Social Science Research for Policy Utilisation in Zambia

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Abstract

The goal of the study was to explore and understand whether any social science research that has been produced by academic staff at the University of Zambia has been utilised by policy makers and to obtain information about research funding, the types of research and purpose for conducting such research, the dissemination strategies used by researchers, the stakeholders considered by researchers during the conceptualisation stage of their research, the extent of collaboration with stakeholders, and the factors that could have possibly enhanced or inhibited the utilisation of social science research in Zambia. The study used mixed method sequential explanatory design comprising bibliometrics analysis of Zambia's articles in the Web of Science database, a questionnaire which was initially administered through the web (web survey) and later through the distribution of hard copies and face-to-face interviews.

The study established that most respondents indicated that the utilisation of social science research findings was minimal and that the major barrier in Zambia is a lack of research funding from the Zambian government. The study also established that a lack of research funding was a major factor that hindered the visibility and accessibility of research outputs at local and international level. Although various scholars established local journals meant to enhance research publications among social science researchers at the University of Zambia, most researchers in the social sciences disseminate their research findings through local academic print journals, and this negatively affects the utilisation of research from the institution by policymakers. The findings further suggest that another factor that hinders research utilisation was that researchers focus on publishing their research findings, which is not a good measure of influencing policy as the majority of policymakers may either not have access to these findings or do not have time to read through long documents. The study has also shown that there is limited political will from the government to use research findings from researchers in their decision-making processes. Government ministries have employed a number of political cadres who do not acknowledge substantiated research, and are not knowledgeable about the types of interventions to curb a particular social problem.

The results in this study also suggest that there is no or very little engagement between the researchers and the policymakers and that this makes it difficult to work together and find common ground to make research a driver of development. Furthermore, the findings also suggest that Zambia lacks national guidelines which could be used to drive research agendas that would bring equity between the funders and the researchers in terms of sharing roles and how research outcomes should be treated. Without research funding, research agendas continue to be driven by (international) funding agencies.

In view of the above findings, the study recommends that the government needs to show a keen interest in funding research, especially at public universities funded by the government. The study further recommends that the link between researchers and policymakers should be strengthened where it exists, so that the researchers and the policymakers can acknowledge the importance of research in national development and the gaps that exist in underplaying the utilisation of research findings. Lastly, the study recommends that researchers should conduct meaningful research that has potential policy impact and make deliberate efforts to send policy briefs to policymakers through the ministries, and encourage them to use them for the betterment of the country.

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Opsomming

Die doel van die studie was om die grade van navorsingsbenutting en impak in Zambië na te vors en inligting in te samel oor die vlakke van navorsingsbefondsing, oogmerke met en tipes navorsing, die disseminasie-strategieë van navorsers, die mate van samewerking met belanghebbendes en die uitdagings wat navorsers teëkom wat die optimale benutting van sosiaalwetenskaplike navorsing in Zambië beperk of optimiseer.

Die studie het vasgestel dat die benutting van sosiaalwetenskaplike navorsingsbevindinge minimaal is en dat die belangrikste rede hiervoor die gebrek aan navorsingsbefondsing van die Zambiese regering is. Die studie het eweneens vasgestel dat die gebrek aan navorsingsbefondsing ook ‘n belanrgike struikelblok is om die sigbaarheid en toeganklikheid to navorsings publikasies beide plaaslik en oorsee te verhoog. Alhoewel verskeie akademici oor die jare gepoog het om meer plaaslike vaktydskrifte tot stand te bring, het baie van hierdie pogings uiteindelik misluk weens ‘n gebrek aan die nodige fondse. Dit is een van die redes wat ‘n negatiewe impak op die benutting – deur die regering - van navorsingsresultate gehad het. Die feit dat die meeste respondente aangedui het dat hul oogmerk is om die bevindinge van hul navorsing in joernale te publiseer, eerder as om te fokus op die moontlike waarde, gebruik en impak daarvan, is ‘n verdere rede vir die lae graad van navorsingsimpak op beleid. Die studie het ook gevind dat daar weinig politieke belangstelling is om navorsingsbevindinge in besluitnemingsprosesse te gebruik. Dit word onder meer toegeskryf aan die feit dat die meeste persone in regering (party)politieke aanstellings is en nie kundig is oor die soort intervensies wat nodig is om sosiale probleme aan te pak nie.

Verder het die studie gewys dat daar weining interaksie tussen navorsers en besluitnemers is wat dit moeilik maak om gemeenskaplike gronde te vind as navorsing as ‘n ‘drywer’ van ontwikkeling geag moet word. Die feit dat daar geen nasionale riglyne is om navorsingsagendas te dryf nie beteken basies dat die navorsingsagendas van navorsers merendeels deur (internasionele) befondsingsorganisasies gedryf word.

Die studie beveel daarom aan dat die regering die befondsing van navorsing – veral by die universiteite – drasties moet verhoog. Verder word ook aanbeveel dat die verhoudinge tussen navorsers en besluitnemers versterk moet word sodat beide groepe die noodsaaklike rol van navorsing in nasionale agenda’s sal aanvaar en onderskryf. En ten slotte, word aanbeveel dat meer sosiaalwetenskaplike navorsers daarna moet streef om betekenisvolle studies te onderneem wat wel die potensiall het om ‘n impak op nasionale beleid te kan maak.

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Stellenbosch University https://scholar.sun.ac.za

TABLE OF CONTENTS

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

List of Figures

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

List of Tables

Stellenbosch University https://scholar.sun.ac.za

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Abbreviations

A&HCI	Arts and Humanities Citation Index
AAAS	American Association for the Advancement of Science
ACC	Anti-Corruption Commission
AGM	Annual General Meeting
AJDP	African Journal Distribution Program
AJOL	African Journals on Line
BAI	Book Aid International
CBU	Copperbelt University
CDC	Centers for Disease Control and Prevention
CI	Confucius Institute
CICT	Centre for Information and Communication Technology
CODESRIA	Council for the Development of Social Science Research in Africa
CPCI-S	Conference Proceedings Citation Index Science
CPCI-SSH	Conference Proceedings Citation Index-Social Sciences and Humanities
CREST	Centre for Research on Evaluation, Science and Technology
CRUSK	Centre for the Research Utilization of Scientific Knowledge
CSO	Central Statistics Office
DDE	Directorate of Distance Education
DFID	Department for International Development
DOAJ	Directory of Open Access Journals
DRGS	Directorate of Research and Graduate Studies
DRUSSA	Development Research Uptake in Sub-Saharan Africa
EBM	Evidence–based Medicine
EBP	Evidence-Based Policy
ESSPA	Eco-System Services for Poverty Alleviation in Africa
FDD	Forum for Democratic Development
FISP	Farmer Input Support Programme
FNDP	Fifth National Development Plan
FNDP	First National Development Plan
GIS	Geographic Information System
GRZ	Government of the Republic of Zambia
GRZ	Government of the Republic of Zambia
GTRP	Gwembe Tonga Research Project
HS	Health Sciences

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HSS	School of Humanities and Social Sciences
IAS	Institute of for African Studies
ICTs	Information communication Technologies
IDE	Institute of Distance Education
IHR	Institute for Human Relations
ILO	International Labour Organisation
IMF	International Monetary Fund
INASP	International Network for the availability of Scientific Publications
INESOR	Institute of Economic and Social Research
JABS	Journal of Agriculture and Biomedical Sciences
JONAS	Journal of Natural and Applied Sciences
KCM	Konkola Copper Mines
LMIC	Low and Middle Income Countries
MJZ	Medical Journal of Zambia
MMD	Movement for Multi-Party Democracy
MNCS	Mean Normalised Citation Score
MoF	Ministry of Finance
MoH	Ministry of Health
MU	Mulungushi University
NGOs	Non-Governmental Organisations
NIH	National Institute for Health
NRAMWU	Northern Rhodesia African Mineworkers Union
NRTUC	Northern Rhodesia Trade Union Congress
NSTC	National Science and Technology Council
OJS	Open Journal Systems
PPP	Private Public Partnership
QDA	Qualitative Data Analysis
RALS	Rural Agricultural Livelihoods Survey
RLISR	Rhodes-Livingstone Institute of Social Science
RLJ	Rhodes-Livingstone Journal
SAIPAR	Southern African Institute for Policy and Research
SAP	Structural Adjustment programmes
SBIS	School of Business and Industrial Studies
SCI-E	Science Citation Index Expanded
SDGs	Sustainable Development Goals
SDS	Department of Social Development Studies

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SES	School of Environmental Studies
SET	Science Engineering and Technology
SNDP	Second National Development Plan
SNDP	Sixth National Development Plan
SSCI	Social Science citation Index
SSH	Social Sciences and Humanities
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIP	United National Independence Party
UNZA	University of Zambia
UNZANDO	University of Zambia at Ndola
UNZAPRESS	University of Zambia Press
UPND	United Party for National Development
USA	United States of America
WoS	Web of Science
ZAJE	Zambia Journal of Education
ZAJLIS	Zambia Journal of Library and Information Science
ZDHS	Zambia Demographic Health Survey
ZLAJ	Zambia library Association Journal

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CHAPTER ONE: INTRODUCTION

1.1 Background

It is generally accepted that universities should engage and contribute in three areas of academic endeavour namely research, teaching and community engagement and it is no doubt that through their missions of teaching, research and community engagement, universities are significant sites for knowledge production in a country (Abrahams et al., 2008; Castells, 2009; Boateng, 2007). Through the use of their research findings, universities have been acknowledged to contribute to national development. Specifically acknowledging the role that universities play in national development, the Sustainable Development Goals (SDGs) in its policy brief stated that "the universities through the extensive research capabilities and activities, have a critical role in providing necessary knowledge, evidence based solutions and innovations to underpin and support achieving sustainable development goals" (Bhowmik, Selim & Huq, 2017: 1). On the part of scholars, Cloete, Bailey and Maassen (2011: 23) have pointed out that "universities' unique contribution to development is via knowledge - either transmitting knowledge to individuals (teaching), or producing and disseminating knowledge that can be applied to society (Research engagement)". Advancing similar sentiments, a former Vice-Chancellor of the University of Zambia also emphasised the role that universities play in national development by stating that "universities have been known to be engines of discovery and generation of new knowledge through research. Universities ultimately contribute to national development through innovations and technical advancements" (Simukanga, 2009: viii). In addition, (Cloete & Bunting, 2013: 13) in concurring with other scholars stated that "universities are the only specialised institutions whose core business is the production, reproducing and dissemination of knowledge, including the education of the next knowledgeable or suitably qualified generation". Other scholars, Soltanisehat, Alizadeh & Mehregan (2019) point out that countries such as the United States of America, the United Kingdom, and other western countries invest heavily in research and development (R&D) and these are the same countries that have the highest economic development. Badat (2009: 5) adds that one of the major roles of universities is the "production of knowledge which advances understanding of the natural and social worlds, and enriches humanity's accumulated scientific and cultural inheritances and heritage".

Measures of how universities contribute to knowledge production and their understanding of the world phenomena, the development of human resource and skills and addressing society's everyday living are employed in various ways such as conducting research that contributes to the body of knowledge that would be used for educating future generations of graduates (Altbach, 2013; Brankovic, Ringel & Werron, 2018; Cherney, Head, Povey, Ferguson & Boreham, 2015; McVay,

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Stamatakis, Jacobs, Tabak & Brownson, 2016). When it comes to social scientists, one of their main interests is how such research contributes towards solving social problems by addressing human challenges. A key prerequisite to solving human problems, particularly social problems and improving lives of the people is through sound policies that are research or evidence-based (Bulmer, 1982; Marvasti, 2018; Tseng, 2012). Consequently, some commentators, Ngongalah, Niba, Wepngong and Musisi (2018) contend that it is indisputable that research is a fundamental element of progress and that the application of research outputs to policy formulation and implementation has become one of the most important determinants of national development the world over.

There are various reasons why social science research produced at the University of Zambia should contribute to society and ultimately to Zambia's national development. First and foremost, the current mandate of the University of Zambia (UNZA) derived from Section 12(1) of the Higher Education Act No. 4 of 2013 stipulates that public universities have three mandates which the University of Zambia has articulated in three broad categories, namely: teaching, research and community service (Masaiti & Mwale, 2017; Mkandawire, 2020). Teaching and research were well articulated as the core responsibilities of the University of Zambia in the Lockwood Report which was commissioned by the first government of the Republic of Zambia when considering the possibility of establishing the first university in Zambia (Lungu, 1993; Mulenga, 2000; Sikwibele & Mungoo, 2009). According to both the Lockwood report of 1963 and Section 12(1) of the Higher Education Act No. 4 of 2013, the University of Zambia is required to conduct research necessary and responsive to national needs. In conducting research, the University of Zambia, like most public universities in Africa, source their research funding mostly from external donors through bilateral agreements with the government to solve specific problems. For instance, most programmes directed at HIV prevention, Malaria, and provision of child immunisation vaccines in Africa in general and Zambia, in particular, are donor-funded with a focussed direction to provide policies for the prevention and treatment of specific diseases. Therefore, when conducting such research, it is required that universities must be accountable for the use of research funds that they obtain from international donors (Frølich, 2011; Kimenyi & Datta, 2011). Consequently, governments and other funders of research are increasingly wanting and demanding to see the difference that academic research makes to and in society (Day, Wadsworth, Bogenschneider & Thomas-Miller, 2019; Fanelli, 2010; Naveed & Suleri, 2015). The need to justify to the donors the relevance of research conducted in countries such as Zambia, where there are austerity measures in place, becomes even more important. In this regard, one of the ways in which social science research conducted at the University of Zambia can show value for money spent on research is by ensuring that their findings address the country's needs.

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The second reason why social science research produced at the University of Zambia should add value to national development is based on the fact that it has enshrined community service as one of its objectives. This objective has been integrated in all public universities in Zambia (Masaiti & Mwale, 2017; Mkandawire, 2020) and, in almost if not all, public funded universities in Africa. Based on this objective and on the fact that most of its research funding is drawn from donors, it is expected that society and donors who provide the research funding have the interest to see that the university contributes to the social good. Therefore it is expected that social science research conducted at the University of Zambia should conduct research with meaningful questions and answers aimed at remedying societal challenges in the country (Odia & Omofonmwan, 2013). By so doing, social science research will show its potential to produce new knowledge and provide some analysis that can lead to improved understanding of the social problems that human beings in different societies face (Altbach & Philip, 2011).

The Zambian government and the University of Zambia have recognised the important role that social science research plays in national development. At national level, the Zambian government takes cognisance of the fact that as a country, Zambia is part of the United Nations (UN) declaration of the Millennium Development Goals (MDGs) and the post 2015 development agenda whose aims are to eradicate extreme poverty and transform economies through sustainable development by the year 2030 (UNECA, 2015). The 2015 development agenda acknowledges the key role that universities play in achieving these goals and states that the achievements on these goals depend on research conducted by universities. Hence in responding to the social needs of society in Zambia, the government has given social science research institutions such as the University of Zambia the mandate to conduct social science research and link its findings to policy formulation and implementation (Masaiti & Mwale, 2017). This mandate has also come as a result of many socio-economic challenges that the country has had to face. These challenges include amongst others, the widespread poverty, inadequate drinking water, high illiteracy rates, intense debt burden, over-population and heavy disease burden (Central Statistics Office, 2011). The government has also provided a framework for higher learning institutions - the Zambia Higher Education Act No. 4 of 2013 which stipulates the major functions of public universities as teaching, research and community service (Ministry of Higher Education, 2013).

At institutional level, the University of Zambia has also acknowledged the important role that research plays in national development by producing a research policy and intellectual property rights (Chipeta & Nyambe, 2012) which in its preamble echoes similar sentiments as those earlier articulated by one of the former Vice-Chancellors (Simukanga, 2009: viii). The policy states that:

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> *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 (Simukanga, 2009: viii)*

The policy further acknowledges the role that University of Zambia researchers is supposed to play to achieve the vision for Zambia by 2030 in line with the SDGs by stating that, "[t]he country needs to intensify the development and application of science and technology in its social economic development" (Simukanga, 2009: viii).

The policy further states that this in line with the Fifth National Development Plan that envisages "a Zambia where science and technology and innovations are the driving forces in national development by 2030" (Simukanga, 2009: viii).

Other than the Research Policy and Intellectual Property Rights, the University Zambia has had several Strategic Plans with the recent ones being the University of Zambia Strategic Plan, which was effective from 2012-2017 (UNZA, 2012b) and the current one, which has been effective from 2018 up to 2022 (UNZA, 2018a) based on the Higher Education Act No. 4 of 2013. The UNZA Strategic Plan recognises research as "a crucial aspect of academic life" and stipulates the role that the University of Zambia should play in national development as follows:

> *One of the University's major responsibilities is to create knowledge through various research activities, the results of which are crucial in making informed decisions and policies by Government, industry, and society at large' (UNZA, 2018a: 4).*

The Strategic Plan further emphasises that research conducted by researchers at the University of Zambia should be responsive to the needs of society and that it should enhance social and economic development.

Several policy documents such as the Zambian Sixth National Development Plan (SNDP), the Higher Education Act No. 4 of 2013 and the University of Zambia Strategic Plans highlight the role and importance of social research. This is a clear indication that public universities in Zambia, and in particular the University of Zambia, are recognised as key role players in national knowledge production. Further, it is also an indication that the University of Zambia does not take pride in producing knowledge for the sake of producing it, without linking that knowledge to a need in society. Thus, the desire to make research relevant to society is at the core of the university.

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1.2 The Role of Social Science Research in National Development

While it is clear that research in general, and social science research in particular, have been recognised as drivers for national development, a number of issues have been raised in the literature with regard to the use of social science research produced by universities. For instance, Ogbodo, Efanga and Ikpe (2013) have argued that research from universities should contribute to the needs of society and this makes the use of social science research outputs cardinal. Sall, Lebeau and Kassimir (2003) equally add that one of the critical ways in which research produced by universities can respond to the needs of society in addition to expected quality teaching, is by contributing to policy and to finding lasting solutions to solving social problems. These sentiments are shared by other scholars such as Canary (2010), who emphasises the two major roles that social science research should play in national development as solving social problems that society is faced with and through the utilisation of research findings by policymakers. This view is echoed by Moahi (2010) who suggests various ways in which social science research can benefit society as he highlights two cardinal issues that should not be ignored. Firstly, he notes that the use of social science research has the potential to provide policymakers with information that can enhance their understanding of human conditions, society, and changes taking place in society and how these affect humans. Secondly, he points out that social science research plays a complementary role to natural science and technology. While natural science and technology may generate innovation, the key role of informing and educating society on the how a particular technology would impact their lives is played by social science researchers. The implication here is that the role played by social science is what ultimately determines the reaction of society on whether or not to accept a particular innovation. In other words, according to Moahi (2010), social scientists have the mandate to provide the avenue for a critical assessment of any innovation to inform the public so that they can make informed decisions.

While the literature indicates that there is no doubt that social science research contributes to national development in various ways, the question of the impact that social science research has on policy and practice is not always self-evident. For many decades there has been an increasing demand to make social science research more useful and applicable for policymaking especially in countries which make huge investments in social science research (Cherney & McGee, 2011; Moahi, 2010). It is also not uncommon for these kinds of sentiments to be echoed within universities themselves particularly by scholars from other disciplines such as medicine, physical sciences and engineering whose role in knowledge developments is almost universally recognised and praised (Bastow, Dunleavy & Tinkler, 2014; Moahi, 2010). Some scholars (Morrison & Van der Werf, 2016; Tseng, Gamoran, Grant & May, 2017) assert that research conducted by universities is more credible than

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that which is produced by think tanks and advocacy groups. However, they are also of the view that university research has not played a considerable role in contributing to policy decisions. This implies that despite the efforts being made by social scientists to make social science research outputs more useful, the role it plays in innovation, policymaking, and in addressing societal needs is generally still undervalued.

