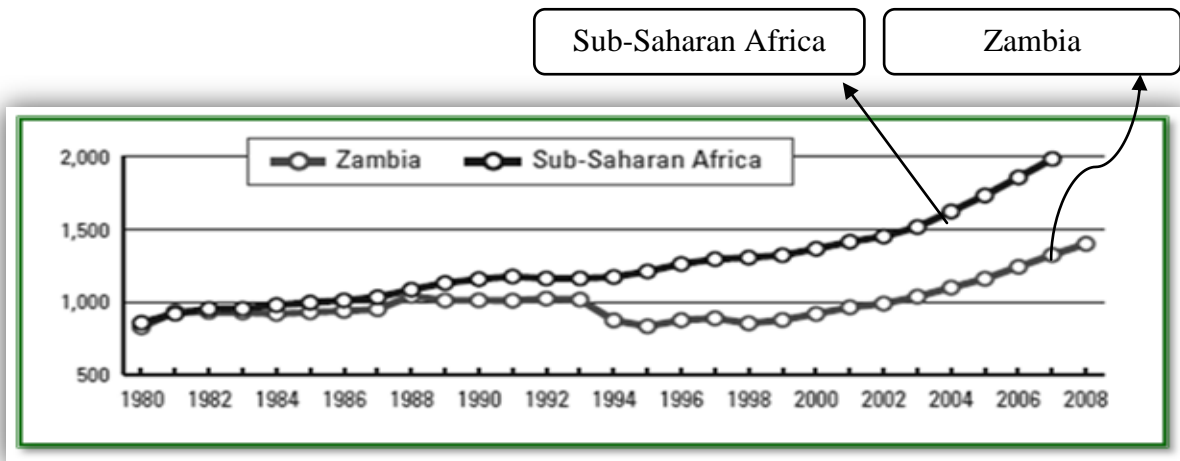
2.1.5 Gross Domestic Product (GDP)

The GDP is one of the indicators used to measure the health of a country's economy. According to the Global Competiveness Report 2009-2010, Zambia's key competitive indicators as of 2008 had the following magnitudes:

- GDP (US\$ billions): 14.3
- GDP per capita (US\$): 1,150.5
- GDP (Purchasing Power Parity) as share (%) of world total: 0.03

The Purchasing power parity (PPP) enables us to compare the standard of living between countries by taking into account the impact of their exchange rate.

Figure 2 shows a comparison between Zambia's GDP per capita to the average GDP for the Sub-Saharan Africa since 1998.



Source: *Global Competitiveness Report 2009-2010* published by the World Economic Forum)

Figure 2: Zambia's GDP per capita 1980 - 2008

An examination of Figure 2 reveals that Zambia's economy noticeably improved during the period 2002 to 2005 in which the Poverty Reduction Strategy Paper and the Transitional National Development Plan were implemented. The improvements in GDP represented a marked reversal of the economic stagnation experienced during the 1990s (MoFNP 2006: 23).

Table 2 shows the three income-based stages of development used by World Economic Forum to rate the countries.

Table 2: The three income-based stages of development

Development stage	GDP per capita in USD
Stage 1: Factor driven	<2000
Transition from Stage 1 to Stage 2	2000-3000
Stage 2: Efficiency driven	3000-9000
Transition from Stage 2 to Stage 3	9000-17000
Stage 3: Innovation driven	>17000

Source: *The Global Competitiveness Report 2008-2009* (p.12) published by the World Economic Forum

Since Zambia's GDP per capita is US\$ 1,150.5, which is below US\$ 2,000, it follows that Zambia is in Stage 1 of development. The stages of development for the case study countries in HERANA project are Stage 1 for Tanzania, Kenya, Mozambique and Uganda. South Africa and Mauritius are in Stage 2, whilst Botswana is in transition from Stage 1 to Stage 2.

2.1.6 Education related indicators and Adult literacy

There are various competitive indicators on education used by the World Economic Forum to rank the countries. Table 3 presents 14 indicators and the global ranking of Zambia on each indicator out of 133 countries.

Table 3: Zambia's performance on HE-related global indicators (2009 – 2010)

Item	Indicator	World Rank of Zambia (out of 133 countries)
1.	Secondary enrollment	113
2.	Tertiary enrollment	127
3.	Quality of the educational system	58
4.	Quality of math and science education	90
5.	Quality of management schools	82
6.	University-industry collaboration in R&D	74
7.	Quality of scientific research institutions	84
8.	Internet access in schools	116
9.	Company spending on R&D	113
10.	Local availability of research and training services	92
11.	Extent of staff training	98
12.	Technological readiness	109
13.	Life expectancy (46 years) 2007	130
14.	Expenditure (2.1% of Annual Budget) 2007	119

Source: Compiled from "The Global Competiveness Report 2009-2010" published by the World Economic Forum. The indicators show global competitiveness of 133 countries across a range of dimensions including HE and training, technological readiness and macro-economy.

The rankings of Zambia in Table 3 paint a general picture that Zambia is not very competitive on HE related indicators.

In terms of adult literacy, UNDP (2009) gave Zambia a rank of 115 out of 135 countries in 2008. In international practice, adult literacy applies only to the population aged 15 years and over, classified by sex, by five-year age-groups, and by urban/rural zones. A person is literate who can with understanding both read and write a short simple statement related to his/her everyday life. A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his/her group and community and also for enabling him/her to continue to use reading, writing and calculation for his/her own and the community's development³.

The United Nations Commission on Sustainable Development (2001) affirms that literacy is an essential element for effective participation in sustainable development processes.

³ The website, http://www.unescobkk.org/fileadmin/user_upload/ict/e-books/Literacy/Literacy_Section3.pdf, for UNESCO, has a booklet that elaborates the meaning of literacy.

2.1.7 Public spending on education

Since literacy is an essential element for effective participation in sustainable development processes, public spending on education is therefore inevitable. According to the *2010 budget address by Dr. Situmbeko Musokotwane, MP, Minister of Finance and National Planning - delivered to the National Assembly on Friday 9th October, 2009*, the proposed public spending on education in Zambia for the year 2010 is 19.9% of the total national budget. From this budget allocation 15.7% is for the tertiary (college and university) education.

Figure 3 shows the 2010 budget share between tertiary and primary/secondary education. It is clear that primary/secondary education had the largest share of the total budget allocation on education, which is 85.3 %.

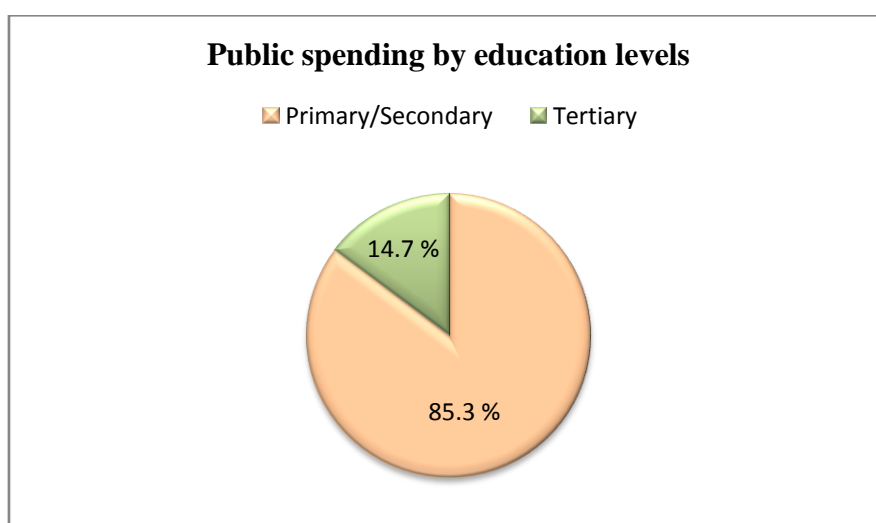


Figure 3: 2010 GRZ budget allocations by education level

2.1.8 Gender in education

The World Economic Forum uses the Gender Gap Index to rank economies according to their gender gaps and their scores can be interpreted as the percentage of the gap between women and men that has been closed. The World Economic Forum in 2009 ranked Zambia as 116 out of 134 countries as having gender gaps in education attainment. Besides, gender by enrolment at primary, secondary and tertiary levels in Zambia had the following ranks (out of 134 countries) and gap scores.

- Primary enrolment: rank 42 with a score gap of 1.01
- Secondary enrollment: rank is 116 with a gap score of 0.87
- Tertiary education: rank 120 with a gap score of 0.46

From these ranks it is evident that gender gaps have been narrowed more in primary enrolment than in secondary or tertiary enrolment.

To sum it all, I have discussed in the sectors on which Zambia's economy hinge; presented Zambia's performance on several global indexes and indicators (HDI, GHI, GDP, poverty index, and education related indicators); public spending on higher education; adult literacy; and gender in development. It is clear that Zambia's performance on the global indexes and indicators is very low. Since these indexes and indicators aim at gauging the level of development of countries, it suffices for me to conclude that Zambia is not competitive in economic development. Presumptuously, the thrust of this study is that a successful linkage of Zambia's HE to economic development can make Zambia more competitive.

2.2 UNZA

2.2.1 History of UNZA

UNZA is one of three public universities in Zambia. The other two are Copperbelt University, opened in 1986 and Mulungushi University, opened in 2008. UNZA is the first university in Zambia. In 1962, in Tananarive, an idea of creating a Zambian university was proposed at the UNESCO sponsored Conference on the Development of HE in Africa. In 1964, the new Zambian government appointed a council to facilitate the creation of a university. Successfully, in 1966 UNZA opened with only 312 students and with 3 schools – Humanities and Social Sciences, Natural Sciences and Education. Four years later, the number increased to 2,500 students. In 1980, UNZA had approximately 4000 students. In 2009, the enrolment at UNZA stands at 11500 students (UNZA 2010)⁴.

2.2.2 Zambia's national regulatory framework for universities

The University Act No. 11 of 1999 of the laws of Zambia regulates all universities in Zambia, be it private or public. This relatively new law has provided for some major changes in the governance of the University of Zambia. One example is that the Minister of Education is empowered, under this law, to appoint the University Council. Another example is that this law has provided for the reduction of the tenure of office of the University Chancellor from five to three years.

2.2.3 UNZA's mission/vision, academic structure and administration

UNZA states its mission as follows:

“UNZA is a centre of Excellence in HE for individuals, industry and society through the provision of quality education, research and scholarly programs for strategic human resource development” (UNZA 2008).

⁴ The history about UNZA is well documented on UNZA website: www.unza.zm

It also states its vision as:

“To be a leader in provision of HE in the region, celebrated for providing comprehensive and rigorous teaching-learning, research and scholarly programs that are responsive to the needs of individuals, industry and society” (UNZA 2008).

UNZA has 9 schools, 2 institutes and two directorates. The schools are: School of Education; Law School; School of Humanities and Social Sciences; School of Engineering; School of Natural Sciences; School of Medicine; School of Veterinary Medicine; School of Mines; and School of Agriculture Sciences. The name of the institute is “Institute of Economic and Social Research” (INESOR), and the two directorates are, Directorate of Research and Graduate Studies, and Directorate of Distance Education (UNZA 2008).

With reference to the University Act of 1999 of the Laws of Zambia, UNZA administration is structured as follows:

- The Chancellor, appointed by the Republican President, on the recommendation of the Minister of Education, from among eminent Zambian citizens, is the titular head of UNZA.
- Then, the Vice-Chancellor, appointed by the Minister on the recommendation of the Council is the academic, financial and administrative head of UNZA and, where the Chancellor is unable to do so, preside at the ceremonial assemblies of UNZA, and confer all degrees and the other academic titles and distinctions of UNZA.
- The Deputy Vice-Chancellor, appointed by the Minister, on the recommendation of the Council, assists the Vice-Chancellor in the Vice-Chancellor’s duties and acts in the place of the Vice-Chancellor when the office of Vice-Chancellor is vacant or the Vice-Chancellor is for any reason absent or otherwise unable to perform the Vice-chancellor’s functions.
- The Registrar, appointed by the Council, under the direction of the Vice-Chancellor, is responsible for the general administration of UNZA including the custody of its property and the administration of its assets.
- The Librarian, appointed by the Council, is, under the direction of the Vice-Chancellor, responsible for the development, control, management and coordination of library services in UNZA.
- The bursar, appointed by the Council and under the general direction of the Registrar, is responsible for the financial planning and general administration of the finances of UNZA and maintains the accounts.
- Lastly, the Dean of Students, appointed by the Council and under the general direction of the Vice-Chancellor, is responsible for the management of students’ affairs and exercises superintendence over the students’ affairs unit.

CHAPTER 3: METHODODOLOGY

This chapter discusses the study design and methodology. Section 3.1 discusses the study with a focus on sample design and sampling techniques used; instruments used in the study and the motivation why they are used; how the study was introduced to the respondents; and the development of study interview questions. Section 3.2 discusses data collection methods by focusing on the interviews; records and documents; reflexivity; and assurance of confidentiality. Section 3.3 discusses the methods employed in analyzing data with a focus on unitizing data; coding; categorization and discovering patterns; and identifying themes. Section 3.4 finally highlights how trustworthiness in the study is assured with respect to credibility; transferability; dependability and confirmability.

3.1 Study design

3.1.1 Study design

For the purpose of this study, the qualitative method has been chosen to investigate the conditions under which UNZA can make significant and sustained contributions to economic development. Therefore, a case study approach is used.

The case study approach presents an orderly way of studying events, collecting data, analyzing information and reporting the results. It entails detailed and intensive analysis of a single case (Bryman 2008: 52). Nevertheless, case study approach has its limitations. Bell (2005) states that a focus on a single case can make it difficult to crosscheck information. Others have argued that since case studies often rely on descriptive information provided by different people, there is room for important details to be left out. Also, much of the information collected is retrospective data, recollections of past events, and is therefore subject to the problems inherent to memory.

In order to minimize the limitations, the data was collected using semi-structured interviews with administrators in UNZA, and document analysis. The use of multiple sources increases confidence in the interpretation of data; helps to confirm the validity of study processes; and reduces biases that may arise from using one method (Denzin and Lincoln 2000).

3.1.2 Sampling method and the sample

This study uses purposive sampling, which is a non-random method of choosing respondents. Gay and Airasian (2000) explain that qualitative studies rely on purposive selection of participants to enrich the data. This observation is supported by Manning (2000), who affirms that the aim of purposive sampling is to enable the person doing a study experience a multitude of points of view on an issue being studied. Lincoln and Guba (1985: 200) explain that to have such an experience, the person doing the study begins with the assumption that context is critical and purposely selects a sample (people to interview, events to observe) which are expected to provide a rich array of information.

However, purposive sampling has limitations. O’Leary (2004) argues that purposive sampling is characterized by two major weaknesses: unintentional biasness and non-representativeness.

In this study, the respondents were chosen with an intention to enrich data on: Zambia’s national development policies; UNZA institutional policies; UNZA academic core and periphery; and externally funded projects in UNZA. I interviewed a total of 13 respondents from UNZA comprising deans of schools (Agriculture; Engineering; Education; Humanities and Social sciences; Law; Mines; Natural Sciences; and Veterinary Medicine); the head of Directorate of Research and Graduate Studies; the head of externally funded projects; and the deputy Vice Chancellor. I was supposed to interview one respondent from MoE. However, MoE did not, within the time I was in Zambia for data collection, avail a person that I could interview. My positive reaction was to diligently use the interview schedule, intended for sourcing data from MoE, as a checklist for analyzing several national policy documents and online information from websites for various government departments.

I should, however, point out that the reason for a seemingly small sample size is the time constraint. I had 6 weeks in Zambia, from 10th January to 22nd February 2010, in which to make interview-related logistical arrangements and to conduct the interviews.

3.1.3 Instrumentation

This study depended on data collection instruments to extract and record information. Lincoln and Guba (1985: 44-45) categorize data collection instruments as human and non-human. The former refers to the person conducting the study and the latter to instruments like the questionnaire.

Regarding the importance of the human instrument, Lincoln and Guba (1985: 39) affirm that:

Only the human instrument is capable of grasping and evaluating the meaning of that differential interaction; because the intrusion of instruments intervenes in the mutual shaping of other element and that shaping can be appreciated and evaluated only by humans, and because all instruments are value-based and interact with local values but only the human is in a position to identify and take into account those resulting biases.

The above affirmation places a huge responsibility of grasping and evaluating the meaning of data, and perceiving and addressing biases in data on the person conducting the study. In this light I:

(a) With regards to interviews

- Conducted each interview as a learner.
- Adjusted to the respondents’ varied and many realities, estimated the interactions, and considered respondents’ indirect values and beliefs.
- Guided the interviews.

(b) With regards to document analysis

- Crossed checked the data content in policy documents with data from interviews and or from other policy documents.
- Contacted appropriate authorities to clarify the issues in the policy document that were unclear.

The non-human instruments I used in this study are outlined below. I chose these instruments because they provide sufficient data as well as ensuring the trustworthiness of the study. Also, to design focused, efficient instruments, I first considered how the collected data would be analyzed and used.

- Interview schedules: I designed specific interviews for eliciting data on (i) national policies, (ii) UNZA policies, (iii) UNZA academic core and periphery and (iv) externally funded projects in UNZA.
- Document analysis checklists: I used the aforementioned interview schedules as checklist for extracting relevant information from policy documents.

Besides, I used the computer to access online literature. I also used the phone to contact respondents and other authorities for more information or clarification over issues emerging from the interviews or from policy documents.

3.2 Data collection

This section sheds more light on how I used the data collection instruments described above.

3.2.1 Interviews

Interviews with respondents were based on an open-ended interview protocol, which enabled me: (i) to be flexible in my approach; (ii) the opportunity to observe nonverbal behavior of the respondents; and (iii) to control the direction of questioning, rashness of the respondent and length of the interview. These advantages of interviews are crucial according to (Spradley 1980).

3.2.1.1 Legitimacy to conduct the interview

Prior to the interviews I served the Registrar of UNZA with my study introduction letter from the University of Oslo. The Registrar promptly gave me an authorization letter to conduct interviews in UNZA and also informed the respondents to accord me maximum cooperation. After that, I made appointments with individual respondents on dates for interviews and served each respondent with an interview schedule.

3.2.1.2 Assurance of Confidentiality

Confidentiality is important in assuring that information is freely given. I informed the respondents that UNZA case study was simply an academic undertaking. In addition, I followed the following standards to assure confidentiality: (i) identification of all participants by a code; (ii) omission of details that could attribute quotations to specific individuals; and (iii) exclusion of details that could spot any of the respondents.

3.2.1.3 Time and duration of each interview

Interviews were held during work hours, in the offices for respective respondents. Each interview lasted one and half-hours on average.

3.2.1.4 Language used in the interviews

Interviews were conducted in English because English is both the official language and the language of instruction in Zambia.

3.2.1.5 Recording interview proceedings

Interview responses were audio-taped with the consent of respondents. However, two of the respondents declined to be audio-taped and as such I recorded the interview proceedings manually in my study diary.

3.2.1.6 Challenges I faced during interviews

Conducting interviews for this study was not easy, and the difficulty increased in proportion to my familiarity with the interview subject, partly because I was once admitted in UNZA for my Bachelors' study program. However, I restrained myself from interjecting my own comments and from leading the respondents so that they have the opportunity to draw their own conclusions without interference.

3.2.2 Analysis of records and documents

The importance of documents analysis in eliciting data for this study cannot be overemphasized. O'Leary (2004) defines document analysis as the 'collection, review, interrogation, and analysis of various forms of text as a primary source of research data'. In this vein, use of documents enables the person doing a study to understand practice, and even more, to understand the situation within which practice occurs (Jarvis 1999: 111).

3.2.3 Study Diary

To augment data collected from interviews and document analysis, I kept a reflexive diary where I described in detail my experiences and logged the study methods I used. Specifically, I:

- entered my daily schedule and logistics – (when, where, and with whom interviews and observations were conducted);
- elaborated my personal values, beliefs, frustrations, joys, and speculations that emerged as I gained greater insight ;
- described respondents and facilities in the UNZA;
- described peculiar events or observations during each visit to the UNZA; and
- entered justifications for any method I chose to use.

Paying close attention and recording respondents' expressions in the study diary helped me develop a deeper understanding of many issues raised by respondents. Indeed, the words of Spradley (1980: 6) can be echoed: 'beneath the surface, hidden from view, lies a vast reservoir of cultural knowledge'.

3.3 Data analysis

The data for this study was analyzed manually through the process of transcribing, coding, categorization into themes and subthemes, and drawing conclusions.

3.3.1 Transcribing the data

The data collected through interviews was transcribed by unitizing and coding. Erlandson et.al (1993: 117) clarify that unitizing data is the crucial step in transforming interview data "into the smallest pieces of information that may stand alone as independent thoughts in the absence of additional information other than broad understanding of the context".

Therefore, data was unitized on index cards that were coded to enable locating the original source. Charmaz (1983: 186) commends that codes act as devices to label, separate, compile and organize data.

3.3.2 Categorization of data into analytical themes

After unitizing and coding, data was categorized into themes and subthemes. Guba and Lincoln (1985: 347) point out that categorization helps "to bring together into provisional categories those cards that apparently relate to the same content". Similarly, Bryman (2008: 554) highlights that categorization helps to construct an index of central themes and subthemes, which are then represented in a matrix that closely resembles Statistical Package for Social Sciences (SPSS) spreadsheet with its display of cases and variables. This study used the following five broad analytical themes, namely national policies, UNZA institutional policies, UNZA academic core and periphery, and eternally funded projects. These themes had subthemes.

3.3.3 Data interpretation and conclusion

After a thorough data categorization, I made simple computations and explored several data presentation methods. Finally, I drew interpretations and conclusions.

3.4 Ensuring trustworthiness in the study

Case studies usually suffer from external validity partly because of the small samples associated with them (LeCompte and Goetz 1982). The solution, according to Guba and Lincoln (1994), is that instead of assessing the quality of case studies on reliability and validity, trustworthiness and authenticity should be used.

Bryman (2008: 377) elaborates that trustworthiness comprises four criteria: (i) credibility (similar to internal validity), (ii) transferability (similar to external validity), (iii) dependability (similar to reliability), and confirmability (similar to objectivity). Bryman further illuminates authenticity criteria as that which address the following issues of wider political impact of study: (i) fairness of the study in representing different viewpoints among members of social setting, (ii) ontological authenticity, referring to whether the study helps members to arrive at a better understanding of their social setting, (iii) educative authenticity, referring to whether the study helps members to appreciate better the perspectives of other members of their social setting, and (iv) catalytic authenticity, referring to whether the study act as an impetus to members to engage an action to change their circumstances.

An outline below highlights how I tried to uphold trustworthiness in this case study UNZA.

3.4.1 Credibility

To try and uphold study credibility I observed the following:

- During the interviews, I occasionally rephrased the respondent's views to make sure I captured their exact views on issues discussed. Besides, I also asked follow-up questions for clarifications.
- After the interviews, I frequently contacted respondents to validate their views on issues that emerged from interviews or from policy documents.
- I adhered to the 'Triangulation' principle. For instance, I confirmed the data from interviews with data in policy documents.
- Following each interview, I gave each respondent the opportunity to listen to the audio recorder as a chance to validate the information or provide additional information or amend or clarify information already provided.
- To help myself analyze data amicably, I made observations of office environments and UNZA facilities where the respondents' interacted.

3.4.2 *Transferability*

In as much as the ultimate determination of transferability rests with future studies, this study has addressed issues related to: (i) UNZA setting, (ii) personal biases detected, (iii) possible influences created by respondents' official positions, and (iv) respondents attitudes, expectations, opinions, and emotions during the interview.

3.4.3 *Dependability and confirmability*

To promote dependability of the study, I engaged two peers with whom I had conversations, discussions, and question-and-answer periods. The engagement enabled my peers to monitor and assess the methods employed in this study and gave me feedback. In addition, the role that my study Supervisor played in debriefing was extremely useful because he possessed a wealth of understanding on the HE and economic development in Africa.

Confirmability is product check that helps assure that data, interpretations, and findings are grounded in the context from which they came (Guba and Lincoln 1985). This study assures confirmability by keeping a diary for logging important activities, schedules, and dates that otherwise might have been forgotten with the passage of time. Besides, audio recordings, transcripts, field notes, and descriptions have been maintained.

CHAPTER 4: ANALYTICAL FRAMEWORK AND LITERATURE REVIEW

This chapter presents the study’s analytical framework and the relevant literature for this study. Section 4.1 describes the analytical framework adapted from the HERANA project, and Section 4.3 presents the literature review.

4.1 The analytical framework

Since the purpose of this case study is to explore the conditions under which UNZA is expected to make significant and sustained contribution to economic development, it is important to use tools or a framework for analyzing data.

4.1.1 Adapting the analytical framework of the HERANA project

This study adapts the analytical framework developed by HERANA project. The constituents of the HERANA analytical framework are summarized in Table 4, whose close examination reveals that:

- HERANA analytical framework is informed by the lessons from successful practices of linking HE to economic development in three countries- South Korea, North Carolina, and Finland.
- The analytical point of departure for the HERANA study is the influence of three interrelated factors (the nature of the pact; the nature, management, size and institutionalization of externally funded project; and the nature, size and continuity of the academic core) on HE’s role in, contribution to and impact on development. In addition, economic development is not remote to economic growth, but encompasses human development, equity based development, and knowledge based development.
- The indicators (of the pact, governance and coordination; institutionalization; and strong academic) are important frames of reference for analyses.

Table 4: Summary of the analytical framework for HERANA Project

	THEME	ISSUES ADDRESSED/COVERED
1.	Brief overview of the Project	<ul style="list-style-type: none"> • Overview of HERANA. Key activities are: <ul style="list-style-type: none"> (i) Research (ii) Advocacy • HE and economic development project. <ul style="list-style-type: none"> (i) Contradictions in the Accra Declaration (1973) that all universities are “development universities”, yet no development framework provided. (ii) Project aims at macro and meso/micro levels. (iii) Project process (iv) What the project is not doing (v) Prism for exploring HE and development (investigation of three systems – South Korea, North Carolina and Finland; and a framework derived from successful practices linking HE and economic development) (vi) Lessons from successful practices.
2.	Analytical premise	<ul style="list-style-type: none"> • Three inter-related factors influencing higher education’s role in, contribution to and impact on development: (i) nature of the pact, (ii) nature, management, size and institutionalization of externally funded project, and (iii) nature, size

		<p>and continuity of the academic core.</p> <ul style="list-style-type: none"> • The propositions expressing the influence of the aforementioned factors on the possible contribution of HE to development, and the relationships between them.
3.	Notions of development	<ul style="list-style-type: none"> • Economic growth as development • Human development • Equity and development • Knowledge and development
4.	The Pact	<ul style="list-style-type: none"> • Definition and characteristic of a pact. • Notions of HE • Actors and relationships which impact the pact • Policy, implementation, infrastructure power, and coordination • The role of external funders • Indicators of the pact, governance and coordination
5.	Institutionalization	<ul style="list-style-type: none"> • Loose coupling • Institutionalism and institutionalization • Indicators of institutionalization
6.	The academic core	<ul style="list-style-type: none"> • Indicators of as strong academic core • Preliminary analysis on typology of projects.
7.	Main findings	<ul style="list-style-type: none"> • Very weak educational department expected to implement many symbolic policies and steer HE towards contributes contributing to development. • Pact on importance of education, but no pact on HE, development and the knowledge economy • Government departments started funding projects in universities with no national coordination. • National policies reflected traditional or new instrument approach to the role of the university in development, except for Botswana and Mauritius • All institutions attempted to institutionalize projects with little or no help from government or funders.

Source: CHET 2009 – HE and Economic Development: Draft Analytical Framework

On tailoring a framework to suit a specific study the Department for Communities and Local Government in UK elaborates that:

Those undertaking evaluations may use the framework as a starting point/structure within which they can map out the questions that are relevant to their specific evaluation. This may involve tailoring the framework and its constituent questions to the specific initiative or project that is being evaluated, or simply selecting relevant questions from the framework... Evaluators will need to consider which methods are appropriate and feasible for their particular study (Department for Communities and Local Government 2009: 5).

I have various reasons for adapting the HERENA study analytical framework. Firstly, the HERENA framework seems to be indicative and comprehensive for guiding the assessment of the contribution of universities to economic development in various settings. British Government's Department for International Development (DFID) elaborates that any analytical framework should be indicative rather than prescriptive so that researchers can

focus on the issues which are important in their setting and to set locally relevant indicators and targets (DFID 2007).

Secondly, the framework focuses on lessons from successful practices in linking HE to economic development in three countries – South Korea, North Carolina, and Finland. The good lessons from these countries are clearly stated in both the framework and Pillay’s 2010 publication, and the lessons seem to be good frames of references in analyzing the conditions under which universities in general and UNZA in particular are expected to contribute to economic development.

Thirdly, adapting HERANA framework in this study promotes consistency and maximizes comparability of the findings between Zambia and the African countries that were studied by HERANA Project.

However, the study limitations in terms of time could not allow the effective use of all the detailed issues addressed by HERANA analytical framework. Whilst HERANA study has had enough time for institution site visits, data collection and analysis, this study has limited time for visiting Zambia for collecting and analyzing the data.

4.1.2 Specifying the analytical framework for this study

The analytical framework for this study consists of five components: (i) analytical point of departure, (ii) *lessons* from successful systems (Finland, South Korea, and North Carolina) and the HERANA project *findings* on eight African countries (Botswana, Ghana, Kenya, Mauritius, Mozambique, South Africa, Tanzania and Uganda), (iii) four inter-related models of development, (iv) the study propositions (v) and selected analytical indicators. I have detailed below these components of the framework.