Several scholars have advanced different reasons why researchers do not directly engage with policymakers or agree to secondment into policymaking processes. For instance, some scholars (Prewitt, Schwandt & Straf, 2012) have argued that one of the reasons why researchers hesitate to be seconded into the policymaking processes is because of interference from the government. Consequently, these scholars caution that universities that anticipate non-interference from the government should actually avoid taking part in political activities. This view is supported by other scholars such as Van der Vossen (2015) who suggests that it would even be better for universities to stay away from engaging with policymakers because doing so is likely to make them sway away from their missions. Similar views are also submitted by Hopper (2013) who contends that once researchers are co-opted into the policymaking processes, they are likely to feel less free to submit their findings that are not appealing to policymakers in positions of power. On the other hand, Tseng et al. (2017) present different views and argue that it is important for researchers to bridge the gap between them and policymakers. However they quickly caution that while doing so, researchers should maintain the rigour of research when presenting their findings to policymakers. These arguments entail that researchers in universities and, specifically those in social sciences, have a moral obligation to find solutions to social problems that society face. Secondly, these arguments also suggest that notwithstanding the challenges that researchers face in engaging with policymakers, they still have an obligation to ensure that policymakers utilise their research findings by engaging with policymakers and participating in policymaking processes.

1.3 Rationale for the study

There are a number of studies that have been conducted in the field of the utilisation of social science research and its influence on policy, with most of the literature focussing on the utilisation of social science knowledge in government and public policy (Caplan, 1979; Landry, Amara & Lamari, 2001a; Landry, Lamari & Amara, 2003; Ouimet & Ziam, 2009; Weiss, 1980); the utilisation of systematic reviews by policymakers (Lavis, Davies, Oxman, Denis, Golden-Biddle & Ferlie, 2005); factors influencing the research utilisation findings in health (Albert, Fretheim & Maïga, 2007) and social sciences (Bogenschneider & Corbett, 2010; Head, 2008; 2013); the use of social science research in informing policy development (Blewden et al. 2010); and more recently on how linkages support the

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use of research evidence in social policymaking (Van der Arend, 2014), to mention but a few. However, it has been acknowledged that the level of research utilisation of social science research where these studies have been conducted is lower than it should be (Ngongalah et al. 2018). Suffice to mention that most, if not all, of these studies were conducted in developed countries with very few, if any, in the developing countries. This means that there is a dearth of information on whether and how social science research has been utilised by policy makers within the African context. Consequently, more research should be conducted to examine whether and how policymakers use social science research in African countries in general, and Zambia, in particular. It is against this backdrop that this study focuses on the social science research utilisation with a case study of the University of the Zambia (UNZA). The argument in this study is that for social science research produced by universities in Zambia, and specifically the University of Zambia, to remain relevant, there is need to ensure that such research contributes to solving social problems that society is faced with and to ensure that research outputs are utilised by policymakers to address these problems. Furthermore, the University of Zambia's objective of engaging with the community should be demonstrated by the interaction that it has with society and by ensuring that society is made aware of the knowledge produced by the university and whether this knowledge informs policy.

1.4 Statement of the Problem

In Zambia a number of social science research projects focused on social problems have been conducted by researchers in public universities but whether or not social science research outputs have effectively been used by policymakers and the extent to which policymakers have utilised this research is not known. There is also a lack of knowledge on the type of knowledge researchers produced, how and whether they collaborated with other stakeholders to produce this knowledge, how this knowledge was disseminated, and the factors that could have enhanced or inhibited the utilisation. Without this information, there is the possibility that much social science research is done in Zambia and a large amount of money is being used without being able to determine what results from such research. This could mean that some results are shelved after they have been produced, the implication being that there is non-use of research findings. It is also possible that the utilisation of research findings from social science research can still be present but not directly visible. This raises questions about whether or not social science research conducted in public universities in Zambia is being utilised to inform policy. Using the University of Zambia as a case study, it is vital to understand whether and how social science research is being used to inform policy in Zambia.

In order to explore and understand some of the dynamics fundamental to the utilisation of social science research for policy in Zambia, the study is guided by the following questions:

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- What is the state of social science research in Zambia?
- Under what conditions have specific social studies informed policy in Zambia?

From these overarching research questions, the following are the specific research questions addressed in this study.

Phase 1: What is the state of social science research in Zambia?

- What type of social science research is conducted by the research institutions in Zambia?
- What agendas drive social science research in both government and public institutions in Zambia?
- What are the main sources of funding of social sciences research in Zambia?
- What are the main modes of research dissemination used by social scientists in Zambia?

Phase 2: Under what conditions have specific social studies informed policy in Zambia?

- Is there evidence that social sciences research is utilised by the Zambian government?
- If yes to Question 3, for what purposes is social science research utilised by the government?
- What are the contributing factors that resulted into research utilisation?

1.5 Scope of the Study

This study is about the use of social research outputs in policy decision-making processes in Zambia, using the University of Zambia as a case study. The study focuses on social science research though in Chapter Seven, comparisons are made with other disciplines. This is specifically done to gauge the performance of social science research against other disciplines in terms of the research funding received; expected research outcomes; overall quality assessment of the research outcomes; main modes of research dissemination; the number of research output produced; intended beneficiaries of the research; utilisation of research outputs by government in policymaking decisions; and the effect of the challenges researchers faced which could have a negative impact on the utilisation of research by policymakers. This comparison is also important because there is a possibility that different disciplines at the same university may be experiencing different situations that may lead to different patterns in research productivity. These variations may ultimately lead to the use or non-use of research outputs by policymakers and on how these research findings would be utilised by policymakers. For instance, if a particular field is not well funded such researchers would not be able to conduce the kind of research needed to respond to the needs of society. Similarly, different disciplines may differ on how they want their research outputs used by various stakeholders. This may mean that the focus of their research may not necessarily be for policy use during the conceptualisation of research. For instance, it is not uncommon for researchers in the natural sciences

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domain to tailor their research on inventions of new technologies for uptake by industry and government ministries and not necessarily for use by policymakers. On the other hand, those in the social science domain are likely to focus on research that would come up with solutions to solve social problems that society is faces, and this can only be achieved if their findings are translated into policy. In this case, their ultimate goal would be to find a way to influence policymakers to utilise their research findings to resolve society's problems.

The researcher's intention in conducting this study was to explore and understand in detail whether and how policymakers utilise social science research in Zambia by using the University of Zambia as a case study. Different methodologies namely bibliometrics, survey and face-to-face interviews were used to explore and understand this phenomenon. As reasoned by Baxter and Jack (2008: 545), a "case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allow for multiple facets of the phenomenon to be revealed and understood". Similarly Chreim, Williams, Hinings & Chreim (2007: 1535) have argued that even if findings are based on a single case; it does not limit their "generalisability [and] it should be noted that naturalistic case studies should be judged not on the basis of generalisability, but on the basis of transferability and comparability". Therefore, although the case study focuses on one institution, the University of Zambia, it does not mean that the findings of this study might not be useful to research and other institutions of higher learning in Zambia and other countries.

1.6 Some Key Concepts Defined

An understanding of the various concepts that have a bearing on the research topic is defined in this section. As a way to set the context for this study, a brief definition using some parameters of research utilisation is given in this section, while a more detailed definition will be explored further in detail in Chapter Two. This is because there is no single definition for the term research utilisation that different scholars agreed upon, hence the definition of research utilisation is very broad. Secondly, the term research utilisation has a bearing on many other aspects such as the history of research utilisation, different types of use, determinants of use and how research is used in policymaking processes, making reading easier when discussed concurrently. However, it is important that some of the concepts are briefly defined from the onset and therefore some concepts such as research, research outputs, policy, policymakers, dissemination and bibliometrics will be defined in this section.

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1.6.1 Research Utilisation Brief Definition and Brief Background

Research utilisation is a term that became prominent in discourses when scholars started questioning the role that social science research played in state-funded public policies and programmes such as public health and education (Boshoff et al. 2018). Accordingly, research utilisation is a topic that mainly concern social scientists and policymakers and academically it is a topic that has focused on research and policy (Larsen, 1980). There is very little consensus on the meaning of the term. For instance, Buysse, Wesley, Snyder and Winton (2006) groups knowledge production, diffusion and utilisation as knowledge utilisation. According to her knowledge utilisation is how knowledge is created, how it is organised and made simple and how it is utilised. On the other hand, some scholars have used research utilisation interchangeably with the term knowledge utilisation and have given a different definition to these terms depending on their fields of study.

Because this study focuses on the utilisation of research produced by social scientists at the University of Zambia, the study will use the definition by Beyer & Trice (1982: 595) who argues that "utilization of research entails people doing something with research results. What they do in using research can include a wide or narrow range of diverse behaviours over short or long periods of time". This definition has been expanded by Bailey and Mouton (2005) who add that research utilisation can also be understood in two ways - direct and indirect. They explain that direct use or immediate use is where research findings are used immediately when advice is given whereas indirect use or mediated use is where research leads to changes in an existing technology. This means that research can be used immediately by policymakers and it can also be used much later when the results are needed for a particular purpose. It is also important to note that in this study research utilisation is the central concept and that it will often be used interchangeably with the word 'use'.

1.6.2 Research

Different scholars have used various definitions of the concept of *research*. For instance, (Tuckman & Harper, 2012: 4) define *research* as "a careful and systematic means of solving problems and gaining new knowledge". Gratton and Jones (2014: 4) define *research* as "a systematic process of discovery and advancement of human knowledge,". Other scholars such as Stone (2002) and (Webber (1991) argue that *research* should not be limited to university research only because there are many other institutions that conduct research and these include government agencies. Webber (1950: 11) cites a policymaker who supports this view and argues that "to you academicians, research is in the journals or books in your field; to us research is any information we need to answer a legislator's question that

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we don't have on top of our desks". Another scholar, Stone (2002: 1) shares similar sentiments and defines the concept of *research* as:

> *a codified, scholarly and professional mode of knowledge production that has its prime institutional loci in universities, policy analysis units of government departments of international organisations and private research institutes and produced by academics, think tank experts and development professionals.*

Since this study focuses on research, not on other sources of knowledge, this definition of Stone (2002 will be leading when the concept *research* is used.

1.6.3 Research outputs

Lalengmawia and Shukla (2017: 108) describe *research output* as:

> *[T]he extent to which lecturers engage in their own research and publish scientific articles in refereed journals, conference proceedings, writing a book or a chapter, gathering and analyzing original evidence, working with postgraduate students on dissertations and class projects, obtaining research grants, carrying out editorial duties, obtaining patents and licenses, writing monographs, developing experimental designs, producing works of an artistic or a creative nature, engaging in public debates and commentaries.*

The term research as an activity and research output are interconnected as research output results from writing, reading and publishing research reports in professional peer reviewed journals, and presenting results for instance as policy briefs to be used by policymakers. Research output is one of the indicators used to measure the academic performance of universities and a core indicator for the calculation of university rankings.

1.6.4 Policy

Bogenschneider and Cobett (2010: 784) defines a *policy* as "a plan or course of action carried out through a law, rule, code, or other mechanism in the public or private sectors". Bogenschneider and Cobett (2010) add that a policy could be documented in legislation or other official documents. Beqiri and Rexhepi (2017: 120) says that a *policy* is

> *[A] deliberate system of principles to guide decisions and achieve rational outcomes. A policy is a statement of intent, and is implemented as a procedure or protocol. Policies are generally adopted by the board of directors or senior governance body within an*

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> *organization, where procedures or protocols are developed and adopted by senior executive officers.*

1.6.5 Policymakers

Bogenschneider and Cobett (2010: 2012) defines *policymakers* as "both the political and administrative decision-makers who play a role in gathering policy information, developing policy advice, creating policy documents and tools, implementing and evaluating these". Day et al. (2019:165) provides a similar definition and add that policymakers include legislation, as well as the rules and regulations that government implementation. Policymakers includes officials and their staff who draft and pass legislation, the executive agency officials who craft rules regarding how policies are executed and judges who interpret and apply legislation (Tseng, Easton & Supplee, 2017)

1.6.6 Dissemination

Wilson, Petticrew, Calnan and Nazareth (2010: 16) define *dissemination* as

> *[A] planned process that involves consideration of target audiences and the settings in which research findings are to be received and, where appropriate, communicating and interacting with wider policy and health service audiences in ways that will facilitate research uptake in decision-making processes and practice.*

In this case, dissemination can be defined as an activity that can also be targeted at researchers in universities as well as other stakeholders. Lomas (1993: 1) defines *dissemination* as 'the communication or spread of new or existing knowledge through a planned or systematic process and implies that information is tailored for an intended target audience'. Dissemination is an important aspect in research that helps stakeholders to have a better understanding of research findings and, more importantly, it facilitates research uptake by industry and utilisation of findings by policymakers (Kerner, Rimer & Emmons, 2005; Schillinger, 2010).

1.6.7 Visibility of research performance

Visibility in this study refers to visibility of research performance which Abrahams, Burke and Mouton (2009:23) describe *and state that:*

> *"Visibility is comprised of a number of features including visibility of authors and content through abstracting and indexing databases, through availability in library collections, through web-based publishing, and visibility of research performance as measured through various bibliometric measures such as citation counts and impact factors.*

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Visibility of scholarly communication means that specific knowledge and authored works can be discovered because they are traceable".

This entails that for research to be visible it should be made public in a manner that makes it easily accessible to relevant stakeholders such as researchers themselves, students and policy makers. Ultimately policy makers can easily identify local research that can be of valuable contribution to society.

1.7 Motivation to conduct this study

The curiosity and interest in social science research utilisation for policy in Zambia began when the researchers worked as a Research Affiliations Officer and as an Assistant Registrar in the Directorate of Research and Graduate Studies (DRGS) (2007–2012) and later as the Assistant Registrar at the Institute for Economic and Social Research (INESOR) (2012–2013). While working at both DRGS and INESOR the researcher was exposed to research conducted by postgraduate students and lecturers. During this time a new regulation was introduced at the University of Zambia to make it mandatory for post-graduate students to publish a journal article with their supervisors, or at least have a journal article accepted for publication. At the time, her job involved compiling these articles in readiness for publication in the local journals that had just been launched by the DRGS. At INESOR the researcher read several journal articles that were in the library and realised that the use of research outputs by policymakers was suboptimal, although the use of research by policymakers is a vital foundation for national development. She also realised that UNZA had been a torchbearer of excellence in social science research in sub-Saharan Africa. However, social science at UNZA no longer occupies this vantage position today as it seems to be lagging in utilising social science research to inform policy in Zambia. This interest was boosted when the researcher received a scholarship in the DRUSSA research programme to pursue a PhD degree in Science and Technology Studies at Stellenbosch University. While the researcher was employed as a lecturer at the Department of Social Development Studies (SDS) (now known as the Department of Social Work and Sociology), she realised that neither the undergraduate nor the postgraduate curriculums in the School of Humanities and Social Sciences integrated Research Uptake/Utilisation theories and practice. In addition, she realised that no social science studies have been conducted to explore social science research for policy in Zambia.

1.8 Chapter outline

Chapter Two provides a brief review of the literature on research utilisation in social sciences. The chapter begins with a brief historical overview of research that provides different definitions that scholars have used over time to refer to research utilisation and different types of research 'use' in

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social sciences. The remainder of the chapter is devoted to a discussion of different schools of thought of research utilisation in social sciences and how social science can contribute to policy decision-making processes and the challenges therein.

Chapter Three is devoted to the history of social science in Zambia and highlights the fact that the University of Zambia's Institute for African Studies, established in 1938, is the oldest and pioneer of social science-oriented research centre in Africa. The chapter provides a detailed background of the inception and progression of the institute, and its successes and challenges.

Chapter Four presents the study design and methodology that has been adopted for this study. The chapter begins by discussing the mixed-methods case study approach that was adopted for this study. The study setting, data collection and techniques used are also discussed. The last section of this chapter outlines how the ethical issues were dealt with in this study.

Chapter Five starts by discussing the lack of scholarly visibility of social science research generally in developing countries. The remainder of the chapter focuses on the local context of publications and journals in Zambia. The chapter concludes by describing how each local journal has performed since its inception and the challenges encountered.

Chapter Six presents the results of a bibliometric analysis from the Web of Science on Zambia's world share and publication output, Zambia's rank among all countries across all research fields, Zambia's distribution of research output across all research fields, Zambia's top performing research institutions, Mean Normalised Citation Scores (MNCS) from 1980-2018 in 2 year, 5 year and 10 year citation windows, Zambia's publication collaboration profiles, Zambia's publication profile in all fields and the top performing institutions in Zambia within that period.

Chapter Seven presents results from both the survey and interviews that highlight how social science research has performed against other sciences in terms of funding, collaboration, stakeholders considered when conceptualising research, types of research output produced by researchers and utilisation of research outputs by policymakers. The factors that contributed to the use or non-use of research findings by policymakers are also highlighted. These results are drawn from the data of the study entitled 'The next generation of scientists in Africa', conducted by the Centre for Research on Evaluation, Science and Technology (CREST) at Stellenbosch University. The researcher participated in the data collection of this study and used some of the research questions that were relevant for this study.

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Chapter Eight provides the conclusion of the thesis. The chapter commences by addressing the research questions before discussing how each of the findings provides some insights for each of the research questions.

1.9 Summary

This chapter has introduced the focus of this study which is the utilisation of social science research for policy in Zambia. The chapter has highlighted that the role that social science research plays through conducting research that addresses the needs of society has been acknowledged both at governmental and institutional level. The chapter has also discussed the role that social science research plays in national development and the challenges that social science research faces. The chapter goes further to argue that while it is important for the University of Zambia to produce social science research, producing social science research alone without ensuring that policymakers use the findings does not add value to addressing the needs of society. Furthermore, if research findings emanating from social science research produced by the University of Zambia are not taken up into policies that can bring about the solutions needed to solve the problems in society, such research is irrelevant to both society and the nation as a whole. The chapter concludes by highlighting that there is a shortage of information on how social science research has been utilised by policymakers in most developing countries and more so in Zambia. It is evident as most of the studies in the literature on social science research utilisation in the policymaking processes have been authored by scholars from developed countries with very few, if any, from the developing countries in general and much less from Zambia.

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CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter starts by providing an overview of the historical origin of research utilisation and different schools of thought of research utilisation provided in literature before discussing different types of research utilisation used in the field of social sciences. The remainder of the literature focuses on social science research - its influence in policy decision-making processes and the challenges therein.

2.2 A Brief Overview of the History of Studies in Research Utilisation

This section provides a discussion on the origins of research utilisation in the field of social sciences. Thomas Backer (1991) describes the transition of knowledge utilisation as a series of waves which started in the 1920s up to 1960 with the first wave of information exploration, followed by the second wave which included Knowledge Utilisation adoption by organisations which ran through 1960s up to 1980. The third wave, being the Knowledge Utilisation focussing on improving human services which started in 1980 up to the present (Backer, 1991) Figure 2.1 below gives a summary of the key focus areas addressed by the different waves that will be discussed in detail in this section.

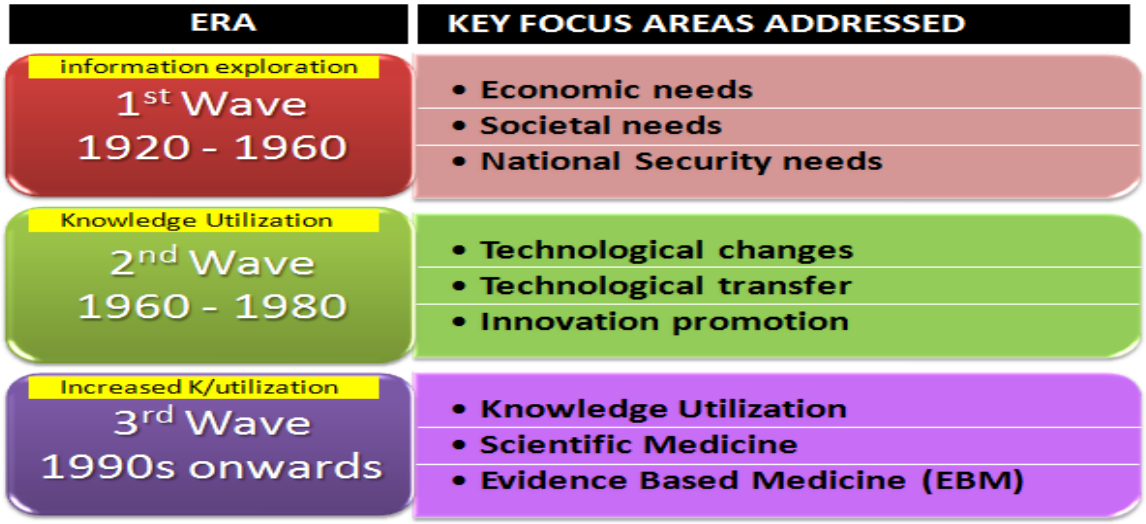

Figure 2:1 The wave analogy of knowledge utilisation and areas of focus

Source: Backer, 1991

According to Backer (1991), these waves did not only capture the main trends in the American context but also provided a background for similar developments in other parts of the world. During this process, scholars developed innovative ideas that would possibly be diffused in agricultural practice and raise agricultural productivity. Consequently, social networks contributed significantly to the

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diffusion process (Backer, 1991). The wave was politically motivated and was made more prominent when the United States Department of Agriculture introduced the Cooperative Extension Services in 1914 (Carlson, 1970).

2.2.1 The First Wave 1920 to 1960

Backer (1991) reasons that the first wave of knowledge utilisation studies started shortly after the First World War (1914-1918) due to the scarcity of food resulting from the war and the increased pressure to raise agricultural production. Consequently, there was a need to increase food productivity, and a range of scholars started conducting research in the fields of diffusion and innovations. At the time, the term 'knowledge utilisation' had not been introduced and the term that was popularly used based on agricultural activities that were taking place was 'agricultural extension'. The genesis of agricultural extensions was politically motivated and gained credibility when the cooperative extension services were established by the United States Department of Agriculture in 1914 (Rogers, 1988). However, even though the focus of the government of the United States of America was on agriculture, it has been acknowledged that rural sociologists spearheaded the studies in diffusion and innovation in the 1940s (Heinsch, Gray & Sharland, 2016; Rogers, 1988). To this effect, (Rogers, 2003) accredited the success of these studies to scholars such as Ryan and Gross (1943) for directly influencing other rural sociologists to conduct studies in the diffusion of innovations. Further, these scholars were also given credit for their classic study of the diffusion of hybrid seed corn among the Iowa farmers which led to better practices of agriculture and ultimately, to better yields for the farmers (Rogers, 2003; Sahin & Rogers, 2006). Studies in diffusion and innovation were further enhanced when a number of land grant colleges such as the University of Wisconsin, the University of Missouri and Iowa State University were established in the USA. Arising from this, researchers in the USA decided to disseminate the concepts of diffusion and innovation beyond the USA. It gave rise to more diffusion studies being conducted in different parts of Latin America, Asia and Africa. Towards the 1960s, research in the field of diffusion and innovation became popular not only in the USA but in different parts of Latin America, Asia and Africa (Rogers, 2003). After the First World War ended, Bush (1945) released an influential report entitled ‘Science the Endless Frontier’ where science was considered a very important aspect for progress towards achieving national goals in health, defence and the economy (Alberts, 2010; Assis, 2018; Barfield, 1997; Li & Vederas, 2009; Pielke, 2010). It is reported that the impact of Bush’s report was significant as it coincided with the development of the atomic bomb, penicillin and radar which had shown a significant contribution to society. It made the public receptive to his message that “scientific progress is essential” for public welfare (Prewitt et al. 2012). Another influential study, ‘Equality of Education Opportunity’ known as the Coleman Report

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(Coleman, 1975) which was undertaken to investigate the lack of availability of equal education opportunities for individuals because of race, ethnicity, religion or national origin equally enhanced the studies of research utilisation. This study, comprising 600,000 students and 60,000 teachers in 4,000 public schools, was considered a major study according to the standards of social science at the time (Prewitt et al. 2012). The study outlined how large-scale social science projects could inform the government on critical policy challenges. It boosted the government's perception that the researchers who designed the radar and developed the atomic bomb for its war effort could also declare a "war on poverty" and a "war on drugs" (Prewitt et al. 2012: 23). Subsequently, the government decided to support science as a relatively autonomous endeavour, free from political influence. It was envisaged that the use of knowledge would benefit not only the scientists themselves, but society as a whole in terms of security and economic prosperity (Backer, 1991; Pielke, 2010). Based on these developments, the USA federal government decided to continue the support of science and the emergence of a new 'social contract' between science and society emerged (Weingart, 2013). This contract entailed that there would be a bilateral relationship between the knowledge producers and society where the knowledge producers would be supported to work independently in their operations to enable them to align their goals to the needs of society (Weingart, 2013). This 'contract' continued to exist without being questioned until the early 1990s when it became clear that science was not providing answers to the most critical problems (Martin, 2003). Following this development, three decades later, the social contract was revised and the knowledge producers were then required to be accountable for their activities and to address the needs of the economy and society more explicitly (Weingart, 2013).

2.2.2 The Second Wave 1960-1980

Having recognised the role played by social researchers in the growth of the economy and national security during the first wave, the USA federal government began to give prominence to social science researchers to guide in the development of policy research (Backer, 1991). As a result, social science researchers in the field of knowledge utilisation were provided with more funding to enable them to focus on the use of the knowledge they had produced as well as disseminating their research findings as individuals and organisations (Backer, 1991).

According to Backer (1991: 229), the USA federal government's interests in knowledge utilisation were threefold:

- the desire for rapid technological change to stimulate economic growth;
- a desire to enhance the transfer of technology emerging from defence and space-related research; and

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- a desire to promote the adoption of innovations emerging from research and demonstration funding from federal health, education, and human services agencies.

For social science to thrive, several mechanisms were put in place by the USA federal government. Firstly, the government ensured that science activities had a practical benefit to society and as a result, the second wave required knowledge producers to be accountable for their activities. Secondly, dissemination activities were also increased through the implementation of mechanisms such as information clearing houses to enhance the work of researchers, scholars, consumers and policymakers (Graham et al. 2006). In addition, print dissemination mechanisms of publications were also implemented (Backer, 1991).

It was during this wave that many new fields started considering the field of knowledge utilisation. The study of the use of research and programme evaluation as a field of study started gaining attention in the 1970s and 1980s, a period Henry and Mark (2003:294) called "a golden age" for work on evaluation use and knowledge utilisation. In the area of research utilisation, credit has been given to the research of Moriarty (2011), Cohen and Weiss (1977), Lindblom, Cohen and Warfield (1980) as well as the scholarship of Campbell (1979) for spearheading the process on social experimentation and the role it should play in shaping public policy. However, one notable study that led to the genesis of social science research use in the policymaking process is the work of Carol Weiss (1979), the pioneer of research utilisation in the field of social sciences. Carol Weiss' research (for instance, Weiss 1979; 1980) sheds significant light on the state of knowledge utilisation in the social sciences during the 1960s, 1970s and 1980s. During this period, both over-optimism and over-pessimism as to the usefulness of social science research could be observed. Over-optimism was obvious in the investment of millions of dollars in applied social science research with government officials reporting an increased interest in social sciences research (Boshoff, 2012). According to (Boshoff, 2012), the line of thought on the part of the government at that time was that individual projects, specifically academic projects sponsored by the government should demonstrate their relevance to society by ensuring that their research findings are integrated into policy documents and other structures. However, later during the 1960s, a period of over-pessimism followed, where the value of social science research for policymaking was questioned (Boshoff, 2012; Wingens, 1990). Consequently, there was a general consensus within the government that social science policy research had a negligible effect on policy decisions (Boshoff, 2012; Tseng, 2012). To this effect, Weiss (1978: 20) concludes:

> *[T]he state of policy research in the 1970s in the USA presented a paradox where on one hand there was willingness to spend resources on social sciences while on the other hand*

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> *there was a notion that social science research was seen as not contributing much to policy-decision.*

It was during this period that Weiss was tasked by the USA government to research on the 'war on poverty'. Upon completion of her research, she presented the findings to the USA government with the expectation that her research findings would be used to inform policy. However, as the research findings were not utilised, Weiss's interest was piqued by the notion that the government would support research, but not use the findings. This became a motivation factor for her to embark on studies on the use of social science research in the policymaking processes. Weiss (1998:1 remarks:

> *I was asked to evaluate a program of the 'War on Poverty' in the 1960s. Johnson's policy to 'eradicate poverty' generated a whole range of new programs: education, health, mental health, job training, programs for the elderly and so on…. When I finished my evaluation of the Harlem program, the report came out in three volumes. We sent copies of the report to Washington: I never heard a word from them! I had the feeling I could have just dumped it into the ocean and it would have made no difference. So, I asked myself: 'Why did they support and fund this evaluation if they were not going to pay any attention to it?' That's how I got interested in the uses of research: What was going on? What could researchers-or anyone else-do to encourage people to pay more attention to research? (Weiss, 1998: 1).*

Weiss also wanted to understand how best research could be useful to policymakers and this led to her studies that would help explain the utilisation and underutilisation of social science research by policymakers.

In her work, entitled 'many meanings of research utilisation' (Weiss, 1979), which was conducted during this wave, she came up with seven different models which explain the circumstances leading to the utilisation and underutilisation of social science research findings by policymakers. These seven models are: knowledge-driven model, problem-solving model, interactive model, political model, tactical model, enlightenment model and research as part of enterprise (Weiss, 1979). These models have been used in the fields of sociology, organisational behaviour, political science, psychology, education, and more recently in science and technology studies. The various models are discussed in section 2.4 of this chapter.

During this wave, other scholars developed models that explain the use and non-use of social science research policy with different interpretations. For instance, Caplan (1979) explained the use and non-use of research using the two-communities, while Dunn (1980) provided four models to explain the

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use and non-use of social science research namely the inquiry-contingent and product contingent models which focus on the scientific community as well as the product contingent and structure contingent which focus on the policymaking community. In addition, Landry et al. (2001a) developed what is considered to be the ideal types of research utilisation models and these are science-push model, demand-pull model, organisational interest model, dissemination model and interaction model.

A significant event that took place during this wave was the establishment of the Center for the Research Utilization of Scientific Knowledge (CRUSK) in 1970 by the Institute for Social Research at the University of Michigan in addition to the establishment of other research institutions. However, while the other institutes for social research established in this period flourished and continued to play major roles in social science, the Center for Research Utilization, did not and it was closed in 1985 (Prewitt et al. 2012).

2.2.3 The Third Wave–1990s Onward

Despite the closure of the Institute for Social Research in 1985, the third wave which ran from the 1990s onwards, was marked by an increased interest in knowledge utilisation activities when the first Bush administration prioritised policies, programmes and research activities pertaining to knowledge utilisation (Backer, 1991). During this period, dedicated programmes for the utilisation and uptake of knowledge began to thrive and were prioritised in all spheres of policy and decision-making in areas such as agriculture, defence, education, health, human services, space administration and transportation (Backer, 1991).

In the early 1990s in the field of medicine, a new concept "Scientific Medicine" was introduced in the field of research utilisation. Subsequently, Guyatt (1991) introduced the concept of Evidence–based Medicine (EBM) and its first publication appeared in the 1991 *ACP Journal Club editorial* (Guyatt, 1991). EBM as an approach that 'helps people make well-informed decisions about policies, programmes and projects by putting the best available evidence from research at the heart of policy development and implementation' (Davies, 2004: 4). EBM was initially meant to increase awareness of the weaknesses of standard clinical practices and their impact on both the quality and cost of patient care in the United States of America (Sur & Dahm, 2011). It was later widely adopted to inform more policy-focused conceptualisations of research utilisation (Blake & Ottoson, 2009; Gray, Sharland, Heinsch & Schubert, 2015). EBM began to gain recognition in the early 1990s and became influential in the research utilisation domain. For instance, the growth of health journals which had been produced especially between the period 1995 and 2004 was an indication that EBM had become

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influential in the research utilisation domain (Estabrooks et al. 2008; Gray et al. 2015; Sur & Dahm, 2011). Furthermore, the prominence of systematic reviews evidenced the influence of EBM in the fields of public health and health care which also brought new demands to the field of knowledge utilisation (Sur & Dahm, 2011; Sutcliffe & Court, 2005). In addition, the emergence of EBM and its variants such as evidence-based policy (EBP), evidence-based guidelines, and evidence-informed, evidence-aware and evidence-influenced policy fitted well into the new public management embraced by neoliberal governments whose focus was on accountability, efficiency, and cost-effectiveness (Estabrooks et al. 2008). To this effect, Backer (1991) concluded that further development of knowledge utilisation was being shaped by evidence-based medicine. Although research utilisation strategies in EBM were initially developed in clinical diagnostic, preventive and therapeutic practices, its application has since moved beyond health care practice and has largely been applied to questions of using science in policy (Tseng, 2012). It has been concluded therefore that at this stage it is not clear that these developments could be interpreted as "indicative of the probable fourth wave" (Boshoff, 2012: 51).

2.3 Overview of the Emergence of Knowledge Utilisation as a Field of Study

The idea of using research results or applying knowledge for the benefit of society is not new. As a field of inquiry, the history of knowledge utilisation dates as far back as the genesis of European social science, with Gabriel Tarde's '*Laws of Imitation*' and early anthropologists known as the British German-Austrian 'diffusions' (Backer, 1991). During that time, however, there were still no real signs and activities of knowledge utilisation until the 1920s when various studies concerning the 'diffusion of agricultural innovations to farmers and new teaching ideas to school personnel' started in the United States of America (Backer, 1991). Rural sociologists spearheaded these studies that were later expanded into a multidisciplinary field that included agricultural innovation, geography, management and information science (Estabrooks et al. 2008). As a field of inquiry, research utilisation started to take shape in the 1970s when there was a growing academic interest in the influence that academic research might have in the decision-making process of the public policy (Newman & Head, 2015). During this period, several researchers started conducting empirical studies which mainly focussed on social research in public policymaking (Beyer & Trice, 1982; Heinsch et al. 2016; Newman & Head, 2015). It was also during this period that several USA federal agencies began to launch programmes of knowledge utilisation and opened offices dedicated to dissemination, utilisation and adoption of innovations at individual and organisational level. Through the establishment of these offices, researchers were able to conduct research utilisation programmes as well testing the strategies that they needed to use to enhance research utilisation activities (Beyer & Trice, 1982: 229). After some

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for-profit research institutes and university-based programmes such as the Centre for Research on Utilisation of Scientific Knowledge at the University of Michigan and the University of Florida Rehabilitation Research Institute on Research Utilisation were established, knowledge utilisation became a field of research and scholarly activity that focussed on the importance of knowledge in all human activities (Backer, 1991). It was during the same period that the USA federal government started assessing the impact and benefits of government programmes that led to the emergence of the field of 'programme evaluation'. It can be attributed to the notion that knowledge utilisation as applied in social science, has always had a direct link to either policy research (or policy analysis) or to programme evaluation studies as both policies and programmes are human interventions that are based on some prior research (Bailey & Mouton, 2005: 7). For knowledge utilisation to be sustained as a field of inquiry, the USA federal government provided support through the introduction of three journals namely: the *Journal of Technology Transfer* in 1975, a specialist journal, *Knowledge: Creation, Diffusion, Utilisation* in 1979 and *Knowledge in Society* in 1988. The journal of *Knowledge, Creation, Diffusion* was later renamed as *Science Communication* (Boshoff, 2012; Heinsch et al. 2016). Over the years, the field of knowledge utilisation has become prominent and it addresses the knowledge-to-policy-gap in various other disciplines such as health, engineering, agriculture as well as education (Grimshaw, Eccles, Lavis, Hill & Squires, 2012). Subsequently, various terminologies such as innovation diffusion, research utilisation, knowledge mobilisation, evidence-based medicine, knowledge translation implementation, exchange evaluation studies and technology have been used. However, Gray et al. (2015) point out that while these terminologies address the knowledge utilisation process, they often assume different meanings, paradigms and assumptions about knowledge use. The field of knowledge utilisation currently features a variety of disciplinarity which includes studies in Technology transfer (Govind & Küttim, 2016; Wahab, Rose & Osman, 2011), Evidence-based practice in Medicine and Public Health (Green, Ottoson & Hiatt, 2014; Heinsch et al. 2016), Knowledge translation in health (Greenhalgh & Russell, 2009),Evaluation Studies (Heinsch et al. 2016) and other related fields.

2.4 Schools of Thought in Knowledge/Research Utilisation

Since the 1970s, there has been a growing interest on both researchers and policymakers to understand the use and influence research-based knowledge has on non-academic environments (Davies, Nutley & Walter, 2008; Larsen, 1980; Weiss, 1978). Consequently, models of research utilisation which attempt to explain why social science research is either used or not used in policymaking have been developed by different scholars (Boshoff, 2012; Heinsch et al. 2016; Landry et al. 2001a; Weiss, 1979). A range of these models were developed by scholars in the United States of America and the United Kingdom in the 1970s and 1980s (Boswell & Smith, 2017; Caplan, 1979;

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Weiss, 1979). However, despite all these efforts to develop conceptual models that identify the significance of using research results in policymaking, there is no single overarching model that has been unanimously agreed upon by these scholars that can be used in explaining research utilisation (Belkhodja, 2014; Belkhodja, Amara, Landry & Ouimet, 2007; Jbilou, Amara & Landry, 2007; Lester, 1993; Rich, 1997). This is because research utilisation can be viewed as a process or outcome and can also be viewed as definite end-point where research has a direct impact on policy (Cherney, Head, Boreham, Povey & Ferguson, 2011). Consequently, scholars have given various interpretations of research use and the factors that account for knowledge utilisation with Weiss and Caplan each offering their own models. Weiss provides seven models with the primary explanation being what she refers to as the enlightenment function, while Caplan (1979) focuses on the relationship between researchers and policymakers. On the other hand, Landry et al. (2001a) identified one of the inclusive typologies where they distinguish between the science-push model, demand-pull model, organisational interest model, dissemination model and interaction model. These models are considered to be the ideal types of knowledge utilisation approaches in the literature of research utilisation, and they are important because they help to develop a background on which to explain the mechanisms and tendencies of research utilisation (Albaek, 1995). These models are discussed in detail in the next section of this chapter.