4.1.2.1 The analytical point of departure

The analytical point of departure for this study is the influence of three interconnected conditions - policies (both national and institutional), institutionalization of externally funded projects, and the strength of the academic core - on UNZA’s role in, contribution to and impact on development. Further, these conditions are also influenced by the socio-economic and cultural settings of Zambia; UNZA’s institutional characteristics; and the external relations of UNZA with national authorities, donors, and industry also influence these conditions.

4.1.2.2 Successful practices of linking HE to development

To explore the conditions under which UNZA can make significant and sustained contributions to economic development, the study also used lessons from successful practices of linking HE to development by the three selected ‘best practice’ countries (Finland, South Korea, and North Carolina). The lessons are listed in Box 1. Besides, the study also used HERANA project *findings* on eight African countries (Botswana, Ghana, Kenya, Mauritius, Mozambique, South Africa, Tanzania and Uganda) as analytical references. The study finds

that there is limited evidence in the African countries of pacts around HE, development and the knowledge economy; the contradictory notions of the role of the university are not resolved (weak infrastructural power); national education departments are generally weak; there was limited co-ordination between government departments in funding projects in universities; the national policies reflect traditional or new instrumental notions of higher education; there were at each university a number of examples of excellent projects managed by outstanding academics; there were very limited attempts to integrate external funding with government priorities and efforts to strengthen the university's academic core; there were numerous attempts to institutionalize projects but limited support from governments or donors for these attempts; the desire for HE to contribute to development was hampered by weak or absent enabling frameworks; and the institutional leadership reflected competing notions of HE (CHET 2009).

This study uses the HERANA study findings: (i) to highlight the economic competitiveness of Zambia; (ii) as part of literature review; and (iii) to compare the performance of UNZA in economic development with the performance of the universities that were studied under the HERANA project.

Box 1: Key implications of successful HE systems for African countries

The implications for African countries of the successful systems of Finland, South Korea, and North Carolina are:

1. Linking economic and education planning
2. Building HE on a sound foundation of high-quality, equitable schooling
3. High participation rates with institutional differentiation
4. Strong state steering
5. Different roles for private higher education
6. HE linked to regional development
7. Strong cooperation and networks
8. Responsive to labor market demand
9. Positive role HE plays in development

Source: Pillay (2010: 30).

4.1.2.3 Four inter-related economic development models

As indicated, this study uses four inter-related models of development presented in Figure 4. The *Economic growth as development model* measures development using the GDP (Mankiw 2007; Maro 2007). The *Human development model* goes beyond GDP with an argument that economic growth is not an end in itself but a means to human development (Sen and Anand 1998; CHET 2009).

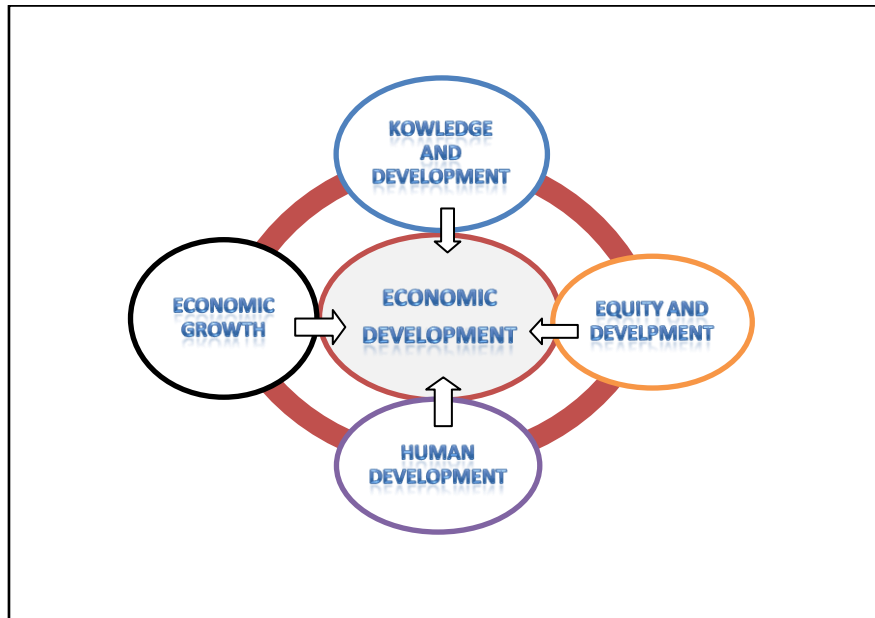


Figure 4: A diagrammatic presentation of four models of development

The *Equity and development model* is based on the notion that equity complements prosperity or development (Burton 1997; Mankiw 2007; CHET 2009). Therefore, societies, institutions and policies with a level playing ground contribute more to sustained growth and development.

The *Knowledge and development model* is based on the understanding that the capacity to use knowledge effectively allows individuals, enterprises, and communities to utilize resources and improve their wellbeing, thereby contributing to development (OECD 1996; Leadbeater 1999; Kok Report 2004; ESRC 2005; World Bank 2008: 5).

I will discuss these four models in detail in section 4.2.1.

4.1.2.4 The four study propositions

Fourthly, this study uses the following four propositions derived from on the study analytical point of departure.

Proposition 1:

The university makes a more significant and sustained contribution to development if national policies depict its role as an engine for development. Conversely, the university makes little contribution to development if national policies depict its role as being traditional, which is mainly associated with the production of civil servants.

Propositions 2:

The university makes a more significant and sustained contribution to development if its role as an engine for development is depicted in its institutional policies.

Proposition 3:

The university makes a more significant and sustained contribution to development when its academic core becomes stronger and economy-oriented.

Proposition 4:

When externally funded projects are not institutionalized within the university, they do not add to strengthening the academic core. Consequently, the university has limited capacity to significantly and sustainably impact on development.

4.1.2.5 Indicators for analysis

The indicators used in the analyses undertaken in the study are outlined in Box 2. These indicators have been adapted from the HERANA project (CHET 2009).

Box 2: Indicators for analysis

National Policies, Governance and Coordination:

- A national development framework is in place
- The concept of a knowledge economy features in national policies
- Government vision for universities
- Link between national level economic and education planning
- Implementation plans and agencies
- Role of the MoE
- Diversification, consensus and coordination of different government departments involved in HE
- Coordination and harmonization of government policies and/or strategies related to the role of HE in economic development
- Link between universities and national authorities
- Funding consistency
- Balance/ratio of income for the UNZA
- Main source of external funding for UNZA

Strong Academic Core:

- Ratio of undergraduate to postgraduate enrolments
- Ratio of student enrolments across fields of study
- Ratio of academic-staff to students
- Percentage of academic-staff with PhD degrees
- Research output in terms of staff and student publications (citation index in journals)
- Institutional contribution to research funding as percentage of total institutional budget
- Proportion of funding from government agencies

Institutional Policies and Activities:

Coherence between institutional vision and national development framework

- University leadership awareness of national policies and strategies on the role of universities in economic development.
- University plan reflects aspects of national development framework
- Institutional leadership vision of UNZA

Institutional engagement around the university's role in/contribution to economic development

- Institutional policies with regard to university's role in/contribution to economic development
- Establishment of specific units, structures or appointments that are linked to initiatives around economic development
- Specific programmes or central funds related to economic development.
- Main barriers facing institution in setting up activities aimed at stimulating economic development

Teaching programmes are becoming more economically oriented

- New programmes are development in response to external needs for training.
- Increases in student enrolments in fields that are considered to be of high economic relevance
- Attempts to attract funding for skills development
- New structures introduced which aim to foster learning-working relationships
- Use of information and communication technologies to prepare students for the knowledge economy
- Nature and extent of involvement of external stakeholders in teaching and learning and curriculum development

UNZA research activities are becoming more economy oriented

- Increase in externally funded research
- Strong strategic management/data oriented.

Externally Funded Projects institutionalized and sustained by University:

- University policy on project funding
- University contribution to or benefit from projects
- Structures are in place to manage project funding
- University special structures in place to manage donor relationships
- A process of registering projects
- Projects done outside the University
- Projects planned by University central administration
- Management of projects related to the University governance structures
- Relation of projects to mission/strategic plan of the University
- Management of the project going to central university administration
- A database for projects
- Project institutionalization
- Attempts to ensure project sustainability

In conclusion, the notable differences between the HERANA project's analytical framework and the framework for this study are that:

- The analytical point of departure in the HERANA study focuses on the influence of the *pact* on higher education's role in, contribution to and impact on development. This study does not use the concept of a "Pact" and instead focuses on "national policies, governance and coordination".
- The HERANA study uses the lessons from three countries (South Korea, Finland and North Carolina); but this study uses both the lessons from these three countries and from HERANA project findings on eight African countries (Botswana, Tanzania,

Mozambique, Mauritius, South Africa, Uganda, Kenya and Ghana). The inclusion of HERANA study findings allows me to compare the findings from Zambia with the situation in other African countries.

- The HERANA study uses more indicators than this study. The reason is that whilst this study had a limited time frame, the HERANA study had a more extended time schedule for data collection, analyses and presentation. As such, limiting the number of indicators in this study enabled me to effectively analyze the data within the limited time.

4.2 Literature review

The study's topic, purpose, questions and analytical framework provided me with an insight into the type of literature I needed to review. In this light, I restricted the scope of the review to the following themes: models of development and higher education; the concept of "Development University" in Africa; countries with successful systems on linking HE and economic development and the implications for African countries; national policies and the role of the university in development; university policies and economic development; university academic core and periphery; and institutionalization of externally funded projects in universities.

The sources of the material I reviewed are: the literature for Master of Philosophy in HE program (both journal articles and books); books from the University of Oslo library; online sources - mainly the World Bank; CHET; UNZA; and several GRZ ministries. However, I should point out that there were volumes of literature online about universities and economic development in Africa. For example, when I made a Google search on "[HE and economic development in Africa]", I got 5,950,000 results. When I tried to narrow the search down to "[universities and economic development in Africa]", I got 8,450,000 results. Narrowing down further the search to "[UNZA and economic development]" gave me 209,000 results. Consequently, I became highly selective on what literature I reviewed from online.

I have presented the literature on the aforementioned themes, by addressing a theme at a time.

4.2.1 Models of development and HE

The topic of this study is "The role of universities in economic development: a case study of the University of Zambia". In this topic, the term "university" is easily understood. What is not easily understood is the term "economic development". What exactly is economic development? This question inspired me to take a significant consideration of the models of development, and this study discusses four models of development: Economic growth as development; Human development; Equity based development; and Knowledge based development (CHET 2009). Cardinal to the review is the connection between each model of development and HE.

4.2.1.1 *Economic growth as development*

The concepts of economic growth and economic development are often used interchangeably. However, part of the literature clearly distinguishes the two concepts. For example, in their publication, *Community Economics: Linking Theory and Practice*, Shaffer, Deller and Marcouiller clarify the difference between economic growth and economic development as follows:

Growth means that we have changed the factors of production, but we probably have the same type of output produced with income distributed the same way. Structural change, within the context of development, means such things as changes in industry mix, product mix, occupational mix, ownership patterns, and technology. Development means that there is a technical and institutional change in the way we increase production and its distribution. It could be that there has been a change in technology, a change in institutions, or a change in cultural/social framework, specifically, changes in attitudes and values of the population. Development is long, purposeful, and permanent (Shaffer et al 2004: 4).

The relationship between the two concepts is that economic growth (measured using GDP) measures a country's economic development. In his publication, *Principles of Economics*, Mankiw (2007: 508) affirms that when judging whether the economy is doing well or poorly, it is natural to look at GDP. In the same vein, Maro (2007) elaborates that GDP, as a standard indicator used to measure a country's economic performance and often seen as an indicator of well-being, is widely used.

Although widely used, GDP has weaknesses in measuring economic development (see for example, Mankiw 2007; Maro 2007; and HERANA 2009). Distinctively, Maro (2007) argues that GDP was never intended to measure well-being because it fails to distinguish between costs and benefits, productive activities and destructive ones, or sustainable and unsustainable practices. Similarly, the HERANA project reports that the relatively high GDP growth rates in the eight African countries did not commensurate social outcomes. High levels of poverty and inequality evidenced this.

Having elaborated that GDP is widely used as indicator for economic development, I now proceed to consider the relationship between HE and GDP. Firstly, the relationship between education and GDP dates back to the time of Adam Smith and the early classical economists. Particularly, the work of Robert Merton Solow is crucial for understanding the commencement of empirical literature on education's contribution to GDP. Solow (1957) ascribed the growth in GDP to three sources: (i) increases in the stock of physical capital, such as machines and buildings that are used to produce goods and services; (ii) increases in the size of the labor force; (iii) and a residual representing all other factors. He observed that the residual contribute significantly more to GDP growth than the increase in the capital stock. Solow named the residual "technical progress" and noted that increasing levels of education were one of the factors that contributed to technical progress.

Solow's finding activated the need to understand the role of education in economic growth in depth. This led to the commencement of empirical literature on the contribution of education to GDP in the 1960s. Notable works that are frequently cited in this field are Schultz (1961),

Denison (1962, 1967) and Psacharopoulos (1972); and the most influential works on contribution of education to GDP are those developed by Wheeler (1980), Hicks (1982), and Psacharopoulos (1994).

Three methods have been employed by researchers to approximate education's contribution to GDP. Some have used growth equations (see for example, Harberger and Selowsky 1966); some, growth accounting or productivity index (see for example, Denison 1967; Selowsky 1969); and others production functions.

On how much education contributes to GDP, the study by Denison (1985) on "*Trends in American Economic Growth, 1929-1982*" illuminates that between 1929 and 1982, increasing levels of education were the source of 16 percent of the growth of total potential output in the non-residential business sector and 30 percent of the growth in the productivity of people employed in that sector in the US.

Similarly, a 2006 World Bank sponsored study on "HE and Economic Development in Africa" conducted by David Bloom, David Canning, and Kevin Chan, examined the impact of tertiary education on GDP. Their study suggests that increasing tertiary education may be important in promoting faster technological catch-up and improving a country's ability to maximize its GDP. Their results show that given the Sub-Saharan Africa's current production level of about 23 per cent below its production possibility frontier, increasing the stock of tertiary education by one year could maximize the rate of technological catch-up at a rate of 0.63 percentage points per year, or 3.2 percentage points over five years (Bloom *et. al* 2006: i-ii).

In sum, I have illustrated that the notion of economic growth views development as simply the country's growth in GDP. I have also argued that education makes significant contributions to economic growth. I now turn to review the next model of development, the "human development".

4.2.1.2 Human development

Human Development, a development paradigm beyond fluctuations in GDP, is defined as the creation of an environment in which people can develop their full potential and lead productive, creative lives in accordance with their needs and interests (UNDP 2010). UNDP insists that people are the real wealth of nations and therefore development is about expanding the choices people have to lead lives that they value.

Literature shows that "Human development" is linked to the economic growth based on the argument that economic growth is not an end in itself but a necessary condition for human development (UNDP 2010; CHET 2009).

UNDP (2010) illuminates that whereas *economic growth* focuses only on enlarging people's choices, human development focuses on seven broad themes, which are presented in Box 3.

Box 3: UNDP's seven themes on human development

- *Social progress:* This theme is concerned with ensuring greater access to knowledge, better nutrition and health services.
- *Economics:* Economic growth is considered as a means to reduce inequality and improve levels of human development.
- *Efficiency:* Concerned with resource use and availability. Human development is pro-growth and productivity as long as such growth directly benefits the poor, women and other marginalized groups.
- *Equity:* Concerned with economic growth and other human development parameters.
- *Participation and freedom:* Predominantly concerned with issues of empowerment, democratic governance, gender equality, civil and political rights, and cultural liberty, particularly for marginalized groups defined by urban-rural, sex, age, religion, ethnicity, physical or mental parameters, and other factors.
- *Sustainability:* Concerned with future generations in ecological, economic and social terms.
- *Human security:* Concerned with security in daily life against such chronic threats as hunger and abrupt disruptions including joblessness, famine and conflict.

Source: Compiled from information on UNDP website

Furthermore, human development is measured using four indices developed by UNDP (2010). These indices are: (i) HDI - Human Development Index, (ii) GDI – Gender-related Development Index, (iii) GEM – Gender Empowerment Measure, and (iv) HPI – Human Poverty Index.

Chapter 2 has already discussed the meaning of HDI and HPI. GDI measures achievement in the same basic capabilities as the HDI does, but takes note of inequality in achievement between women and men. GEM is a measure of agency, which evaluates progress in advancing women's standing in political and economic forums and examines the extent to which women and men are able to actively participate in economic and political life and take part in decision-making.

There are other incorporations to human development by Sen and Anand (1998), who have incorporated substantive freedoms necessary for an individual to lead a desired life and argue that poverty is a deprivation of a person's capability to lead his or her desired life.

From the foregoing discussion it can be argued that HE and human development are related through the mentioned themes that hinge on HE. For example, the focus of Social Progress theme is empowering society with knowledge, which, according to Clark (1983), can be facilitated by institutions of HE, whose business is to fashion and manipulate knowledge.

In addition, HE is implicitly related to the four mentioned human development indices through the knowledge factor. HE can empower people with knowledge that can be traded, say through employment, for wages. This can be evidenced by a study by Macerinskiene and Vaiksnoraite (2006) which suggests that the average earnings of individuals are closely related to their educational attainment. The higher salaries that educated entrants are able to command on the job market represent both the interest on the capital they have invested in higher education and the fact that they have become more productive.

In terms of performance, most African countries have done poorly on human development (UNDP 2010). Correspondingly, the HERANA project affirms that no African country has yet achieved high levels of broader human development in terms of the UNDP definition. The study illuminates that of the eight African countries reviewed in HERANA study, only Mauritius has achieved medium level human development. Similarly, I also gave a summary in Chapter 2 that Zambia has performed poorly on human development in terms UNDP definition. This is evidenced by FNDP that explains states as follows:

Zambia is currently in the lowest category of human development as defined by the United Nations Development Program (UNDP). In this regard, the challenge of reducing poverty is perceived by the Government not as an option but as an imperative for under such high poverty conditions, the social and political stability that is so pivotal for the revival of the country's growth and prosperity becomes vulnerable to real and potential societal tensions (MoFNP 2006: 1).

In all, I have indicated that human development is beyond economic growth. GDP is treated as a necessary condition for human development. I have also indicated that most African countries, including Zambia, have performed poorly on human development indicators as defined by UNDP.

4.2.1.3 *Equity based development*

The argument on equity based development is that equity complements prosperity or development (Burton, 1997). Burton stresses that equitable distributions are not only ethically appealing, but also sustainable in the long run. In this light, societies, institutions and policies with a level playing ground contribute more to sustained growth and development.

From the economic point of view, Mankiw (2007) explains that markets are usually perceived as a good way to bring about both equity and efficiency in the allocation of resources. He differentiates that while efficiency means that society is getting the maximum benefits from its scarce resources, equity refers to the fair distribution of those benefits among society's members. He further explains that since markets, in many instances, fail to achieve the equity goal of society, governments can improve equity through "public policies, such as income tax and welfare system..." (Mankiw 2007: 11). In the same vein, the HERANA project illuminates that equity helps nations to invest resources where the returns are highest, and enables societies to maximize the opportunities for innovation and investment.

Although I did not find literature on the linkage between HE and equity notion of development, I am of the view that the linkage exists. Firstly, HE can enlighten members of society on equity issues through university core activities – teaching and research. Secondly, HE produces people with advanced skills that can be used to design 'equity' sensitive public policies.

That most African countries are not committed to mainstreaming equity in development is among the findings of the HERANA study. The study reports that only one country, Mauritius, in the sample of eight countries had its social and economic policies highly committed to growth with equity.

Regarding equity in Zambia, my analysis of FNDP reveals that GRZ has committed itself to promote growth with equity. Specifically, GRZ explains and commits itself as follows:

Government recognizes that redistributive policies do matter for reducing poverty and that *growth* and *equity* are not necessarily in conflict. The Government maintains that there is no intrinsic trade-off between long run aggregate efficiency and overall equity, hence its resolve to approach poverty reduction through the 'broad-based growth' approach. It is in this context that the Government, together with civil society, has placed priority attention on those sectors that both maximize growth stimulation as well as on those, such as agriculture, education and health, which best address the plight of the poor (MOFNP 2006: 1).

Having discussed equity as a dimension of development, I now turn to consider the final notion of development "Knowledge based development".

4.2.1.4 Knowledge based development

The concept of KE can be understood from the following several definitions of KE. The *Economic and Social Research Council* states that:

Economic success is increasingly based on upon the effective utilization of intangible assets such as knowledge, skills and innovative potential as the key resource for competitive advantage. The term "knowledge economy" is used to describe this emerging economic structure" (ESRC, 2005).

In his report, *New measures for the New Economy*, Charles Leadbeater states that:

The idea of the knowledge driven economy is not just a description of high tech industries. It describes a set of new sources of competitive advantage which can apply to all sectors, all companies and all regions, from agriculture and retailing to software and biotechnology (Leadbeater 1999).

The Department of Trade and Industry subscribes to knowledge economy as:

... one in which the generation and exploitation of knowledge has come to play the predominant part in the creation of wealth. It is not simply about pushing back the frontiers of knowledge; it is also about the most effective use and exploitation of all types of knowledge in all manner of economic activity (DTI Competitiveness White Paper 1998).

The Organization on Economic Co-operation and Development affirms that:

The role of knowledge (as compared with natural resources, physical capital and low skill labor) has taken on greater importance although the pace may differ, all OECD economies are moving towards a knowledge based economy" (OECD 1996).

The Kok Report states that:

The knowledge society is a larger concept that justifies an increased commitment to R&D. It covers every aspect of the contemporary economy where knowledge is at the heart of value added – from high tech manufacturing and ICTs through knowledge intensive services to the overtly creative industries such as media and architecture" (Kok Report, 2004)

The World Bank (2008: 5) publication on ‘Building Knowledge Economies’ explains that the capacity to use knowledge effectively allows individuals, enterprises, and communities to utilize resources and improve their well-being, thereby contributing to development. The World Bank further elaborates that among its many contributions to economic and social development, knowledge acts as the (i) driver of competitiveness and productivity, (ii) facilitator of welfare and environment, and (iii) enabler of institutions and governance.

The World Bank (2008) has developed the ‘Knowledge Economy: Analytical Framework’ addressing the nature of (i) labor force, (ii) information infrastructure, (iii) innovation system, and (iv) institutional regime. With respect to these issues, the World states that:

- The labor force should be composed of educated and skilled workers who are able to continuously upgrade and adapt their skills to create and use knowledge efficiently. Education and training systems encompass primary and secondary education, vocational training, HE, and lifelong learning.
- A modern and adequate information infrastructure will facilitate the effective communication, dissemination, and processing of information and knowledge. Information and communication technologies (ICTs)—including telephone, television, and radio networks—are the essential infrastructure of the global, information-based economies of our time.
- An effective innovation system is composed of firms, research centers, universities, consultants, and other organizations that keep up with new knowledge and technology, tap into the growing stock of global knowledge, and assimilate and adapt it to local needs.
- The country’s institutional regime, and the set of economic incentives it creates, should allow for the efficient mobilization and allocation of resources, stimulate entrepreneurship, and induce the creation, dissemination, and efficient use of knowledge.

Having discussed the four notions of development and how they are linked with HE, it is now expedient to review how the concept of “Development University” in Africa is portrayed in the literature.

4.2.2 The concept of “Development University” in Africa

“...there is increasing evidence that HE may be becoming at least a necessary, if not a sufficient, condition for development, and the notion of HE as a driver for development is neither new, nor uncontested in Africa” (CHET 2007: 19).

That universities must be engines for socio-economic development is not new in African countries (UNESCO 1998). In the immediate postcolonial times, African countries considered universities as necessary institutions for promoting economic development. Unfortunately for Africa, development agencies, later and for several decades placed great emphasis on primary

and secondary education as optimal areas for investment (Sawyer 2002). In this vein, Bloom explains that:

Because of a longstanding belief that primary and secondary schooling are more important than tertiary education for economic development, the international development community has encouraged African governments' relative neglect of HE (Bloom *et al* 2006: i).

The reasons for the neglect of HE within development initiatives in Africa include a lack of empirical evidence that HE effects economic growth and poverty reduction (Bloom *et al* 2006:1); lack of evidence that HE yields social benefits over and above the benefits that accrue to students themselves (Psacharopoulos and Patrinos 2002); and the hypothesis that HE may promote social unrest and political instability (Bloom *et al* 2006).

On the contrary, a World Bank sponsored study by Bloom and others argue that the analytical tools used in the earlier studies which emphasized larger returns for primary education than for secondary or tertiary education were based only on one dimension of returns to HE - the private returns. The following revelation by Bloom *et. al* (2006) casts doubt on the practical applicability of the earlier findings:

Traditional rate of return analysis focuses solely on the financial rewards accrued by individuals and the tax revenues they generate. It neglects the broader benefits of advanced education manifested through entrepreneurship, job creation, good economic and political governance, and the effect of a highly educated cadre of workers on a nation's health and social fabric. It also ignores the positive impacts of research – a core tertiary education activity – on economies (Bloom *et al* 2006:17).

Several other studies associate HE with an array of benefits: social, economic, public and private benefits. For example, various studies (see, for example, Hansen and Lehmann 2006; Bloom *et al* 2006; Bramwell and Wolfe 2008; Wolfe 2004; World Bank 2008) suggest that HE is a determinant and a result of income, and can produce public and private benefits; create greater tax revenue; increase savings and investment; lead to a more entrepreneurial and civic society; improve a nation's health; contribute to reduced population growth; promote technological change and innovation; and strengthen governance. Figure 5 presents an array of the benefits of university education.

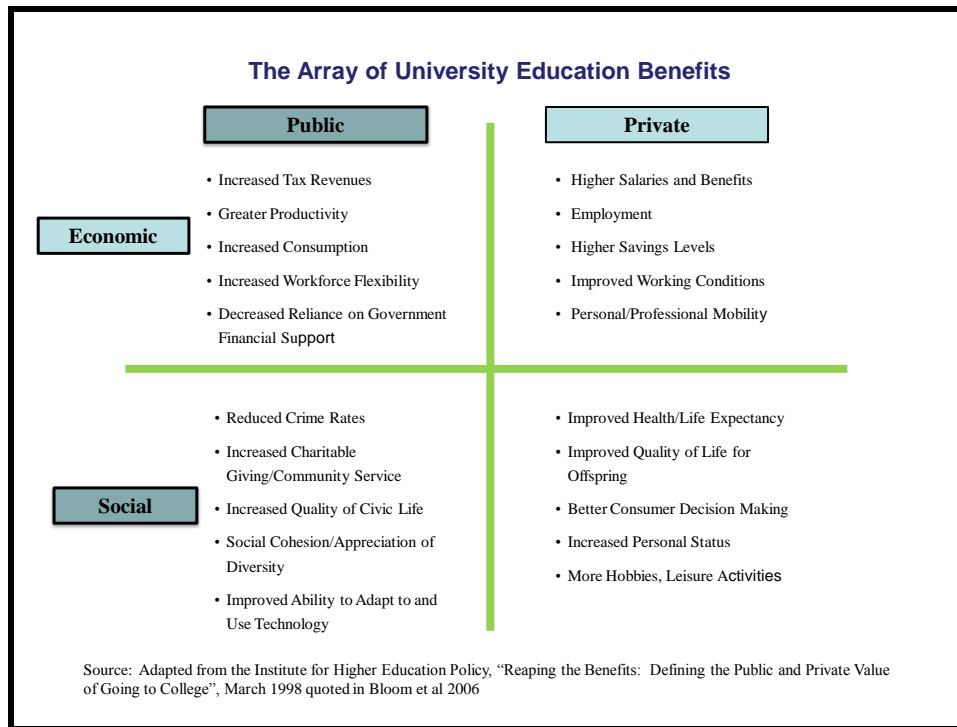


Figure 5: A diagrammatic presentation of an array of university education benefits

In the light of the above evidence on the benefits of university education, the former UN Secretary General Kofi Annan (as quoted in Bloom et al 2006) echoed a statement that:

The university must become a primary tool for Africa's development in the new century. Universities can help develop African expertise; they can enhance the analysis of African problems; strengthen domestic institutions; serve as a model environment for the practice of good governance, conflict resolution and respect for human rights, and enable African academics to play an active part in the global community of scholars.

Also, in the recent years, both development organizations and major donor governments have come to terms with the fact that all levels of education are important in pursuit of economic development, and have documented the important role HE can play in development.

For example, World Bank, which for several decades shifted its resources from higher to primary education and influenced both the bilateral donors and African governments to do the same, has now produced several documents that emphasize the significant role of HE in development. Notable among these documents are:

- *Accelerating Catch-up: Tertiary Education for Growth in Sub-Saharan Africa (2008)*, which states as follows:

Private and social returns to education have consistently been high. Earlier research found larger returns for primary education than for secondary or tertiary education. However, the picture is changing and the returns to tertiary education have risen appreciably. Private returns to tertiary education in low-income countries are now frequently on par with the returns from primary education. Each additional year of education can yield 10 percent to 15 percent returns in the form of higher wages. Furthermore, micro studies are identifying links between skills and higher productivity at the level of the firm, while research using macro data is showing that research and

development (R&D) raises productivity, as does the quality of education (measured by middle school test scores) (World Bank 2008: xxi).