2.5 Linear and Interactive Models of Research Utilisation by Landry et al.

The models by Landry et al. (2001a) discussed in this section are an extension of the earlier works by authors such as Weiss (1979) who differentiated between linear and interactive models. Landry et al. (2001a) observed that the models of knowledge utilisation could be classified into four major groups, namely: a science push model, a demand pull model, a dissemination model and an interactive model. Table 2.1 below provides a summary of Landry's (2001a) models and outlines the key drivers and the goal of each model.

Table 2.1: Four major groups of Landry's Linear Interactive Models

MODEL	KEY DRIVERS	GOAL	OUTCOMES
Science Push Models	Researchers	Conceptual use	Provides evidence through research
Demand Pull Models	Policymakers	Needs of end users	Needs of users addressed
Interaction Models	Researchers and Policymakers	– Interaction between researchers and policymakers	More research utilisation
Organisation Interest Model	Policymakers	- Meet interests of Policymakers through organisations that conduct research on their behalf	Enhanced buy-in from policymakers

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Dissemination	Researchers	Dissemination strategies	Possibility of transfer of useful knowledge to end users (Policymakers)

2.5.1 The Science Push Model

The science push model of research is assumed to follow a linear path from the researcher to the user, and it is presumed that research results regularly find their way into application. In this model, researchers are central to the research utilisation process as they are the source of ideas for directing research. Thus, the topics originate from them and they are the ones who conduct the research and provide the available evidence to potential users such as the policymakers. Therefor it implies that the end-users are merely recipients of the findings and not the originators of the ideas and not the ones who conduct research. Several factors that affect the use of research by the end-users are mentioned in this model including, the research design (basic, applied, quantitative or qualitative, etc.) and the attributes and the dimensions of the research findings i.e. reliability and the importance of the research (Lomas, 1993). Two notable criticisms have been levelled against this model, particularly that transfer of knowledge to users is not automatic in a context where no-one assumes responsibility for its transfer. Secondly, that raw research information is not usable knowledge and that there is a process for transforming it into information usable in policymaking (Lomas, 1990). These criticisms stimulated the emergence of demand-pull model.

2.5.2 Demand Pull Model

Unlike the science push model which focuses on the researcher, the demand-pull model saw the initiative shift from the end-users to researchers. This model also follows a linear sequence where the starting point lies with the identification of the research problem by the customers (Yin & Moore, 1988). The customer defines the problems and asks researchers to conduct research that contributes to identify and assess alternative solutions to specific problems (Weiss, 1979; Yin & Moore, 1988). In other words, this approach as it relates to problem-solving, generates a customer-contractor relationship where the policymakers are customers who define what research they want, and the researcher is the contractor who executes the contract in exchange for payments (Landry et al. 2001a). Thus, according to this model, knowledge utilisation is determined by the needs of the users. In this regard, the model assumes that the use of knowledge is increased when researchers focus their projects on the needs of users instead of focussing them only on the advancement of scholarly knowledge (Frenk, 1992; Silversides, 1997). This model has been criticised for not considering that even research geared to solve problems may not be utilised as it may be in conflict with the

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organisational requirements of the users. Furthermore, organisational interests may skew research utilisation to only specific types of research.

2.5.3 Organisational Interest Model

The organisational interest model is an extended version of the demand-pull model, and it takes into consideration the organisational interest of users and other organisational factors such as organisational structures, rules and norms of the user organisation to facilitate utilisation (Boshoff, 2012; Landry, Amara & Lamari, 2001b). According to this model, the organisational structures, rules and norms are essential determinants of knowledge utilisation (Kothari, Birch, & Charles 2005) and the principal factor causing under-utilisation of research material lies in political interests of the users, which may be in conflict with the research findings. Accordingly, research results are more likely to be used when they support the interests and the goals of the organisation (Oh, 1997). The criticisms levelled against this model is that similar to the demand pull model, it focuses too much on the interests of the users and thus paying too much attention to instrumental use while ignoring the interaction between researchers and users as a mode of knowledge transfer (Landry et al. 2001a).

2.5.4 Dissemination Model

The dissemination model (Landry et al. 2001a) adds another dimension into the research activities by focussing on formulating dissemination strategies where useful knowledge generated from research can be transferred to potential users. Thus, dissemination in this model is considered to have occurred when a potential user becomes aware of the research results (Landry et al. 2001a). The model assumes that information is available and by appropriate dissemination will eventually be utilised. This model has two shortcomings with the first being that mere awareness and reception by end-users does not necessarily imply actual use of the research results. The second is that the model does not provide space for the involvement of users in the selection of research information to be transferred or the production of research results (Huberman, 1987; Lomas, 1997).

2.5.5 Interaction Model

The interaction model was developed as a result of criticisms that were levelled against the science-push and demand-pull models that these models: i) they do not involve users in the production process of research results, ii) they do not assume responsibility in the transfer of research, and that, iii) they focus on the instrumental use of research findings (Heinsch et al. 2016). This interaction model originates from the work of Grindle and Thomas (1991) and should not be confused with interactive model of research utilisation by Weiss (1991) which will be discussed in section 2.5 of this chapter.

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This interaction model differs from the linear sequence discussed in the previous models that begin with the needs of the researchers or the users and it closes the distance between the two communities (Bogenschneider & Corbett, 2010; Greenhalgh & Sietsewieringa, 2011; Newman, Cherney & Head, 2016; Newman & Head, 2015; Wadesango, 2014). The model gives more attention to the relationships between researchers and users during the various stages of knowledge production, dissemination and utilisation (Landry et al. 2001a) and suggests that the relationship between researchers and users is not only linear; it is iterative and even "disorderly" (Landry et al. 2001b: 335). The model combines all the explanatory factors identified in other models: 'types of research and scientific disciplines, needs and organisation interests of users (and) dissemination … mechanisms' Landry et al. (2001b: 335). This model is considered to be overarching as it includes a broader perspective of important explanatory factors such as research types and nature of results, needs and organisational interests of users, dissemination and linking structures which have been captured by the other models (Boshoff, 2012; Landry et al. 2001a). According to this model, knowledge utilisation is dependent on various intense interactions between researchers and users, and therefore the more sustained and intense the interactions between the researchers and the users are, the greater the possibility of utilisation (Landry et al. 2001a).

2.6 Models by Weiss (1979)

In Section 2.2.2 of this chapter, it was stated that Carol Weiss had been cited in literature as having pioneered social science research utilisation models by developing seven models which illustrate how research is used in policymaking. In addition, she originally distinguished between linear and interactive models. In this section, we discuss her models in detail. However, it is important to note that the early models by Weiss (1979) were not presented as frameworks that highlight and organise aspects of various studies of knowledge utilisation, but rather as models trying to 'exemplify how social research knowledge actually come to being used in policy' (Boshoff, 2012: 54). Table 2.2 below gives a summary of the types of models developed by Weiss (1979) and how they result in research utilisation.

Table 2.2: Summary of types of models developed by Weiss (1979)

MODEL	KEY DRIVERS	GOAL	OUTCOMES
Knowledge-driven	Policymakers	Provide insights through basic research	Opening opportunities for applied research to be used by policymakers
Problem Solving	Policymakers	Research to provide evidence to an identified problem	Research findings lead to research utilisation by policymakers

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Interactive	Researchers	Mutual consultation between researchers and policymakers	Mutual consultations provide potential responses that influence research utilisation
Political	Policymakers	Use research as weapon to support Governments' pre-determined policy	Research utilisation compatible with the governments' viewpoint of a policy
Tactical	Policymakers	Use research as a tactic for delaying action	Delayed policy action by government
Enlightenment	Researchers	Researchers to provide policymakers with ways of making sense out of a complex world	Policymakers sensitised to new ideas that social science research offers

2.6.1 Knowledge-Driven Model

The knowledge-driven model (Weiss, 1979) derived from the natural sciences is similar to the 'science push model' and is considered the most reputable in the literature of research utilisation in social sciences (Boshoff, 2012; Weiss, 1979). This model is based on the assumption that basic research provides findings which may have relevance for public policy (Bowen & Zwi, 2005). It assumes that the production of knowledge will ultimately result in the development of policies and eventually finds opportunities for use. The model follows a linear sequence of events. Figure 2.2 below shows the knowledge-driven model as presented by Weiss (1979).

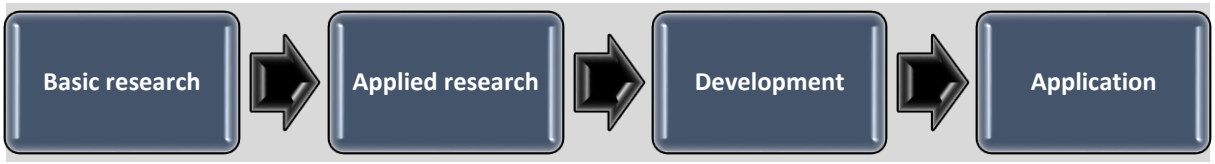

Figure 1.2: The knowledge-driven model

In essence, it is a model where it is assumed that conducting basic research provides insights that lead to applied research, to development, and finally to the application of the results (Almeida & Báscolo, 2006: 10). However, Weiss (1979) argues that while this linear sequence is applicable in the natural sciences, this does not apply in social sciences because unlike in the natural sciences knowledge generated in the social sciences is often not compelling in terms of implementation.

2.6.2 Problem-Solving Model

The problem-solving model Weiss, (1979: 427) is based on the most mutual concept of knowledge utilisation, which involves the direct application of the findings from specific social science studies to a policy decision (Bowen & Zwi, 2005). This model assumes that i) a problem exists and has been

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identified, ii) the information available is not sufficient to provide a solution and in order to find a solution empirical evidence is needed, and therefore iii) research has to be conducted to provide the missing knowledge and depending on the results, and iv) policymakers can reach a solution to a policy problem. According to this model, the need for a decision to be made in response to a problem is the main drive behind the research. This model assumes that policymakers and researchers tend to agree on what the desired goal should be. The role of social science in this model is to identify and select the appropriate means to reach the intended goals. The expectation is that regardless of the nature of the empirical evidence supplied, it clarifies the situation and reduces uncertainty and therefore it influences the decisions that policymakers make.

According to Weiss (1979), in this formulation of research utilisation (problem-solving model), there are two ways by which social science research can enter the policy arena. The first is that when policymakers are faced with a decision, they may go and seek information from pre-existing research to identify an appropriate solution. In some cases, information is brought to their attention by staff analysts, colleagues, consultants, administrators, interest groups or by social scientists. Irrespective of the way the information is gathered, it is of prime importance that the communication link between researchers and policymakers needs to be effective to address the problem. The second way in which social research enters the policy arena is when policymakers purposively commission social science research to fill the knowledge gap. In this case, the policymakers are dependent on the social scientists to provide data, analytical generalisations and interpretations as presented in the study recommendations.

2.6.3 Interactive Model

The interactive model (Weiss, 1979) highlights how social science research affects the decisions that are made by policymakers in the process of searching for knowledge. An interactive model connects directly to the executive action, and it happens when policymakers seek information from various stakeholders who participate in various consortia and other forms of interaction (face-to-face meetings) to assist the policymakers to come to a decision. These stakeholders include administrators, practitioners, political planners, journalists, clients, friend and social scientists who engage in mutual consultations that eventually lead to solutions for decisions or courses of action that are taken by policymakers. Within this model the use of research is not central but “only one part of a complicated process that also uses experience, political insight, pressure, social technologies, and judgment” (Weiss, 1979: 428). Thus, social science researchers are just one set of participants in the decision-making process.

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2.6.4 Political Model

In this model, research is used as a 'weapon' to support pre-determined positions arising from ongoing debates. In the process differences in opinions based on interest, ideology or intellect may have reached the point where decision-makers are no longer receptive to new evidence from social science research and may take a stance that research is not likely to influence. When this happens, research may be used by the side that finds its conclusions favourable. As a result, the evidence is used to neutralise opponents, convince waverers and bolster supporters. In this case, contends that "even if conclusions have to be ripped out of context (with suppression of qualifications and of evidence, "on one hand") research becomes grist to the mill" (Weiss, 1979: 429). Social scientists usually see this as an illegitimate attempt to use research for self-serving purposes of agency justifications and personal advancement. Weiss points out that using research to support a pre-determined position is research utilisation too, it is in a form that would seem to be neither an unimportant nor improper use. Only misinterpretations of findings are illegitimate. Weiss concludes that since research finds a ready-made partisan who fight for its implementation, it stands a better chance of making a difference in the outcome.

2.6.5 Tactical model

The tactical model assumes that there are times when social science research is used for purposes that have no significant bearing to the substance of the research. In this model, it is not the use of research findings that matter but that research is being done. For instance, when the government is confronted with a demand for action, it may use research as a tactic for delaying action by providing responses such as 'yes we know that this is an important need and we are actually carrying out a research on it right now' (Weiss, 1979: 429). Sometimes the government, when it is faced with unwelcome demands, may use research as a delaying tactic by saying 'we are still waiting for the outcome of the research and as soon as the research findings are ready, we shall revert to you on this matter' (Weiss, 1979: 429). Sometimes when government agencies are confronted with unwelcome policy demands, they may use research as an excuse to avoid criticism by claiming that their course of action was based on the findings and recommendations of social science studies. In some cases, some agencies use tactics by financially supporting research programmes that enhance their prestige and by allying with social scientists of high repute who in return side with them when they are asked to account for the resources and promises made to society. Irrespective of the conclusions made, these are the tactics used in bureaucratic politics.

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2.6.6 The Enlightenment Model

One of the ways research feeds into the policy arena is through a process of enlightenment where policymakers do not rely on the findings of a single study or even a body of related studies in decision-making. As a result they cannot, therefore, cite a specific study that has shaped their decisions. However, that does not mean that they are not aware of the research that has provided them with an underlying set of ideas on which they have based their decisions and actions. According to this model, social science research diffuses indirectly through many channels such as professional journals, mass media, conversation with colleagues, etc., and with time, variables dealt with and the generalisations offered provide decision-makers with ways of making sense out of a complex world (Weiss, 1979).

A notable difference between this model and the problem-solving model is that the enlightenment model does not assume that the research results must be compatible with the decision-makers' values and goals in order to be useful. However, a shortcoming of this model is that if the research is passed through indirect and unguided channels, it can dispense invalid generalisations. It is also likely that some social science understandings may be partial, over-simplified, inadequate, or wrong (Weiss, 1979).

2.6.7 Research as part of the Intellectual Enterprise

The final model of research utilisation proposed by Weiss (1979) in social science research is viewed as part of the intellectual enterprise of society. Social science research is perceived as one of the more intellectual pursuits of society informing policy. Social science and policy respond to issues that affect society at a particular time and in the process of this interaction, they influence each other and is often influenced by the issues that the society faces. For instance, policymakers in their quest to find solutions to the issues that affect society can initiate a research project and request the social scientists to study the matter. However, suppose in the process of conducting the research social scientist realise that the initial parameters presented by the policymakers excluded certain important aspects. In that case, social scientists can inform the policymakers so that the research can be reconceptualised, thus triggering a response from both the researcher and the policymakers. In this approach research is one part of the interconnectedness of the intellectual enterprise (Weiss, 1979). The argument is that it is often an emerging policy interest in a social issue that leads to the appropriation of funds for social science research, and only if the research funds are made available to social scientists will they be attracted to the study of the issue.

In the earlier models by Weiss (1979) discussed above, the focus was on contrasting knowledge producers to knowledge users with an indication that knowledge can only flow in one direction that

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is either from the producer of knowledge to the user (knowledge-driven model); or from the user of knowledge to the producer (problem-solving model); or through some interaction between the knowledge producers and the knowledge users. Arising from these models (Trostle, Bronfman & Langer, 1999) provided a different view of Weiss' (1972; 1974; 1977; 1978; 1979; 1980; 1981; 1983; 1986a; 1991; 1993; 1997; 1998) models and summarised her models in three basic approaches namely rational approach, strategic approach and the enlightenment or diffusion approach. According to Trostle et al. (1999), the rational approach is a combination of the models that Weiss refers to as knowledge-driven and problem solving representing the conventional manner of thinking about this relationship: the policy process is inherently rational, with research results used when they exist and decision-makers calling for research when needed. The strategic group comprise what Weiss (1979) calls the political and tactical and sees research as a kind of ammunition in support of critical or certain positions, prompting or delaying policy action. The third, the enlightenment or diffusion approach, comprise the remaining models - interactive, enlightenment and intellectual enterprise and stress that both the research and decision-making processes take place in parallel with various other social processes and thus play different roles.

Following Weiss' (1975, 1977; 1979; 1980; 1986) models both researchers and policymakers were representing two distinct communities and hence leading to Caplan (1979) presenting this perspective as a two-communities theory. However, Dunn (1980) questioned whether this represented a theory and rather referred to it as a metaphor that allows for analogies.

2.7 Caplan's (1979) Two Communities Perspective

One of the first models that explain the lack of direct research utilisation and frequently cited for use and non-use of research in literature is the two-community perspective or "metaphor" by Caplan (1979).

Based on the above arguments, some scholars concluded that the two-community model is based on the contrasting list of the supply and the demand-side problems (Bogenschneider & Corbett, 2010; Rosenblatt & Tseng, 2010). On the supply-side are researchers and on the demand-side are the policymakers with each claiming that the other is to blame for the non-utilisation of research in policymaking. Researchers make claims that policymakers fail to spell out objectives in researchable terms and that they do not appreciate research findings related to policy choices. As such, policymakers do not make much use of research that researchers produce (Bekker, Van Egmond, Wehrens, Putters & Bal, 2010; De Goede, Van Bon-Martens, Putters & Van Oers, 2012). Alternately, policymakers equally make claims that researchers do not pay adequate attention to ensuring that

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their findings are available to policymakers so that it can be utilised. Furthermore, researchers argue that even if they submit their research findings to policymakers, the latter do not do use the findings within the specified timeframe necessary for effective policymaking. Rather policymakers feel that researchers do not relate their findings to the broad context of policy issues (Cooper & Levin, 2010). According to this model, researchers and policymakers have different priorities in terms of values, beliefs and incentives which are shaped by different cultures in which they operate (Head, 2013; Heinsch et al. 2016)). For instance, when it comes to producing knowledge, social science researchers are interested in the production of peer-review publications and citations as indicators for quality and prestige. This is because these outputs are recognised in academic incentive systems and hence researchers place less value on policy relevance of their research (Cooper & Levin, 2010; Heinsch et al. 2016). Conversely, policymakers are not interested in the publications produced by researchers but in the knowledge that helps meet attainable solutions to pressing problems and in the incentives, rewards, and cultural assumptions associated with these different outcomes (Cooper & Levin, 2010; Henig, 2009). Consequently, when policymakers solicit for research, their focus is on topics that have policy relevance and they do so as and when needed (Oliver, Lorenc & Innvær, 2014). In this regard, Brownson, Royer, Ewing and McBride (2006) argue that researchers and policymakers live in 'parallel universes'. Reflecting upon the differences between researchers and policymakers, Graham et al. (2006) uses a well-known metaphor by claiming that 'researchers are from Venus and policy makers are from Mars'. Booth (1998, cited in Neilson, 2001: 4) summarises the two communities as follows:

> *[T]he two communities' hypothesis explains under-utilisation of research by policy makers as living in separate worlds. The differences make for wide divergences in expectations, in perceptions of mutual impact as well as difficulties in achieving satisfactory and constructive relationships" (Neilson, 2001: 4)*

The potential gap identified by Caplan (1979) concerning the differences between the domains of the researchers and policymakers is relevant for a number of reasons. Firstly, the two-communities model has been helpful in understanding the differing expectations of researchers and policymakers and in terms of communication problems between them. Secondly, the model has also provided a helpful lens through which to scrutinise both cultures and their discrepancies (Bogenschneider, 2011; Bogenschneider & Corbett, 2010). Figure 2.3 below shows the summary of the gaps that exist in both cultures of policymakers and researchers.