- *Higher Education Quality Assurance in Sub-Saharan Africa: Status, Challenges, Opportunities, and Promising Practices (2007)*; which claims that for African countries HE is critical to achieving the Millennium Development Goals (MDGs).
- *Constructing Knowledge Societies: New Challenges for Tertiary Education (2002)*, which stresses the role of HE in building technical and professional capacity and strengthening primary and secondary education.
- *HE in Developing Countries: Peril and Promise (2000)*, which argues that HE is essential to developing countries if they are to prosper in a world economy where knowledge has become a vital area of advantage.
- *Knowledge for Development (1999)*, which emphasizes the need for developing countries to use HE to provide knowledge to narrow the income gap with rich world economies.

Subsequently, many African countries have reaffirmed the important role of universities in national development, and have embarked on HE reforms. Bloom *et. al* (2006: 10-13) show the following examples of reforms made by Africa countries:

- The Ethiopian Parliament's HE Proclamation in June 2003 which led to the giving of substantial autonomy to universities to choose their own staff at all levels; encouraging the development of private universities; introducing new degree courses that better fit the country's economic needs; and establishing a national Quality and Relevance Assurance Agency.
- The improvement of the financial situation leading to reduction in dependency on state funds by Uganda's Makerere University.
- The birth of new partnerships such as the Southern Africa Regional Universities (SARUA).
- The acceleration of the spread of distance learning in the Sub-Saharan Africa.

The benefits of HE presented in the literature above are important to this study because they help in understanding the legitimization for the government to steer UNZA towards economic development.

It is worth noting that the literature has not ended with merely evidence on the benefits of higher education. It also articulates the types of roles or functions a university can play in economic development. The HERANA project (CHET 2009), for example, states five worldwide notions of the role of the university in development as follows:

- *Traditional development view*: The University is viewed as merely a producer of national person-power, which is mainly for civil service.

- *Institutional view*: The University is considered as a self-governing institution.
- *New Instrumental view*: The university is an instrument for producing skilled professionals (predominantly doctors, lawyers, teachers, nurses, agricultural specialists), and for meeting and responding to ‘community’ needs.
- *Service enterprise view*: The University is seen to be rooted in markets meeting and responding to community needs.
- *Engine of Development view*: The University is the electricity of development in the new knowledge-economy.

Figure 6 is a diagrammatic illustration of five notions of the role of the university in development based on the information from HERANA project. Its examination shows that the university can make a more significant and sustained contribution to development when its role is predominantly viewed as the engine for development.

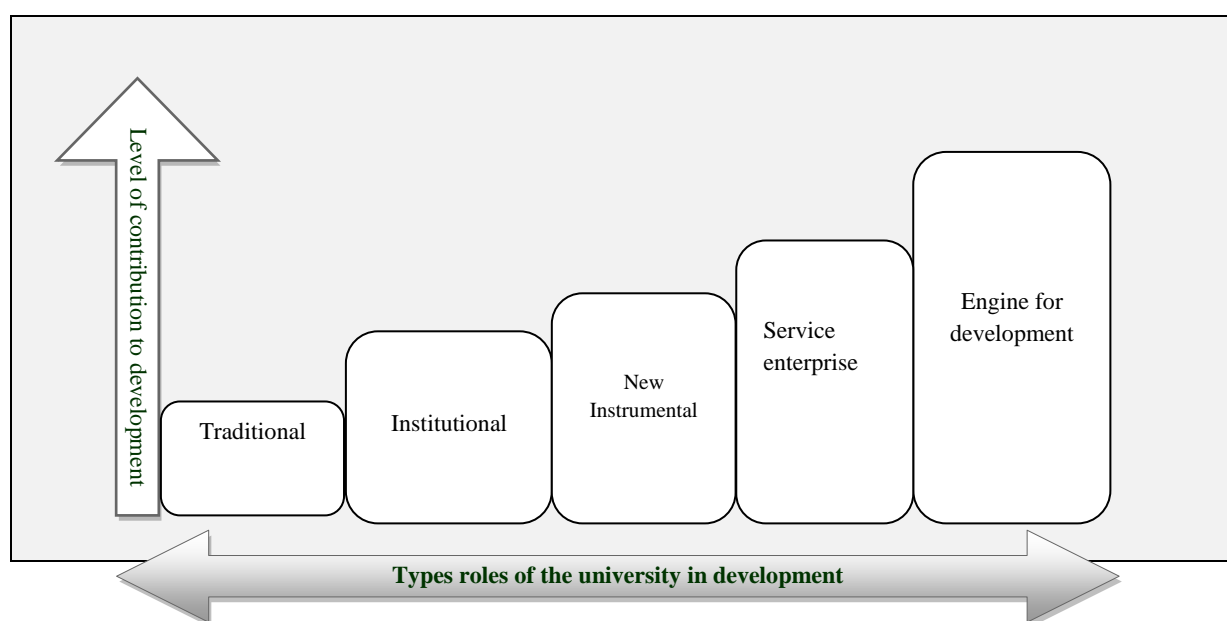


Figure 6: *The five visions of the roles of the University in development*

No discussion of the concept of “Development University in Africa” would be complete without acknowledging the works of Manuel Castells (2009), who locates the following six functions of universities within historical context:

- *To produce values and social legitimation*: Castells argues that all the major universities in the world started as theology schools to simply produce values and legitimation.
- *To elect the elite*: Universities establish a social stratification in society and make sure that the elites go through the selection functions in some of the universities.
- *To train the labor force*: The university emerges as professional university – particularly important in the schools of medicine, law and engineering, and engineering schools which are critical for the development of industrialization as training institutions.

- *To produce scientific knowledge:* Science to develop certain specific industries that were very important for the country.
- *Generalist universities:* Universities elevate the level of education of the population at large, bringing in to the universities at least 20 to 25 per cent of the propertied classes.
- *Entrepreneurial universities:* These universities centre on the innovation and the connection between the world of science and technology, and the business world.

Castells observes that these functions are not mutually exclusive, but are combined in different ways in the entire university system. One of the key issues, he emphasizes, is how to articulate these different functions without downplaying one or the other. He also argues that the notion of public and private universities does not matter because both universities are in the *public interest*. What really matter, he indicates, is how bureaucratic the university is, how flexible it is, and how manageable it is. He further contends that the notion of technological transformation of universities must be tackled seriously and that e-learning must be introduced in today's universities.

In summary, the literature presented on the notion of Development University in Africa is important to this study because it helps locate both the national and institutional notions of the role of UNZA in economic development. It also helps in understanding the correlation between funders of development projects in Zambia and role that UNZA plays in development.

In my view, it is not sufficient for African universities, specifically UNZA, to simply be aware of their roles in development; but they should also be able to use successful examples of linking higher education to development as frames of reference. In this vein, the next section is a review of literature on successful systems, particularly Finland, South Korea and North Carolina.

4.2.3 Lessons from successful HE systems

Several studies recognize Finland, North Carolina and South Korea as good examples of countries where HE systems have made significant contributions to economic development. World Bank, for example, reports as follows:

“Finland and the Republic of Korea are good examples of concerted consensus building efforts to engineer successful transitions to knowledge-based economies. In both cases, a national economic crisis compelled the affected actors to define and implement a new agenda through explicit or implicit national consensus on goals and mechanisms for moving forward. Policy makers and private sector leaders extended the time horizon for results from the adopted policies. In both cases, mechanisms already in place anticipated change and the need to undertake or adjust appropriate reforms. These cases show that to overcome institutional rigidities and bottlenecks, a combination of top-down and bottom-up policies are necessary” (World Bank 2007: 59).

The above quote shows that the national consensus on goals and mechanisms for moving forward is an important factor in promoting development. University is one of the mechanisms for moving the economy of a nation forward and as such consensus on what the university should play is vital.

The other important factor shown in the quote is the use of a mixture of to-down and bottom-up policies to overcome institutional rigidities. For example, the use of mixture of policies to overcome rigidities in its HE institutions enabled South Korea to develop its research and development base through government institutes, initially to facilitate the adaptation of imported technology and later to pursue internal research (World Bank 2007).

Finland has an exceptional school system on which HE is based: clear connection between economic and education policies, and the country’s promise to equity. This environment has enabled universities in Finland to make meaningful contributions to economic development. Vossensteyn (2008) portrays that universities in Finland are very committed to boost economic development to an extent that the Committee on Societal and Economic Engagement in Universities proposed a model for the monitoring and evaluation of universities’ societal and economic engagement.

No discussion concerning African countries on “Lessons from successful systems in linking HE and economic development” can end without considering the work of Pundy Pillay (2010): *Linking HE and economic development: implications for Africa from three successful systems*. This 106-page publication, produced in the framework of the HERANA project, is organized in four chapters whose contents are summarized in Table 5.

Table 5: Issues addressed in Pillay’s 2010 publication

Chapter/Topic	Issues addressed
1/Synthesis	Synthesis of the Finland case study; synthesis of the South Korea case study; synthesis of the North Carolina case study; the role of HE in economic development; common threads and differences; some possible implications for African countries
2/Finland	Education and the economy; the HE system; research and development; the regional role of higher education; HE and the innovation system; higher education–industry linkages; HE and quality; higher education–labor market linkages; financing higher education; recent changes in the Finnish system; concluding observations and implications for African countries.
3/ South Korea	South Korean economic development; education and economic development; education financing ; the HE system; HE challenges; university–industry linkages; concluding observations and implications for African countries.
4/ North Carolina	The HE system; the North Carolina community college system; university–industry linkages: the case of North Carolina State University: identifying future challenges in higher education: the University of North Carolina tomorrow commission; concluding observations and implications for African countries.

Pillay identifies nine key implications for Africa of the successful systems of Finland, South Korea, and North Carolina. I have already presented these implications in Box 1. Pillay is mindful of the possible criticism that his findings may be treated as being irrelevant for African countries given that all three case studies are from the rich, industrialized world. He, however, argues that the relationship between HE and economic development is unquestionable, and that in the globalizing world, poor countries need not base their economies entirely on the production of primary commodities and manufactured goods requiring skills provided by primary and secondary education, but also on the production of value-adding goods and services requiring skills provided by HE system (Pillay 2010: 31).

This study is in agreement with the two arguments of Pillay and endeavors to explore the nine key implications for African countries on Zambia by using UNZA as a case study.

In the preceding review, I have elaborated the four notions of development; the concept of “Development University” in Africa; and the lessons for African countries from the successful systems of three countries (Finland, South Korean and North Carolina). It is now expedient to review the relationships between national policies and the role of universities in development.

4.2.4 National policies and the role of the university in development

“Public policy reflects both intent of the government to change, as well as some course of action. It is... a key driver of change and traditionally ... a rational process consisting of casually- linked phases of policy formulation, policy implementation, policy evaluation, feedback and policy adaptation” (CHET 2009:19)

Public policy is defined by Gornitzka (1999:10) as “a public statement of an objective and the kind of instruments that will be used to achieve it”.

The term, ‘instruments’ refers to government capabilities or the essential mechanisms by which it influences society. Hood categorizes instruments into *nodality* -the central position of government in societal communications and its ability to send out information which it judges to be necessary or relevant; *treasure*-government’s control of money and other resources; *authority* -the ability of governments to issue binding laws, that is to formally limit the behavior of the targeted subjects; and *organization* - the public bureaucracy and its ability to implement program, and to monitor environments (Hood, as quoted in Gornitzka 1999: 19).

Contrary to the traditional view of policy process as being rational and simple, literature show that a policy process is usually complicated and irrational (Pressman and Wildavsky 1973). In this light, it is argued that policy analysis should not only focus on implementation analysis but on studying the interactive aspect of the whole policy process (see, Gornitzka *et al* 2005; Cerych and Sabatier 1986). Figure 7 is a diagrammatic presentation of the three policy phases, whose close examination reveals that various actors play specific roles in policy process. For example, the Parliament can endorse a national policy on HE during the policy formulation phase.

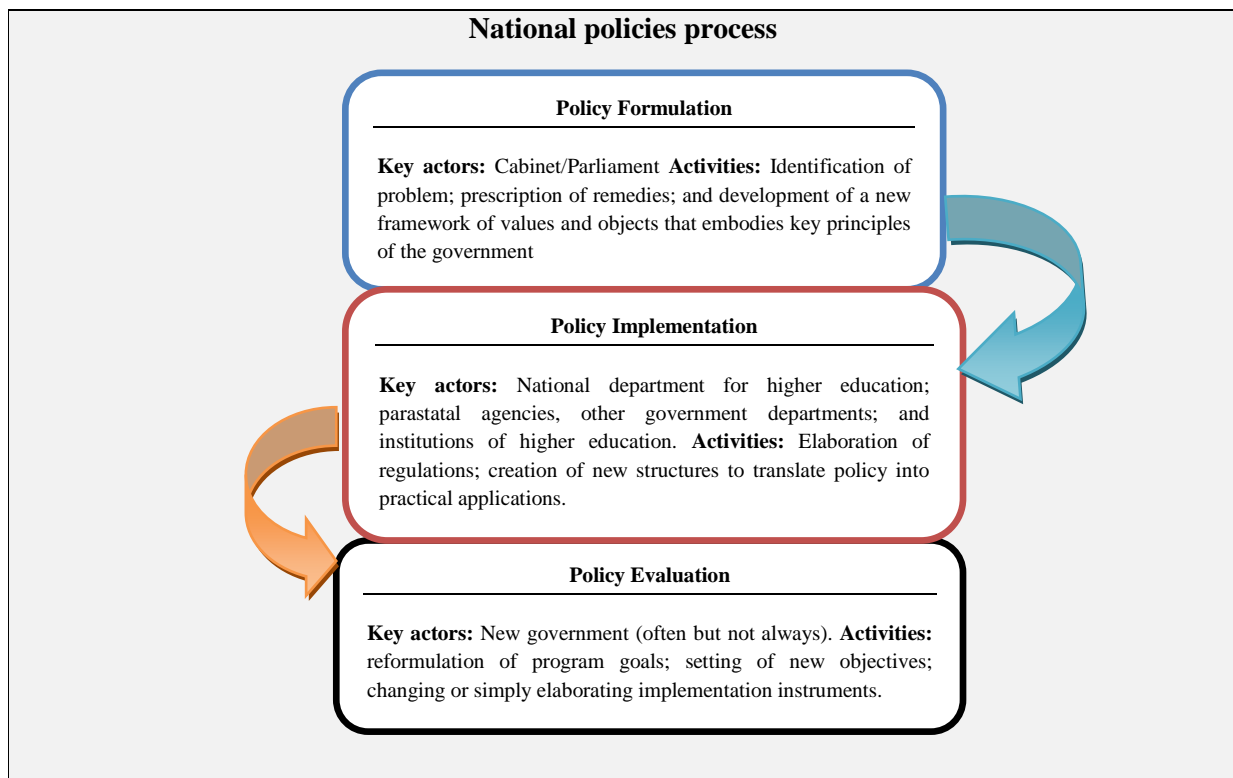


Figure 7: A diagrammatic presentation of the three phases of public policy process

Source: Author (A design based on the information by Gornitzka et. al 2005; Cerych and Sabatier 1986).

The underlying argument in most literature for having public policy on HE is to provide enabling conditions for steering higher education. For example, the German Federal Ministry of Education and Research (2004: 13) for elaborates this argument by stating that:

Left to themselves universities and the market are likely to achieve less in terms of economic value and new jobs, and therefore there must be policies that provide the setting for innovations and for the creation of new jobs because only state-of-the-art research policy promotes sustainable growth.

The other argument is that public policies worldwide aim at granting the national universities academic autonomy and management freedom from government to promote greater organizational diversity and distinctiveness; more active and socially engaged institutions; and greater inter-university competition (Yamamoto 2004). Additionally, public policies foster university accountability (Mortimer 1972); and increase diversity of the HE system (Van Vught 2008).

Despite these strong arguments, public policies in most African countries have not succeeded in linking HE to national and regional development efforts (see for example, Obanya 1999; and Sawyerr 2004). The factors for policy failure are beyond the traditional view postulated by McLaughlin (1998: 70) that policies fail because of lack of resources. In this case, Garn (1999: 435) suggests a multi-causal model for HE policy failures, and explains that:

The realization of intention is constrained and enabled by organizational context, linkages between multiple sites, phases of policy process, the mobilization of resources and a multifaceted conceptualization of power.

The first failure factor of HE policies in African countries is what Jansen (2001) refers to as *political symbolism*, a notion that policies are simply symbolic gestures rather than substantive actions. An examination of various studies and policies documents on HE, reveals that a lot of policies in African countries are symbolic (Jansen 2002; CHET 2009). HERANA project of eight African countries explains that:

It is clear that a lot of HE policy is symbolic, sometimes written by foreign consultants and then there is not sufficient political will, or infra-structural power, to negotiate trade-offs (CHET 2009: 21).

The second factor is that most African countries' higher educational policies are largely shaped by development agencies, especially the World Bank. This shaping has negative effects on HE, such as effects from reduced funding (see, for example, Obanya 1999; Brock-Utne 2000, Sawyerr 2002; and Bloom *et. al* 2006).

Brock-Utne elaborates that the UNESCO's emphasis on education for all in reality means that donors willingly, and African government unwillingly, have given a priority to investing in primary education, resulting in often acute cutbacks in HE funding. She further argues that even the success story of Makerere University, which the World Bank boasts about, has not been guided by national policies but by advice from the World Bank and the neo-liberal agenda it adheres to, and she adds that the agenda makes it difficult for any country to govern according to national policies (Brock-Utne 2000).

The third factor is that national policies on HE in Africa are not articulated with the economic needs (Obanya 1999). For example, CHET (2007: 11-12) reports that rather than formulate development paths, many states try to force HE into undemocratic political agendas, resulting in many institutions in Africa having a rather ambiguous, if not antagonistic, view of development and higher education. The report adds that recent high profile documents produced by African ministries are silent on the role of HE, citing documents by Economic Commission for Africa, NEPAD and the Southern African Development Community.

The fourth factor is harmonization is absent among HE institutions and the academic programs; and between government ministries involved in HE (World Bank 2008; CHET 2009). This is also true with regional policies on higher education. A typical example is the failure by SADC Heads of State to develop policy guidelines and mechanisms to harmonize academic programs and qualifications in the region, which have failed (World Bank 2007:39).

I have reviewed in this section the meaning of public policy, the arguments for public policies; and the factors that make African policies on HE fail. These factors are important to this study because they will help locate possible problems associated with Zambia's national policies on higher education. However, no review on relationship between education policies and economic development will be complete without a review of HE institutional policies, which I have addressed in the next section.

4.2.5 University policies and economic development

A large number of approaches have been developed world wide for studying the effectiveness of universities (see for example, Sawyerr 2002; CHET 2007).

According to Sawyerr (2002), the most important contribution of a university to society, can be measured by the quality of the knowledge a university generates and imparts; the habits of critical thought it institutionalizes and inculcates in its graduates; and the values of openness and democratic governance it promotes and demonstrates.

To make such contributions to society, universities must have responsive policies. In his study on *HE policy and the world of work: changing conditions and challenges*, Teichler (1999) reviews that most experts agree that HE must be well-informed of expectations from the outside world in order to adopt the necessary proactive role and thus respond to the need to prepare students for indeterminate future job tasks, new employment patterns and contributions to innovation in society. Expectations of the society must inform the university institutional policies.

Even in de-regulated environment, universities are required to have sound policies on self-monitoring and evaluation. A study by Yamanoi (1999) on Assessment of research in universities: Science and Technology, illuminates that after deregulation, university's self-monitoring, and self-evaluation can be systematized to activate research and to achieve effective management.

There is enough literature focusing on university strategic plans as meaningful tools to help universities contribute to economic development. Gigerich (2004), for instance, emphasizes that a strategic plan will help guide the university in the most effective ways to contribute to economic development initiatives. He explains that strategic planning helps universities undertake a comprehensive inventory of all their activities that have a material impact on economic development initiatives; match up their key assets with regional and national economic development initiatives which present an opportunity for the influencing people, facilities and capital to support economic development efforts; and develop higher educational economic development strategic plans, with implementation steps.

4.2.6 University academic core and the periphery

Literature subscribes to “academic core” of the university as teaching (in terms of degree programs) and research (usually basic in nature) and to the “periphery”, which includes the activities beyond the academic core that help the university to transform and survive (Clark 2008). The HERANA project uses the term “extended periphery” to characterize all the teaching and research related activities situated outside the academic core activities. The example given are lifelong learning; specialized research centers of applied nature; special projects funded by the third parties; and consultancies.

On the importance of the academic core, a study by Reiko (2001) on *University reform in the post-Massification era in Japan: analysis of government education policy for the 21st Century*, reports that a research-oriented academic culture circumvents substantive

improvement of teaching, which results in improved quality in the delivery of university program.

To emphasize the importance of the university academic core and the university autonomy, Magna Charta Universitatum (2010) states:

The university is an academic institution at the heart of societies differently organized because of geography and historical heritage; it produces, examines, appraises and hands down culture by research and teaching. To meet the needs of the world around it, its research and teaching must be morally and intellectually independent of all political authority and economic power.

Literature highlights several problems affecting the academic core in African universities. A notable problem is the “brain drain”, that is the migration of educated Africans to developed countries in search of better conditions of services. In its statement to the heads of state and government attending the G8 + 5 Summit in Italy, in July 2009, Network of African Science Academics (NASAC) emphasized that:

Universities [in Africa] have been hollowed out by decades of brain drain and now find themselves severely handicapped by dilapidated facilities and inadequately trained staff.

NASAC further emphasizes that:

One-third of all African scientists’ lives and work in developed countries. This outflow represents a significant loss of economic potential for the continent, especially in today’s global society where scientific and technological knowledge drive development.

Another problem affecting the academic core in African universities is the control of the university research and programs by funding agencies. Although I could not locate current literature on this problem, I still feel the observation by UNESCO (1991: 48) is worth mentioning. UNESCO contended that the collaboration between funding agencies and local African research is a dubious undertaking and a painful experience to African researchers, many of whom participate in it simply because they have no alternative if they want to improve their professional careers.

Furthermore, UNESCO (1991) observes that university research in Africa is also impeded by the practice of building its research activities into loan and credit projects, a practice which dissuades governments and universities from borrowing specifically for educational research, and, therefore, limits both the commitment of governments to research and to the institutionalization of a strong research capacity and infrastructure with planning units in ministries of education and other institutes where indigenous research could be conducted.

Having elaborated the academic core and the periphery, and the problems that weaken them in African universities, I will proceed in the next section to discuss institutionalization of activities in universities, with reference to externally funded projects.

4.2.7 Institutionalization: Externally funded project in the University

The fourth analytical proposition of this study relates to the degree to which development related activities are institutionalized within UNZA itself. What is cardinal with institutionalization, according to CHET (2009: 28), is the focus on how the nature of the university as an organization and the development related activities fits into the university organizational setting, and impacts on university's role in development.

An institution is defined by Olsen (2007) as a “relatively enduring collection of rules and organized practices derived from collective identities and belongings, and embed in structures of meaning and resources”. In this case, behavior is driven by constitutive rules and practices, and that the capability of specific actors like universities to act according to the prescribed rules and laws, according to CHET (2009: 30), depends on both the structures of resources, and degree and form of institutionalization. Before I elaborate on factors affecting the degree and form of project institutionalization in universities, it is cardinal to understand the meaning of project institutionalization in the university.

The university institutionalizes a project when the project knowledge is accumulated and feeds into teaching, curriculum development, postgraduate training and publication (CHET 2009: 30). The factors affecting the degree of project institutionalization in universities are explained below.

Firstly, HERANA project identifies the strength of ministries of education, and coordination between the ministries dealing with HE as factors that affect project institutionalization in universities (CHET 2009).

Secondly, “loose coupling” (Lutz 1988) in terms of “internal loose coupling” and “external loose coupling” (CHET 2009) can affect project institutionalization in the university. Whereas “internal loose coupling” refers to the operational links between the university academic-staff and administration, “external loose coupling” refers to the operational links between the university academics/administration with government and other stakeholders like the donors (CHET 2009).

Thirdly, project institutionalization in the universities can be highly affected by the funders, who according to CHET (2009) include a range of agencies and foundations that contribute directly to the projects of universities, including government agencies that fund projects in universities.

Literature shows that these the above factors have affected institutionalization of projects in African universities. The HERANA project, for example, reports that the eight African universities the study group visited had weakly institutionalized environments in terms of absence of pact resulting in different visions of the main role of universities in development; weak ministries of education with insufficient regulatory and funding power to steer universities towards economic development; very little coordination between ministries about the role of higher education.

Project funding, which must be effective in helping project institutionalization, has failed in many areas. The first problem is that funding is not effective because funders, according to

Castells (2001), have failed to take into account the specificity of university as an institution and link it to science and training functions aligned with the goals of the economy.

The second problem is that donors rarely release the aid they promise. A typical example of unfulfilled donor promises is the funding of African development projects, projects on HE inclusive, to help Africa meet the Millennium Development Goals by 2015. The G8 Summit of 2009 observed that less than 30% of aid promised had been actually delivered (CHET 2009: 22).

The third problem is that there is no generally accepted development model amongst the funders. There are several elements for funding that include poverty reduction, stimulating economic growth and strengthening democracy. Besides, there is no supporting evidence for specific funding of HE directed towards creating knowledge economy (Maassen et al 2007); and investment is mainly focused on institutional development themes with:

no attempts to link funding to visions for the development of national HE system as a whole, let alone seeing these investments within the framework of the need to develop HE at various levels in Africa (CHET 2009: 23).

The fourth problem is that HE development aid to Africa is characterized with systematic gaps, which according to De Gast (2005) are lack concentration, coordination and consistency. These gaps explain the observations by Maassen et. al (2007) that in Africa, 622 projects were spread over 14 themes and 24 countries with only limited in three areas: academic, institutional and human resource development.

This African scenario is contrary to development model in the three countries (Finland, North Carolina and South Korea) where concentration, coordination and consistency are enhanced such that there are well-coordinated agencies specifically for promoting either industrial or technical (CHET 2009: 26).

The fifth problem, as revealed by critical analysis of literature and the activities of most Foreign Affairs Departments of the countries supporting HE in Africa, is that “none of the donor countries...subscribes to the engine of development approach in their development cooperation policies with respect to higher education” (Maassen 2009, as quoted in CHET 2009).

The sixth problem is the observation made by CHET (2007) that aid for Africa is characterized by short term, un-programmatic projects and funding; and that sustainability and knowledge building are undermined by constantly shifting interests and funding patterns. In addition, Maassen elaborates as follows:

The long-term agenda of donor countries is broad social development in the recipient countries, but this is in conflict with donor demands for short-term impact and reporting deadlines. The consequence is that where development aid finds its way into universities, it does so in forms that do not contribute to sustained development of the academic core of the institution (Maassen, as reported by Trish Gibbon in the University World News, 18 July 2010).

Captivatingly, Maassen further emphasizes that:

Development aid from donor countries to Africa is usually directed to issues identified as priorities in the home country's development agenda - issues such as HIV and Aids, poverty reduction, primary health care and food security, among others. This kind of focus is often at the expense of high-level knowledge development such as that produced within the research culture of universities (Maassen, as quoted by the University World News, 18 July 2010).

This problem is compounded by the non-alignment of aid with national university priorities. The Rome 2003 High-Level Forum on Harmonization⁵ and Paris Declaration (2005) on Improve Aid Effectiveness to Achieve Millennium Goals postulate that the externally funded projects or aid should be under the leadership of the recipient country leadership; aid should be aligned with national development goal of the recipients; donor aid should be harmonized; aid should be managed for results; and that there must be mutual accountability.

In addition, African based agencies such as SADC and NEPAD do not acknowledge HE in their publications (CHET 2009). HERANA project illuminates that African based agencies produce higher profile reports and policy documents with almost no reference to higher education. The documents focus on basic schooling and vocational training. This is a problem in itself because funding in education sector tends to be concentrated on schooling and vocational training.

Coming to the end chapter 4, I now present the actual analytical framework of this study in the schematic Figure 8. The figure shows links among the main elements I have identified in the framework.

Figure 8 comprises 10 boxes of which boxes 1 to 5 show the flow of the study – from research problem to conclusion. The research problem and questions (box 1) are expressed into the conditions (box 2) under which the university is expected to make significant and sustained contribution to economic development. These conditions are drawn from the theoretical and practical work (box 10) done so far on universities and economic development. The arrow from box 2 to box 3 denotes the link between the conditions and the university. The link is explained by the study analytical point of departure (box 6), study propositions (box 7) and the theoretical and practical work (box 10). The arrow between the University (box 3) and economic development (box 4) denotes the contribution of the university to economic development. The significance of the contribution can be estimated by using indicators denoted by box 8. These indicators are drawn from explanatory variables of the link between the conditions and the university, and from the models of development denoted by box 9. The models of development (box 9) can also help us to understand the broader meaning of economic development and how it is linked with higher education. Box 5 denotes the study conclusions, which drawn from all the other elements of the framework.

⁵ The deliberations of the Rome High-Level Forum on “*Aid Harmonization and Alignment*” are Available at: <http://www.aidharmonization.org/secondary-pages/editable?key=106>

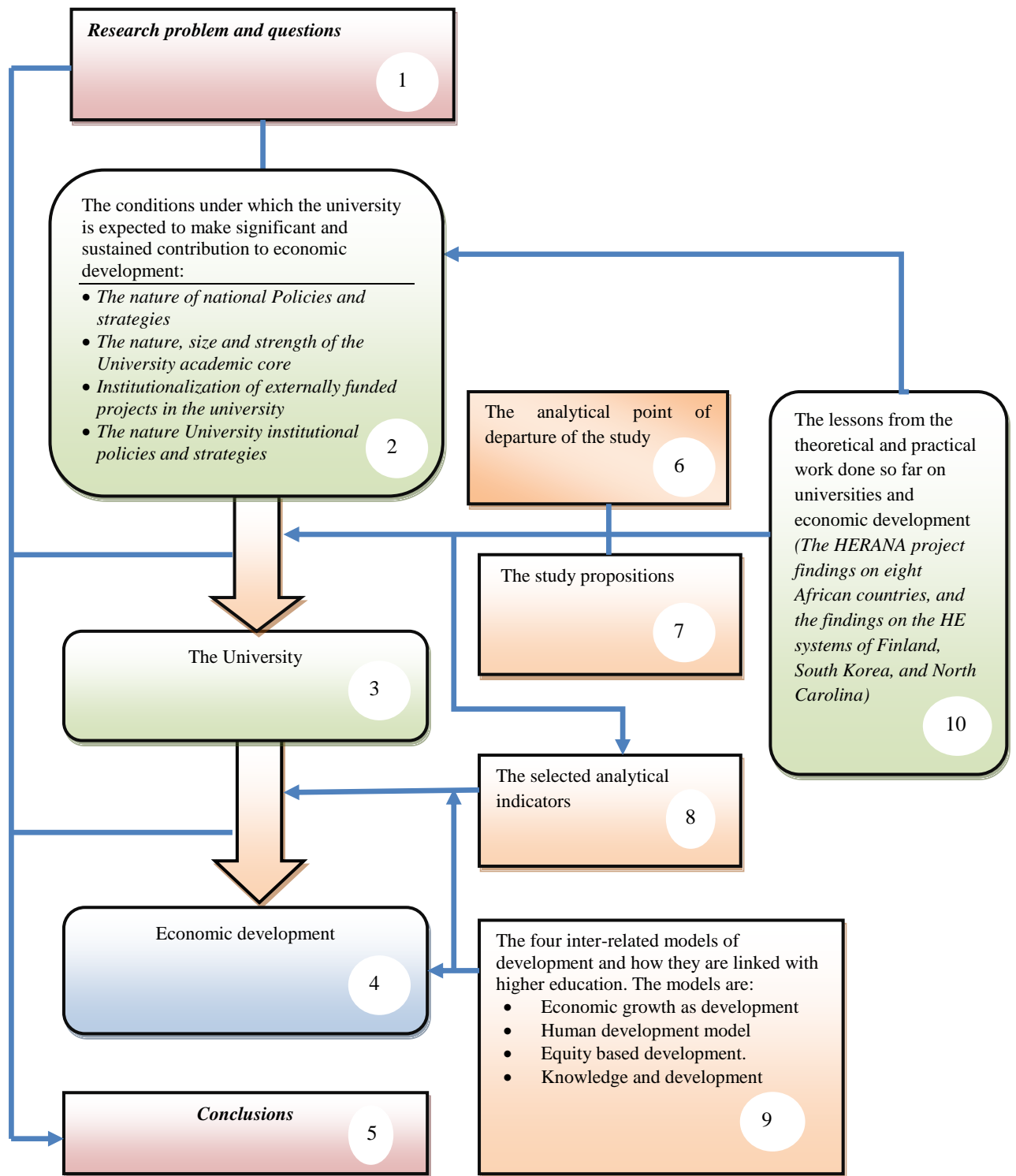


Figure 8: Schematic representation of the study analytical framework

Source: Author

In summary, this framework attempted both to maximize the chances of capturing all the types of data I identified as potentially relevant to the case study of UNZA, and enabled me to use a range of theories and available empirical evidence for analysis and explanation of the data I collected on Zambia.

CHAPTER 5: RESULTS AND DISCUSSION

This chapter presents and discusses the study findings on each individual study question. Section 5.1 addresses the role of the University in development as depicted by Zambia's national development policies. Section 5.2 covers the role of the University in development as depicted by University institutional policies. Section 5.3 focuses on the strength of the academic core of UNZA and on whether the academic core is becoming economy oriented. Finally, Section 5.4 addresses the extent to which UNZA institutionalize externally funded projects.

5.1 QUESTION 1:

What role of the University in development is depicted by Zambia's national development policies and strategies?

My initial intended sources of data for addressing this question were twofold: (i) interviews with a representative from the MoE Headquarters in Lusaka, Zambia; and (ii) analysis of several national policy documents and statements. However, I faced one complication. The MoE did not, within the time I was in Zambia for data collection, avail a person that I could interview. My reaction was to diligently use the interview schedule, intended for sourcing data from the MoE, as a checklist for analyzing several national policy documents and online information from websites for various government departments.

My analysis of the national policies focused on establishing whether Zambia had a national development framework and if it had, then examine if it reflected the concept "knowledge economy". Further, I analyzed the Government's vision for Universities; linkages between economic planning and educational planning; the role of the MOE in universities; coordination of different government departments involved in HE; and public funding of HE in Zambia. I have presented the results and the discussion in sections 5.1.1 and 5.1.2, respectively.

5.1.1 Presentation of findings

5.1.1.1 Does Zambia have a national development framework?

Zambia has a national development framework called the Fifth National Development Plan (FNDP) covering the period 2006-2010 under the theme 'achieving broad-based wealth and job creation through citizenry participation and technological advancement'. This 32 chapters plan was completed in January 2006 and launched the same year in July under Zambia's Ministry of Finance, Planning and National Development.

The results reveal that the immediate motivation for preparing the Zambia's FNDP was that the implementation of the first Poverty Reduction Strategy Paper (PRSP 2002-2004) ended in December 2004. Additionally, the Transitional National Development Plan (TNDP- 2002-2005) ended in December 2005⁶.

⁶ MoFNP has provided highlights on the development of the FNPD on its websites: www.mofnp.gov.zm

Equally important, GRZ planned that FNDP must be a result oriented and a well decentralized instrument as the following statement indicates:

The instrument will be designed in such a manner as to ensure that it is result based, formulating national development strategies within a realistic annual and medium term budget process. Keeping in line with the policy of decentralization, as recently announced, and in reaffirming government's commitment to broad based consultations, it has been decided that planning and the subsequent budget process will be extended to the district level (MoFNP 2006).

The remarkable aspect of FNDP is the expectation that both legal and natural persons in Zambia must work hard and realize its vision. This expectation is captured in Box 4, which gives the last two paragraphs of FNDP "Foreword" by the late President of Zambia, Levy Patrick Mwanawasa (MoFNP 2006: ii).

Box 4: FNDP urges all Zambians to work hard

12. I would like to appeal to all national stakeholders to play their part in ensuring the success of this Plan by establishing and strengthening the needed structures, capacities, and alliances for our common goal to reduce poverty in the interest of social welfare. It is also important to stress that ultimately, good policies and intentions cannot result in growth and development unless every one of us from Government to the individual is prepared to work hard and diligently to realize our dreams. On my part, I shall ensure that Government does everything possible to fulfill this noble mission. I urge our people in every part of the country to rededicate their energies to the successful implementation of the FNDP. I wish to thank all Zambians for contributing effectively to the preparation process of the FNDP. Government will continue to consult citizens in key areas involving all planning and implementation processes so that their inputs are taken into account.

13. Lastly, I would like to thank all our cooperating partners who have over the years supported us in many fields of our national economy. My appeal to them is that they should come forward to support us once again during this crucial period of the implementation of the FNDP.

Patrick Levy Mwanawasa, S.C.
PRESIDENT OF THE REPUBLIC OF ZAMBIA
December 2006

On the legal status of the FNDP, a commentary by the Zambian professor, Michelo Hansungule (Hansungule 2007), indicates that although Article 110 of the Constitution of Zambia empowers GRZ to develop and implement national policies, including the FNDP, yet Article 111 of the Constitution bars national policies from being enforced by judicial courts by stating that:

The Directive Principles of State Policy shall not be justiciable and shall not thereby, by themselves, despite being referred to as rights in certain instances, be legally enforceable in any court, tribunal or administrative, institution or entity.

In this light, Hansungule (2007: 6) reacts as follows:

FNDP is not a legally binding covenant even if it is tempting to perceive it as such between the rulers and the ruled. This is why it can use or its drafters can afford to use the loftiest of terms because legalistically speaking, there is no fear they will be legally held accountable to

it. There is no intention on the part of the government to open itself to legal suits based on promises in the Plan (Hansungule 2007: 5).

Regarding the sectors that FNDDP considers to drive the economy of Zambia, Education does not feature at all. FNDDP, as earlier stated in this thesis, identifies Agriculture Sector as the engine for development. Complementary sectors are infrastructure, tourism, mining, manufacturing, education, health, water and sanitation.

The discussion on the national development framework cannot be complete without mentioning HE related policies. These are:

- NPE of 1996 under the MoE
- Technical Education, Vocational and Entrepreneurship Training (TEVET) policy-1996 under the Ministry of Science, Technology and Vocational Training,
- Education Sector FNDDP National Implementation Plan framework 2008-2010,
- MoE Strategic Plan (2003-2007), and
- Investment Policy Review of Zambia - 2008 by the United Nations Conference on Trade and Development

Since universities in Zambia fall under the auspices of MoE, a comment on NPE is necessary. NPE addresses the entire field of formal institutional education, paying particular attention to democratization, decentralization and productivity on the one hand, and curriculum relevance and diversification, efficient and cost - effective management, capacity building, cost sharing, and revitalized partnerships on the other. The recurrent themes in the document are flexibility, pluralism, responsiveness to needs, and the protection of quality (MoE 1996).

NPE identifies three challenges concerning universities, and the first being that failure to retain highly qualified academic staff by universities was an immense loss to the country, in terms of investment in training and expertise; and an incalculable loss to universities, in terms of replacement needs, disrupted program, and demoralization of ongoing staff. NPE further indicates that the threat of additional losses remains, so long as a large gap remains between the terms and conditions of service that the Zambian universities can offer and those offered at universities elsewhere in the region. The second challenge was that the clients universities serve, whether these are government ministries or other sectors of society, do not adequately use university services. The third challenge was need for GRZ to increase accountability of universities in relation to value for money and quality of provision of services because universities received substantial GRZ funds even during years of severe economic difficulty.

5.1.1.2 The concept of knowledge-economy in national policies

KE concept does not feature explicitly in Zambia's national development policies. In addition, the national policies I reviewed did not make any reference to the KEI for Zambia. Nonetheless, there are several strong statements in FNDDP and NPE on the important role of knowledge and the pillars of the KE, which are "economic incentive and institutional regime;

education and human resources; the innovation system; and ICT” (World Bank 2010). Let me cite some of the notable statements. On the important role knowledge plays in national development, for example, NPE states that:

Because of the centrality of knowledge, skills and technology in shaping the organization and productivity of the economy, education is a productive investment. ... Investment in education ... is of crucial concern in the strongly competitive climate of the modern world. Hence, the Government strongly reaffirms the important role education plays in human resource development as the basis of all other development. It will act, therefore, as the watchdog for enhancing the contribution of education and training to economic development and improved social cohesion (MoE 1996: 3).

Regarding the importance of innovation in development innovation, FNDP states the vision for Science and Technology Sector as: “A Zambia where science and technology and innovation are the driving forces in national development by 2030”. In the same vein, FNDP states that one of the policies under “Commerce and Trade Sector” is to:

Stimulate investment flows into export-oriented production areas in which Zambia has comparative and competitive advantages as a strategy for inducing innovation and technology transfer into the national economy (MoFNP 2006: 125).

With respect to ICT, FNDP stresses that:

The ICT is one of the fastest growing industries in the world and is changing technologies, business models, and work relations. It is widely and increasingly regarded as the fourth factor of production after land, labour and capital. The Government has recognized this fact and focuses at three levels, namely connectivity, capacity and content (MoFNP 2006: 70).

GRZ efforts on KE can be recognized from its effort to develop a national ICT policy in 2005, whose thrust was to integrate ICT for sustainable national development and poverty reduction. FNDP promised that the national ICT policy would be operationalized.

Lastly, FNDP makes several policy statements and references to institutional aspects. The following terms repeatedly appear in the FNDP: *institutional reforms, re-organization, linkages, frameworks, policies, capacity, and development*.

In short, there is implicit appearance of the concept of KE in Zambia’s national development policies.

5.1.1.3 Government’s vision for Universities

GRZ acknowledges that HE is important to economic and social development of the nation. Specifically, NPE affirms as follows:

HE is of central importance to the economic and social development of a country. The activities of higher-level institutions and the recipients of HE advance and preserve a society’s intellectual, scientific, cultural and artistic endeavors. This conservation and furtherance of a society’s accomplishments entail that HE institutions pursue a vigorous and sustained critical evaluation of the society’s past and present achievements and, on the basis of such evaluation, chart the possible directions for future developments (MoE 1996: 88).

On what specific functions universities should perform in Zambia, GRZ declares that universities must be responsive to the real needs of Zambia, and that they must, on merit, win the respect and proper recognition of the university world (MoE 1996: 96).

In terms of describing the type of role that universities must play, NPE states, “Government recognizes its responsibility to safeguard and uphold the *traditional role* of higher education” (MoE 1996: 3). GRZ expects both MoE and the universities to perpetuate this traditional role of universities in development, according to GRZ. The MOE subscribes to the traditional role of universities and affirms as follows:

The MoE likewise acknowledges its role in fostering the wholesome development of individuals at this level [HE level], 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. On the other hand, HE 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 (MoE 1996: 88).

Despite the importance attached to HE in development, GRZ has not mainstreamed HE in most sector-based plans in FNDP. My analysis of all the programs stated under Education and Skills Development Sector Plan in FNDP reveals that there were seven programs and 15 strategies for public universities, presented in Table 6. Of the seven national programs, teacher education was a top priority for GRZ funding. FNDP qualifies this by explaining that the greater investment of resources in the education sector targets three priority areas: recruitment of teachers; procurement of educational materials; and the construction of classrooms and teachers’ houses. “It is estimated that the government will need to recruit 5,000 additional teachers per year to reduce the high pupil-teacher ratios [in basic schools] and eliminate the system of double and triple shifts” (MoFNP 2006: 40).

Table 6: National Programs and strategies on Universities in FNDP

	Program	Strategies: University Education
•	Curriculum Development and Educational Materials	a) Design a comprehensive and diversified university curriculum with relevant linkages to other educational levels and to the needs of socio-economic development. b) Develop, produce, and distribute teaching/learning materials for students.
•	Standards and Assessment	a) Review and develop the internal mechanisms for assessment, including methods of continuous assessment and examinations b) Establish the criteria for the operations and management of the ZQA and NQF within the context of the SADC framework
•	Teacher Education	a) Train qualified teachers with high school teacher competencies in order to reallocate those qualified Grade 8-9 teachers currently teaching in Grades 10-12 to basic education
•	Infrastructure development	a) Provide and expand infrastructure in order to increase access to university education b) Establish a third university based on a public-private partnership model c) Rehabilitate and maintain universities, including hostels, libraries, and laboratories
•	Distance Education and Open Learning	a) Develop an effective framework to coordinate provision of open and distance education

		b) Identify and utilize appropriate methodologies and technologies for facilitating distance and open learning
•	Equity	a) Equip lecturers with adequate and relevant information about HIV and AIDS
		b) Increase access, participation, and retention in college education with particular emphasis on CSEN and OVC
		c) Eliminate gender disparities in both participation and learning achievement
•	Research (University Education)	a) Encourage sustainable scientific and technological development through research
		b) Implement and/or strengthen programmes on attachment to and exchange of students and staff between tertiary institutions and industry

GRZ is for the view that the “need to meet the Millennium Development Goals by 2015” justifies its plans to spend more resources on teacher training.

The fiscal policy direction during FNDP shall give greater attention to ensuring that the composition of public spending is not only growth-oriented but also pro-poor. In this context ... and ... also adhering to the commitment to meet the eight MDGs targets by 2015, FNDP public spending priorities shall be as follows: a) Social sector spending, particularly on education and health (MoFNP 2006: 49).

GRZ further conceives that universities in Zambia would play the role of training more teachers to help meet the Millennium Development Goals.

5.1.1.4 *Linkages between economic planning and educational planning*

GRZ acknowledges the need to link HE to economic activities. NPE elaborates this need as follows:

Universities in Zambia could effectively respond to the real needs of society when linkages between the economy and universities were strengthened through (i) centers financed by industry to conduct joint industry—higher institution cooperative research; (ii) company-sponsored internships for students; (iii) part-time appointments in higher institutions of personnel from relevant sectors of the economy; (iv) recourse by commerce and industry to local higher level personnel for seminar presentations, consultancy work, research, participation in planning, and advice; and (v) facilitation by industry of the access of third level staff to technological developments, operational techniques, and socio-economic information (MoE 1996).

On the contrary, my analysis of the role of HE in sector based development plans in FNDP reveals that very few sector based plans explicitly indentified the role HE could play in sector development. I compiled Table 7 to show how HE has been neglected in sector-based plans in FNDP.

Table 7: HE in Sector based plans in FNDP 2006-2010

	SECTOR	TNP	TNS	NPE		NSE	
				GE	HES	GE	HES
1.	Education and Skills Development	9	120	9	7	105	15
2.	Employment and Labor	11	77	-	-	5	-
3.	Science and Technology	6	22	4	-	9	9
4.	Food and Nutrition	8	12	2	1	2	1
5.	Agriculture	9	59	1	-	6	-
6.	Mining	6	28	-	-	1	-
7.	Communication and Meteorology	7	36	2	-	2	-
8.	Infrastructure	6	23	-	-	-	-
9.	Natural Resources	16	59	4	-	6	-
10.	Manufacturing	7	25	1	-	-	-
11.	Commerce and Trade	7	43	-	-	1	-
12.	Energy	9	25	-	-	-	-
13.	Tourism	8	37	-	-	-	-
14.	Environment	5	22	-	-	-	-
15.	Health	27	123	3	1	17	2
16.	Gender and Development	7	42	2	-	6	-
17.	Information services	5	21	-	-	2	-
18.	Governance	6	70	-	-	-	-
19.	Water and sanitation	10	42	-	-	-	-
20.	Arts and culture	6	17	-	-	-	-
Total		175	903	28	8	162	27

Note: TNP=Total Number of Programs, TNS=Total Number of Strategies, NPE=Number of Programmes involving Education, NSE=Number of strategies involving Education, GE=General Education, HES=HE Specified.

A close examination of Table 7 reveals that the sectors that FNDP identifies as being crucial to Zambia’s economic development have disregarded HE. In terms of numbers, out of 175 programs, only eight programs (4 %) involve higher education. Also, only 27 (3%) out of a total of 903 strategies involve HE. Figures 9 and 10, respectively, show the percentage of HE programs and strategies in 20 sector-based plans in FNDP.

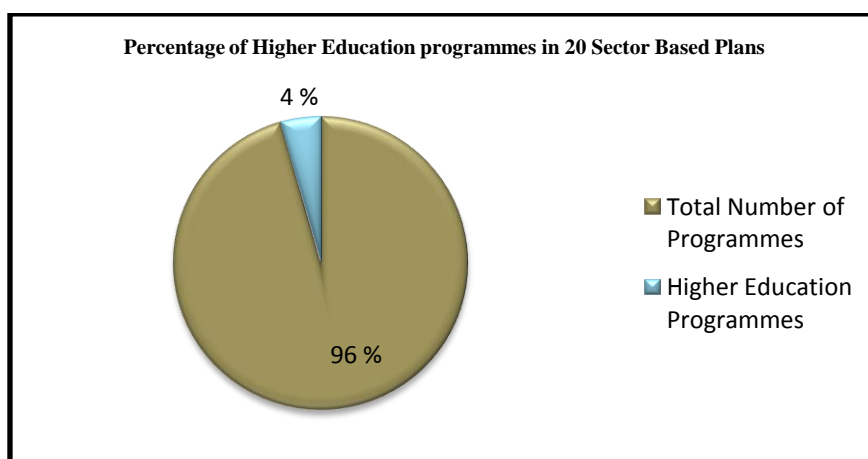


Figure 9: Percentage of HE programs in 20 Sector based plans in FNDP

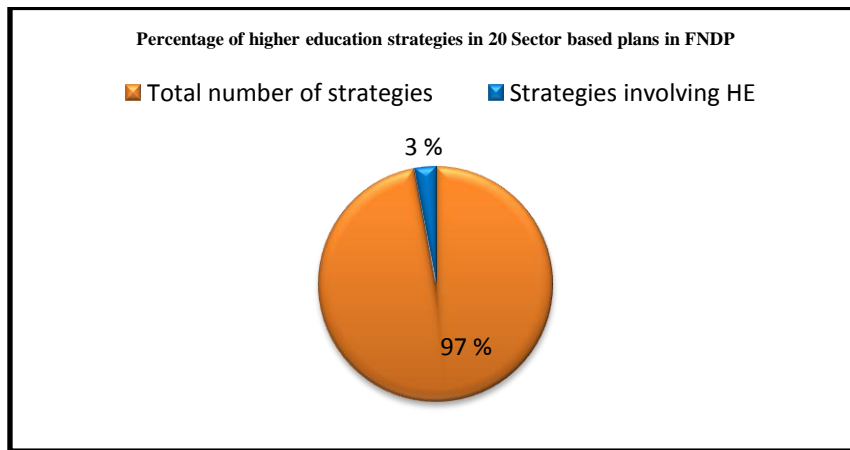


Figure 10: Percentage of HE strategies in 20 Sector based plans in FNDP

It is worth noting that the tendency of disregarding the link between university and socio-economic sectors is not only remote to Zambia’s indigenous development policies. A typical example is a 65-page report, Investment Policy Review – Zambia of 2006, by United Nations Conference on Trade and Development (UNCTD). The report stated that in Zambia:

There is still a general consensus within the private sector, in particular among foreign investors that many skills relevant to a modern and competitive market environment are lacking in Zambia. Indeed, the skills shortage has been identified by many potential investors as the main reason for their reluctance to introduce more advanced technologies and to increase investment in skill-intensive and higher value-added production system.

The solution to skills shortages in Zambia, according to the report, is not universities education, but technical education. UNCTD expresses its gladness that GRZ had restructured the educational and training programs in the country with a view to creating a national system that met the skill requirements and needs of the new economic system. The restructuring here refers to simply the formulation of the Technical Education, Vocational and Entrepreneurship Training (TEVET) policy in 1996. Interestingly, the word “university” does not appear in the entire document.

5.1.1.5 *The role of MoE in universities*

In 1996, GRZ asserted to create, promote and support the conditions within which all levels of education could achieve their potential. NPE illuminates as follows:

The Government’s role in education arises from its overall concern to protect the rights of individuals, promote social well-being and achieve a good quality of life for every person through all-embracing economic development. The Government must therefore seek to create, promote and support the conditions within which education can realize its potential in society (MoE 1996: 3).

To achieve this role, MoE sets its mission as follows:

The mission of the MoE is to guide the provision of education for all Zambians so that they are able to pursue knowledge and skills, manifest excellence in performance and moral uprightness, defend democratic ideals, and accept and value other persons on the basis of their personal worth and dignity, irrespective of gender, religion, ethnic origin, or any other discriminatory characteristic (MoE 1996).

From this mission statement, the role of MoE is to guide the provision of HE in Zambia, which is mainly to direct policies for universities. This is partly because GRZ contends that it has given universities academic freedom and managerial autonomy as elaborated below:

Academically, each university is responsible for determining its own programmes of instruction at all levels, determining and regulating the requirements for admission, regulating and conducting examinations, conferring degrees and other awards, and promoting, coordinating and controlling the direction of research. Each university engages its own staff, manages its own affairs, charges fees, and carries out any business or undertaking that seems proper to it (MoE 1996: 95).

The academic freedom given to universities by GRZ is further emphasized in the *Education Sector FNDP National Implementation Plan framework* as follows:

Although the MoE is the parent ministry, the ... public universities in Zambia ... are quasi-autonomous institutions with powers to strategically plan for their activities based on both government grants and self-generated resources (e.g. from fees and investments). These universities have their own respective decision-making authorities (University Councils) that have delegated powers and authority to their managements to manage education service delivery at this level (MoE 2007: 65-66).

That GRZ through MoE directs university policy is well documented in FNDP. Regardless of the fact that UNZA council and management system determine the activities of UNZA, GRZ directed universities in Zambia to address the issues itemized in Box 5.

Box 5: Government's directives to UNZA in FNDP

Universities must:

- Improve their general management and administration.
- Improve human resource management in order to reduce the current exodus, particularly from the University of Zambia.
- Address the challenges associated with the institutions' dilapidated and inadequate physical infrastructure.
- Improve staffing levels of the different programmes.
- Improve learning environment through investment in laboratory equipment and related reagents/chemicals; improvement of the library facilities, and institutional recreational facilities for both students and academic staff.
- Review different teaching programs' curricula with a view to aligning them to the labor market demands.
- Expand the capacity of teacher education training (with particular focus at mathematics and science graduate teachers) through both the public and private sector.
- Strengthen their capacity to undertake gender-related research (MoE 2008: 66).

Notwithstanding its directives to universities, MoE has explicitly documented its affirmation that it will not monitor universities. A typical example of such an affirmation is contained in the *Education Sector FNDP National Implementation Plan framework*, which after identifying three programs for public universities (namely, Institutional Capacity Building; Multi-sectoral Sponsorship of Research and Development; Sponsorship of Educational Research and Development; and Graduate Training and Staff Development), indicates that universities themselves, and not MoE, will monitor the implementation of these programs (MoE 2008).

5.1.1.6 *Coordination of different government departments involved in HE*

According to NPE, Zambia's HE is divided into tertiary and university education and its provision is mainstreamed across various government ministries. MoE guides the delivery of education by teacher training colleges. The technical education, vocational and entrepreneurship training is under the Ministry of Science, Technology and Vocational Training. The Ministry of Sport, Youth and Child Development is responsible for community based skills training. The Ministry of Community Development and Social Services is accountable for leadership and practical skills as well as literacy classes that are offered mainly to vulnerable groups, such as the people who are handicapped; marginalized people; orphans and non-literate youth and adults. The Ministry of Health is responsible for training of nurses, dentist and clinical officers (MoE 1996).

GRZ has acknowledged the lack of coordination of these different government departments involved in HE as one of the problems facing Zambia's education system. NPE acknowledges that each government ministry involved in educational provision currently works almost in seclusion, and that for this reason the government approach to educational provision tends to be fragmented. This may lead to wasteful duplication of some services while in other areas there is inadequate provision (MoE 1996: 131). GRZ contends that if not resolved, the problem of lack of coordination among government departments and other stakeholders involved in HE will worsen. In this regard, GRZ conceived the implementation of an integrated national policy for HE as the best solution to this problem. In addition, MoE emphasized the need to create conditions for effective coordination of policies, plans and programs. MoE reported as follows:

To overcome such problems, the Government has adopted an initiative aimed at improving the coordination of policy and programs in the entire education sector. This initiative, known as the Education Sector Integrated Program (ESIP), is a sector wide integration of educational activities, programs and projects currently under the authority of MoE; Science, Technology & Vocational Training; Community Development & Social Services; and Youth, Sport & Child Development (MoE 1996: 130-131).

Despite the ESIP initiative, national coordination of HE programs is still a challenge. Mumba (2004: 4) observes that national coordination of HE programs is still a problem in Zambia and laments that:

Unfortunately [for Zambia], no national body co-ordinates ... education programs conducted by different government departments and other non-governmental organizations, as is the case in some countries like Lesotho and Botswana [Ghana].

In addition, GRZ committed itself as follows:

Government will establish a HE Authority for the coordination of all higher-level education and will mandate the MoE to facilitate its establishment. The Authority will have advisory, planning, quality assurance, financial, and administrative functions (MoE 1996: 97).

Quite the reverse, my results reveal that although this GRZ commitment has been on political agenda since 1996, yet the Higher Education Authority has not been established.

5.1.1.7 Public funding of HE

GRZ has been funding and has committed itself to continue funding public universities in Zambia. NPE elaborates as follows:

The Government acknowledges that public support remains essential to ensure the educational, social and institutional mission of higher education. It further recognizes that, although it is a substantial charge on the national budget, HE is equally a national investment for enhancing economic performance, cultural development, and social cohesiveness.... The greater part of the funding for HE may still continue to come from the Government, but arrangements need to be in place that will ensure adequate and ample revenues from the institutions' own activities and from cost sharing schemes (MoE 1996).

GRZ in recent years has requested public universities to become more entrepreneurial in order to increase their financial base. GRZ policies statements are that: financing of HE will be on a shared basis between the Government, the institutions themselves, and students; and that HE institutions will develop strategies for widening their resource base and diversifying their sources of revenue (MoE 1996: 101-102):

In relation ratios, GRZ funding, in form of grants and bursary remittances for GRZ sponsored students, is the biggest source for public universities. UNZA (2008) confirms that, "Government funding accounts for over ninety percent of UNZA total income". That the largest part of university funding is from GRZ translates into several problems for UNZA because GRZ public funding is insufficient and inconsistent, as elaborated by FNDP below:

Universities have experienced severe under-funding since the 1970s. This has led to overcrowding; dilapidation in infrastructure; high student lecturer ratios; lack of expansion in facilities; high levels of indebtedness; and inadequate education materials and ICT (MoFNP 2006:148).

UNZA (2008) emphasizes that, "the negative budget variance, usually accompanied by delayed disbursements, has ... negatively impacted the management of UNZA". Similarly, MoE explains that UNZA uses the insufficient grants from the government to solely "cover recurrent expenditure, mainly salaries, leaving insufficient surplus for capital investment, staff development or research" (MoE 2007: 65).