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GAP	NATURE OF GAP
Knowledge gap	▪ Research has potential to provide practitioners with knowledge to improve their practice but the two communities do not communicate effectively
Culture gap	▪ The two communities do not understand each other or respect each other's type of work
Motivation gap	▪ Practitioners are not interested in research
Relevance gap	▪ Two-communities value investigation of different types of problems
Immediacy gap	▪ Practitioners need quick solutions while academic research can be a lengthy process
Publication gap	▪ Few research publications in a particular field and practitioners do not contribute to those available
Reading gap	▪ The two communities do not read each other's literature
Terminology Gap	▪ The two communities use different terminology so that one is not understood by the other
Activity gap	▪ Practitioners do not really do research
Education gap	▪ Practitioners do not have the knowledge and skills to do research
Temporal gap	▪ Practitioners do not have time to read research or engage in research activities

Figure 2.2: Existing gaps between researchers and policymakers

Source: Haddow and Klobas (2004: 31)

Although the two-communities perspective received attention in literature, it is has not been without criticism. Bogenschneider & Corbett (2010) and Wadesango (2014) in particular emphasises the barriers between knowledge producers and users, rather than the potential to surmount them through, for example, collaborative research (Bekker et al. 2010; Wehrens, 2013; Wehrens, Bekker & Bal, 2014). Furthermore, since the theory of the two-communities assumes that researchers operate on a pull basis where researchers solicit research topics as and when needed, its explanatory power may be limited when it is applied to fields of research where academics and other researchers are directly involved in research that informs policy (Gray, Joy, Plath & Webb, 2015). In addition, the two-communities theory ignores the fact that researchers and practitioners may constantly move across the communities or may be employed in both communities simultaneously by suggesting that researchers and practitioners come from two distinct communities. To this effect, Wingens (1990) argues that the two domains are not that separate. For instance, policymakers hold university degrees and have to assess research as part of their routine work; researchers, on the other hand, are familiar with the public sphere through consultancy and other forms of engagement, among many things. Based on this argument Wingens (1990) argues for a systems approach where researchers and policymakers focus on successful interaction between them as this would lead to successful utilisation of research, with the gap between the two socially different systems serving as a starting point for explanation, and not as an explanation itself as presented in the two-communities perspective.

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2.8 Dunn's Model (1980)

From the discussions above on the two communities, it has been established that the value of the two-communities perspective lies in that it acts as a metaphor or constructive analogy from which one can derive diverse explanations for the use or non-use of social science research by policymakers. Dunn (1980), groups these competing explanations into five models with two (inquiry-contingent model and product-contingent model) covering aspects relating to the scientific community. The other two models (problem-contingent model and structure-contingent model) cover aspects that relate to the policymaking community. In contrast, the last model relate to the interaction between the two communities (process-contingent model).

- According to the inquiry-contingent model, the modes of inquiry by which knowledge is created (quality of research design and strategy, and analytical method) determine the extent of knowledge use by policymakers.
- The product-contingent model, on the other hand, claims that the scope of knowledge used by policymakers is a function of the characteristics of the products of social science research. In other words, the form, content, language, length, validity and reliability of the knowledge output have a direct bearing on its use or non-use.
- The nature and characteristics of the policy problem(s), according to the problem contingent model, are key factors in determining the extent to which scientific knowledge is used to resolve the problem. For instance, the complexity of the policy problem and the levels of uncertainty and risks involved may play a role in knowledge use.
- The structure-contingent model claims that the formal structures, procedures incentive structures of the organisation responsible for knowledge use determine the actual extent of knowledge use.
- Lastly, the process-contingent model focuses on the interaction between knowledge producers and the potential users thereof; the extent of knowledge use is considered a direct function of the nature of interaction.

In summary, this section has discussed a number of models that have been used in the research utilisation for policy. Some of the research models discussed in this section focus on applying findings whereas others consider problem solving as being critical in the research utilisation process while other models focus on organisations and policymakers. Despite the differences presented by these models, there are similarities as each model indicates the nature of research activities and promote

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the evaluation of research findings. These models also offer a common purpose, which is to bridge the gap between research and policy and to ultimately provide a framework for the necessary conditions for research utilisation activities to be successful.

2.9 Different Types of Research Utilisation in Policy

Many different types of use have been suggested in the literature. One of the earliest, and most significant, pieces of work on this was by Weiss (1979) in the 1970's in which she developed three broad types of research use namely conceptual use, instrumental use, and symbolic use. In subsequent research, Weiss and colleagues have written about imposed use and process use (Birkeland, Murphy-Graham & Weiss 2005). Process use of research is where leaders or policymakers, in this case, incorporate the processes of research into their own work, for instance by launching an evaluation study, participating in a grant proposal that includes an evaluation component, or collaborating with others to analyse data (Farrell, Calafiura, Leggett, Tsulaia, & Dotti, 2017: 111). According to Tseng (2012), imposed use "describe mandates to apply research knowledge, such as a requirement that government budgeting be based on whether agencies have adopted programs backed by evidence". (Tseng, 2012: 7). However, according to several scholars process use (Bailey & Mouton, 2005; Beyer & Trice, 1982; Blewden et al. 2010; Tseng, 2012; Weiss, 1979) have not been commonly used in social science research and policy literature. The ones that are prominently used are conceptual use, instrumental use, and symbolic use In social sciences. The use of research/knowledge can mean the use of knowledge to convince users to make decisions which they would otherwise not have made (instrumental use), the use of research/knowledge to change understanding (conceptual use), or the use of knowledge to confirm and promote pre-existing policy directions (symbolic use).

Instrumental use refers to the direct impact on policy or practice implying that research findings are used immediately such as when advice is given and acted upon; used to change an existing technology; inform the development of a new programme; or used to solve a policy problem (Bailey & Mouton, 2005; Blewden et al. 2010). Estabrooks (2008: 204) uses the same logic but from a nursing viewpoint and points out that research can be translated into a material and useable form, such as protocol. Conceptual use refers to the use of research where scientific ideas may be published and made public in various forms without any immediate use or uptake due to the indirect routes of diffusion before it is applied in a social, economic or political sense (Bailey & Mouton, 2005). To this effect, Bailey and Mouton (2005:1) cite Carol Weiss' (1980:1) well-known phrase of "knowledge creep" which provides a good description of such indirect utilisation. According to Weiss (1977; 1979) knowledge creep implies that research influences policy over a long period of time through gradual ways rather than

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through immediate or direct ways. Simply put, there are some scientific ideas that are not considered or used immediately, only to be taken up later by the scientific community or policymakers, and these ideas may possibly contribute to what eventually become significant in the policy. According to Bailey and Mouton (2005), these scientific ideas which take long to be utilised are common in the humanities and social science domain. Such ideas that creep into policy can bring about changes in awareness, perception, knowledge and understanding about research into policy (Van der Arend, 2014). Symbolic use on the other hand, is the opposite approach of instrumental model and it takes place in the political arena where the knowledge from research is used as a political tool to persuade or legitimise pre-existing policy directions (Bailey & Mouton, 2005; Bekker et al. 2010; Estabrooks, 1999; Stone, 2002). In this type of research use, the focus is on taking care of the interests of the political actors in fulfilling their viewpoints in decision-making.

Weiss (1979) identifies two subtypes of symbolic utilisation. The first subtype is when research is selectively used to legitimise political action and ensure that research that seems to undermine political action is not used (Boswell, 2009; Hoppe, 2009). In this context, research is also used selectively to substantiate political policy action, and in both cases, the intention is to defend a policy that is already in place and research is only used as a channel to support it. Weiss summarises it by stating that within this subtype of use, research becomes "ammunition for the side that find its conclusion congenial and supportive" (Weiss, 1979: 429). Likewise, Bulmer (1982) notes that the use of research findings as political ammunition recognises that policy initiatives cannot be easily attained where policies are formulated within a political system in which there are contending parties and interests. In this instance, with objective research findings in their support, the case for change would give those seeking particular policies some scientific morality. Research then becomes ammunition for the side that finds its conclusions most supportive. Weiss (1979) succinctly states that

> partisans brandish the evidence in an attempt to neutralise, convince waverers and bolster supporters. Even if conclusions of such research findings have been ripped out of context, research becomes grist of the mill (Weiss, (1977: 14).

In most cases, symbolic use of research is commonly used by pressure groups who commission research to bolster a case which they are arguing (Bulmer, 1982). In Zambia, and in other African countries, symbolic use of social science research is synonymous with Non-Governmental Organisations who conduct opinion poll surveys after elections to prove their arguments. Afrobarometer, a pan-African, non-partisan research network conducts a number of such public attitude surveys on democracy, governance, and economic related issues across more than 30 countries in Africa to support their arguments on issues of governance (Bratton, Dulani & Nkomo,

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2017). For instance, in 2016, Zambia had general elections which in some stakeholders' views, and in their own view, were marred with violence which saw the leader of the largest opposition political party, the United Party for Development (UPND) Mr Hakainde Hichilema arrested. He was brutally treated and detained indefinitely based on what was termed as unfounded treason charges for which the evidence had not been provided (Resnick, 2016). Against this background, a survey was conducted to get a sense of the overall public mood on whether Zambia was still a democratic country or it was heading towards dictatorship, or if it was already a dictatorship (Bratton et al. 2017). The survey results showed that Zambians were still firmly committed to democratic ideas but that in practice the democracy was apparently beginning to erode (Bell, 2016; Bratton et al. 2017; Wahman, 2017). These findings supported the sentiments raised by Bratton about governance in Zambia.

The second notable subtype of symbolic utilisation distinguished by Weiss is the tactical use of research. This subtype of symbolic utilisation research is used to control policy and policy agendas, and therefore the reputation of the researcher in such research use is of prime importance. This is because, in this subtype of research use, research conducted by a researcher from a renowned university or research institution is sufficient to have the research recognised and have its findings utilised without reference to the content of the research (Boswell, 2009). The results of such research are designed to solve practical, operational problems faced by policymakers and as such the research is tailored to specifications provided by the policymaker who is interested to answer a highly specific set of questions concerned with the operating procedures and practices (Bulmer, 1982). Research institutions within government and industrial research units that are concerned with particular service delivery to physically challenged persons such as the blind and the deaf commonly use this subtype of research. In the next section, we highlight the factors that hinder the use of social science research before concluding with a discussion on how research contributes to policymaking.

2.10 Understanding the Barriers of Research Utilisation in Policymaking

The use of social science research in policymaking is not as forthright as presumably envisioned by the researchers and the policymakers. While there are several factors that enhance the use of social science research in policymaking, there are similarly many factors that inhibit research from being utilised by policymakers. Based on these two different schools of thought, a significant number of scholars (Bogenschneider & Corbett, 2010; Bulmer, 1982; Cherney, Head,Povey, Boreham, & Ferguson,2015; Cherney,Head,Povey,Ferguson & Boreham, 2015; Cherney & McGee, 2011; Head, Ferguson, Cherney & Boreham, 2014; Lavis et al. 2010; Oliver, Innvar, Lorenc, Woodman & Thomas, 2014; Van der Arend, 2014) and many others have undertaken empirical studies in research utilisation and documented the challenges that hinder the use of social science research in the policymaking

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processes. These studies are meant to provide an understanding on why the efforts made by researchers and policymakers are not always as fruitful as intended and to identify strategies that would better connect research and policymaking processes (Van der Arend, 2014). Based on the findings from these studies policymakers and researchers have raised issues that they consider as barriers to the use of social science research in policymaking processes.

2.10.1 Timelines and Research Funding

One of the most frequently cited barriers from the policymakers' point of view that hinders the likelihood use of social science research in policymaking is time (Bell, 2016; Cherney et al. 2011). According to these scholars, commissions or committees as well as policymakers who have worked with researchers have complained that researchers often take longer than expected to produce research results. Such delays impact negatively on the work of commissioners and policymakers who are often under considerable political pressure and/or work within a tight timeframe (Bulmer, 1982; Cameron, 2011; Howlett & Wellstead, 2016; Newman et al. 2016). Policymakers argue that academic research findings tend to be delayed by months to years before they are submitted. In contrast, the policy process often requires answers in a very short space of time. This is so especially in situations such as when there is a disaster and policymakers must provide a quick response to such emergency situations (Head, 2013). This means that for social science research results to feed into the commission's deliberations, the results must be ready before the time-frame given to the commissions or policymakers. However, such expectations are often not achieved especially in cases where the commission or policymakers have to recruit and retain senior social scientists who might have prior commitments of teaching and undertaking some other research within their respective universities (Bulmer, 1982; Head, 2013; Newman et al. 2016). Bulmer (1982) points out that even in some cases where senior social scientists are already recruited, the expectations of the commissioners in terms of meeting the time-frame are often not met and that there are various reasons for this. Most importantly, social scientists usually have long term schedules of work that need to be done within stipulated times and therefore cannot necessarily adjust their schedules to fit in with short-term demands. In addition, in some cases researchers are hindered by lack of resources to conduct research immediately or to deliver research findings within the timeframe in which the policymakers or commissioner is working (Blewden et al. 2010; Bulmer, 1982; Cherney et al. 2011). In addition, sometimes commissions require in-house research to be conducted by senior researchers and present the findings according to the stipulated time of policymakers. The challenge faced by researchers in this case, is that conducting in-house research and contracting senior researchers requires funding which may not be readily available. Therefore when the commissions do not have adequate funding,

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researchers are not able to conduct research and translate research findings on behalf of the commission within a stipulated timeline. In addition, it has been argued that policymakers often do not share their policy directions that will assist researchers to formulate timely research agendas and findings that would be appropriate to address the needs of policymakers (Uzochukwu et al. 2016). However, it is important to note that delays and other inhibiting factors does not imply that such research should be abandoned or that the findings are unlikely to be used in policymaking. These findings, though not feeding in the commission's deliberations immediately, may contribute to public understanding through subsequent publications (Bailey & Mouton, 2005). Thus, social science research would still have played a role in informing policy.

2.10.2 Terminologies Used by Researchers

The second argument is linked to the way that research is presented or communicated to the policymakers, where it is perceived that research results are presented in a language that is too technical or theoretical to be comprehended by policymakers and hence difficult to be of any use in policymaking (Bulmer, 1982; Stone-Jovicich, Goldstein, Brown, Plummer & Olsson, 2018). The argument is that the more technical and theoretical terminologies are used in the results, the less accessible they are to non-academics. Drawing from his experience of working with commissions, Bulmer (1982) echoes similar sentiments and warns that when researchers present results with technical language to the commissions, the secretariat often do not easily understand the findings and this makes it difficult for the secretariat to summarise the findings before circulating it to members of the commissions. Yet at this stage, it is usually expected that the findings should have answered the most basic questions that would guide policy and therefore be presented in such a form that a lay-person could understand. Such situations pose a big challenge to commissions to rely on such findings as the commissioners opinion may be that social science research contributes little or is of no value to solving the practical problems that the commission faces. Consequently, such results are often devalued by the commissions and are not prioritised in their policy documents. Due to these mistakes, observations have been made that academic research rarely has a policy impact and often fails to meet the needs of policymakers (Coburn & Talbert, 2006; Hess, 2008; Van der Arend, 2014). Some scholars who hold this view have even penalised researchers for lack of understanding on how policy is drafted and for having unrealistic expectations about what research can achieve (Black & Donald, 2001; Hudson, Hunter & Peckham, 2019). However, evidence suggests that the failures by policymakers to use research where researchers have used technical language results from variations in orientation, skill and communication barriers between policymakers and academic researchers, drawing on the argument that they live in different worlds with differing language, values and awards

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(Levin, 2011; Levin & Edelstein, 2010; Vanderlinde & Van Braak, 2010). It is argued that researchers and policymakers operate in two different environments. Researchers work in a culture where the validity of research results is of prime importance; where academic reward systems do not adequately recognise dissemination of results to non-academic users such as policymakers, and to be promoted is based on showing evidence of academic excellence through publications in peer-reviewed journals (Caplan, 1979; Cherney et al. 2011; Uzochukwu et al. 2016). Such an environment inhibits researchers from focusing on policy-related issues and from disseminating their research findings to the policymakers. This is especially applicable to early career scholars who are informed that publishing in a high quality journal is tantamount for a successful career. To these scholars, making an effort to promote the relevance of their work to policymakers would seem potentially unproductive and a waste of time (Parkhurst, 2016). In addition, while researchers are expected to show excellence through publications in peer-reviewed journals, most of those in low and middle income countries (LMIC) especially in Africa, strive to achieve excellence due to relatively few incentives such as funding to conduct applied research (Bell, 2016; Uzochukwu et al. 2016). In addition, the available funding is often inadequate which can lead to low-quality research results that cannot inform policy. Ultimately, this will result in a disconnect between researchers and policymakers. When there is little interaction between researchers and policymakers, it implies that there is no meaningful discussion of available research findings. Therefore it is difficult to identify both policy-related problems and policy areas that require research attention (Uzochukwu et al. 2016). The implication is that the under-utilisation of research findings from social science research unless both researchers and policymakers realise that they are key in dealing with these misunderstandings.

2.10.3 Disparities of Incentives from Research Findings and Competing Sources of Evidence

One of the prominent barriers documented by scholars in the research utilisation domain is that the disparity between institutional incentives for policymakers and researchers are remarkably different (Van der Arend, 2014). Furthermore, researchers are generally highly driven by the imperative to publish to maintain a strong reputation among academic research peers, and the desire to produce theoretically sound research outputs. The outputs are produced following rigorous methodologies that demand clarity of the definition of the problem, the use of appropriate methods and instruments for measuring the variables as well as analysis (Brownson et al. 2006; Bulmer, 1982; Cherney & McGee, 2011; Van der Arend, 2014). Conversely, policymakers are usually highly driven by political and practical obligations and the need to satisfy a vast range of policy stakeholders (Bogenschneider & Corbett, 2010; Bulmer, 1982; Cherney & McGee, 2011). In addition, policymakers argue that

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policymaking 'involves a complicated, almost subjective calculus that considers a number of competing factors such as values, career aspirations, media attention, and the voters' views, among many others and submit that 'research and evidence both sit as only part of wider knowledge' (Davies, Nutley & Walter, 2007: 20). Other scholars who support this view agreed that policymakers do make use of research findings in their decision-making processes. However, they claim that there are many other channels through which policymakers can get evidence and that research is only one of the inputs amongst many other legitimate ideas that policymakers consider when making policies (Craft & Howlett, 2013; Davies et al. 2007; Uzochukwu et al. 2016). According to these scholars, policymakers draw knowledge from a variety of sources which include, among others, political knowledge, rigorous scientific knowledge, professional-managerial knowledge (or tacit knowledge) and stakeholder knowledge. Some scholars have come to a conclusion that while social science research, can and does, play an important role in policymaking, 'it is often subordinate to other, more salient, factors' considered by policymakers (Bogenschneider & Corbett, 2010: 9). Therefore, this implies that for social science research to find its way in policy, it has to contend with other competing interests of policymakers. Arising from such arguments, researchers still often argue that policymakers ignore the research that they produce while on the other, policymakers contend that research is not significant enough to meet their needs (Bogenschneider & Corbett, 2010: 9; Cherney et al. 2011). Consequently, it has been observed that despite the efforts made by both researchers and policymakers to produce and make use of research in policymaking processes, both parties feel their actions are not acknowledged.