On GRZ funding allocations, MoE made projection for the Education sub-sector funding requirements for the period 2008-2010. Table 8 shows the percentage share of required recurrent funding by sub-sector.

Table 8: *MoE Sub-Sector funding allocations for the period 2008-2010*

Sub-sector of education	2008		2009		2010	
	Billion Kwacha (ZMK)	% Share	Billion Kwacha (ZMK)	% Share	Billion Kwacha (ZMK)	% Share
Early Child Care Development and Education	2	0.09	3	0.12	3	0.17
Basic Education	1,390	63.06	1,704	65.76	2,016	67.74
Literacy Education	0.3	0.01	0.3	0.01	0.3	0.01
Higher school Education	344	15.61	392	15.13	447	15.02
Tertiary: Teacher Training	75	3.40	56	2.16	48	1.61
Tertiary: University	288	13.07	299	11.54	301	10.11
Management and Administration	105	4.76	137	5.28	159	5.34
Total	2,205	100	2,591	100	2,976	100

*Note: The monetary figures in Table 7 are based on exchange rate of 1 USD to ZMK 3,764.25 (as at 31.12.2007: I accessed the rate online from <http://www.oanda.com/currency/converter/>)

Source: MoE (2007: 99-100) Education Sector National Implementation Framework 2008 – 2010

As Table 8 reveals, basic education takes the largest share, at an average of 70% over the 2008-2010 periods, followed by high school education accounting for about 15%. The allocated funding to universities account for an average of 11.5 %.

5.1.2 Discussion of the findings

5.1.2.1 Do national authorities see UNZA as an important contributor to economic development?

On National policies:

Let me coin my own notion that “national policies are the eyes through which national authorities sees the roles of HE”. In this case, there are several enlightenments from the preceding results on national policies and the role of UNZA in development. Firstly, the revelation by the results that Zambia does not have both a standalone policy and a national authority on HE, casts an immense doubt on whether university education can be adequately mainstreamed into national policies or plans such as NPE and FNDP. This weakness, in my view, is compounded by the observation Hansungule (2007) made that the Zambian Constitution renders national policies as plain documents whose contents or any conflicts arising from them cannot be settled in the courts of law. Implicitly, the Constitution has given

policy makers power to make as many symbolic policies (Jansen 2002) on HE as possible, knowing that no court of law in Zambia would hold them accountable for not implementing whatever they write as policies, or whatever they fail to implement from the policies they make. A typical example is GRZ policy statement made in 1996 that “We, GRZ, shall create a National HE Authority for coordinating HE in Zambia”. Let me present a caption from NPE in Box 6:

Box 6: The legendary promise: A “National HE Authority” for Zambia

To remedy this situation, the Government will establish a HE Authority for the coordination of all higher level education and will mandate the MoE to facilitate its establishment. The Authority will have advisory, planning, quality assurance, financial, and administrative functions.

Specifically, the responsibilities of the HE Authority will include:

1. advising government on the general policy of the HE sector in the country;
2. coordinating the long-term planning and overall development of HE for government approval;
3. receiving and appraising applications for the establishment of private higher institutions and dealing with such proposals and applications;
4. ensuring that within agreed policy parameters a balance is established between institutions as to the level, type and variety of programs, including an appropriate balance between certificate, diploma, degree, and postgraduate work;
5. ensuring that the programs offered in publicly-funded institutions maintain relevance to the human, occupational and skills needs of the country;
6. planning the recurrent and development funding needs of HE, across the whole sector and, in collaboration with the appropriate institutional authorities, for individual institutions;
7. ensuring that systems and procedures are put in place which will facilitate public accountability and the evaluation of cost-effectiveness within institutions and throughout the HE sector as a whole;
8. ensuring that quality assurance procedures are put in place, followed, and monitored
9. serving as a clearing-house for all applications for admission to higher institutions;
10. administering publicly-financed loan schemes for students in higher institutions;
11. ensuring greater equality of access to HE, having particular regard to gender, socio-economic status and special educational needs;
12. promoting links between third-level institutions, the economy and society.

(Source: MoE 1996).

Almost not a word, the specified responsibilities of the ghostly HE Authority sound immaculate and for sure would have helped to link UNZA to economic development. Since, these responsibilities of HE Authority are very appealing mostly to people concerned with HE, GRZ has never relented in making mention of this seemingly symbolic policy statement: “We, GRZ, shall create a National HE Authority for coordinating HE in Zambia”. Though not trying to sound sarcastic, it is deplorable that the creators of the National HE Authority are not conscious as to when the Authority “must” be created. I have used the word “must” because GRZ used the word “will”, which is affirmative. Above and beyond, it is my contention that delegating MoE to facilitate the establishment of a National HE Authority sounds disastrous and very symbolic for simple reasons that MoE, as results suggest, has several weaknesses that might hamper it to spearhead the establishment of the Authority. In my own words, MoE seems to be a spear without a head –(head here ranges from the attitudes of MoE towards HE, through financial muscle to external pressure on MoE). I will further elaborate the weaknesses of MoE under section 5.1.2.2. The question that should linger is: In which ways

should the policy makers be made to expedite the establishment of an authority on HE in Zambia?

The second illumination from the results is the symbolic nature of policies. I have already stated that the Zambia Constitution has rendered national policies on HE as symbolic, or in Jansen's (2001) words, "simply political symbolic gestures rather than substantive actions". My interest here is drawn to the micro-level component of the HERANA project whose findings indicated that a lot of HE policy in the eight African countries is symbolic and sometimes written by foreign consultants (CHET 2009). So symbolism in national HE policies is not limited to Zambia. My study results suggest that in as much as GRZ knows that UNZA can contribute to national development, as expressed in national policies, yet GRZ neglects to implement the very policies that can link UNZA to economic development. The legendary notion that lack of financial resources impedes the implementation of public policies for HE may not be a grand justification. This is because financial constraints, as suggested by Garn (1999: 435), are simply one of the multi-causal factors for HE policy failures. That public policies on HE in Zambia, as shown by results, simply reflect mainly the intent of GRZ to change with little course of action is one of the indicators that national authorities do not practically value the importance of HE in economic development.

Thirdly, the results demonstrate that GRZ made UNZA a semi-autonomous institution with the aim of making UNZA become more engaged in economic development. However, the results point to a different meaning of university autonomy expressed by MoE. If we consider MoE as a legal person, with a voice, then the results suggest the following verbalization by MoE about UNZA:

In the name of "academic freedom" and "managerial autonomy", I shall give you money; I shall communicate through national policies what I and my father (GRZ) thinks about you and what we expect you do; even when we tell you what to do, we shall not monitor what you are doing, don't think we care so much about what you do; so monitor yourself; all that we need from you is simply a financial statement at the end of each financial year so that our Minister can take it to the Parliament. So go in peace and monitor yourself".

Though dramatized, the results points to a notion that UNZA is MoE's adopted, abandoned but not forgotten child because the autonomy seems to have rendered UNZA a status of an asylum seeker from MoE. UNZA is not forgotten in the wisdom that MoE directs UNZA on policy issues and provides financial support to UNZA. The abandonment is with reference to MoE's attitude that "UNZA monitor thy activities" (MoE 2007). Abstaining from monitoring UNZA by the MoE seems to be a serious omission. As previously presented in the literature review that since, universities, when abandoned, are likely to achieve less in terms of economic value and new jobs (FMER 2004: 13), there is need to make external accountability of universities become stronger than internal accountability so that they can use their scarce resources effectively in pursuit of their goals (Mortimer 1972). In this view, the results suggest that the national authorities, especially MoE, use UNZA's autonomy to cover up their weaknesses and failure to make UNZA more accountable to society.

Fourthly, the results elucidate that both FNDP and NPE prioritize basic education to be more over HE. Results, for instance, show that under public funding the share of universities are far

much lower than that of basic education. Moreover, results also show that MoE makes basic, secondary and college education more accountable to society than university education. This result is in line with observation by CHET (2007) that the focus of most national development policies in Africa is still basic education and not HE, and that this focus is partly supported by governments' focus on meeting the Millennium Development Goal of basic education for all. In a nutshell, it seems that national authorities in Zambia consider basic education to be more important to economic development than HE.

On the vision of the government for the University:

The vision of GRZ for universities in Zambia is clearly stated as traditionally to produce person-power, especially teachers. FNDP, for example, emphasizes the need for universities, especially UNZA, to supply government with 5000 teachers per year. An output of 5000 teachers represented approximately half of UNZA's total student enrollment in 2008. Implicitly, the role of UNZA in development is to develop person-power, especially teachers, as confirmed by MoE that, "the universities have done much to meet society's needs for high level human resources is evidenced by the statistics" (MoE 1996: 95). In addition, the results also have illuminated that FNDP, NPE and the University Act of 1999 emphasizes that universities must render services to the public. Summarily, the results suggest that the vision of GRZ for UNZA is twofold: Traditional Development view and Service Enterprise view.

On the concept of KE:

GRZ acknowledges that knowledge is important in development. However, FNDP and NPE do not show any commitment of GRZ to KE concept as a basis for development. Firstly, we see that both FNDP and NPE have not encapsulated the KE concept and they have not made any references to the global KEI for Zambia nor have they proposed any measures to help Zambia perform better on KEI. Secondly, these policies do not show how the generation and exploitation of knowledge will play a predominant part in the creation of wealth, contrary to the conviction by the Department of Trade and Industry (1998). Further, the policies have indicated the effective use and exploitation of all types of knowledge in all manner of economic activity in Zambia.

Thirdly, the absence of the KE concept in most of the sector-based plans in FNDP is an indication that sector based development in Zambia is not driven by knowledge. This contradicts the recommendation by the Kok Report (2004) that knowledge economy must cover every aspect of the contemporary economy where knowledge is at the heart of value added – from high tech manufacturing and ICTs through knowledge intensive services to the overtly creative industries such as media and architecture. Similarly, knowledge driven economy lack according to Leadbeater and Demos (1999) describes a set of new sources of competitive advantage that can apply to all sectors, all companies and all regions, from agriculture and retailing to software and biotechnology. Lamentably, this is not the case for sector plans in FNDP.

Fourthly, the results show that national policies have not identified UNZA as one of the constituents of an effective innovative system. This contradicts the postulation by the World Bank (2008: 5) that an effective innovation system comprises firms, research centers, universities, consultants, and other organizations that keep up with new knowledge and

technology, tap into the growing stock of global knowledge, and assimilate and adapt it to local needs.

In sum, the results suggest that since the KE concept is not explicit in the national policies and sector plans, the policies overlook the role UNZA can play in the KE. The policies seem to view UNZA's role in KE as simply to produce person-power. The idea of the knowledge driven economy is not just a description of high tech industries. It describes a set of new sources of competitive advantage that can apply to all sectors, all companies and all regions, from agriculture and retailing to software and biotechnology (Leadbeater and Demos 1999).

5.1.2.2 *Is MoE capable of steering UNZA towards economic development?*

As already highlighted in the foregoing discussion it is clear that MoE is weak in driving UNZA towards economic development. Firstly, NPE clearly shows that MoE has failed to coordinate HE. Furthermore, MoE does not have any directorate specifically for HE. In line with CHET (2009: 20) this is an indicator that MoE has weak infrastructural power, in that it has failed to construct a framework within which explicit trade-offs could be made.

Secondly, whilst MoE considers accountability of UNZA to be important, yet it has failed to make UNZA more accountable to the public. MoE explains as follows:

Autonomy does not dispense with the need for public accountability, whether in regard to funds received from the Government or in regard to those coming from other sectors of society, greater accountability being part of the price that is paid for greater autonomy. Moreover, it is universally recognized that some tension will always exist between the demands of accountability and those of legitimate autonomy. However, as suggested already, accountability can be achieved by putting in place procedures for the assessment of institutions, departments and individuals; autonomy can be safeguarded by entrusting to the institutions themselves the primary responsibility for this evaluation process (MoE 2010).

While MoE explains that UNZA will conduct its primary evaluation, yet MoE has failed to conduct the secondary evaluation. Also, MoE has not put in place procedures for the assessment of UNZA. It is clear from the above statement that the accountability that MoE refers to is remote to finances and not linking UNZA to development.

Thirdly, results show that communication between MoE and UNZA is weak. To strengthen the communication MoE made a seemingly symbolic policy statement as follows:

Communications between the Ministry and the universities will be strengthened by establishing a HE liaison officer in the Directorate of Standards and Curriculum Development, and involvement of top university management in the Ministry senior management meetings (MoE 2010).

The plan to have a HE liaison Officer first appeared in the MoE Strategic Plan for the period 2003-2007. This year, 2010, MoE is still cherishing the plan to recruit the HE liaison Officer.

Fourthly, in the absence of strong infrastructural power, MoE is likely to direct UNZA in undemocratic ways. This behavior is in line with the observation by CHET (2007: 11-12) that rather than formulate development paths, many states try to force HE into undemocratic

political agendas, resulting in many institutions in Africa having a rather ambiguous, if not antagonistic, view of development and higher education. This problem can be compounded by the fact that GRZ through MoE funds UNZA. MoE elaborates that, “Although the universities are autonomous institutions, the Ministry is responsible for providing bursaries for students and grants towards upkeep of those institutions” (MoE 2010). This statement suggests that MoE can use funding as an instrument to undemocratically control UNZA. In fact, MoE clarifies that institutions that depend more on public funding will not benefit much from the autonomy conferred on them.

Higher-level institutions that meet a sizeable proportion of their own resource needs are much more favorably placed than those that depend almost exclusively on the Government for their funding. They are less severely affected by whatever constraints may affect the public budget. Their greater measure of financial freedom enhances their managerial, administrative and academic freedom. They enjoy more substantial institutional autonomy (MoE 2010).

To sum up, this study suggests that MoE is weak in directing UNZA towards economic development, and might be using undemocratic means to control UNZA. As already pointed out this finding is in line with the finding of HERANA project (CHET 2009) that most new ministries of education in the eight African countries are weak. The study furthermore suggests that the UNZA managerial autonomy that MoE talks about is symbolic mainly because of the fact that the largest percentage of UNZA funding is from GRZ.

5.1.2.3 *Is there consensus and coordination between different departments of the government involved in higher education?*

On consensus and coordination between different departments of the government involved in HE, the results show that such do not exist despite the fact that GRZ has recognized the need for coordination. HERANA project explains that coordination and consensus can be achieved “through formal structures and through networks (CHET 2009: 21). The results show that the formal structures for effective coordination of departments dealing with HE in Zambia seem symbolic. A typical example is the 1996 intention of GRZ to establish a National HE Authority for coordinating all higher-level education. Deplorably this intention has been on agenda since 1996.

In a nutshell, there seems to be no consensus and harmonization between the departments of the government involved in HE. This problem is also common to other African countries. As already shown in literature review, the World Bank (2007:39) observes that national development policies in Africa have failed to harmonize HE institutions and the academic programs. This is also true with regional policies on HE. A typical example is the failure by SADC Heads of States to develop policy guidelines and mechanisms to harmonize academic programs and qualifications in the region.

One of the lessons from successful education systems presented in literature review is that “strong cooperation and networks” (Pillay 2010: 30) help to link universities to economic development. In this vein, lack of consensus and harmonization between the departments of the government involved in HE in Zambia can subsequently jeopardize the successful transitions to knowledge-based economy. The case of Finland and the Republic of Korea

shows a good example of concerted consensus building efforts to engineer successful transitions to knowledge-based economies. In both countries actors defined and implemented a new agenda through explicit or implicit national consensus on goals and mechanisms for moving forward (World Bank 2007: 59).

In sum, this study suggests that the absence of strong coordination and networks between different GRZ departments involved in HE in Zambia seems to make HE fail to make significant and sustained contribution to economic development.

5.1.2.4 *How strong is the linkage between UNZA and national authorities?*

From the results, UNZA seems to be weakly linked to national authorities. Firstly, most sector-based plans in FNDP disregard the role of the University in sector development. Secondly, the absence of a dedicated national authority for HE acts may have been a strong incentive for national authorities to disregard UNZA. Since UNZA is not a national authority but is simply an institution under MoE, UNZA has no legal mandate to force its activities on national authorities. In addition, being under MoE, UNZA may have been perceived by national authorities as purely a baby for MoE. Some respondents kept felt that MoE was partly response to facilitate the linkage between UNZA and national authorities because

Lamentably, a weak linkage between universities and national authorities is a wide problem in African countries. As already indicated in literature review, McLaughlin (1998: 70) observes that most African countries have not succeeded in linking HE to national and regional development efforts. Similarity, one of the lessons from the successful systems is that HE must be linked to regional development (Pillay 2010: 30). On the contrary, my analysis of the regional or provincial plans in FNDP reviews that HE is not linked to regional planning.

In sum, the results have shown that a weak link exists between UNZA and national/regional authorities.

5.1.2.5 *Is public funding of UNZA adequate and consistent?*

That public funding is inadequate and inconsistent, as shown by the preceding discussion, implies that UNZA is constrained financially to perform its activities effectively. This study suggests that UNZA must find ways of increasing its revenue so that it lessens its dependence on GRZ funding. This is because GRZ funding is tight to university academic freedom and managerial autonomy. According MoE, UNZA continues may not exercise its academic freedom and managerial autonomy in a manner that maximizes its contribution to economic development if it continues to obtain funding from GRZ.

5.2 QUESTION 2

What role of the University in development is depicted by its institutional policies and strategies?

To answer this question I analyzed data from the interview with a respondent from the office of the Vice Chancellor at UNZA. In addition, important data came from an analysis of some of UNZA institutional documents handed over to me or recommended during the interviews.

5.2.1 Presentation of results

5.2.1 Coherence between UNZA vision/plan and national development framework

On this subject, I specifically investigated whether UNZA leadership is aware of national policies and strategies on what role it is expected to play in economic development; whether UNZA Strategic Plan reflects aspects of the national development framework; and what vision for UNZA is harbored by its leadership.

When asked whether UNZA leadership was aware of national policies and strategies on what role it is expected to play in economic development, the respondent affirmed that the leadership was very much aware and indicated that UNZA Strategic Plan for the period 2008-2012 was largely shaped by national policies. A follow up analysis of UNZA Strategic Plan confirmed the respondent's answer. The Plan states as follows:

The strategic plan also takes into account the prevailing MoE Strategic Plan (MOE-SP), Vision 2030, the Fifth National Development Plan (FNDP) and other relevant and appropriate national and institutional policies (UNZA 2008: vi).

A follow up question on whether UNZA Strategic Plan really reflected aspects of national development framework, the respondent felt so and gave the following brief explanation:

In developing the Strategic Plan, we used several national and UNZA policies to come up with the Plan. So the answer to your question is definitely, yes.

My follow up analysis of UNZA Strategic Plan confirmed the respondent's strong assertion that aspects of national development framework were reflected in the Plan. The opening paragraph of Section 2.4 (National Context) of the Plan states as follows:

The development and implementation of the Strategic Plan (2008 –2012) should take into account and respond to the national socio – economic environment, the national policy context as well as institutional policies and development during the 2002 – 2006 Plan period.

Sub-section 2.4.1 (Policy context) has identified a number of national policies and discussed their direct implications for the development of UNZA's Strategic Plan. These policies are: NPE - 1996; National Policy on Science and Technology -1996; National Information and Communication Technology Policy; and Vision 2030 and FNDP.

UNZA Strategic Plan has discussed implications of each of the policies in detail. The scope of this study is not to cite all the implications. As an illustration, the following implicating issues from NPE have been cited:

- Teaching and research programs of the publicly funded universities must be responsive to the real needs of society and that these should be of such high standard that, on merit, they win the respect of the university world.
- Universities should establish suitable quality assurance and public accountability systems.
- The financing of HE will be on a shared basis between the Government, the institutions themselves, and the students. HE institutions will develop strategies for widening their resource base and diversifying their sources of revenue; and that

Government support for students in HE institutions will be in the form of loans that will be recovered during the students' subsequent working life.

- A HE Authority was yet to be established, which will be responsible for coordinating and harmonizing policy and practice in the HE sector.
- The MoE will support the initiatives of private organizations and individuals in the establishment of private universities

Furthermore, Sub-section 2.4.2 has discussed UNZA institutional policies that provided an important framework for the development of its 2008 – 2012 Strategic Plan. These policies are: UNZA HIV and AIDS draft policy; Staff Development Policy; UNZA Information and Communication Technology (ICT) draft policy; and UNZA Research Policy.

When asked a closed ended question on UNZA leadership vision for the University, the respondent asked for an elaboration on meaning of each of the following visions: traditional development view; institutional view; new instrumental view; service enterprise view; and engine for development. After I explained what each vision meant, the respondent ruled out the “engine for development” vision for UNZA and further elaborated that:

We, as a university, are engaged in producing high skilled manpower [person-power]. So, I think the “engine for development” view may not apply our case.

A follow up scrutiny of UNZA Strategic Plan reveals that the institutional leadership vision of UNZA is to restore the excellence in teaching, research and public service. This is clearly stated in the Strategic Plan:

The consensus of the stakeholders was that UNZA was in decline at many fronts, such as, its international and national reputation in provision of high quality education and in research output. The theme of this strategic plan is “Restoring Excellence in Teaching, Research and Public Service” (UNZA 2008: vi).

This is further concretized by the vision for UNZA during the Strategic Plan period 2008-2012, which states:

UNZA will be a leader in provision of HE in the region, celebrated for providing comprehensive and rigorous teaching learning, research and scholarly programs that are responsive to the needs of the individuals, industry and society.

The respondent highlighted that the University Act of 1999 shaped the vision for UNZA Strategic Plan. A scrutiny of the Act, specifically to Section 6 (1), reveals a twofold-ascribed role of the University:

- To provide university education, promote research and advancement of learning; and
- To disseminate knowledge and, without discrimination, to hold out to all persons, who meet all the stipulated academic or professional qualifications, the opportunity of acquiring university education.

According to the respondent, developing strategic human resource for national and regional development is central to UNZA. This is expressed in UNZA mission statement as follows:

UNZA is a centre of excellence in HE for individuals, industry, and society through the provision of quality education, research, and scholarly programmes for strategic human resource development, in order to promote national and regional development, through relevant and appropriate partnerships (UNZA 2008).

The respondent further elaborated that the establishment of UNZA was in fact driven by agent need of manpower with high-level skills:

UNZA was actually built on the premise that it has to contribute to economic development of the country... through manpower development of high level ... If you check even in the Fifth National Development Plan... you see that the role of UNZA and HE in general is well articulated there. In that respect the University of Zambia, in terms of its policy as well, it keeps on aligning itself with economic development... Our plan, strategic plan, we have clear reflection that we have to develop quality manpower for the country; and we have to align our training and teaching to the market, which we serve, which is the industry.

The respondent urged me to seriously note that every School in the University had the responsibility to implement what is contained in UNZA Strategic Plan, and to submit quarterly progress report to UNZA Management. UNZA Strategic Plan states as follows:

The Strategic Plan is to be implemented through a university-wide approach whereby all stakeholders will participate within the framework of the strategic plan. Common working arrangements will be employed with the objective of using and strengthening 'bottom-up' approaches that foster decentralization of academic and administrative systems (UNZA 2008).

5.2.2 UNZA's engagement around its role in/ contribution to economic development

This section addresses the following issues: UNZA's institutional policies with regard to its role in economic development; establishment of specific projects, units, structures or appointments that are linked to initiatives around economic development; specific programs or central funds related to economic development; and the main barriers facing UNZA in setting up activities aimed at stimulating economic development.

5.2.2.1 UNZA's institutional policies on its role in economic development

On whether UNZA had institutional policies specifically for economic development, the respondent explained that there were no specific policies but he felt that UNZA Strategic Plan and Research Policy were necessary documents in linking UNZA to economic development.

5.2.2.2 Specific projects, units, structures or appointments linked economic development

With regards to UNZA's specific projects, units, structures or appointments linked to initiative around economic development, the respondent cited TDAU and INESOR.

Commenting on why TDAU was considered as an initiative linked to economic development, the respondent explained as follows:

TDAU is an initiative that is linked to economic development because it translates University research into actual economic development. TDAU responding to community needs... For example, the Unit produces machinery for making blocks.

As a follow up to the respondent's comments on TDAU, I analyzed the 2005 UNZA annual report and searched UNZA website to obtain an insight into TDAU operations. TDAU was semi-autonomous unit of UNZA, established in 1975, to act as a Centre to pull advice from the University to local industries (UNZA 2005: 93). The objectives of the Unit were: (i) to develop and promote appropriate technologies in areas of potential national economic growth; (ii) to serve as a centre for research, design and manufacture of prototypes; and (iii) to foster partnerships and linkages with industry, research and development institutions, donors and NGOs.

UNZA Annual Report for 2005 revealed that during the year 2005 TDAU produced, among other products, 100 TD-Interlocking block press machines, 23 TD-Plain block press machines, and 30 TD-Diaphragm pumps. The report indicated that TD-Interlocking block machines were exported to other countries like South Africa, Malawi, Botswana, and Namibia. Besides, TDAU had a total of 7 projects under research and consultancy. An example is the project on the development of a tumbling machine for the Mining Sector Diversification Program. However, TDAU faced the following constraints: workshop machinery break-downs; lack of reliable transport since Dutch support came to end in 1994; small workshop and office spaces; and foreign exchanges losses (UNZA 2005: 94).

Considering INESOR, UNZA Annual Report for 2005 and UNZA website provided valuable insights into nature and activities of the Institute. Historically, INESOR was founded in 1938 with a strong bias towards the social sciences. Since its inception, it has undergone four phases of its name changes:

- Rhodes – Livingstone Institute, 1938 -1965
- Institute for social research / Centre for African Studies, 1965 – 1971
- Institute for African Studies, 1971 – 1996
- Institute for Social and Economic Research (INESOR), 1996 to date.

On the activities of INESOR, UNZA (2010) reports as follows:

The Institute carries out both basic and applied research... Research can either be self – initiated or commissioned by Government, International Organizations, Non-Governmental Organizations, Business Organizations and Individuals. Collaborative research between the Institute and other interested parties is also encouraged. In addition, the Institute carries out consultancy services in relevant research areas including facilitating the organization of workshops, seminars, and conferences...The University runs a research Affiliation Scheme through which researchers, both within and outside the country can be affiliated to the Institute of Economic and Social Research for the purpose of carrying out research in Zambia.

INESOR consists of 6 research programs: Agriculture and Rural Development; Economic and Business Research; Governance Research; Health Promotion Research; Socio-Cultural Research; and Urban Development (UNZA 2005: 62). The respondent emphasized that the

Institute is linked to economic development through practical research in various areas shown in Table 9.

Table 9: INESOR programs and research areas

PROGRAM	RESEARCH AREAS
Agriculture and Rural Development Program	Agricultural policy and planning; Agricultural technology and production systems; agricultural training and extension; agricultural trade, marketing and distribution; drought and food security / food aid; rural poverty and incomes; migration and rural settlements; community participation; and infrastructure and environmental considerations
Economic and Business Program	Sector studies (e.g. mining, construction manufacturing, small-scale industry, banking, trade, finance); marketing; labor and employment; regional co-operation and integration; and Environmental considerations
Governance Program	Political systems and organizations; electoral systems and voting patterns; human rights (e.g. of women, children and the disadvantaged); governance, democracy and capacity building; decentralization; constitutionalism; public administration and management; political dimensions of economic reforms; global politic; legal reforms; environmental consideration
Health Promotion Program	Health systems research and delivery systems; health policy and planning; health education; maternal and child care systems; psycho- social aspects of health; nutrition Community based rehabilitation; reproductive health; health infrastructure and environmental considerations
Socio- Cultural Program	Performing and aesthetic studies; traditional life studies; humanistic studies: philosophy and religion; language studies; communication studies; traditional law studies; and indigenous technology.
Urban Development Program	Urban sociology; housing; water and sanitation; road and transport; migration, urban planning and settlements; and environmental considerations

What was cardinal to the respondent is that INESOR can, through research, impact the economic development of Zambia.

5.2.2.3 UNZA's specific activities related to economic development

When asked to indicate whether UNZA had specific programs or central funds related to economic development, the respondent indicated the following income generating projects run by UNZA: York Farm, ZAMNET, Liempe Farm, University Horticultural Nursery, University Printer, University Health Services and Marshlands Guest House. According to the respondent, both Liempe and York farms support UNZA teaching and research. Liempe Farm, for example,

Keeps animals on a production basis to produce offspring that can be used later in teaching and practical lessons...[and] excess teaching materials are later sold to the university community to raise funds for in order to feed the animals in the production units and the cycle continues for the two semesters of the university calendar (UNZA 2010).

Established in 1994, ZAMNET is a communication system that provides Internet service (providing dial-up, broadband, wireless and satellite internet access) to the public. Besides,

ZAMNET also provides services like web hosting, web development, network services, and training.

5.2.2.4 *Barriers in setting up activities aimed at stimulating economic development*

When asked to mention barriers facing UNZA in setting up or strengthening activities aimed at stimulating economic development, the respondent mentioned staff adherence to teaching and research as the major barrier UNZA faced. The respondent explained:

We have a slight problem here.... strong adherence to teaching and research. UNZA management is working hard to break this belief. Most leaders think that the role of UNZA is mainly teaching... But nowadays we need to survive financially. As such we need to venture into various income generating activities. Like the farms I mentioned.