2.10.4 Networking and Trust between Researchers and Policymakers

Another critical aspect that hinders research utilisation is lack of networks between researchers and policymakers. Networks are not only important in research but also in policymaking. As such policymakers rely to a large extent on trust of the source and status of those within their networks (Stoker & Evans, 2016). It is therefore important that researchers and policymakers engage with each other and agree on certain aspects of policy as there is a greater likelihood for the research quality, dissemination and eventually utilisation to be bolstered if both parties are involved from the onset (Cherney et al. 2011; Molas-Gallart & Tang, 2011; Rickinson, Sebbsa & Edwards, 2011; Uneke et al. 2017). Undoubtedly this engagement will not come naturally; one party has to start the process. One of the ways to enhance research utilisation in policymaking is to make use of prominent researchers who already have established relationships with policymakers. These researchers are aware of the philosophical positions and ideologies that politicians and policymakers stand for and they are also aware of the preferences politicians and policymakers have and how they want to achieve their

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defined goals (Bogenschneider, Little & Johnson, 2013; Stoker & Evans, 2016). In addition, prominent researchers usually have established networks with such policymakers and therefore know how best to argue with them when recommendations for interventions are challenged and can echo the need for using social science research in various platforms that they have (Bogenschneider et al. 2013; Jennings & Hall, 2011). Therefore, if researchers do not have networks with policymakers, it will be difficult to lobby for their research findings to be used by policymakers as the forces of opposition to a policy do not stop once it is adopted as Stoker & Evans (2016) point out: "[i]n politics all that appears solid and definite can suddenly melt and become an arena of uncertainty" (Stoker & Evans, 2016: 17). This implies that researchers need to establish their trustworthiness to policymakers and improve their status for their research findings to be effectively utilised by policymakers.

2.10.5 Different Values and Expectations from Research

Another reason why social science research is often not used for policy is attributed to the roles of policymakers. One of the functions of policymakers is to justify the investment of public resources by ensuring that research conducted stimulates new knowledge that would address persistent policy problems and create interventions that would improve societal challenges (Reale et al. 2018). Accordingly, policymakers often want to understand, define, measure and capture these effects to ensure that they are using public funding to sustain 'good science'. However, the challenge in this instance is the differing perspectives on what 'good science' entails. The main concern of researchers is the robustness of the methods used, the reliability of tests and analysis and the integrity of the research effort (Blewden et al. 2010; Newman et al. 2016; Reale et al. 2018). In this regard, Weiss (1977) points out that researchers do not usually want to commit themselves to definite answers or viewpoints that the policymakers expect as it may compromise their research findings, and in the process these findings can be challenged or even refuted by evidence from other studies.

2.10.6 Lack of Coordination between Researchers and Policymakers

Some scholars base their arguments of the non-utilisation of social science research on the way in which social science researchers conduct themselves. They argue that one of the reasons for non-utilisation of social science research by policymakers is that social scientists, like scholars from other disciplines, often practice an elitist academic enterprise where they operate within their circles without the involvement of policymakers (Caplan, 1979). This being the case, policymakers often do not get to know what social science researchers are researching or the academics involved. Weiss (1979) adds that another reason why policymakers do not often utilise social science research is that research results are not always delivered to policymaking institutions. However, these views have

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been criticised by some scholars who argue that the reason for non-utilisation is mainly due to policymakers rarely request information from university-based researchers that they can use in their work (Bultitude & Sardo, 2012). Yet, involving researchers in policymaking can influence scientific research in itself by changing the focus so that it meets the needs of society more effectively, as well as directly influencing policy. The implication here is that researchers may have the information that would be used to inform policy but if the policymakers do not work in collaboration with researchers from the universities most of this work will be used for academic purposes only. Yet, research conducted in universities can be used by policymakers as sources of knowledge that can assist in solving social-economic issues affecting their countries. Some scholars add to this viewpoint and argue that governments are usually not receptive to suggestions for improvements in their policies or programmes and as a result they tend to consider policy changes only when there is a serious, or apparent crisis (Koon, Rao, Tran & Ghaffar, 2013; Uzochukwu et al. 2016). Subsequently, they only express the need for research when it is too late for it to make a meaningful contribution towards policy decisions. Generally, some of the government's new policies and programmes tend to precede rather than follow research.

2.10.7 Composition of Stakeholders in Decision-Making

A contributing factor to the non-use of social science research is the composition of stakeholders involved in the decision-making process. The policymaking process includes multiple players among others elected public representatives, senior civil servants, political party members, advisors and technical experts who have different values, ideologies, political parties and influence. This implies that there can be a bias towards particular information sources because while all these actors play an equally important role in shaping policy processes and outcomes by contributing their views in the policy-decisions of government, these stakeholders have different interests in the policymaking process (Cherney, Head, Povey, Ferguson & Boreham, 2015; Newman & Head, 2015). Consequently, research reports and documents are interpreted in various ways depending on their values, ideologies, political affiliation and influence they have (Newman, Cherney & Head, 2017). They add that this calls for negotiating and reaching a consensus position with stakeholders who have conflicting interests. It makes it difficult for research to strike a balance and to be effectively used in the policymaking processes, suggesting that policymaking is a political issue. To this effect, Newman and Head (2015: 389) succinctly put their argument this way: "[A]genda setting is a political task, as is the identification of policy objectives. Because much of policymaking is political, the use of research in the policymaking process is often political as well".

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2.11 Facilitators of Social Science Research Utilisation in Policymaking

While there are a number of barriers to social science research utilisation, there are also factors that enhance the use of social science research in policy. In this regard, conditions that would improve the use of social science research in policymaking have been categorised by some scholars into four variables namely the researcher context, the end user context, dissemination and interaction (Cherney & Head, 2010; Head et al. 2014; Newman et al. 2017).

2.11.1 Researcher Context

The first variable is the researcher context where it has been argued that research utilisation of social science research is enhanced by several factors such as: i) =qualitative or quantitative research outputs; ii) whether the research is tailored for academic users; iii) the significance of internal or external funding sources, and iv) the institutional drivers that motivate collaborations with external partners and end-users (Bogenschneider & Corbett, 2010; Cherney, Head, Boreham, Povey & Ferguson, 2013; Head, 2013). According to these scholars, another important aspect that improves research utilisation is the disciplinary background of a researcher. This is considered as a crucial aspect as the kind of interactions and the methods of communication that a particular discipline usually adopts has the potential to shape the behaviours and views about how the research is disseminated and how the researcher engages with the end-users (Bogenschneider & Corbett, 2010).

2.11.2 Adhering to Policymakers' Expectations

The second variable explains factors that can enhance the use of social science research from the perspective of the policymakers themselves. The argument is that research utilisation is likely to occur when the following requirements are met namely: i) when the research is deemed appropriate by policymakers; ii) when the research meets the needs of policymakers; iii) when the research findings coincide with the priorities of policymakers; iv) when the policymakers' views about the quality of research are positive; and v) when there is a political and economic likelihood of adopting research recommendations (Cherney, Head, Povey, Boreham, et al. 2015). In addition, research utilisation is also likely to take place when the researcher can interpret the research findings and when research findings in the form of reports and journal articles are easily accessible to policymakers (Newman et al. 2016; Ouimet & Ziam, 2009). Some scholars suggest that when research findings are available to policymakers, especially at the time when they are constrained with meeting deadlines and have no other type of evidence, it is most likely that they will utilise such findings (Newman et al. 2016; Ouimet & Ziam, 2009). They add that this is likely to happen when research findings meet the needs of policymakers.

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2.11.3 Communicating Research Findings

The third variable explains factors of dissemination and focuses on the efforts that the researcher makes to adapt and tailor research findings into reports for users and to develop strategies on how the results would be communicated (Cherney, Head, Povey, Boreham et al. 2015; Huberman, 1990). It is envisaged that the more researchers invest in adaptation and dissemination, policymakers are more likely to adopt research-based knowledge. Adaptation in this case, implies that researchers should ensure that their reports are self-explanatory; they should ensure that they make an effort to make their conclusions and recommendations more specific or more operational; they should make efforts to focus on variables amenable to interventions by users, and they should make an effort to make reports interesting (Cherney & McGee, 2011). Dissemination efforts include strategies such as communicating their findings through social media, convening meetings to discuss the scope and results of their projects with specific users or partners (Cherney, Head, Povey, Boreham et al. 2015; Cherney & McGee, 2011), and targeting particular forums to report on their research to government committees (Bulmer, 1982).

2.11.4 Relationships between Researchers and Policymakers

The fourth variable focuses on the intensity of the relationship between researchers and potential users or beneficiaries of their research findings. The argument is that for social research to be of feasible to policymakers there should be strong linkages between researchers and the policymakers (Bogenschneider & Corbett, 2010; Bulmer, 1982; Lavis et al. 2010). These studies state that strong linkages between researchers and policymakers is one of the important strategies that can improve or facilitate the use of social science research by policymakers. Similarly, some studies have identified the lack of strong linkages as a critical barrier to research utilisation (Cherney et al. 2011; Cherney & McGee, 2011; Hall & Jennings, 2010; Jennings & Hall, 2011; Oliver et al. 2014; Van der Arend, 2014). For instance, Oliver et al. (2014) point out that strong linkages create mutual trust, respect and common grounds on which to share knowledge and thus creating confidence between researchers and policymakers. Bulmer (1982) agrees that these linkages can also be strengthened when both researchers and policymakers are involved in the same committees and share common grounds on how research can influence policy. Researchers and policymakers can engage other partners whom they have engaged with over the years and whose experience and expertise may be needed to strengthen such committees (Bulmer, 1982; Cherney, Head, Povey, Boreham 2016). The argument is that the stronger the linkages are between the researchers and policymakers, the higher the likelihood is that the use of social research will occur.

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2.12 Social Science Research use in Policymaking

Different scholars have raised a concern that policymaking by government decision-makers and the community should be informed by evidence (Banks, 2009; Cherney & Head, 2010). While it is important for science to produce evidence through research the use of science to inform policy is considered a human activity rooted in social processes (Bell, 2016). This implies that explaining whether, how and why that knowledge is used in the policymaking process is a task of social science (Boswell & Smith, 2017). Consequently, through the research that they conduct, social scientists contribute to policy by determining what works and why, and what types of policy initiatives are likely to be most effective and to make attempts to explain some aspects of human action, interaction and the social world (Stufflebeam & Coryn, 2014).

One of the processes that social science research uses to contribute to policymaking is through basic, applied and evaluation research which is conducted across a range of disciplines such as anthropology, sociology, and economics (Blewden et al. 2010; Bulmer, 1982) Arising from the findings of these types of research, recommendations are given to policymakers. Policymakers use these findings to come up with interventions that can be used to solve some of the social problems society may face at a particular time. Basic research is often referred to as pure research or fundamental research and is undertaken with the intent of either advancing knowledge or theoretical understanding (Blewden et al. 2010). This type of social science research is usually guided by the researchers' curiosity and does not often have an immediate recognisable practical application (Bentley, Gulbrandsen & Kyvik, 2015). However, in some instances, basic research is used as the foundation for applied research which is the second type of research that social scientists undertake. In this case, the studies are conducted with the intent of applying research results to solve a specific or particular problem facing society and ultimately for possible policy use (Bulmer, 1982). The third type of research conducted by social scientists is evaluation research which is undertaken to determine the quality and significance of a program, policy or consumer program (Stufflebeam & Coryn, 2014). In all of these types of research, the common thread is that social scientists attach great importance to the methodologies they use since these methodologies play a vital role in producing reliable and valid evidence which policymakers can base policy decisions on (Bulmer, 1982). Bulmer adds that the purpose for which social science research is conducted, and the analysis used is another aspect in which social scientists contribute to policy. As such, he states that intelligence and monitoring research are typical examples of research that focuses on the purpose for which research is conducted and methodologies that can lead to reliable data that policymakers can use in the policy decision-making processes. According to Bulmer (1982) intelligence and monitoring is a type of social science research which involves the collection of

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demographic, economic and social data which is analysed and made available to policymakers to use in policymaking decisions as they plan for service provision in the country. In Zambia, the Central Statistics Office (CSO) is one such institution that has been mandated by the government to conduct this type of social science research and to ultimately produce comprehensive economic and social data for policymakers in the government. In addition, most of the government social surveys such as registration data, census, general household surveys and labour force surveys done by the Central Statistics Office in Zambia are conducted by social science researchers. Generally, though not regularly, such data are produced in quantitative form to make it easy for the policymakers to understand the veracity of a particular problem. This data often assists the government in the planning of activities, the implementation of policies and in the tendering of advice to various line ministers.

2.12.1 Strategic Analyses

The second contribution of social science research is what Bulmer (1982: 184) terms as "strategic analyses". According to Bulmer, strategic analyses is the type of research that is grounded in an academic discipline but firmly oriented towards magnifying a social problem that might have arisen in society. The purpose of this type of research is to bring the information to the attention of policymakers so that they act effectively towards an identified social problem and change the situation for the betterment of society. One instance where this type of social research has been effective in bringing the social problem to the attention of policymakers for possible interventions in Zambia is the issue of children forced into marriages or early marriages. These child-marriages is one social problem that has been a long-standing concern to school teachers, Non-Governmental Organisations, traditional leaders and the Zambian government. A child-marriage is where one or both parties are under the age of 18 and have not expressed their full, free and informed consent to get married (Moyo & Müller, 2011; Rammath, 2015). As a result of this escalating social problem, a number of social science research studies have been conducted within Zambia (Banda & Sitali, 2019; Mulenga, Mulenga, Bwalya & Ngongola-Reinke, 2018; Mutyaba, 2011: Mwanza, 2015) to obtain in-depth information on the underlying social, cultural and economic factors that motivate and sustain the practice of child-marriages.

Comparative studies have also been conducted in different selected districts of Zambia to provide policymakers with a wider evidence base to develop more effective prevention and response interventions (Parkes et al. 2017). The findings from these studies show that there has been little to no change in the national prevalence rate of child-marriages in Zambia. According to these studies, the major factors accounting for child-marriages are primarily the high levels of poverty, especially in rural areas where customary marriage is recognised and practised (Delprato, Akyeampong, Sabates &

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Hernandez-Fernandez, 2015)). These two factors are acerbated by a mismatch in policies resulting from the use of dual legal system where customary law runs side by side with the state law in matters of marriage, divorce and inheritance rights (Chitonage, & Umar, 2018; Ndulo, 2011). The concurrent legal systems exacerbates the problem as the state law defines a child's legal age for marriage as 18 for females and 21 for males. However, the customary law does not state any age limit, but rather the markers of maturity are based on puberty, completion of initiation rites, and engagement in sexual relations (Mweemba & Mann, 2020). As a result, in environments characterised by high levels of poverty and other adversities, the transition from childhood to adulthood can be swift and girls are forced into marriage as soon as they reach puberty regardless of their age. High levels of poverty have led to children not being able to go to school (Bhanji & Punjani, 2014; Jangara, 2017; Mann, Quigley, Fischer, 2015: Nguyen & Wodon, 2012). Furthermore, parents and guardians are forcing their young daughters to marry as an opportunity to benefit financially from the bride price and to ease the strain on household resources, especially in poverty-stricken rural areas. The vulnerability of orphans and step-children (Amoo, 2017; Ault, 1983; Mbaye & Wagner, 2017; Palermo & Peterman, 2008) are exacerbated by weakening traditional structures where social support were provided by the extended families.

Other comparative studies which include Zambia and other African countries have been conducted, and the results of these studies confirm that Zambia has one of the highest rates of female child-marriages in Africa with a reported national prevalence of 42% (Akwara et al. 2010; Mweemba et al. 2020).

Social science researchers have played a significant role in conducting research on child-marriages in Zambia and have also participated in comparative studies and based on their research findings, recommendations were made to the policymakers. Consequently, the Zambian government has since put measures to intensify the fight against child-marriages. Some of the measures include the collaboration of civil societies with the government by forming a national movement called *'Girls not brides'*. This movement is spearhead by Plan International and teaches young girls to refuse entering into child-marriages (Chitempa, 2017). Moreover, traditional leaders such as the chiefs who were not initially included in the fight against child-marriages have been included and have been key in ensuring that child-marriages are banned in their chiefdoms (Muriaas, Tønnessen & Wang, 2017) . While this study was conducted, the First Lady, Mrs Esther Lungu, launched a countrywide campaign against child-marriages. Subsequently, Zambia hosted the First African Girls' Summit to End Child-Marriages in November 2015 and this was followed by legal and regulatory frameworks that have been developed and implemented by organisations such as Plan International and CRC (Sandøy et al. 2016).

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The third purpose served by social research is what Bulmer (1982) terms scientific control. Social scientists have contributed towards policymaking in the area of medicine, specifically in public health by conducting research aimed at preventing the spread of certain epidemics that emerged in some of the communities within Zambia. In cases where a particular disease could spread unchecked, social science research has been conducted not only to control the prevalence of the disease, but to assist policymakers to come up with measures of combating the disease more efficiently and effectively. A common scenario in Zambia is the outbreak of cholera which regularly takes place in peri-urban or high-density areas during the rainy season. For instance, the heavy rains experienced from the last quarter of 2008 and another episode in 2015 resulted in water-logging and the pollution of water sources and sanitation facilities (Kennedy-Walker, Amezaga & Paterson, 2015). According to research findings by these authors, in both cases, the situation was exacerbated by the lack of proper reticulation and waste disposal systems, and the problem led to the spread of cholera in some peri-urban areas around Lusaka, the capital city of Zambia. The Public Health department of the Ministry of Health, in conjunction with the City Council, engaged social scientists in the fight against cholera. The role of the social scientists in this case was three-fold: firstly to conduct a social impact assessment to establish the causes of the pandemic; secondly, to determine the number of households affected and thirdly, to inform policymakers on the prevalence rates of cholera. The social scientists were required to make recommendations to the policymakers on the most suitable intervention measures that needed to put in place to prevent the spread of the disease (Kennedy-Walker et al. 2015). Hence, social science research contributed to the policy formulation through the interventions that were put in place by policymakers. This led to sensitising the public, not only on the dangers of cholera, but on how cholera spreads, how it can be avoided, and on the best measures that could be put in place to prevent similar incidences from happening in other parts of the country.

2.12.3 Conducting of Programme Evaluation Research

The fourth way in which social science research contributes to policy is through conducting programme evaluation research (Bulmer, 1982). Programme evaluation research is a term which is used to refer to a variety of types of research designs such as action research, evaluation research, social experimentation and project appraisal (Bulmer, 1982; Rossi, 2004). Berk and Rossi (1999: 20) define programme evaluation research as

> *the use of social research procedures to systematically investigate the effectiveness of social intervention programmes that are adapted to their political organisational environments and designed to inform social action in ways that improve social conditions.*

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Programme evaluation research is designed to observe and report on changes that occur in the world either as a result of a policy intervention or as a result of changes built into the design of the research (Berk & Rossi, 1999). Powell (2006: 1) provides a broader definition and maintains that programme evaluation research is "a type of study that uses standard social research methods for evaluative purposes, as a specific research methodology, and as an assessment process that employs special techniques unique to the evaluation of social programs". From these definitions it is evident that programme evaluation is an investigation that social researchers conduct with the intent to ascertain whether the goals of the programme were achieved. The evaluation is also intended to inform those who formulated and implemented the programme about the usefulness and weakness of the programme. An example of an evaluation programme that has been conducted in Zambia is the Farmer Input Support Programme (FISP) which started in 2004 and ended in 2011 (Jayne, Mather, Mason & Ricker-Gilbert, 2013; Mofya-Mukuka, Kabwe, Kuteya & Mason, 2013; Resnick, 2016). The FISP programme was initially implemented through cooperatives and other farmer groups, and was meant to alleviate poverty among small-scale farmers by providing them with subsidised fertiliser and hybrid maize seed. It was also to allow the private sector to participate in the supply of agricultural inputs. The project evaluation of the FISP programme was conducted in two phases: the first was a supplemental Survey (SS) which covered the periods 1999/2000, 2002/2003 and 2006/2007 farming seasons. The second was the Rural Agricultural Livelihoods Survey (RALS) which was conducted in 2012 and covered the 2010/2011 farming years (Mason, Jayne & Mofya-Mukuka, 2013). The findings of the evaluation showed that although poverty reduction was an implicit goal of the programme the majority of fertiliser was not allocated to the poorest households who cultivated less than 2ha land, but rather to households that cultivated more land (2+ ha). The latter are less likely to be below the poverty line (Mason et al. 2013; Mason & Tembo, 2015; Ricker-Gilbert, Jayne & Shively, 2013). In addition, the results further show that though one-third of government spending on agricultural sector was spent on FISP, the rural poverty rate in 2010 (78%) remained the same as in 2004 (CSO, 2009; 2011). Arising from these findings, recommendations were made to the policymakers and the implementers of the programme that for it to be successful a different strategy had to be used. It was suggested that implementing FISP through an e-voucher system may help to address the problem of late delivery (Jayne, Mather, Mason & Ricker-Gilbert, 2013; Mason & Jayne, 2013). According to the e-voucher system, the beneficiaries of FISP would be given coupons worth a certain amount of money which can be redeemed at private agro-dealers traders' shops for the inputs of their choice. According to the programme evaluators of FISP, one of the advantages of using this system was that it would reduce the problem of late delivery of agricultural inputs (Mason, Jayne & Mofya-Mukuka (2013). Another advantage was that using the e-voucher system would increase the impact of FISP by enabling

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the government to account for the total input use and possibly create jobs in the process (Mofya-Mukuka, Kabwe, Kuteya, & Mason, 2013; Sitko, Bwalya, Kamwanga & Wamulume, 2012). This evaluation was conducted by social science researchers and the recommendations were used by the Zambian government to come up with the e-voucher system. The e-voucher system is also being evaluated to see how viable it is.

2.12.4 Joint Consultation at Conceptualisation Stage of Research

Another way in which social science has contributed towards policymaking is through their interaction with policymakers during the conceptualisation stage of research (Bulmer, 1982). A participatory research design enable researchers to possibly influence the ways in which issues are perceived by policymakers, and to change their perceptions about social reality during the conceptualisation phase of the research (Lavis, Ross, Hurley, Hohenadel, Stoddart, Woodward & Abelson, 2002). Through such interaction, researchers and policymakers can jointly define the research question, remain in contact during the research process and once the research is completed, they can discuss findings and the likely implications in the policymaking process (Bell, 2016; Van der Arend, 2014). In addition, through engagement with policymakers social science researchers can sensitise policymakers on the nature of a social problem and contribute to their understanding by providing possible options for addressing the problem and the context in which countermeasures must be introduced (Bulmer, 1982). For instance, in situations where new program areas are introduced and the policymakers lack first-hand experience these perspectives can be of great value. In such cases, social science researchers use ideas to rethink through the previous program assumptions and use the experiences from previous research to construct new programmes (Weiss, 1980: 396). For instance, in Zambia social scientists have been conducting social impact assessments before the development of the copper mines to assess the risks that would affect the communities near the mining industries. However, some studies have shown that researchers recently involved stakeholders such as the mine owners and the policymakers to work together during the conceptualisation stage of the impact assessment. Resulting from these interactions risks such as air, soil and water pollution and land degradation associated mining have been reduced (Chanda et al. 2008; CSO, 2010; Kachapulula-Mudenda et al. 2018; Lindahl, 2014).

2.12.5 Participation of Researchers in Committees

The other way in which social science research contributes to policymaking is through the participation of social science researchers in commissions that investigate social problems (Bulmer, 1982). Bulmer acknowledges that when commissions investigate social problems, they usually draw on available knowledge from social science research, especially in situations where there is a gap in the available

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knowledge and where members of the public are seemingly unwilling to give evidence. In such cases, social scientists conduct interviews in such communities, interpreting results to the members of the commission in a non-technical manner and making recommendations to the commissions on the possible interventions that will address the perceived problem. This scenario is one instance in which social science results filter through the deliberations of policymakers.

2.13 Summary

This chapter started by presenting a brief overview of the history of research utilisation by discussing different waves that emerged shortly after the First World War and how these progressed over time to include research utilisation. The chapter further discussed how the concept of Scientific Medicine, now known as Evidence-based Medicine, emerged and how this led to different scholars presenting different terminologies such as knowledge translation in health as well as evaluation studies. Different viewpoints of how social science research can be enhanced or hindered have also been highlighted in this chapter. The chapter also discussed different types of research utilisation, the barriers and the facilitators of research utilisation from the perspectives of researchers and policymakers. The chapter concluded by discussing the use of social science research in policymaking processes.

CHAPTER THREE: THE HISTORY OF SOCIAL SCIENCE RESEARCH IN ZAMBIA

3.1 Introduction

It is crucial to provide an account of both the history of university education and the history of social science research in Zambia to understand the contribution of social science research to policy in Zambia. This chapter shows that the establishment of the three public universities in Zambia was a significant milestone in this discourse and provides the context against which the use of social science research outputs for policy in Zambia can be analysed.

3.2 Origins of Higher Education in Zambia

Zambia, formerly Northern Rhodesia and a former British colony became politically independent on 24 October 1964 with Dr David Kenneth Kaunda as its first president. Prior to independence, the missionaries were the primary providers of education in the country. Not only were the missionaries

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the main providers of education in Zambia they were also the ones who laid the educational foundation on which Zambia continued to build after independence (Carmody, 2008; Simuchimba, 2005). The pioneering work of the missionaries in Zambia's education system also led to the prominence of religious education as a subject matter in Zambia both before and after the country's political independence. To this effect, there are a plethora of studies on the contribution of missionaries in Zambia's education system and national development in general (Carmody, 2008; Simuchimba, 2005). It is beyond the scope of this study to detail the contributions of missionaries but suffice to recognise that Zambia owes much to the early missionaries for its educational system and as such, the history of the Zambian education system would be incomplete without acknowledging their contribution.

3.3 A Historical Perspective on Higher Education in Zambia

It has been acknowledged by scholars that during the pre-independence period in Zambia opportunities for education and training for indigenous Africans were inadequate (Chiyongo, 2010; Kelly, 1991). Chiyongo, for instance, points out that less than 1,000 learners in 1963 had passed their School Certificate Examination and the number of people with post-secondary certificates was correspondingly smaller. Table 3.1 below illustrates this point as it shows the number of educated Africans in Zambia, by highest examination passed by the year 1963, a year before independence.

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Table 3.1: Educated Africans in Zambia by highest examination passed by 1963

LEVEL	MALES	FEMALES	TOTAL
Standard IV (Grade 6)	86 900	23 300	110 200
Standard II (Grade 5	28 200	4 200	32 400
Form III (Grade 9)	3 940	480	4 420
School Certificate (Grade 12)	884	77	961

Source: Chiyongo (2010)

At a post-secondary level, the situation was even worse. For instance, in the year of attaining independence in 1964, Zambia had 138 graduates who have trained abroad in countries such as the United Kingdom (Chiyongo, 2010; Chondoka, Phiri & Chabatama, 2007; Mkandawire, 2020). At its first graduation ceremony held on 17 May 1969, the University of Zambia produced 99 graduates from the School of Humanities and Social Sciences and the School of Education only. Out of the 99 graduates, 27 were awarded Bachelor of Arts degrees while the others were awarded diplomas in Social Work and certificates in Education. It is important to note however that out of the 53 who were awarded certificates in Education, none of them were indigenous Zambians. Most of these graduates came from abroad or surrounding neighbouring countries and took the opportunity to enrol in the newly opened university. Some were of British origin who came with their families many years before the university was established. This means that the numbers of educated indigenous Zambians were minimal at the time and therefore the government had to make a concerted investment in the education sector and to establish its own public university. Table 3.2 below shows the numbers of the first graduates at the University of Zambia in 1969.

Table 3.2: University of Zambia first graduates (1969)

School	**Qualification awarded**	**Total number**
Education	Certificate in Education	53
Humanities and Social Sciences	Diploma in Social Work	19
	Degree of Bachelor of Arts	26
	Bachelor of Social Work	1
Total		99

Source: UNZA (1969)

When the indigenous Zambian government was installed post-independence, it was confronted with numerous challenges mainly related to the scarcity of educated people among Zambians and the shortage of a workforce. Consequently, one of the major challenges was the need to address these shortages and create a cohort of a human resource capable of steering development in the country. Another challenge was to integrate the European and African education systems to meet the aims of the Zambian population post-independence. Furthermore, the government needed to institute an overall primary education system (Chifwepa, 2006). To address these challenges, the Zambian

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government formulated strategies that were intended to not only broaden the capacity of the education system to accommodate more students, but also to contextualise the system so that it could respond directly to the needs of the Zambian population. Two strategies were immediately adopted; one was to embark on the expansion of education facilities in primary and secondary schools and the other was to set up a commission that would investigate the possibility of establishing of a national university in Zambia.

As a way of implementing the expansion of education facilities in primary and secondary schools, the Zambian government drafted several interventions which included the use of the Emergence Development Fund and the development of National Development Plans. Prior to independence, the colonial government had devised an Emergency Development Fund (1961–1965) and this fund was in operation 18 months after independence. One of the intervention strategies the Zambian government used to support the capacity of the education system was to retain the Emergency Development Fund and allocate most of the available monies to the education sector (Kelly, 1991; Mwanakatwe, 1971). This was done to provide additional educational facilities to enhance the education of Africans that were earlier neglected.

Subsequent National Development Plans namely the First National Development Plan which ran from 1 July 1966 to 30 June 1970, and the Second National Development Plan which ran from January 1972 to December 1976 ,respectively focused on providing sufficient education at lower and primary school levels (Kelly, 1991). Specifically, the First National Development Plan (GRZ, 1966) aimed at ensuring that every child attained four years of primary education from 1970 onwards while the Second National Development Plan (GRZ,1972) aimed at achieving an 80 percent transition rate from grade 4 to grade 5 by 1976 (Kelly, 1991; Mwanakatwe, 1971). These plans assumed that the increase in the numbers of grade four and five pupils would lead to increasing numbers at primary level. A further assumption was that it would prepare the pupils to adjust to grade seven, from grade seven to secondary school and ultimately to tertiary education.

Under the second intervention strategy, the government's focus was on establishing a higher learning institution as none existed. To achieve this, the Government of the Republic of Zambia instituted a Commission of Inquiry in March 1963 to ascertain and advise the government on the possibility of setting up a national university (Lockwood, 1963). The American Council on Education and the Inter-University Council for Higher Education Overseas selected the commission members. The commission received financial support from the Department of Technical Cooperation in the United Kingdom and, the Carnegie Corporation of New York in the United States. The next section focuses in detail on how the three public universities were established in Zambia: the University of Zambia was established in

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1966, Copperbelt University was established in 1978, and Mulungushi University was established in 2008.

3.3.1 The Establishment of the University of Zambia

Zambia (previously known as Northern Rhodesia) had no University prior to independence. The Zambians seeking university education had to go abroad and a few had to pursue their studies at other African universities. In the early 1950s, there were plans to have a university college in Zambia. However, these plans did not materialise as they were abandoned after the creation of the Federation of Rhodesia and Nyasaland in 1953 and the related political decision to establish a university college in Salisbury (now Harare), in Southern Rhodesia (now Zimbabwe). Salisbury hosted the headquarters of the federal government of Rhodesia and Nyasaland (Mwanakatwe, 1971). The University College of Rhodesia and Nyasaland was inaugurated in March 1957 but did not respond to the needs of Northern Rhodesian people. For instance, it was difficult for people in Northern Rhodesia to enrol at the University College of Rhodesia and Nyasaland as the selection criteria stated that the candidates should have A-levels. Most of the people in Northern Rhodesia could not meet this requirement and this meant that they were excluded from studying at the University College. The severe lack of graduates, in addition to Zambia's reluctance to be dependent on the Federation of Rhodesia and Nyasaland University in Salisbury, strengthened the need for the development of the University of Zambia (Stabler, 1968).

The establishment of the University of Zambia owes much to Professor Douglin Anglin. Professor Anglin visited Northern Rhodesia in August 1962 and gave a public lecture to students at Mindolo Ecumenical Foundation, a Pan-African Centre for Reflection and Fellowship in Kitwe (a town based on the Copperbelt of Zambia) on a topic he titled "A University of Zambia" (Lockwood, 1963). He was later appointed as first Vice-Chancellor of the University of Zambia. This public lecture focused on the importance of establishing a university in Zambia and it attracted a lot of interest from the audience of students who were being groomed to take up administrative positions after independence. Following this event, and debates by the Northern Rhodesian government to set up a higher learning institution that was lacking in the country, the Government constituted the Lockwood Commission in March 1963, headed by Sir John Lockwood, a former vice-chancellor of the University of London. The Lockwood Commission was tasked to advise on the development of a university (Chifwepa, 2006; Masaiti & Mwale, 2017). In its report, submitted in November 1963, and published in February 1964, the Lockwood Commission unanimously recommended the immediate establishment of a university in Lusaka (Akakandelwa, 2009; Lockwood, 1963; Stabler, 1968). In early 1964, the Zambian government accepted the Lockwood Committee's recommendations in principle and administratively

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set up a provisional council to prepare the basis for the establishment of the university. This ignited hope in the people of Northern Rhodesia to have a university of their own. In supporting the idea of establishing a university in Northern Rhodesia, the Lockwood Report stated that:

> *[T]he university must be responsive to the real needs of the country; secondly that it must be an institution which on merit will win the respect and proper recognition of the university world. The report further emphasized that unless the university satisfied these two criteria, it will fall short of meeting its national responsibility (Lockwood, 1963:2).*

The commission also recommended that the entrance requirements for admission to a university degree course should be a suitable performance at the "O" level of the GCE examination, after 12 years of school education, or the possession of equivalent qualifications (Lockwood, 1963). This was different from the requirement that were set by the University College of Rhodesia and Nyasaland whose entry requirements did not factor in the low levels of education qualifications Zambians at the time.

In January 1964, the new nationalist government led by David Kenneth Kaunda indicated that it had accepted the recommendations of the Lockwood Commission and within four months, there was an inaugural meeting of the Provisional Council of the University, the body charged with establishing the University. It is important to note that at the time the University of Zambia (UNZA) was being established in 1966, Zambia had several technological institutions in and near Lusaka and elsewhere in Northern Rhodesia. These included the Rhodes-Livingstone Institute (the founding institute for social sciences); the Oppenheimer College of Social Services; the College of Further Education; the Northern Technical College (craft and technical training); the Hodgson Technical College(trade school); the Natural Resources Development College (central training institution for agricultural, veterinary, forestry, community development and cooperative officials of the middle range); the Staff Training College (in-service training for administrative and executive grades), and Chalimbana Training College (Manchishi & Hamweete, 2018). It is important to note that while there were so many colleges, unlike other African national universities which developed out of some prior precursors where a college was upgraded to university standards, the University of Zambia was established as an independent university from its inception. The establishment was in line with the Lockwood Committee's recommendation which highlighted the non-acceptance of merging higher and further education into a university (Stabler, 1968: 34). In this regard, most of the staff who came to teach at the University in its early years came from abroad and some from other African universities.

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Based on the premise that the University needed to produce Zambian educated elites as recommended by the Lockwood Commission Report (Lockwood, 1963; Stabler, 1968), the University of Zambia was established in 1965 through an Act of Parliament, No. 66 of 1965, and it was opened on 17 March 1966 (Akakandelwa, 2009; Carmody, 2008; Stabler, 1968). The first President of Zambia, Dr Kenneth David Kaunda approved this Act of Parliament and it established the legality of the university. This was followed by an inauguration in July 1965, and Dr D. G. Anglin of Charleton University in Canada was appointed as the first Vice-chancellor of the University of Zambia. In August of the same year, the Oppenheimer College of Social Services (now Ridgeway Campus) was acquired and became the first University of Zambia campus (Carmody, 2004: 171). Teaching commenced in March 1966 followed by the installation of His Excellency, President Dr Kenneth David Kaunda as the first Chancellor on 12 July 1966. His inauguration was attended by representatives from more than 50 other universities and approximately 2000 guests.

The Zambian public supported the establishment of the University of Zambia and held high expectations of the institution. Substantial funds were used to build the infrastructure of the University of Zambia. This was to ensure that the institution could include all spheres of society, including the communities in the rural parts of the country. For instance, out of the estimated cost of £3 million, apart from the money amounting to £285 000 which was raised through the pledges of business concerns on Independence Day (24 October 1964), £150 000 was raised through the Association of the Friends of the University of Zambia through its "Man in the street" campaign. The "Man in the Street" was a national association that was established for contributions towards the University of Zambia stage one infrastructure. It had over forty-eight working committees across the country and donations as small as 10 shillings (British) were listed in the association newsletters as personal or organisational. Some students in rural areas also showed their commitment as they made their pledges through road repair works while parents who did not have money donated their farm produce (Stabler, 1968). To this effect, Dr Kaunda, Zambia's first republican president and chancellor of the institution at the time, in appreciation of the generosity and commitment by the Zambian people to have a university established in their country at the Chancellor's Installation Banquet, 12 July 1966, stated:

> *The University of Zambia is our own University in a very real sense. The story of how the people of this country responded to enthusiastically to my appeal for support is a very thrilling one. Humble folk in every corner of our nation – illiterate villagers, barefooted school children, prison inmates and even lepers – gave freely and willingly everything they could, often in the form of fish or maize or chickens, The reason for this extraordinary*

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> *response was that our people see in the university. The hope of a better and fuller life for their children and grand-children (Ajayi, Goma, Johnson & AAU, 1996: 1).*

The University of Zambia is located on two campuses with the main campus known as the Great East Road Campus. This campus is on the south side of the Great East Road approximately nine kilometres from the town centre in Lusaka while the second campus, the Ridgeway Campus houses the Medical School and is situated on John Mbita Road, four kilometres South East of Lusaka, opposite the University Teaching Hospital (Masaiti & Mwale, 2017). Lusaka is in Lusaka Province, and it is the administrative capital of Zambia.

The first three schools at the University of Zambia were Education, Humanities and Social Sciences and Natural Sciences (Chifwepa, 2006; Masaiti & Mwale, 2017). Over time new schools were added as facilities developed. These include the School of Law in 1967; School of Engineering in 1969; School of Medicine in 1970; School of Agricultural Sciences in 1971, School of Mines in 1973, and School of Veterinary Medicine in 1983 (Masaiti & Mwale, 2017; Mundende, Simui, Chishiba, Mwewa & Namangala, 2016). The inclusion of the Law School brought the number of Social Science schools to three. In 2016, the School of Medicine was divided into four stand-alone schools namely the School of Health Sciences, School of Public Health and School of Nursing Sciences. The Graduate School of Business (GSB) was established during the same time (Masaiti & Mwale, 2017). In addition to the schools and units, there are three institutes: the Confucius Institute (CI), the Institute of Distance Education (IDE) and the Institute of Economic and Social Research (INESOR). A Directorate of Research and Graduate Studies was established to coordinate the postgraduate programmes at the University of Zambia. Two support units were also established; the Centre for Information and Communication Technology (CICT) and the University Library System (Chifwepa, 2006). The University offers several degree programmes with different modes of study such as evening, full-time, part-time, parallel and distance. The degrees offered are Bachelors, Masters and Doctor of Philosophy (PhD).