The respondent further commented that the newly launched UNZA Research and Intellectual Property Policy and Strategic Plan for 2008-2012 would break the barrier so that UNZA could get involved in many activities that stimulate economic development.

5.2.2.5 *Standardization of rules of engagement aimed at economic development*

In the interview I read the following definition of “standards” given by the International Organization for Standardization (ISO):

Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose (University of Wisconsin-Madison 2010).

After defining standards I asked the respondent to indicate if UNZA has standardized rules of engaging itself in economic development. The respondent was of the opinion that whereas in the past no standardization of the rules was evident, UNZA was currently started to standardize rules. The respondent elaborated as follows:

Let me shed some light here... What do I mean when I say the rules are becoming standardized? You see, UNZA did not have a research policy until this year. So research rules to engage UNZA in economic development. I am happy that our Strategic Plan is a big effort in standardization of the rules of engaging ourselves in economic development.

UNZA Strategic Plan portrays itself as a standard framework for engaging UNZA in economic development. Specifically, it states as follows:

The University Strategic Plan is a standard framework and guideline that the schools/units will use to elaborate local strategic plans and annual work plans. The Central Administration will provide policy support and resources within the framework of the University Strategic Plan and will supervise and monitor the delivery of services using established University systems (UNZA 2008: 64).

The respondent further commented that GRZ rules of engaging universities in economic development were not standardized. This resulted in a situation where each government ministry had its own rules of engaging with UNZA. The respondent emphasized as follows:

The government must consider UNZA as a pool of experts in almost all areas. This consideration must force the government to establish standardized rules of connecting its ministries to UNZA. Currently, we only depend on memorandum of understandings when dealing with government ministries.

5.2.2.6 *Linkages of UNZA policies to the labor market*

Concerning the status of labor market for university graduates, GRZ makes the following statement:

University and college graduates are entering the labor market with limited hope for gainful employment. This state of affairs has created a mismatch between the increasing labor force and the rate at which the economy can absorb this increasing labor force leading to high levels of unemployment. The resulting high unemployment levels are also putting pressure on the resource base (MoFNP 2006: 227).

UNZA views that its policies are linked to the labor market. The respondent affirmed the link and cited one example as follows:

One example I would give is the comprehensive university curriculum review that is done in coordination with the industry.

On whether UNZA collected data on graduate absorption into the labor market, the respondent was not aware of such an activity at institutional level. However, the respondent indicated that some Schools in UNZA were collecting the data. The respondent commented as follows:

“I don’t know about any deliberate policy at institutional level. But I am sure schools like the Mines are collecting data”.

5.2.2.7 *Opportunities and strategies for networking and collaboration with external stakeholders*

According to the respondent, UNZA had many opportunities for networking with external stakeholders. UNZA Council, for example, drew its membership from a spectrum of stakeholders – that is non-governmental organizations, government ministries, and the industry. Another opportunity for networking is the participation of various stakeholders on UNZA boards, and the participation of UNZA staff on other boards. The respondent stated as follows:

The other example is that Schools have boards that have members from the industry... for example the Engineering. Also, UNZA staff sits on several boards... such as the Environmental of Council of Zambia.

Research dissemination workshops, according to the respondent, were also opportunities for collaboration. The respondent explained that:

We hold conferences or dissemination workshops. We bring together various stakeholders and explain to them what we have done.

In addition, the respondent considered that since UNZA was under MoE, it had an opportunity for collaboration with other stakeholders through the MoE. If at

I triangulated the above respondent's statements with information contained in UNZA Strategic Plan for 2008-2012. The Plan contains Section 5.7 on *Collaboration /International Linkages*. The Plan acknowledges UNZA's membership on regional, continental and international organizations, such as ACU, Association of African Universities, and SARUA. It states that although many members of staff had participated in various regional and continental activities, UNZA needed to participate fully in regional and continental activities, within the provisions of the African Union Second Decade of Education Action Plan and the AU strategy on the harmonization of HE programs in Africa, the AAU Strategic Plan (2003 – 2010), the SARUA strategic plan and the SADC Protocol on Education and Training.

UNZA Strategic Plan states that UNZA would benefit from its active participation in the continental and regional activities in terms of curricula development and quality assurance, exchange of experiences, ideas and information and professional associations, sharing of undergraduate and postgraduate programs, research and development, lifelong education and training and provision of short courses.

To increase UNZA's participation in continental and regional activities, UNZA Strategic Plan proposes six strategies: (i) provide a framework for staff and student exchange with other institutions; (ii) promote joint curricula and programs with other institutions; (iii) provide information, to academic staff, on continental and regional activities; (iv) increase joint research activities with relevant institutions within and outside of the country; (v) promote collaborative projects; (vi) participate in the review/development and implementation of national and regional Qualifications / Frameworks (UNZA 2008: 73).

5.2.2.8 *Awareness of Zambia's standing on the KEI*

The respondent was asked to state UNZA management was aware of Zambia's standing on KEI. The respondent admitted having not paid attention to Zambia's standing on the KEI, and doubted if any other administrator in UNZA paid attention to KEI. The respondent recounted having used the KEI in personal research some time back.

As a follow up to the respondents remarks on I analyzed UNZA official documents to establish whether KE notion appears in the documents. In UNZA Strategic Plan the term "Knowledge Economy" is stated once under section 2.3.2 [Southern African Regional Universities Association (SARUA)]. The document states as follows:

To ensure that universities are recognized as major contributors to national, and regional socio – economic development; in particular, through improving the number and quality of

graduates in the region, increasing the number of trained leaders and scientists, and encouraging a competitive knowledge economy (UNZA 2008: 10).

In UNZA Research and Intellectual Property Policy the term *Knowledge Economy* is mentioned four times, once under Section 1.2.3 (Networks and Partnerships) and three times under 1.2.4 (Universities and Development). The former states:

It is important to note that in the knowledge economy universities no longer have the monopoly of knowledge production through research to themselves (UNZA 2009: 4).

One of the instances in the latter Section states:

Universities are crucial forces and factors that promote development. They are also active partners and contributors to the knowledge economy (UNZA 2009: 5).

In addition to what is presented in literature review on knowledge economy, I made a detailed analysis of the World Bank documents on KEI deposited on its website. Figure 11 (sourced from World Bank website) is a flow chart showing the constituents of KEI.

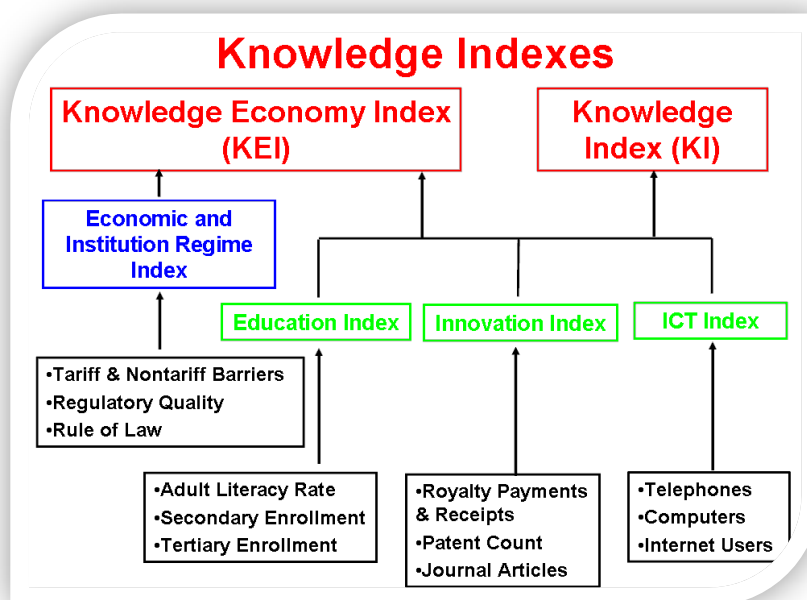


Figure 11: A flow chart showing Knowledge Indexes

A close examination of Figure 11 shows that the three indexes under KI (Education Index, Innovation Index and ICT Index) contain variables that are directly connected to the University. These are: tertiary enrollment; journal articles; and telephones, computers and Internet users.

Within this context, the 2007 ratings of countries on KEI position Zambia as number 123 out of 146 countries (World Bank 2010). Table 10 compares the performance of Zambia on KEI for 1995 and 2005/2007. It is clear that increases in actual variables like Internet Users per 1000 People; annual GDP; gross secondary school enrollment; and the Total Telephones per 1000 People. There are declines in human development index and S&E journals articles. Inopportunately, the information on gross tertiary enrolments was not given for the year 2007.

Table 10: Zambia's recent and past performance on KEI variables

Variable	Zambia (most recent) (Group: All Countries)		Zambia (1995) (Group: All Countries)	
	Actual	Normalized	Actual	Normalized
Annual GDP Growth (%), 2003-2007	5.60	5.79	1.00	1.32
Human Development Index, 2005	0.43	0.49	0.44	1.04
Tariff & Nontariff Barriers, 2009	71.20	3.01	61.20	5.26
Regulatory Quality, 2007	-0.48	2.60	0.34	5.72
Rule of Law, 2007	-0.64	3.15	-0.60	2.85
Royalty Payments and receipts(US\$/pop.) 2007	0.10	1.09	n/a	n/a
S&E Journal Articles / Mil. People, 2005	2.69	2.50	3.88	3.17
Patents Granted by USPTO / Mil. People, avg 2003-2007	0.00	2.47	0.00	3.17
Adult Literacy Rate (% age 15 and above), 2007	68.00	1.64	73.20	3.22
Gross Secondary Enrollment rate, 2007	43.14	1.74	26.54	1.81
Enrollment rate, 2007	2.51	3.88	2.51	1.33
Total Telephones per 1000 People, 2007	230.00	1.71	10.00	2.55
Computers per 1000 People, 2007	10.00	1.69	n/a	n/a
Internet Users per 1000 People, 2007	40.00	2.12	0.00	7.45

Source: World Bank (2010): <http://info.worldbank.org/etools> [last accessed 13 March 2010]

5.2.2 Discussion of the findings

The preceding study results calls for a discussion of salient issues. Firstly, it is clear from the results that UNZA's vision or Strategic Plan explicitly reflects the aspects of national development framework. For instance, UNZA Strategic Plan, NPE and FNDP emphasize UNZA shall produce the national person-power. In addition, UNZA's vision encapsulates the "public service" role of the University. In this regard, the study suggests that the role of UNZA in development can be rated as manly "traditional development" and "service enterprise" - *traditional development* because the main aim of UNZA is to produce person-power, especially teachers and social scientist for civil service; and *service enterprise* in the sense that UNZA is expected to engage itself in the market and in meeting community needs. The rating of the role of UNZA in development tarries with the findings of HERANA project on University of Nairobi in Kenya on which there was much talk about science and commence, but still was predominantly traditional in orientation. Similarly, HE in Uganda portrayed a strong traditional development with the assumption that the market (private) students would drive the new instrumental role (CHET 2009) move.

Secondly, the results show that the standardization of rules of engagement in UNZA, especially rules governing research, had been weak in the past. The results points to the fact that since UNZA Research and Intellectual Property Policy was launched in 2009 it implies that the standardization of rules of engagement in research is in its infancy stage. The opinion of the respondent was that UNZA Strategic Plan and Research Policy are the guiding documents for not only linking UNZA to the needs of the economy, but also for standardizing the internal rules of engagement so that UNZA can make significant contribution to economic development. This expectation is in line with the observation by Gigerich (2004) that strategic

plans guide universities in the most effective ways to contribute to economic development initiatives.

Thirdly, UNZA's committed on self-monitoring and evaluation seems important because MoE, as already discussed, has weak infrastructural power to steer UNZA towards economic development. This action by UNZA carries with an illumination by Yamanoi (2008) that in the face of deregulation, university's self-monitoring, and self-evaluation could be systematized to activate research and to achieve effective management. By implication, adherence to strategies contained in its policy documents can make UNZA increase its contribution to national economic development.

The fourth salient issue postulated by results is that UNZA has tried to align policies as aligned with its mission. Both UNZA Research and Intellectual Property Policy and Strategic Plan have made substantial references to UNZA mission statement. Besides, results show that UNZA policies have been informed by the needs of individuals, industry and society. This aspect is supported by Teichler (1999), who argues that HE must be well informed of expectations from the outside world in order to adopt the necessary proactive role and thus respond to the need to prepare students for indeterminate future job tasks, new employment patterns and contributions to innovation in society.

The fifth issue is that UNZA has many opportunities for networking and collaboration with other stakeholders. The study suggests that increased participation in continental and regional activities can help UNZA to shape its role in development. For example, UNZA could increase joint research activities with relevant institutions within and outside of the country so that its academic core is strengthened.

The sixth issue is that UNZA has, within its "extended periphery", several initiatives around economic development. These include York Farm; ZAMNET; Liempe Farm; University Horticultural Nursery, University Printer; TDAU; and INESOR. Each of these activities plays a role in economic development. For example, role of TDAU can be understood within the context of the Knowledge Economy: Analytical Framework by the World Bank (2008), which states that:

An effective innovation system is composed of firms, research centers, universities, consultants, and other organizations that keep up with new knowledge and technology, tap into the growing stock of global knowledge, and assimilate and adapt it to local needs.

The results have also shown ways in which TDAU produced different types of machinery demanded by society.

As well, the role of INESOR is based on Human Development Model that has already been discussed in literature review. Results points to a conclusion that the ultimate goal of INESOR is to create an environment in which people could develop their full potential and lead productive, creative lives in accordance with their needs and interests. Notably, the research themes espoused by INESOR (poverty, gender, knowledge and health) carry with the themes Human Development Model is built on.

The seventh issue is that UNZA does not have a deliberate institutional policy on collecting data on graduate absorption into labor market. Without this data it is probable that some curriculum review initiatives in UNZA might not reflect the real needs of labor market.

The eighth issue is that UNZA institutional policies have not been informed by the Zambia's KEI. This is also true with the national development policies that inform UNZA policies. This omission casts a lot of doubt about the effectiveness of UNZA in helping Zambia transform to knowledge-based economy. Neglecting Zambia's KEI in UNZA policies contradicts the claim by World Bank (2008) that to be part of an effective innovation system, the university is supposed to "keep up with new knowledge and technology, tap into the growing stock of global knowledge, and assimilate and adapt it to local needs" (World Bank 2008). Without the encapsulation of Zambia's KEI, UNZA may not be capable of "capable of fashioning and manipulating knowledge to benefit society" (Clark 1983).

In summary, the study suggests that since UNZA's vision reflects the aspects of Zambia's national development framework, its role in development can be rated as twofold: "traditional development" and "service enterprise". The results have shown that standardization of rules of engagement in UNZA had been weak, especially rules pertaining to research; that UNZA institutional policies are not informed by Zambia's KEI; that TDAU, INESOR, York Farm, ZAMNET, Liempe Farm, and University Horticultural Nursery are notable initiatives of UNZA around economic development; that UNZA does not have a deliberate institutional policy on collecting data on graduate absorption into labor market; and that UNZA has many opportunities for networking and collaboration with other stakeholder.

5.3 QUESTION 3

What are the main developments with respect to the academic core of UNZA? To what extent is the academic core becoming more economy-oriented?

To answer this question, I analyzed data from the interviews with Deans of Schools and a respondent from the Directorate of Research and Graduate Studies. I also analyzed several documents from UNZA website. The analyses focused on both the academic programs and research.

5.3.1 The strength of UNZA academic core

To establish the main developments with respect to the academic core of UNZA, this study focused on the ratio of postgraduates to undergraduate enrolments, the ratio of student enrolments stock rose broad of fields of study, the ratio of academic-staff to students, percentage of academic-staff with PhD degrees, the research output in terms of staff and student publications, institutional contribution to research funding as percentage of total institutional budget, and proportion of funding from government agencies.

5.3.1.1 Postgraduate to undergraduate student enrolments (head count)

UNZA provided me with data on undergraduate student enrollments for 1999 and 2008. However, the data on postgraduate student enrolment for 1999 and 2008 was not available. My reaction was to include student enrollments for 2007 and 2010 because these two years had data for both undergraduates and postgraduate enrolments.

In 1999 UNZA had a total of 5510 undergraduate students and the total number of undergraduate students in 2008 was 10968, indicating a 99 percent increase from 1999. By gender, the number of females enrolled rose from 1687 in 1999 to 4688 in 2008, indicating an increase of 177 percentages. Also, the number of male students rose from 3823 in 1999 to 6480 in 2008, representing a 69 percent increase⁷.

Furthermore, in 1999 and 2008, the School of Education enrolled more students than any other school. This is followed by Humanities and Social Sciences, and then Natural Sciences. In 2008 for instance, 45 percentage of the total number of undergraduate students enrolled were in the School of Education, whereas 19 percent and 14 percent were in the School of Humanities and Social Sciences, and School of Natural Sciences, respectively. The enrollment pattern - more students in Education, followed by Humanities, and then Natural Sciences- is identical for the two years -1999 and 2008.

I now turn to the student enrollments for 2007. The data I collected is summative in sense that UNZA availed me with data on total number of student enrollment across the levels of study (undergraduate, masters and PhD). Table 11 presents the total number of students in each level of study.

Table 11: 2007 total numbers of students in UNZA by program level

PROGRAM	NUMBER OF STUDENTS ENROLLED		
	Female	Male	Total
Undergraduate	4,108	5,994	10 102
Masters	99	213	312
PhD	17	7	24
Total	4224	6214	10438

From Table 11, it is clear that out of a total of 10438 students, 10102 (96.8 percent) were undergraduate students; 312, (3.0 percent) were master students; and 24, (0.2 percent) were PhD students. With regards to gender, it is also clear from Table 10 that, under each program level, more males than females had been enrolled.

⁷ The enrollment presented is based on the raw data UNZA availed to me during the interviews.

With regards to 2010, UNZA new student intake across schools and program levels enrollments by presented Table 12.

Table 12: 2010 UNZA new student intakes by school and program-level

School	Bachelor		Masters		PhD		Total
	Female	Male	Female	Male	Female	Male	
Agricultural Sciences	2	13	5	24	1	3	48
Education	153	168	22	36	1	9	389
Engineering	2	7	0	7	0	1	17
Humanities and Social Sciences	418	409	68	144	1	5	1045
Law	12	17	3	14	1	1	48
Medicine	*	*	30	46	0	0	76
Mines	0	2	1	5	0	0	8
Natural Sciences	278	387	2	14	0	0	681
Veterinary Medicine	3	10	2	10	0	3	28
Total	868	1013	133	300	4	22	2340
Total by program	1881		433		26		2340

Note: * denotes that the program level is not offered by the School.

Sources: UNZA website (www.unza.zm)

A close examination of the Table 12 shows that the new intake of students in UNZA comprised more students in undergraduate than in postgraduate programs. In terms of total numbers, undergraduate enrolled 1881 students; master programs enrolled 433students and PhD programs enrolled 26 students. Figure 12 shows student enrolments by program level in percentages. It is clear that 80% are undergraduates, 19% are master students and 1% is PhD student.

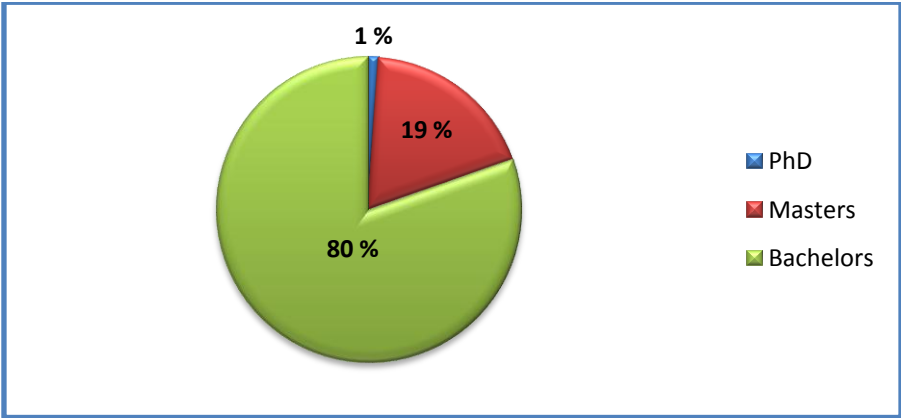


Figure 12: A pie chart showing 2010 new students intake at UNZA by program level

From Table 12, I have calculated the student enrolment ratios across programs of study as follows:

- Postgraduate (Master and Ph.D.) to undergraduate = 459:1881 = 1:4
- PhD to Undergraduate = 26:1881 = 1:72 (meaning 1 PhD students to 72 undergraduate students).
- PhD to Masters = 26:433 = 1:16 (meaning 1 PhD student to 16 Masters Students).
- Master to undergraduate = 433:1881 = 1:3 (meaning 1 Masters Student to 3 undergraduate students).

With regards to gender, it is clear Table12 that there are more Males and females enrolled at all program levels in 2010. Further, Figure 13 amplifies student enrolment across schools. It is clear that Humanities and Social Sciences enrolled more students than any other school. The biggest number of students enrolled in master and undergraduate programs is in Humanities and Social Science. However, the biggest number of PhD students enrolled is in Education, seconded by the Humanities and Social Sciences.

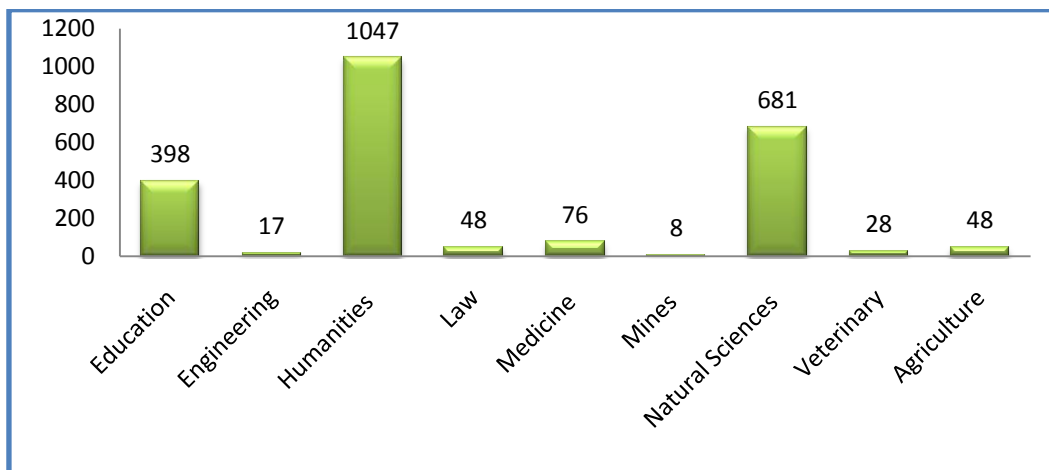


Figure 13: A bar chart showing 2010 UNZA new intake of students across Schools

5.3.1.2 Percentage of academic-staff with PhD degrees

UNZA availed me with the 2008 University Calendar that contains the academic-staff under each school in UNZA. However, data on academic-staff for 1999 was not available. Table 13 presents the number of staff with PhD and master's degree in 2008.

Table 13: Number of staff with PhD and Master Degrees under each School

School Department	Number of staff required	Number of staff with PhD degrees	Number of staff with Masters degrees	Total	Shortfall
School of Agricultural Sciences					
Agricultural Economics and Extension Studies	11	2		10	1
Animal Science	15	6		10	5
Crop Science	15	5		12	3
Soil Science	15	5		9	6
Food Science and Technology	8	0		9	-
School Administration	2	2	2	4	-
Sub total	66	20	34	54	15
School of Education					
Administration	8	2	4	6	2
Adult Education and Extension Studies	19	3	10	13	6
Education Administration and Policy Studies	7	0	9	9	-
Library and Information Systems	8	1	5	6	2
Language and Social Sciences Education	23	5	16	21	2
In-service Education Advisory Services	5	1	3	4	1
Mathematics and Science Education	8	1	6	7	1
Education Psychology, Sociology, and Special Education	Data unavailable	3	11	14	-
Sub total	>78	16	64	80	>14
School of Engineering					
School Administration	5	2		3	2
Agricultural Engineering	10	2		5	5
Civil and Environmental Engineering	16	3		7	9
Electrical and Electronic Engineering	16	1		6	10
Geomatic Engineering	12	2		7	5
Mechanical Engineering	16	5		11	5
Sub total	75	15	4	39	36
School of Humanities and Social Sciences					
School Administration	1	1		1	0

Gender Studies	7	2		3	4
History	15	11		13	2
Mass Communication	12	2	2	14	-
Psychology	12	2		9	3
Development Studies	13	4	7	21	
Sub total	60	22	9	61	9
School of Law					
School Administration	4	1		3	1
Law	30	0	1	11	19
Sub total	34	1	3	14	20
School of Medicine					
School Administration	4	1		3	1
Community Health	9	3		11	-
Anatomy	6	2		3	3
Biomedical Sciences	-	1		5	-
Surgery	-	2	3	20	-
Pathology and Microbiology	-	3	1	14	-
Pediatrics and Child Health	-	1	5	17	-
Psychiatry	-	0		2	-
Physiological Sciences	-	3		6	-
Obstetrics and Gynecology	-	1		9	-
Internal Medicine	-	2		10	-
Post-Basic Nursing		1		8	-
Physiotherapy	-	1		5	-
Pharmacy	-	2		6	-
Medical Education Development	-	1		3	-
Sub total	>19	24	3	122	>4
School of Mines					
School Administration	5	3		4	1
Geology	20	6		8	12
Mining Engineering	19	6		9	10
Metallurgy and Mineral processing	21	4		4	17
Sub total	55	19		25	30
School of Natural Sciences					
School Administration	5	2		3	2

Biological Sciences	24	11		20	4
Chemistry	24	11		19	5
Computer Studies	12	1		6	6
Geography	17	5		12	5
Mathematics and Statistics	22	6		13	9
Physics	24	9		14	10
Sub total	128	45	2	87	41
School of Veterinary Medicine					
School Administration	6	3		3	3
Biomedics	-	4		5	-
Para-Clinical Studies	-	2		9	-
Disease Control	-	4		9	-
Clinical Studies	-	3		10	-
Sub total	>6	16	0	36	>3
Grand total	>521	178	340	518	>172

From Table 13, it is clear that almost all schools have shortages of academic staff. The shortages are severe in School of Natural Sciences followed by the Schools of Engineering, and then School of Mines. Using the figures in Table 13, Figure 14 illuminates that the PhD staff constitutes 34% and master's staff 66%. The ratio of PhD staff to Master's staff is about 1:2.

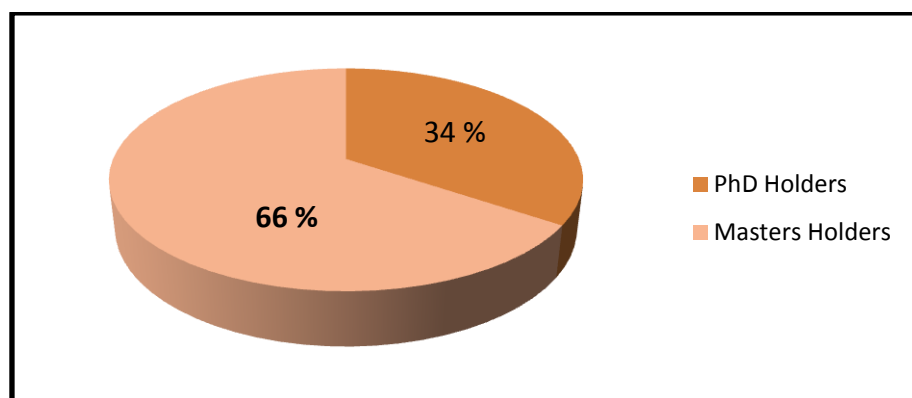


Figure 14: Percentage composition of 2008 UNZA academic-staff by qualifications

UNZA attributes the shortage of academic-staff brain drainage, a problem that has haunted UNZA for decades (UNZA 2008). Figure 15 is an excerpt from NPE on GRZ lamentation over brain drain at UNZA.

In response to its brain drain, UNZA has developed a Staff Development Policy (UNZA 2005), which guides and regulates all aspects of UNZA staff development programs. The main challenge in staff training is:

“The provision of PhD level training because the majority of the academic-staff are at Masters level, conducting research with a low number of staff holding PhD degrees and inadequate funding” (UNZA 2008).

The loss that Zambia has suffered through this exodus is serious. Between 1984 and 1994 the University of Zambia alone lost over 230 of its lecturers, 161 of them being Ph.D. holders with a considerable degree of seniority. This is the equivalent of about 60% of its current total number of staff. The loss to the country, in terms of investment in training and expertise, is immense. The loss to the institution, in terms of replacement needs, disrupted programmes, and demoralization of ongoing staff, is incalculable. The threat of further losses remains, so long as a large gap remains between the terms and conditions of service that the Zambian universities can offer and those offered at universities elsewhere in the region. The inadequate and unstable staffing levels to which this situation has led make it difficult for the universities to discharge their mandate effectively.

The loss of so many members of academic staff puts quality teaching of students at risk, since the services of the remaining staff must be dispersed over ever larger student numbers. The primary responsibilities of the universities are to teach, conduct research and provide service, but because of staff losses and shortages attention has had to be focused on meeting the immediate needs of the student body. This has jeopardized research, which is critical to the well-being of the country and to the academic health of a university, and has put a question mark over the ability of the institutions to provide government, industry and society with the service and advice they need. The universities' research mandate has also been jeopardized by poor funding and the small interest that government ministries and the commercial and industrial sectors show in calling upon its expertise.

Source: NPE (MoE 1996)

Figure 15: GRZ lamentation over brain drain at UNZA

5.3.1.3 *Ratio of academic-staff to students*

UNZA has admitted that the ratio of academic-staff to student at UNZA has not been impressive for a longtime. UNZA Strategic Plan elaborates as follows:

The severe under-funding since 1970s has led to overcrowding, dilapidated infrastructure, high student-lecturer ratios, lack of expansion in facilities, high level of indebtedness and inadequate education materials.

If we disregard the number of the postgraduate students enrolled in 2008, the ratio of UNZA academics staff (508) to undergraduate student (10568) stands at 1:22. In the same vein, academic-staff (70) to undergraduate student (2355) ratio in the School of Education in 2008 alone was 1:33. UNZA has grieved over the inadequate number of academic staff. UNZA Strategic Plan for example elaborates as follows:

“Lecturers to student ratios have ... suffered due to the increased enrolments...[and] most of the academic and administrative departments have operated below 50% of their approved establishments” (UNZA 2008: iii).

In the same vein, one respondent narrated as follows:

Staffing here is bad. In my department for example, we have an establishment of 12 members of staff, and yet there are only 7 of us. I have to do administrative work and also teach. This shows how bad the situation is.

5.3.1.4 Research output in terms of staff and student publications

On research publications, UNZA admits as follows:

Whereas, the University has made tremendous progress in teaching and service, research has lagged behind particularly in the area of scholarly publications, their commercialization and protection. To promote scholarly research, publication, commercialization and protection, and interaction between UNZA and the Zambian public, private and civil sectors, the Directorate of Research and Graduate Studies embarked on developing a Research Policy and Intellectual Property Policy (UNZA 2009: viii).

In the same line, UNZA Strategic Plan reports as follows:

Whilst there has been a lot of research going on, the lack of coordination means that it has not been possible to have a central database of all the research projects taking place throughout the entire university. Thus documenting the combined, institutional research output remains a key challenge (2008: 24).

When asked to state the number of publications indexed in journals by UNZA staff and students, the respondent could not estimate any number of publications. He however, contented that academic staff, individually and severally, were engaged in research and had been publishing in both local and international journals. In a low mood, the respondent concluded as follows:

Do you know what? In my opinion... we do a lot of research as a university. It is unfortunate that we may not have made as many publications in journals. Otherwise, UNZA lecturers do a lot of research.

With the insight from the respondent, I conducted online search for journal publications under individual names of UNZA academic staff. An online Google search on “UNZA staff publications” linked me to UNZA website. Under the item which read “Article Index” I found the following number of publications for a few academic staff: 45 publications under Dr. Olusegun Yerokun; 20 publications by Dr. Victor Shitumbanuma; 16 publications under Dr. Elija Phiri; and 31 publications under Dr. Benson Chisanga. Among the journals and web-engines the staff articles were published include: Environmental Geochemistry and Health (Springer); Elsevier; Journal of Science and Technology (UNZA); UNISWA Research Journal of Agriculture (Swaziland); Soil Survey and Land Evaluation (UK); Journal of Third World Science Technology and Development Technology; Journal of the World Aquaculture Society; Zambian Journal of Applied Earth Sciences; Geosciences in International Development (UK).

5.3.1.5 UNZA contribution to research funding and proportion of funding from government agencies

UNZA identifies the following external sources of research funding: (i) GRZ through MoE; (b) GRZ through ministries other than MoE; (iii) Non-GRZ grants, NGO, Private Sector; (ii) Regional and international funding, and (iv) royalty disbursement as stipulated in UNZA Research and Intellectual Property Policy and Intellectual Property Policy. However, the Policy does not indicate the proportions of funding from each source.

In addition, the respondents and UNZA policy documents had no data on proportion of funding for UNZA research by UNZA itself and GRZ. However, the respondent explained that UNZA had been availing research funds to its academic staff. He elaborated as follows:

When it comes to internal funding, UNZA makes available resources to enable us carry out the research agenda. It is important to note that that research fund is normally made available to researchers through a competitive process outlined by UNZA. Also note that each school in UNZA is required to open separate bank accounts to administer research funds allocated to it.

5.3.2 Are UNZA teaching programs becoming economy-oriented?

5.3.2.1 Changes in the internal traditional activities to strengthen the relationship between the university and the economy

When asked to indicate and explain any changes in the internal traditional activities to strengthening the relationship between UNZA and the economy, four respondents mentioned *curriculum review* as a major change.

One respondent affirmatively explained that:

As you may be aware that the major traditional activity in UNZA's is teaching or simply offering programs - whatever you may call it. So to make ourselves more relevant to the economy, we now conduct periodic review of the curriculum. We may have a weak relationship with the industry; but we are trying our best to strengthen it through curriculum reviews.

On the same topic, one respondent asserted that there was no external pressure to make UNZA change its traditional activities. He slowly affirmed that:

The fact is that UNZA is on its own. How can it become relevant to the economy if politicians themselves do not see its link with the economy? Absolutely, no relationship is forged or strengthened. There isn't even any government policy to compel industry and us to work together. When it comes to research one can lament. Do not forget also that university infrastructure is not well developed... so you find that research is stressed up and consultancy suffers. What I am driving to is that the relationship between this university and the industry very weak, period.

5.3.2.2 *New programs introduced in response to economic development/labor market*

Although, there was a general agreement across respondents that UNZA had been introducing new programs, yet the views of the respondents differed on whether the new programs were introduced in response to the labor market.

In support of the view that the introduction of new programs in UNZA was as a response to labor market, one respondent hinted as follows:

“During curriculum review, each School seeks inputs from industry... Why?... Because our product, the students end up in industry. Actually, we now conduct industry demand driven courses, which are refreshers courses”.

In the same vein, the respondent from the School of Natural Sciences gave the following specific examples of the programs that she believed had been introduced in response to the economy demands:

In our School we have introduced 7 new programs since 1999 to respond to the economy. These are computer science; insurance Mathematics; financial Mathematics and Actuarial Science; Environment Education; Bachelor of Education Mathematics and Science or the so-called BEDMAS. Then we have also Primary and Secondary degree programs. These programs were driven by the demands of the economy.

Furthermore, another respondent from the School of Mines recounted as follows:

“We consult with industry when developing the new programs. For examples, the mines, such as Lumwana and Konkolo Copper Mines are consulted to when developing programs because they actually sponsor students in form of scholarships in fields like geology”.

One of the respondents who viewed the introduction of new programs in UNZA as not a response to the labor market emphasized that GRZ was behind the introduction of a number of new programs in UNZA. He affirmed that, “*The Ministry of Education instructs us to produce more teachers, unfortunately*”.

5.3.2.3 *Increase in student enrolments in fields of high economic relevance*

According to UNZA, all fields of study were considered as meaningful to socio-economic development (UNZA 2008). However, when I used FNDP to define the relevant fields of economy (mainly agriculture, mining, infrastructure, and sanitation), there were mixed responses on whether student enrolments in UNZA increased in fields considered to be of high economic relevance.

One of the respondents who felt that student enrollments did not increase in fields of high economic relevance emphasized, “*Increase is not in relation fields that are important in economic sense*”. However, one respondent in support of the notion that student enrolments increased in fields of high economic relevance explained as follows:

“Yes... enrolment increases recently resulting from Fast Track Teachers program for upgrading teachers from diploma to degree responding to the new demand for degree holders in high schools”.

Also, the respondent from the School of Mines qualified that increases in student enrolment in Geology and Mining Engineering programs was of economic significance because the mining sector is vibrant in Zambia.

5.3.2.4 *Attempts to attract funding for skills development*

There was no agreement across respondents that UNZA made attempts to attract funding for skill development. One respondent in support of the notion elucidated, “UNZA has been attracting funding for Staff Development Fellows... which is funding for skills development”. Another respondent explained that, “Yes... the mines sponsor students. We attract funding from the mines for development skills... and also UNZA sends Staff Development Fellows for training”.

One of the respondents made specific reference to a Finnish funded project that was currently running in UNZA, “Integrated Water Resources Management”, which had incorporated academic staff, and students (3 PhD and 2 Masters). He narrated that UNZA had attracted the project with the view of using the project to develop skills of UNZA academic-staff and students.

5.3.2.5 *Use of ICT to prepare students for the knowledge economy*

The respondents acknowledged the importance of use of ICT to prepare students for the knowledge economy. Also, there was a general agreement across respondents that ICT infrastructure at UNZA was insufficient to cater for all students. One respondent grieved as follows:

“We have very few computers in the University Library. It is sad that a student can stay for two weeks waiting to be informed by the Library when it is his or her turn to access the computer”.

The respondents expressed satisfaction over the creation of a computer laboratory in the School of Natural Sciences and the introduction of a new academic program in Computer Science. In addition to this positive endeavor, UNZA has committed itself to address the ICT related problems. UNZA Strategic Plan illuminates as follow:

By December 31, 2012, the University will have incorporated ICT in library service delivery that meets the emerging needs of staff, students and other users. Academic, professional and administrative staff and students will have access to electronic library resources, [and that] by December 31, 2011; the University will have developed and implemented an integrated ICT system for management, academic and scholarly activities, which are functionally reliable (UNZA 2008: xii).

5.3.3 Are UNZA research activities becoming economy-oriented?

The following statement in UNZA Strategic Plan expresses the challenges UNZA is facing regarding its research:

Research is a crucial aspect of academic life and yet this has been one of the weak areas in the development of UNZA in recent years. The lack of funding for research activities, experienced during the larger part of the second strategic plan period has made it difficult for the University to be at the frontier of knowledge and effectively play its essential role as a centre of creativity, innovation and invention (UNZA 2008).

5.3.3.1 UNZA Research and Intellectual Property Policy

Until 2009, UNZA had no institutional policy on research. The implication of this is captured as follows by UNZA Strategic Plan:

The coordination of research has not been very effective. Consequently, teaching schools and other units has conducted research in an uncoordinated manner resulting into a lack of clear institutional and collective research focus in the university (UNZA 2008: 18).

UNZA Research and Intellectual Property Policy in particular addresses the following issues: human resource development/capacity building; research funding; management of research; management of research funds; research infrastructure; quality management and research ethics; data management and dissemination; recognition of excellence in research; institutional collaboration; postgraduate students' research; undergraduate research; and intellectual property rights.

UNZA Research and Intellectual Property Policy acknowledge research as one of the core functions of the University linked to national development. It states:

One of the core functions of every University is research. Universities have been known to be engines of discovery and generation of new knowledge through research. Research ultimately contributes to national development through innovations and technological advancements (UNZA 2009: viii).

UNZA's desire to link its research to national development is further expressed in the overall objective of UNZA Research Policy, which is stated as:

To provide policy guidelines that will promote and foster the academic and managerial environment conducive for undertaking research in order to enhance the scientific, technological, social, economic and political development for the improvement of the living standards of the Zambian people and beyond (UNZA 2009: 10).

5.3.3.2 Governance arrangements for research

When asked to explain the institutional structures put in place to make research become economy-oriented, there was a general agreement across respondents that the structures

elaborated in UNZA Research and Intellectual Property Policy seemed adequate to link UNZA research to the economy.

A follow-up analysis of UNZA Research and Intellectual Property Policy reveals that half of the entire document addresses the “*Institutional Research Framework*”. The six structures explained in the policy are summarized as follows:

- *Research Board*: mandated by UNZA Senate to provide strategic research direction to the University through the development of effective research policies;
- *Directorate of Graduate Studies*: charged with the responsibility of general administration of the research programs;
- *Research Ethics Committees for the University*: charged with the responsibility of reviewing research proposal for research ethical compliance;
- *Research Audit, Implementation and Monitoring Committee*: responsible for ensuring consistence in the research activities of the university;
- *INESOR*: an interdisciplinary social science research wing of UNZA mandated to carry out research on full time basis; and
- *School Research Committees*: mandated to preside over research matters of the School.

5.3.3.3 UNZA research contracts

On research contracts, respondents highlighted that UNZA from time to time had contracts not only with GRZ, but also with industry. Besides, they further, elaborated that individual lectures had also contracts.

On contacts between UNZA and GRZ, the respondent in the School of Education highlighted as follows:

We, as School of Education, had several research contracts from the Government of Zambia between 1999 and 2008. The two contracts I can cite right are: *Education through Zambia’s Cultural ceremonies* project, and the second is called *Positioning UNZA School of Education in the changing environment of primary education*.

On research contracts between university and the industry, the respondents strongly believed that UNZA through INESOR had contracts with industry. However, they did not cite any contract.

I made a follow-up online search on the contracts between INESOR and industry. One of the contracts mentioned is the research on *Fisheries and HIV/AIDS in Africa: Investing in Sustainable Solutions*. The Project is being implemented in 8 countries in East and Southern Africa as well as West and Central Africa. The Swedish International Development Cooperation Agency (SIDA) and the Norwegian Ministry of Foreign Affairs through their joint Regional Program on HIV/AIDS in Africa from April 2007 to March 2010 finance the

Project. The outcomes of the research will feed back to the communities and will also be part of the regional program to influence regional policies on fisheries and HIV/AIDS (Chilima 2009). Specifically, INESOR was contracted to take a lead in the following research streams:

- Mobility and migration of Fishing Community
- Fish Market chains; and
- Stakeholder/Institutional and Policy analysis

Interestingly, the last research stream of the project, *Nutrition Impact*, was also contracted to UNZA Food and Nutrition Commission.

Another contract concerns the participation of INESOR in research on *Living Conditions among People with Activity Limitations in Zambia: A National Representative Study*. The research was undertaken in 2005-2006. The Norwegian Federation of Organizations of Disabled People funded the research.

In 2009, UNDP collaborated with the INESOR on a project concerned with strengthening the capacity for formulating and implementing macroeconomic, sectoral and structural policies that are more supportive of poverty reduction by deepening pro-poor policy dialogue among stakeholders. This project was implemented in the North Western Province of Zambia (UNDP 2009).

In short, the above three examples, serve as evidence that INESOR is engaged in practical research.

5.3.3.4 Infrastructure for research

UNZA defines research infrastructure to include buildings, office space and facilities, training centers, libraries, databases, laboratory equipment, instruments, and computer networks (UNZA 2009: 24). As already indicated, there was a general agreement across respondents that UNZA research infrastructure is undeveloped. One of respondents explained that research infrastructure had been neglected because UNZA was only concerned with teaching and not research. The respondent emphasized: *“It is sad that our traditional business has been teaching and not research”*.

UNZA is hopeful that the newly launched Research Policy will aid the development of research infrastructure: One of the main aims of UNZA Research and Intellectual Property Policy is explained as follows:

Facilitate the following activities aimed at building and sustaining the research infrastructure: (a) Investment in research infrastructure bearing in mind that decisions to fund infrastructural development need to be made in a collaborative manner owing to significant cost involved; (b) Support consensus building on a wide range of research objectives, strategies and priorities as conceived by individual schools/units of the university; (c) Rapid response to the on-going technological changes (UNZA 2009: 24).

5.3.4 Discussions of findings

5.3.3.5 Is UNZA academic core strong?

The results suggest that UNZA academic core is not strong. Firstly, the postgraduate to undergraduate student enrollment ratios are not impressive at all. This enrollment scenario contradicts UNZA mission of producing high person-power (PhD and Masters graduates) for economic development. Using the words of Castells (1991 as quoted in CHET 2007) postgraduate education in the development of Zambia is merely a “luxury ancillary”.

The results also show that the majority of UNZA academic-staff are Masters Degree holders. The insufficient number of academic-staff with PhDs in UNZA has implications on the academic core. The first implication is that UNZA may not enroll a large number of master’s students because of the small number of academic-staff with PhDs to teach and supervise the students. The second implication is that UNZA is likely to fail to produce high skilled person-power needed for economic development. The third implication is that the quality of UNZA research, which is highly dependent on academic-staff with PhDs, is likely to be compromised.

Furthermore, student enrolments across schools indicate that more teachers and social scientists are produced from UNZA on the expense of other fields considered to be more relevant to economic development of Zambia. The overall UNZA student enrollment landscape suggests that the role of UNZA in development is mainly traditional development, which according to CHET (2009), means the mere production of person power for civil service.

GRZ, in several documents, has emphasized its desire to meet the Millennium Development Goals. This desire, for education sector, implies the need on the part of GRZ to employ more teachers. The results indicate that government wanted 5,000 teachers per year from 2008-2011, and therefore directed much of its funding on training of teachers. So this intention, coupled with GRZ’s absolute powers to direct UNZA’s policies, may explain why UNZA School of Education enrolled more students than other schools in 1999 and 2008. By implication, GRZ, like many states in Africa, can try to force HE into undemocratic political agendas, as situation which results in many institutions in Africa having a rather ambiguous, if not antagonistic, view of development and HE (CHET (2007: 11-12).

Regarding staff and student publications in journals, UNZA rates itself to have performed poorly in journal publications. However, the results show that individual academic-staff had been publishing articles in both local and international journals. What seems to have been lacking in UNZA is a deliberate policy on documenting all journal articles UNZA academics publish. Hopefully, UNZA will be guided by its Research Policy in archiving the publications of its academics and students. Archiving is necessary because journal articles are one of variables in KEI. The absence of archiving may partly explain why Zambia’s standing on KEI is very low. Furthermore, lack of archiving journal publications may restrict access to the

articles by decision makers leading to what Maassen described as the poor connectivity between knowledge produced and decision makers.

In a nut shell, the academic core of UNZA is characterized by imbalances in student enrollment across fields and levels of study programs; levels teaching programs; number of academic-staff with PhDs; and ratios of academic-staff to students. Besides, research funding, proportions by UNZA itself and government ministries are documented; and there is lack of records of publications in journals by the academic-staff and students. All these weaknesses are symptoms of a weak academic core.

5.3.3.6 *Is the academic core becoming economy-oriented?*

Results have illuminated that UNZA is trying to introduce teaching programs that are economy oriented. UNZA academic administrators feel GRZ's positive interference could speed up the teaching programs to become more economy-oriented. However, lack of GRZ support is evidenced by underfunding of and non-commitment to monitor UNZA activities. This finding is similar to that of HERANA project that the efforts by universities in African countries were not supported by governments (CHET 2009).

This scenario is contrary to the argument by Mortimer (1972) that control by society or government over universities must be increased in a mass society, and thus external accountability must become stronger than internal accountability. Besides, the South Korea example highlighted in literature show that government could use a mixture of policies to overcome rigidities in public universities.

Although new programs are being introduced in UNZA, yet their connectivity to labor market should be questioned. It is clear from the results that UNZA does not have an institutional policy on tracking graduates absorption into the labor market. Failure to monitor the progression of graduates in the labor market may make inspire UNZA to offer programs that do not meet labor needs.

Although UNZA Research and Intellectual Property Policy is in its infancy stage, yet its comprehensiveness shows that UNZA is commitment to creating what Reiko (2001) refers to as "research-oriented academic culture" which circumvents substantive improvement of teaching and leads to improved quality in the delivery of university programs. All things being constant, UNZA Research and Intellectual Property Policy is expected to promote a strong link UNZA to economy development. For example, the policies emphasizes that UNZA is committed to publishing the research findings, and establishing a central database for research.

The results also show that UNZA through INESOR is strongly linked to the economy. Examples of some of the research INESOR has undertaken have been elaborated in the results. Besides, the results show that GRZ also gives contracts to UNZA, which is a move in a positive direction because some decades ago, GRZ used to by-pass UNZA and contract institutions or researchers from the developed countries to conduct research on behalf of GRZ. GRZ admits as follows:

What is anomalous is that large sums are spent in procuring the services of consultants from abroad while locally available expertise is present at the universities... The Ministry's position is that within the framework of Zambia's liberalized economy, the universities and other higher level institutions will be given equal opportunity of access to government consultancies, for which they will be expected to compete on an equal footing with other applicants (MoE 1996).

Presumably, contracting UNZA to conduct research for GRZ would link UNZA to the economy development because most government research is centered on regional and national development.

5.4 QUESTION 4

To which extent does UNZA institutionalize externally funded projects?

To answer this question I analyzed data from the interview with a respondent, was heading an externally funded project called, Intergraded Water Resource Management Centre (IWRM). For the same purpose, I analyzed important data from the University institutional documents.

5.4.1 Presentation of results

5.4.1.1 Policy of the University on project funding

Externally funded projects are one of the sources of funding for UNZA. UNZA Strategic Plan explains that as follows:

“UNZA must optimize existing income generating undertakings and also seek new ones... Furthermore, income from funded research/projects and consultancy needs to be maximized” (UNZA 2008: iv).

However, UNZA has no standalone policy on project funding. The respondent elaborated that:

We have open policy... Open in sense that the University is open for collaboration with other universities. The University is open to receive funding from other universities. What we do is, we sign a MoU or Memorandum of Understanding with that other partner on how we are going to work when that project materializes.

The respondent stressed that MoUs between the University and its partners guided the project funding. An analysis of the University Act of 1999 and UNZA Strategic Plan of 2008 showed that both documents had no guiding parameters for project funding.

5.4.1.2 Project funding and the structures to manage project funding

According to the respondent UNZA contributed to project funding both financially and non-financially. Citing a Finnish funded project called “Integrated Water Resources Management”, the responded elaborated as follows:

Example on that one [project] is that we [UNZA] have to provide office space; we have to provide water; we have to provide electricity... the amenities that go with the University. The lecture is not paid from that project. So the contribution of the institution is to pay the salary to the lecturer. The other ones, like the test project starting this year, we have to contribute 10% in terms of money.

On structures put in place to manage project funding, the respondent mentioned that UNZA has a varied type of system. However, the norm was that project funds were deposited in the UNZA account. Thereafter, the account could be managed at either central level of school level. The respondent further elaborated that project funding was subjected to both internal and external audits. An example cited was the Finnish funded project on which the respondent commented as follows:

There are funders who want their projects to be audited externally. I had a Finnish project that ended last year. The Finnish government required that the auditors appointed by them externally audit the project. The project underwent internal audit by UNZA and the external audit. The project is closed and not institutionalized. But the project is again currently audited by GRZ through the Auditor General's office.

The respondent felt that two audits of project funding, one internal and one external, were enough to establish how projects funding had been used.

It is worth noting that the structures for managing project funding are entrenched in highly centralized, inflexible UNZA system (UNZA 2008). UNZA Strategic Plan underscores as follows:

The University has a highly centralized management system with an organization structure that is rigid and inflexible, making the operations very ineffective and inefficient...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 Schools and Units have sufficient funds (UNZA 2008:20).

5.4.1.3 *Registering of projects*

All externally funded projects are registered with the University. The respondent contended that management of project funds through UNZA account and the internal auditing of project funds by UNZA is a clear indicator of projects being registered by UNZA.

5.4.1.4 *Does UNZA central administration plan the projects?*

UNZA central administration, according to the respondent, meant either the Directorate of Research and Graduate Studies or the office of the Vice Chancellor. The respondent further pointed out that UNZA central administration delegated projects to schools. The respondent clarified as follows:

Some funder can bring an agriculture project to us [Directorate of Research]. We evaluate the project and then delegate to the School of Agriculture. But if you mean that the

central administration is the vice Chancellor's office ... they also do the same. When they receive the project, they will either send it to us or to the dean of the appropriate school.

The respondent explained further that, whereas the nature of the project determines which School of UNZA will plan and implement the project. However, the role of UNZA central administration is to monitor the schools to ensure that projects are implemented according to MoUs.

5.4.1.5 Relationship between projects and UNZA mission and its Strategic Plan

The respondent claimed that externally funded projects are linked to UNZA mission and Strategic Plan. He substantiated that the Strategic Plan has created a good environment for easy capture of projects. In addition, each School of UNZA, for instance, is required to have a strategy that, among other things, helps a particular school to attract projects.

The respondent also elucidated that one of the aims of UNZA Strategic Plan was to promote the notion of demand-oriented research. By implication, UNZA could redirect its efforts to attract projects.

5.4.1.6 Sustainability of projects: teaching, research and postgraduate training

On whether the projects were institutionalized or not, the respondent explained that most of the externally funded projects had promoted teaching, research, and postgraduate studies. He further explained that UNZA, through Directorate of Research and Graduate Studies, made sure that externally funded projects were utilized to strengthen UNZA teaching, research, and postgraduate studies. He strongly emphasized as follows:

The key part of this Directorate is to make sure that postgraduate students in particular ... are part of these [projects]...The emphasis is also on the lecturers to always update teaching material based on the information from projects. We also make sure that at least every five years our curriculum is reviewed to include research [project] outputs. This is how we try to institutionalize project findings into teaching material.

The respondent cited an ongoing project in UNZA under the School of Mines, *Intergraded Water Resources Management*, has having incorporated 3 students pursuing PhD programs and 2 students pursuing masters' degree programs.

After the interview I made a follow up check on UNZA website to have an insight into other externally funded projects in UNZA. Notably, UNZA hosted a Belgian Government funded Vlaamse Interuniversitaire Raad-UNZA-Institutional University Cooperation (VLIR-UNZA IUC) Partnership Program which started in 1997 and closed in March 2006. This ten-year partner program aimed at improving the quality of education, research and management of UNZA and targeting it to those sectors of industry that are of essential importance to Zambia's socio-economic development. The specific projects implemented are shown in Table 14.

A close examination of the projects objectives in Table 14 shows that VLIR-UNZA IUC Partnership Program aimed at strengthening UNZA's academic core. The *Final Evaluation of*

the IUC Partnership with the Universality of Zambia (UNZA) report of 2008 has described many achievements of each project. To provide examples of the achievements, this study focuses on three projects: Computer Science, Veterinary Medicine, and Inter-disciplinary Research.

Table 14: Projects under VLIR-UNZA- IUC Partnership Program

Project	Overall objective	Specific purpose/objective
UNZANET	To improve the quality of education and research throughout the university	To make new information and communication technologies more widely available and accessible to academic staff, students and professional staff in all schools of the university and to establish decentralized management and administrative systems
Distance Education	To improve the quality, socioeconomic relevance, scope and accessibility of distance education offered by UNZA	To build and strengthen the capacity of the Directorate of Distance Education to deliver its courses and support services to distance learners through the application of information and communication technologies.
Computer studies	To improve the performance of the Zambian economy in both the public and private sectors through the effective application of computer technology	To establish a fully operational Department of Computer Studies within the School of Natural Sciences, which will offer programs of study at Bachelor of science, postgraduate diploma and masters levels, as well as research and consultancy services to industrial and administrative agencies
Food Science and Technology	To provide qualified human resources for the Zambian food industry and related institutions	To establish a Department of Food Science and Technology within the School of Agricultural Sciences offering a four-year training program
Veterinary Medicine	To contribute to increased livestock productivity and public health in Zambia.	To improve the practical skills of vets qualifying from UNZA by means of practical and clinical training at the field station, and to increase knowledge of helminthology in Zambia
Geology	To improve the performance of the mining and environmental sectors through the provision of better educated Earth Science graduates, so that they will make an enhanced contribution to the Zambian economy	To improve the quality of educational, research and consultancy services offered by the School of Mines
Interdisciplinary Research	Enhancement of research capacity at UNZA	To encourage young researchers at UNZA to carry out applied interdisciplinary research using the equipment provided by the IUC program

Sources: Compiled using data from the *Final Evaluation of the IUC Partnership with the Universality of Zambia (UNZA)* report of 2008.

Under Computer Science project, UNZA has established the Department of Computer Studies, with fully refurbished departmental office and two computer laboratories with networked computers. In addition, the Department enjoys the three short-term visiting Belgian professors per year to participate in the academic programs and local staff visits/training in Belgium. Furthermore, UNZA now runs undergraduate bachelor program in computer sciences (UNZA 2010).

Regarding the achievements of the Veterinary Medicine project and Inter-disciplinary Research project, the *Final Evaluation of the IUC Partnership with UNZA (UNZA) -report* elaborates as follows:

The School of Veterinary Medicine made good use of the opportunities offered by the Interdisciplinary Research project. The research has resulted in a considerable number of publications (see the Appendices) and provided the basis for attending conferences to present research results and funding was provided by the project for conference attendance. According to the self-assessment report, the project produced 38 articles in international peer reviewed journals, 42 conference proceedings (full papers), 42 conference abstracts and 11 posters. Research papers were presented at the conferences that were held in March 2004 and in August 2005 (Nooijer and Siakanomba 2008: 3).

The report further explains that the overall impact of the *veterinary Medicine project* as follows:

Improved staffing levels in the four teaching departments of the School of Veterinary Medicine, improved research facilities and research outputs, and publication thereof in international scientific journals, have contributed to enhance academic standing of the university. The laboratory is being used by regional M.Sc. and Ph.D. students who apply technologies introduced by the project. The students are able to report the results back to the stakeholders in the research areas, including the farmers, veterinary and public health workers. The field station has also become a place where farmers can take their sick animals for veterinary assistance and the dip tank allows resource-limited farmers to dip their animals six days a week. Village sensitization campaigns about the importance of the facility were carried out through the village committees. Disseminating the research findings to the veterinary training institutes and extension workers as well as policy makers could equally yield more positive impact (Nooijer and Siakanomba 2008: 52).

In terms of project sustainability, the report affirms that Veterinary School Project is likely to be sustained by UNZA because of the following indicators:

- The establishment of a field station has provided a permanent arrangement for field training
- The relatively high number of people trained under the project, including both academic and technical staff, with 5 out of 7 M.Sc. graduates trained still work at the School.
- Quality research and research facilities have helped in attracting funding for its continued research and training activities. Examples are that the laboratories have already attracted more than € 200,000 from the DANIDA for a Ph.D. training project in the field of cryptosporidium and porcine cysticercosis; and the immunology laboratory has been designated as a regional (Eastern and Southern Africa) reference laboratory for Immunodiagnostic by the regional cysticercosis working group.
- The research undertaken by the project has helped the school in international research collaboration – both with institutions in the South and in the North (Nooijer and Siakanomba 2008: 52).

Furthermore, the report elaborates the collaboration of the School of Veterinary Medicine with other stakeholders as follows:

In terms of South-South collaboration, the School [Veterinary] has provided some training in immunological techniques to Ph.D. students, mainly from Kenya, Tanzania and Zimbabwe. Within Zambia, some collaboration has been established with UNZA's School of Medicine, and the Ministries of Health and Agriculture and Cooperatives. It is moreover understood that the School of Veterinary Medicine runs a clinic that is generating income by providing diagnosis and treatment of animal diseases for farmers and domestic pet-owners. It is likely that the links between UNZA's School of Veterinary Medicine and the institutions in Flanders will continue through the VLIRUOS Research Initiative and North-South-South Cooperation programs (Nooijer and Siakanomba 2008: 53).

Excerpts in Figures 16 and 17 present the summary of the overall evaluation of the program with regards to program strengths and weaknesses. Even though the two excerpts explain both the strengths and weaknesses of the method, there is need show an additional weakness that instead of the Veterinary Medicine project training UNZA academic-staff in PhDs, it trained Belgians. In this regard, the *Final Evaluation of the IUC Partnership with UNZA (UNZA)* has taken note as follows:

A question remains whether development aid funds should indeed have been used for Ph.D. training of Belgian nationals rather than enhancing UNZA staff capabilities (Nooijer and Siakanomba 2008: 51).

• Relative strengths

The programme has established a research infrastructure, comprising laboratories in several of UNZA's schools and Departments (Veterinary Medicine, Geology, Soil Sciences, and Food Science and Technology). This will allow University staff to continue to undertake research and consultancy services in areas that are of immediate relevance to the Zambia's economy and population. Research infrastructure plus the establishment of appropriate human resource capacity would allow for continuation in research collaboration, especially in Veterinary Medicine, Geology and Soil Sciences and, to a lesser extent, in Food Science and Technology. In these areas there is also an interest among the Flemish institutions to do so.

Improved laboratories are also used in teaching and learning of undergraduate and postgraduate students. The introduction of the (competitive) Interdisciplinary Research project has given further impetus to the University's Schools and Departments to undertake (some) collaborative research; opening up of the project to University units outside those directly participating in the VLIR-UOS IUC Programme ensured a broader impact of the initiative. The quality of the research undertaken appears to have been good, resulting in some cases in publication in international peer-reviewed journals. Attention for research policy development, training in research proposal preparation, etc. during the final year of the Programme is likely to contribute to a more sustainable approach to scientific research.

Ample attention was also paid to key services - most notably the Computer Centre and the university library, supporting UNZA' research and training as well as services functions.

Considerable attention was paid to staff development - enhancing the capabilities of academic and technical staff has been a core component of most projects, especially during the 2nd phase of the Programme. This was also true for the three projects in which (relatively expensive) Belgian resident experts have been involved. Despite 'greener pastures' that continue to exist outside the University, especially, though not exclusively, in the ICT sector, a substantial number of those trained have remained with the institution - even though no staff retention policy has been in place.

Through the Programme, the University has furthermore managed to introduce two new undergraduate programmes, one in computer science, the other in food science and technology. All acknowledge that the presence of the Belgian resident experts has been instrumental in this.

Figure 16: Excerpt showing strengths of VLIR-UNZA IUC Partnership Program

• Relative weaknesses

During the 1st phase of the VLIR-UOS IUC Programme with the University of Zambia consisted of a series of more or less 'stand alone' projects, with some common sharing of available facilities. Though there has been some more cooperation among the individual projects in the 2nd phase, one cannot escape the impression that these 'stand alone' projects have prevailed. There is little sense of a real integrated programme with e.g. common themes and approaches as well as common overall goals or objectives.

The individual projects were all, some more than others, affected by common problems, including the lack of an appropriate staff reward and retention policy, problems experienced in the financing of recurrent costs, especially once the Programme is over, and the absence of a proper research policy and framework, however without supporting institution-wide initiatives to address them. At the same time, UNZA management appears to have given insufficient priority to these issues; for long, the same seems to have been true for issues related to ICT.

Programme funding and financial management have encountered problems - particularly until the nomination of a Programme Manager in 2003. Money arrived late, communication about funding available was inadequate, causing difficulties in projects to stick to their original planning, which in turn led to activities either not implemented or implemented with delay on the one hand and under expenditure on the other. Programme financing furthermore suffered from uncertainties concerning expenditures that had not been accepted in Belgium and the lack of reliable financial reporting.

Efficiency of implementation of project activities was also affected in some cases by limited time inputs from the Flemish staff in relation to the key problems to be addressed (an example is the Computer Centre and library project). Moreover, projects are often based on interpersonal rather than inter-institutional collaboration which would imply the involvement of more persons on both sides. The transfer from personal to inter-institutional collaboration is seldom made.

Sustainability remains a key concern - though there has been some increase in own income generated by the laboratories and departments that participated in the VLIR-UOS IUC Programme. To date, the funds generated through research and consultancy are in most cases, an exception is the School of Veterinary Medicine, well below the operational costs paid for by the Programme. There has been little increase of the Government budget for the University.

Figure 17: Excerpt showing weaknesses of VLIR-UNZA IUC Partnership Program

5.4.1.7 Database for projects

On database for externally funded project, the respondent stated that hard-copy reports on high level University research, and externally funded projects were kept in the Directorate of

Research and Graduate Studies. Nevertheless, some of the reports were deposited in UNZA Library. The respondent further asserted that any University School running a project was required to create a database of the project.

5.4.1.8 Mechanisms to ensure project sustainability

On mechanisms put in place to ensure project sustainability, the respondent made reference to the UNZA Research and Intellectual Property Policy and Intellectual Property of 2009; UNZA Strategic Plan; UNZA Research Implementation Manual which was being developed; and the UNZA Research Board. The respondent felt that since many externally funded projects in UNZA had taken the nature of research and teaching, then UNZA Research and Intellectual Property Policy would help sustain the projects.

My follow-up analysis of UNZA Research and Intellectual Property Policy reveals that the notion of sustainability appears in the policy mission statement, stated as follows:

The mission of the Research Policy is to promote a sustainable, focused and dynamic environment that fosters efficient and effective research and contributing to social and economic development and at the same time assuring academic freedom (UNZA 2009:xiii).

The policy aims at providing sustainable environment for research projects. It also aims at providing sustainable infrastructure as stated below:

UNZA will strive to build and maintain a sustainable research infrastructure. The infrastructure will be defined to include buildings, office space and facilities, training centres, libraries, databases, laboratory equipment and reagents, instruments, computer hardware/ software (2009: xvi).

5.4.2 Discussion of results

A number of issues arise from the preceding results. Firstly, in the absence of a formal institutional policy on funding of externally funded projects may advantage and disadvantage UNZA in various ways. UNZA relies on MoUs between UNZA and funders. However, MoUs have their pros and cons. For example, in the absence of written policy, UNZA may or may not have strong negotiating powers with its funders. Besides, funders may fail to pin down UNZA's demands since there are no laid down rules (in the policy) on which to do. Besides, the absence of policy on project funding may act as an incentive or a disincentive for individual academic-staff or Schools to be initiative and vigilant in soliciting project funding.

Secondly, the results have shown that externally funded projects are not coordinated within UNZA. Surprisingly, even projects run by one funder, for example, the Belgian funded projects, failed to be coordinated within UNZA. The results have further shown that there is little sense of having an integrated program in UNZA. This lack of coordination and integration, when perceived within the context of the definition of institutionalization as a "relatively enduring collection of rules and organized practices derived from collective identities and belongings, and embed in structures of meaning and resources" (Olsen 2007), entails that externally funded projects in UNZA seems not to have been institutionalized.

Thirdly, the problem of lack of integration and coordination of externally funded projects seem to be compounded by weak management institution-wide initiatives aimed at addressing the project related problems (Nooijer and Siakanomba 2008). The fact that UNZA Research and Intellectual Property Policy is relatively new implies that before the policy projects may have not been backed effectively by UNZA management. Besides, results suggest that UNZA management, in the past, appeared to have insufficient priority on such issues as research, staff development, and integration of projects.

The fourth issue is that institutionalization of projects seems to be hampered by lack of proper networking between funders and UNZA (Nooijer and Siakanomba 2008). The results have shown that externally funded projects are usually characterized by interpersonal and not inter-institutional collaboration. This type of collaboration is likely to block the involvement of other people in the project, especially the academics. It seems that “external loose coupling” (CHET 2009), or the operational links between UNZA academic-staff and project funders is weak. This situation, according to Castells (2001), makes funders fail to take into account the specificity of the university as an institution and link it to training functions aligned with the goals of the economy. As such, a weak link between UNZA’s academic core and the projects is highly possible, and therefore contradicting the definition of project institutionalization that, “A project is institutionalized by the university when the project knowledge is accumulated and feeds into teaching, curriculum development, postgraduate training and publication” (CHET 2009: 30).

Regarding sustainability, the results illuminate that UNZA has human capacity and the newly established UNZA Research and Intellectual Property Policy that can help to sustain projects. However, the financial and research infrastructure are the major constraints capable of making project sustainability almost impossible.

CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Chapter 6 presents study conclusions, implications and recommendations. Section 6.1 summarizes and concludes salient points emanating from Chapter 5. Section 6.2 presents some of the possible policy and practical implications of this study. Section 6.3 presents study limitations, and finally Section 6.3 presents recommendations.

6.1 Conclusions

6.1.1 Question 1

What role of the university in development is depicted by national development policies and strategies?

The preceding study results and discussion on this question have revealed several issues. Firstly, although Zambia does not have both a standalone policy and a national authority on HE, university education has been addressed in FNDP and NPE. However, one of the weaknesses of FNDP and NPE is that the Constitution of Zambia does not back these documents as legal and insists that their contents or any conflicts arising from them cannot be settled in the courts of law in Zambia.

Secondly, it is evident that Zambia's national development policies give priority to basic education and not HE, and that this focus is partly supported by governments' focus on meeting the Millennium Development Goal of basic education for all. Besides, national policies on HE have not explicitly dealt with KE concept as well as the role UNZA can play in the KE.

Thirdly, results have shown, with notable examples, that MoE seems to be weak in directing UNZA towards economic development, and might be using undemocratic means to control UNZA. The results have revealed that the autonomy that MoE talks about is symbolic. MoE has affirmed if UNZA continues to obtain funding from government it may not exercise its academic freedom and managerial autonomy in a manner that maximizes its contribution to economic development freedom and managerial autonomy. Lamentably, public funding to UNZA is inadequate and inconsistent, thereby constraining UNZA from performing its activities effectively.

Fourthly, the study has shown that there is weak coordination and networking between different GRZ departments involved in HE in Zambia. The policies have not documented any existing functional formal structures for coordinating different GRZ departments involved in HE. Related to this problem is the seemingly weak link between UNZA and national/regional authorities.

By and large, FNDP and NPE have strongly defined the role of UNZA as being firstly, to produce person-power for the nation, and secondly to render public service.

In the light of the above summary of the findings on the study question 1 (*What role of the university in development is depicted by national development policies?*), I should first restate study proposition 1 as follows: *“The University makes a more significant and sustained contribution to development if national policies depict its role as an engine for development. Conversely, the university makes little contribution to development if national policies depict its role as being traditional, which is mainly associated with the production of civil servants”*. From the study results, discussions and the above summary, this study suggests that Zambia’s current national development policies on HE depict the role of UNZA as twofold: “traditional development view” and “service enterprise view”.

6.1.2 Question 2

What role of the university in development is depicted by the University institutional policies and strategies?

The preceding results and discussions on this study question have illuminated many issues. Let me start with commendable aspects of UNZA institutional policies. Firstly, UNZA’s vision and Strategic Plan explicitly reflect the aspects of national development framework (FNDP, NPE and other national policies), which have repeatedly prescribed the function of UNZA as production of person-power for national development; conducting in basic and applied research; and providing public service. Secondly, UNZA has many opportunities for networking and collaborating with other stakeholders and this study suggests that increased participation in continental and regional activities can help UNZA to shape its role in development. Thirdly, although UNZA, in the past, had no standardization of rules of engagement for the core research, the newly launched UNZA Research and Intellectual Property Policy of 2009 has started creating standardized rules of engagement in research. Fourthly, the elimination by results that UNZA has committed itself to strengthen self-monitoring and evaluation activities seems important because MoE, as already discussed, has weak infrastructural power to steer UNZA towards economic development. Lastly, results have shown that UNZA has, within its “extended periphery”, several initiatives around economic development. These include York Farm; ZAMNET; Liempe Farm; University Horticultural Nursery, University Printer; TDAU; and INESOR. Each of these activities plays a role in economic development.

There are several weaknesses of UNZA institutional policies and activities revealed by this study. Firstly, UNZA does not have a deliberate institutional policy on collecting data on graduate absorption into labor market. Without this data it is probable that some curriculum review initiatives in UNZA might not reflect the real needs of labor market. Secondly, although UNZA Strategic Plan has mentioned the KE concept, yet it has not recognized and addressed Zambia’s standing on KEI. The study suggests that this omission casts doubt about the effectiveness of UNZA in helping Zambia transform to knowledge-based economy.

Before making the final conclusive statement, let me first state study Proposition 2: *“The University makes a more significant and sustained contribution to development if its role as an engine for development is depicted in its institutional policies”*. Based on the results, discussion of results and the above summary, this study suggests that UNZA institutional policies depict the role of UNZA in development as being a producer of high-level human

resource for regional and national development, and a provider of community services. These two roles are synonymous to “traditional development view” and “service enterprise view”; the former role being true in the sense that UNZA academic core, as suggested by this study, seems to be weak, and bent towards the production of more undergraduates and very few postgraduates.

6.1.3 Question 3

What are the main developments with respect to the academic core of UNZA? To what extent is the academic core becoming more economy-oriented?

Concerning the main developments with respect to UNZA academic core, the study has uncovered various issues. Firstly, postgraduate to undergraduate student enrollment ratios have not been impressive⁸. Secondly, the results illuminate that student enrolments across UNZA schools indicate that more teachers and social scientists are produced from UNZA on the expense of other fields, which GRZ consider to be relevant to the economic development of Zambia. On production of more teachers, results have indicated that because GRZ, in FNDP, set a target of employing 5,000 teachers with university degrees per year from 2008-2011, it directed much of its funding on training of teachers.

Thirdly, results have shown that the majority of UNZA academic-staff are masters degree holders, implying that the number of students enrolled in masters degree programs remains smaller because of the small number of academic-staff with PhDs to teach and supervise masters students. In addition, UNZA faces both a challenge of producing high skilled person-power needed for economic development; and challenge to maintain quality UNZA research, which is highly dependent on the number of academic-staff with PhDs.

The fourth issue is that on academic-staff and student publications in journals, UNZA rates itself performance as being poor. To the contrary, the study the results have revealed that individual academic-staff have been publishing articles in both local and international journals. What seems to have been lacking is a deliberate UNZA institutional policy on documenting all journal articles that UNZA academics publish.

On whether teaching programs are becoming economy-oriented, the results have revealed a number of issues worth summarizing. Firstly, UNZA is trying to introduce teaching programs that are regarded by GRZ and other stakeholders as relevant to economy development. However, GRZ support is lacking in terms of funding of and non-commitment to monitor UNZA activities. Secondly, although new programs are being introduced in UNZA, yet their connectivity to labor market seems questionable in the absence of both an institutional policy on a central database for tracking graduates absorption into the labor market, and monitoring of the progression of graduates on the labor market.

On whether UNZA research is becoming economy-oriented, results have elaborated that the launching of UNZA Research and Intellectual Property Rights Policy in 2009 is some evidence that UNZA was determined to creating research-oriented academic culture, which

⁸ Postgraduate (Masters and PhD) to undergraduate student enrollment ratio for 2010 UNZA new student intake is 1:4; and PhD to Undergraduate student enrollment ratio is 1:7.

would help its teaching programs and the services provided to the Zambian community. The policy aims at addressing the past weaknesses of research in UNZA. Notable among the weaknesses were that very little research findings were published, and no central database for research was in place.

Besides, results clearly show UNZA through INESOR, is strongly linked to the economy, through the practical research INESOR has been undertaking. Lamentably, though is the fact that GRZ has not promised to give UNZA government research contracts on “grandfather” type of relationship.

Before providing final statements on study question 3, let me first state the study Proposition 3: *“The University makes a more significant and sustained contribution to development when its academic core develops and becomes stronger in relation to the development of the university as a whole”*. Based on the results and their discussion, and on the above summary, this study suggests that UNZA academic core seems to be weak. The study also uncovers that UNZA, through its extended periphery activities, such as TDAU, INESOR, and commercial farm, seems to be strongly linked to the economic activities of the nation.

6.1.4 Question 4

To what extent does UNZA institutionalize externally funded projects?

The study has illuminated on various issues concerning the eternally funded projects in UNZA. It is commendable that UNZA has been attracting projects, mostly from funders outside Zambia. However, results have shown that UNZA does not have a written policy on external funding, but instead MoUs are used.

There is several other weaknesses associated externally funded project in UNZA, as illuminated by the results. Firstly, externally funded projects, including those run by one funder, seem not to be coordinated within UNZA, and there appear to be little sense of having an integrated program in UNZA. Thirdly, it seems that UNZA has weak management institution-wide initiatives aimed at addressing the project related problems, and that UNZA management, in the past, appeared to have insufficient priority on such issues as research, staff development, and integration of projects. Fourthly, institutionalization of projects seems to be hampered by lack of proper networking between funders and UNZA. Besides, the externally funded projects appear to be characterized by interpersonal and not inter-institutional collaboration. This can result blocking the involvement of other people in the projects, especially the academics.

Regarding sustainability, the results reveal that UNZA lacks financial and research infrastructure capacity to sustain eternally funded projects when funders pull out.

It is worth noting that, UNZA’s internal management structures have been relaxed to give Schools greater opportunities to identify projects, source external funding, and implement the projects. This situation paints a positive picture that UNZA’s central administration is determined to facilitate the implementation of projects and is committed to monitoring that the project are implemented as planned.

The projects referred to in the results have exposed that very few UNZA students are integrated in some externally funded projects to pursue masters program and PhD programs. Worse still, results have exposed proof that funders, to train their own nationals in PhD programs, have used the projects they fund in UNZA.

Before making conclusive statements in relation to study question 4, let me restate study the Proposition 4 as follows: *“When externally-funded projects are not institutionalized within the university, they do not add to strengthening the academic core. Consequently, the university has limited capacity to significantly and sustainably impact on development”*.

Based on the results, discussion of results and the problems highlighted in the above summary, this study suggests that lack of coordination and integration of externally funded projects lessen the possible alignment of projects with the mission of UNZA, thereby causing projects to contribute minimally to the strengthening of UNZA academic core. The study further suggests that UNZA’s capacity to sustain externally funded projects is jeopardized by lack of support from GRZ.

6.2 Possible policy and practical implications of this study

This study has implications for the strengthening of the role of UNZA in economic development in Zambia. The study has yielded information that may be used in a variety of ways.

6.2.1 Implications for the government of Zambia

The government should be aware of the role of UNZA in development as depicted by national policies. It should be known that the existing national policy environment did not provide strong incentives for UNZA to transform itself into an engine for economic development. Instead, national policies on HE seem to restrict UNZA to playing mainly a traditional development role in development.

Sources of disincentives in national policy environment include absence of national instruments on HE in economic development; the superficially traditional role of Universities in development stated in the University Act of 1999 and in national policies; the absence of national programmes and strategies on HE in sector-based plans; GRZ directives to UNZA to enroll more students in teacher training programmes on the expense of other programmes with higher economic value; and lack of harmony among national policies.

The findings of this study may help to substantiate the need for GRZ to reform national policies so that disincentives are removed, and institutions of HE become engines for economic development.

6.2.2 Implications for UNZA

That UNZA should be an engine for economic development is beyond doubt. However, the question is: Is UNZA aware about the conditions under which it can make significant and sustained contribution to economic development? The findings of this study can be the

starting pointing for UNZA to consider seriously the conditions affecting its role in development. In this vein, UNZA should be aware of its role in development as depicted by its institutional policy environment; status of its academic core/periphery; and the factors that hamper UNZA to from utilizing externally funded projects in strengthening its academic core. Equally important is the fact that UNZA needs awareness of how national policies have latently shaped its role in development.

6.3 Study limitations

The first limitation of this study is that the extensive and complex phenomenon of “*universities and economic development*” has been studied from a rather narrow empirical perspective of using the single case study design that naturally brings forth many limitations as far as the generalization of the results of the study is concerned.

The second limitation of this study is the perspective adopted of limiting the study to four issues: (i) national development policies, governance and coordination; (ii) UNZA institutional policies and activities; (iii) the academic core of UNZA; and (iv) externally funded projects in UNZA. Understanding other perspectives, such as the role of the university as depicted by civic societies in Zambia, would no doubt have been fruitful.

The third limitation is that this study adapted the analytical framework from HEARANA project. I have vigorously argued that the HERANA analytical framework seems to be a good point of reference for analyzing the role of universities in development in African countries because on the basis of the literature research I conducted during this study, I came to the conclusion that there were hardly any studies which proposed frameworks for analyzing the role of universities in development.

Finally, data collection through interviews was limited to the period from January to February 2010. This period proved hard for MoE to avail me a person that I could interview. In addition having returned to Norway from Zambia, it was not possible for me to make follow-up visits to UNZA for more data collection or clarifications. I had to depend on communicating with respondents using emails and phone. The responses from these two means of communication had not been prompt.

6.4 Recommendations

Based on the study conclusions, implications, and limitations, I make the following recommendations for GRZ, UNZA and the future studies.

6.4.1 Government of the Republic of Zambia

GRZ should consider doing the following:

- Redefine the role of Universities stated in University Act of 1999 and in national policies. The role of Universities should be clearly stated as engines for development.

- Establish national instruments on HE in economic development. For example, a regulatory body on HE can be established under the Act of Parliament.
- Relieve MoE of its responsibility over universities, and place the responsibility in a regulatory body, solely dedicated to HE in development.
- Put in place a deliberate policy on integration of HE issues in national sector-based plans. In this way, sectors would identify how their operations are related to and can be influenced by universities.
- Harmonize national policies in order to maximize the contribution of universities to economic development.

6.4.2 *University of Zambia (UNZA)*

UNZA should consider:

- Pressuring the Parliament to redefine the role of UNZA as an engine for economic development.
- Introducing institutional measures to archive the publications in journal by its academic-staff and students.
- Not only attracting more externally funded projects, but ensuring also that the projects help in strengthening of its academic core.
- Putting in place a deliberate institutional policy on collection of data on absorption of graduates into the economy. The data can prove useful in activities like curriculum reviews.
- Encapsulating the KE concept in its policies university policies.
- Aligning undergraduate students enrolled with economic needs.
- Developing its infrastructure that would match with the increases in student enrollments.

6.4.3 *Future studies*

This study has revealed pertinent issues surrounding the role of UNZA in economic development. My desire therefore is not to paint a picture that this study ends up in the future, but that the future itself must extend this study. To that effect, I recommend that:

- Future studies should extend this study by using more universities as case studies within a national.
- Whereas the focus of this study was the government (national policies), University (institutional policies and academic core), and funding (externally funded projects),

future studies could extend the focus to include other stakeholders such as the civil society.

- Future studies should focus on finding practical ways for *jumpstarting* *Zambian universities* (as engines for development), taking into consideration the lessons from the successful HE system, such as Finland, North Carolina and South Korea.

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APPENDICES

Appendix A: A request for permission to conduct interviews in UNZA

Olav M Troviks Vei 34 H0211
0864, Oslo
NORWAY

10th January 2010

The Vice Chancellor
University of Zambia
P.O. Box 32379
LUSAKA

Dear Sir/Madam,

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE
UNIVERSITY OF ZAMBIA**

My name is Sibeso Likando, a second year student in the Master of Philosophy in Higher Education at the University of Oslo in Norway.

I hereby seek permission to conduct research for my Master thesis in the University of Zambia. My research topic is, "The Role of Universities in Economic Development: A case study of the University of Zambia". I seek to interview the Office of the Vice Chancellor, the Directorate of Research and Graduate Studies, deans of schools and heads of externally funded projects.

Find attached my introductory letter from the University of Oslo.

Thanking you in anticipation.

Yours faithfully,

SIBESO LIKANDO

Appendix B: Interview schedules

B-1: Questions for Vice Chancellor on UNZA policies and mechanisms

1. Are there institutional policies with regard to the role of the University in economic development? If so what are these policies?
 - 1.1 When were these policies developed?
 - 1.2 Are these policies part of the university's mission and strategic plan?
 - 1.3 How have these policies been received at university school level?
2. To what extent have the policies you have mentioned resulted in the further development of standardized rules of engagement aimed at economic development?
3. Are there specific units, structures or appointments that are linked to initiative around economic development?
4. To what extent are the policies linked to the labour market?
5. Does the University or your School collect data on graduate absorption into the labour economy?
6. What kind of formal and informal opportunities and strategies are there for networking, relationship-building and communication with external stakeholders (the industry and other sectors)?
7. Are you aware of Zambia's standing on the knowledge economy index?
8. How has the academic core developed in comparison with the University as a whole?

B-2: Questions for deans of schools in UNZA

1. What was the total student enrolment (head count) in your School (in 1999 and 2008)?
2. How many students were enrolled in PhD programmes, Masters' degree programmes, Bachelors' degree programmes (1999 and 2008)?
3. What was the total number of academic staff in your department (1999 and 2008)? How many were PhD degree holders? Masters' degree holders? Student Development Fellows?
4. Are there any changes in the internal traditional activities to strengthen the relationship between the university and the economy? If so, please describe the changes.
5. Have any new programmes or curricula introduced in response to national priorities for economic development?
6. Who initiates the opening of new programmes?

7. Do you take the needs of the labour market into consideration when developing academic programmes?
8. What efforts are there to link courses offered to economic contextual needs of local communities?
9. Have there been increases in student enrollments in fields that are considered to be of high economic relevance?
10. Have there been any attempts to attract funding for skills development?
11. Have any structures been introduced which aim to foster learning-working relationships?
12. Have there been developments in the use of information and communication technologies to prepare students for the knowledge economy?

B-3: Questions for the head of UNZA Directorate of Research

1. Does the University of Zambia have an institutional policy on research?
2. If yes, when was the policy developed?
3. If yes, do you think the institutional policy on research is:
 - Appropriate?
 - Relevant?
 - Selective?
 - Outcome oriented?
 - Capture cross cutting outcomes?
4. Explain the governance arrangements of research in the University?
5. Which staff of the university is engaged in research?
6. Does the University get research contracts? (e.g. from government).
7. What role do the schools of the University play in research?
8. Would you rate the university infrastructure as adequate for research? If not, why?
9. Does the university publish research findings? If yes,
 - How many student publications were indexed in Journals in 1999 and 2008?
 - How many staff publications were indexed in Journals in 1999 and 2008?
10. Who funds research in the University?
11. What was the total University budget and the percentage of the budget allotted to research (in 1999 and 2008)?
12. How much did the University contribute to research funding as a percentage of the total institutional budget (in 1999 and 2008)?
13. How much did the government contribute to research funding (in 1999 and 2008)?

14. Is there a central database for research in the University?

B-4: Questions for heads of externally funded projects

A project is defined as a partnership that is separately managed and has dedicated external funding in the area of economic development.

1. What is the policy of the University on project funding?
2. How are the projects funded? Is there any institutional contribution or benefit?
3. What structures are in place to manage project funding?
 - 3.1 Are the structures central and/or School based?
 - 3.2 Is there a special structure in place to manage donor relationships?
4. Is there a process of registering projects? Are there some projects that are not registered? If not, which projects and why?
5. Are there projects done outside the University?
6. Are projects planned by central University administration?
7. How does the management of projects relate to the University governance structures?
8. How do projects relate to the mission and strategic plan of the University?
9. How are projects institutionalized in terms teaching, research and postgraduate training?
10. How much management of the project goes to central university administration?
11. Is there a central and/or School database for projects?
12. Are there attempts to ensure project sustainability? If so, what mechanisms are in place?

B-5: Checklist for analyzing national policy documents

1. Is there a national development framework is in place
2. Are there national steering or guiding instruments specifically for economic development? (For examples, incentives, performance assessments, special projects).
 - [If the steering instruments are there] Who drives these steering at national level?
 - What effect do these steering instruments have on the universities, for example on UNZA?
3. Are there policies, laws and/or strategies at the national level (for example the Ministry of Education) which address or concern the role of higher education and economic development?
4. Does the concept of a knowledge economy features in national policies?

5. What role does MoE play in universities?
6. Is there harmonization of such policies and/ or strategies? If so, which government departments are involved? Is there diversification, consensus and coordination of different government departments involved in HE?
7. Is there a link between national level economic and education planning?
8. Is there evidence in policy documents on the linkages between universities and national authorities?
9. Is the public funding of UNZA adequate and consistent? What proportion of UNZA funding is from GRZ?
10. Are their national or regional attempts at developing policy or framework for the role of higher education in Zambia's economic development?
11. Is there government support for different functions between Schools within the UNZA, or between UNZA and other institutions (such as the Copperbelt University) to respond to different aspects of the labour market/economy?