At its inception, the University of Zambia enrolled 312 full-time students of whom 233 were degree students registered in the natural sciences and education, and a Social Work diploma programme (Kelly, 1991; Stabler, 1968). Out of these 20 percent were female. By the 1970 the enrolment increased to more than 1000, and 4000 in 1980 (Chifwepa, 2006). The increase in the enrolment was commensurate with the university's efforts to provide opportunities to as many Zambians as possible. It was also aimed at meeting the deficit of human resources that were needed in the country. However, while the enrolments were necessary for the development of the country, the projection was that the total enrolment would eventually level off at approximately 8000 students but the numbers kept increasing. These large numbers of students could not be accommodated, academically

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and residentially at the University of Zambia main campus in Lusaka. In view of this development, in 1975 a decision was made that the university should develop into a federal basis system (Kelly, 1991; 1999). This meant that the university would comprise three constituent institutions, one at Lusaka, one at Ndola, and another at Solwezi in the North-Western Province. A new University of Zambia Act that came into operation in 1979 provided a definitive constitution for this federal structure.

In anticipation of the federal structure development, and in response to the need to provide university training in the fields of accountancy and business administration, the University of Zambia at Ndola campus (UNZANDO), was opened in 1978 with the establishment of a School of Business and Industrial Studies, followed by the School of Environmental Studies in 1981 (Masaiti & Mwale, 2017). The University of Zambia Ndola campus was housed at the Riverside Campus of the Zambia Institute of Technology in Kitwe where teaching and residential facilities were readily available. However, this arrangement was intended as a temporary measure while physical planning, mobilisation of resources and the initial construction process got underway at the permanent site that had been acquired in Ndola. The campus was named Ndola campus although it was located in Kitwe – the building of a new campus never materialised. However, while the federal structure plans were still underway in 1987, Parliament passed a University Act which abolished the federal structure, and instead, two Acts were passed to establish two autonomous universities, namely the University of Zambia and the Copperbelt University.

3.3.2 Contributions of the University of Zambia to human resource development in Zambia

The University of Zambia made an exceptional contribution to the increase of higher education in Zambia and thus contributing to the human capital by producing graduates at undergraduate and postgraduate levels (Kelly, 1999). Most of these graduates, who obtained an undergraduate, masters or PhD have worked or are still working for the Zambian government. These graduates include among others, two Zambian presidents namely, the late Zambian President Dr Levy Patrick Mwanawasa who graduated from the University of Zambia Law School in 1973, and President Edgar Chagwa Lungu who also graduated from the School of Law in 1980. Among the prominent opposition political parties with representation in parliament who are alumni of the University of Zambia are Hakainde Hichilema, the President of United Party for National Development (UPND), and Edith Nawakwi, president of the Forum for Democratic Development (FDD). These two obtained their bachelor's degrees in Economics and Business Administration, and Agriculture Economics and Business Management respectively from the University of Zambia (UNZA, 2016b). However, Zambia's contribution to the nation is not just

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restricted to the government and political sectors; there are other alumni of the university in a broad spectrum of sectors, including Constitutional Court, Supreme Court and High Court judges.

The undergraduate alumni group include graduates with certificates, diplomas and degrees, while the postgraduate graduates obtained advanced diplomas, masters and PhDs. Even though the focus of the study is on the use of research produced by postgraduate graduates that constitute the cadre of researchers in the country, to show the graduation trends and contribution to human resources by the University of Zambia, it is essential to include undergraduates as well. Subsequently, the tables below show the graduation trends at undergraduate and postgraduate level per school since the inception of the University of Zambia in 1969.

Table 3.3: University of Zambia Doctor of Philosophy graduates by School from 1980-2015

YEAR	Agricultural Sciences	Education	Engineering	Hum & Social Sciences	Law	Medicine	Mines	Natural Sciences	Veterinary Medicine	TOTAL
1980				1						1
1982								1		1
1989		1								1
1990		1								1
1992								1		1
1993				1						1
1994								1		1
1995								1		1
1997									1	1
1998		1						3	1	5
2001									1	1
2002					1	1				2
2003							2			2
2004							1	1		2
2006				1	1			1		3
2007		2		1						3
2008		24								24
2009		2		2				1		5
2010		3		1						4
2011				1						1
2012					1	1				2
2013	1		1	1		3		1		7
2014	2	3		1		2			1	9
2015		17	1			2			3	23
Total	3	54	2	10	3	9	3	11	7	102

Source: UNZA (2015a)

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Table 3.4: University of Zambia First degree graduates per School from 1969-2014

YEAR	SCHOOL									
	Agric. Sciences	Education	Eng.	Hum & Social Sciences	Law	Medicine	Mines	Natural Sciences	Vet Medicine	Total
1968				6						6
1969		1		17	3	1		1		23
1970		3		13	3	4		3		26
1971		16	1	23	5	2		7		54
1972		26	7	29	5	10		12		89
1973	2	54	18	42	19	18		26		179
1974	12	59	17	57	25	17	1	19		207
1975	11	53	6	30	10	23	5	16		154
1976	14	69	14	61	15	37	5	31		246
1977	16	95	11	73	36	28	4	48		311
1978	12	93	17	72	38	26	4	17		279
1979	11	122	27	74	22	32	18	8		314
1980	12	126	30	113	37	48	18	16		400
1981	22	99	21	159	31	49	18	34		433
1982	2	165	36	120	24	70	30	38		485
1983	24	150	49	134	41	72	41	45		556
1984	22	67	36	74	24	76	21	33		353
1985	5	44	14	42	8	58	11	7		189
1986	74	303	115	248	70	106	58	89		1063
1987	49	215	88	161	31	115	30	65	13	767
1988	52	162	63	138	43	93	22	62	16	651
1989	38	227	79	170	31	89	32	56	17	739
1990	43	241	99	142	35	94	28	55	14	751
1991	36	159	60	264	39	100	17	61	17	753
1992	40	198	70	168	29	97	31	80	19	732
1993	31	212	86	244	39	100	26	96	22	856
1994	32	222	99	213	49	111	33	86	18	863
1995	41	218	74	254	39	110	31	71	10	848
1996	36	179	84	178	62	123	36	45	12	755
1997	47	1	0	0		113	0	0	0	161
1998	36	281	87	196	34	112	38	72	17	873
1999	42	306	85	208	29	118	35	79	12	914
2000	0	0	0	0	0	90	0	0	0	90
2001	40	224	92	172	44	1	38	85	16	712
2002	0	0	0	0	0	128	0	0	0	128
2003	63	374	89	196	76	169	36	74	12	1 089
2004	34	453	65	590	90	168	34	85	9	1 528
2005	80	471	61	317	115	160	28	121	6	1 359
2006	58	401	65	434	93	205	22	104	13	1 395
2007	64	660	77	396	73	202	21	121	21	1 635
2008	85	831	73	437	60	224	22	144	20	1 896
2009	117	985	79	431	79	255	44	161	9	2 160
2010	107	1 012	74	387	74	306	50	162	29	2 201
2011	99	1 028	80	549	110	304	59	192	66	2 487
2012	104	1 170	98	610	80	181	56	136	33	2 468
2013	82	1 488	86	636	60	419	26	135	22	2 954
2014	86	2 067	66	726	74	515	34	131	29	3 728
Total	1 781	15 330	2 398	9 604	1 904	5 379	1 063	2 929	472	40 860

Source: UNZA (2015b)

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Table 3.5: University of Zambia Postgraduate Diploma Graduates per School from 1970-2015

	Education	Engineering	Humanities & Social Sciences	Law	Mines	Natural Sciences	Total
1970	70						70
1972	42						42
1973	20						20
1976			4				4
1980				7			7
1981				6			6
1982				4			4
1984				2			2
1985				8			8
1987				7			7
1992				6			6
1994				2			2
1995				11			11
1996				11			11
1998				14			14
2000				8			8
2002	5	6					11
2003				17			17
2004	4			10			14
2005	9			9			18
2007	8			16			24
2008				3			3
2010					8		8
2011					4		4
2013					11		11
2015						8	8
Total	158	6	4	141	23	8	340

Source: UNZA (2015c)

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Table 3.6: University of Zambia: University of Zambia Masters' degree graduates by School from 1972-2015

YEAR	SCHOOL									
	Agric Sciences	Education	Eng.	Hum & Social Sciences	Law	Medicine	Mines	Natural Sciences	Vet. Medicine	Total
1972								1		1
1973				2						2
1975		2			1					3
1976				1	2			1		4
1977					1			1		2
1978					1					1
1979		1			2					3
1980		1		4				3		8
1981		3		2				2		7
1982		8			3					11
1983		1		8	1			9		19
1984		5		16	5			10		36
1985		2		4				2		8
1986		2		6	1	4	5	5		23
1987		7		1	3	5	3	4		23
1988		1		4	2	5	2	2		16
1989		1		10						11
1990		1			5	1	4			11
1991				11						11
1992	7	3	2	25	1	7	7		3	55
1993	1	4		3		1				9
1994	3		2	10		7	1			23
1995	5	6		4		1		3	4	23
1996					1	6			1	8
1997									6	6
1998	10	3	2			27		7	8	57
1999	5	3	2	8		11	1	2	2	34
2000	13	1	2	14	2	23	3	3	2	63
2002	10	8	4	14		9	7	8	1	61
2003	14	6		14		25		2		61
2004	1		1	5		97	14	3		121
2005	6	6		19		24			3	58
2006	1	19		15		13		3	1	52
2007	10	28	3	27		18		2	2	90
2008				17		7	1	2	2	29
2009	7	91	1	33		20	1		1	154
2010	18		2	69	1	57	10			157
2011	5	72	2	83	1	137	4	5	3	312
2013	6	103	6	186	5	62	4			372
2014	29	61		70	2	15		3	7	187
2015	3	92		139	8			8	3	253
Total	154	541	29	824	48	582	67	91	49	2385

Source: UNZA (2015d)

The three tables clearly indicate that the humanities and social sciences disciplines have produced more graduates at PhD, Masters and Postgraduate advanced diploma levels since the inception of UNZA as compared to the Schools of Natural and Applied Sciences. However, considering that UNZA

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has been in existence for the past fifty years (2016) and that the Schools of Humanities and Social Sciences, Education and Law are among the early schools that were established, the numbers of postgraduates are not commensurate with the numbers of graduates with first degrees. This has a bearing on social science research outputs and ultimately the utilisation of these research outputs for policy. In view of this, in Chapter Five, a comparison is made between the trends of research outputs by researchers in the social science disciplines with that of the natural and applied sciences. This is done to have an overview of the state of social science research outputs in Zambia and to understand the challenges, if any, that inhibit social science research from being useful in informing policy.

3.3.3 The Establishment of Copperbelt University

The Copperbelt University is the second-largest public university established through the Act of Parliament No. 19 of 1987 (Masaiti & Mwale, 2017; Matuka & Joseph, 2016; Mkandawire, 2020). Prior to 1987, the Copperbelt University existed as a satellite campus of the University of Zambia Federal System with two schools; School of Business and Industrial Studies (SBIS) and School of Environmental Studies (SES). However, in 1978, following a recommendation by a research team consisting of representatives of the Government of the Republic of Zambia (GRZ), the International Labour Organisation (ILO), and the United Nations Development Programme (UNDP), the School of Business was established as a separate entity from Industrial Studies. In their report, the research team found that more than 2000 managerial and supervisory positions in Parastatal companies, public institutions and private firms were at the time, filled by people who were either partially qualified or not qualified at all. The team, therefore, recommended the creation of the School of Business to create a pool of specialists in Business Management and Accountancy which was lacking in Zambia (MacMillan, 1993; Masaiti & Mwale, 2017). The recommendations led to the autonomous functioning of the Copperbelt University and its continued operations with the two Social Science Schools namely: the School of Business and Industrial Studies, and the School of Environmental Studies. The latter initially resorted under the University of Zambia Great East Road Campus.

The Copperbelt University started with 514 students, but the figures have increased to over 10,000 students and an academic workforce of over 915 (Masaiti & Mwale, 2017). At its first graduation ceremony in 1992, 100 students graduated from the various disciplines, while the number of graduates increased to 1,400 in 2013 (Masaiti & Mwale, 2017). Since its first graduation, the Copperbelt University has expanded its degree offering and student enrolment. CBU has ten faculties spread across the disciplines of Built Environment, Business, Engineering, Mathematics and Natural Sciences and Medicine, Mines and Mineral Sciences, Natural Resources, Peace and Conflict Studies, and Graduate studies.

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3.3.4 The Establishment of Mulungushi University

Mulungushi University (MU) is the third public university in Zambia. It was formerly known as the National College of Management and Development Studies, and was converted into a university by the Zambian Government in a private-public partnership with Konkola Copper Mines (KCM) on 1 January 2008. Konkola Copper Mines provides several scholarships, internships and employment to students and graduates from the Copperbelt University as part of this partnership. MU is located in Kabwe, Zambia. It consists of two campuses; the Great North Road Campus located 26 kilometres North of Kabwe, on the banks of Mulungushi River, and the Kabwe Town Campus located along Mubanga Road, off Munkoyo Street in the centre of Kabwe Town.

The University provides Bachelor of Arts degrees in social sciences-related disciplines such as Bachelor of Social Work, Bachelor of Local Government Administration and Management, Bachelor of Public Administration, Bachelor of International Relations and Development, Bachelor of Development Studies, and Bachelor of Economics. Other degrees offered by MU are a Bachelor of Commerce that includes Accounting/Finance, Economics, Management and Marketing; Bachelor of Entrepreneurship, Bachelor of Accounting and Finance, as well as Bachelor of Purchasing and Supply Management. It also offers courses via distance education. In 2009, more than 500 distance education students, mainly former diploma students of the National College for Management and Development Studies, were enrolled (Mulungushi University [MU], 2016).

MU was established with two distinct differences from the University of Zambia and the Copperbelt University. Firstly, it started as a National College of Management and Development Studies, and it was later converted to a University. The second distinction is that unlike the other two universities, it is the only public university that the government allowed to enter into a private-public partnership at its inception. This aspect has a bearing on how MU makes decisions on running its operations as it has the autonomy to make decisions on funding, enrolment and tuition fees, while University of Zambia and Copperbelt University are solely dependent on funding from the government. In this case, while the tuition fees paid by students at the University of Zambia and Copperbelt University can only be determined by the government, MU has the autonomy to determine the tuition fees independently. The implication here as will be seen in the section on funding of universities and its effects on Social Science research is that, most of the challenges faced by University of Zambia and Copperbelt universities are not common at MU.

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3.3.5 Establishment of other Public Universities

In 2011 the government declared that three additional colleges would be converted to universities; Mukuba University in Kitwe of Copperbelt Province, Kwame Nkrumah University situated in Kabwe Central Province, and Chalimbana University situated in the Chongwe district of Lusaka Province. The government has since declared the creation of more universities in the country, located in various regions; Robert Makasa University in Chinsali in Muchinga Province, King Lewanika based in Mongu in the Western Province and the University of Luapula in Mansa in Luapula Province (Manchishi & Hamweete, 2018; Masaiti & Mwale, 2017).

3.3.6 Background of Social Science Research in Zambia

Social Science research in Zambia has a long history that stretches as far back as 1937 when the Rhodes-Livingstone Institute for Social Research was established in Northern Rhodesia (currently known as Zambia) under Chapter 152 of the Laws of Northern Rhodesia (Lockwood, 1963). Since its inception, the institute has changed its name four times. From 1938 to 1965, before the establishment of the University of Zambia, it was known as the Rhodes-Livingstone Institute for Social Research (RLISR) and primarily focused on the socio-cultural effects of migrant labour (Gewald, 2008). Initially, the institute was incorporated into the Rhodes-Livingstone Museum, but as the museum became specialised in archaeology, physical anthropology and ethnology the focus of the institute shifted to social anthropology, sociology and related social sciences. Consequently, the two institutions separated in 1946 and operated under two distinct Boards of Trustees with the museum retaining the name Rhodes Livingstone, and the research institute became the Rhodes-Livingstone Institute (Mufuzi, 2011). In 1952, the RLISR moved its headquarters from Livingstone to Lusaka and was officially opened on 22 October 1953. For a while in the 1950s, the RLISR was a constituent institute of the University College of Rhodesia and Nyasaland in Southern Rhodesia (now Zimbabwe). In 1965 the institute became an integral part of the newly-established UNZA as its social science research section and was renamed the Institute for Social Research (ISR). The ISR merged with the Centre for African Studies in 1971 to form the Institute for African Studies. Since 1997, the institute operated as the Institute for Economic and Social Research (INESOR) (UNZA, 2012a:453).

3.4 Social Science Research Pre-Independence – The establishment of RLISR

The proposal to establish a research institute in Zambia (previously known as Northern Rhodesia), was made by the third Governor of Northern Rhodesia Sir Hubert Young in 1934 (Richards, 1977). Governor Young was mainly influenced by Audrey Richards, who made a remarkable contribution towards ensuring that the establishment of a research institute in Northern Rhodesia was realised. Not only

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was Audrey Richards influential in establishing the research institute, she was also instrumental in establishing anthropological research in Northern Rhodesia. She was the first person in the 1930s to conduct professional anthropological research among the Bembas in Northern Rhodesia (Musambachime, 1993) . Her study resulted in her seminal work, "Land, Labour and Diet in Northern Rhodesia: An Economic Study of the Bemba tribe", that was published when she was a senior lecturer at the University of Witwatersrand in Johannesburg, South Africa (Gewald, 2007).

There were several factors that led to the proposal for the establishment of a research institute in Northern Rhodesia, but this study focus on the four prominent ones. The first factor was the realisation by the colonial administrators that there were many problems arising from the cultural differences between the Europeans and Africans, and that these needed to be addressed (Chakanika, 1989). The conflict between the two groups arose as the European settlers and the colonial government had exploited natural resources and human resources in Northern Rhodesia. To find solutions to these problems, the colonial government found it necessary to set up a research institute to undertake anthropological and sociological research among the indigenous communities of Central Africa. The research was set up to study the many problems that had arisen from the cultural contact between the Europeans and the Africans (Mufuzi, 2011). It was anticipated that the results of these studies would assist the colonial government in governing the situation.

The second factor is that the colonial government had established urban centres along the railway line which made movements easier for migrants to be employed in the copper mines. By 1930, about 32,000 workers were employed on the mines in Northern Rhodesia (Juif & Frankema, 2018). It was during this period that the government became aware of an increase in worker consciousness amongst the African mineworkers, and that this would likely disturb the smooth running of the mines. They also observed that from the early 1920s the Watchtower activities had spread rapidly in all parts of the colony, and were still spreading, and that this would make it increasingly difficult for the mine owners to control the African mineworkers (Assimeng, 1970; Kalusa, 2011). As such, the government needed to understand the impact that the movement would have on the mineworkers, and also the effect this would have on the mine industries (Tembo, 2014). In addition, the colonial administrators observed that there were racial tensions between the African mineworkers and the mine owners, and these needed to be addressed. However, the administrators could not use their observations alone as objective scientific evidence and therefore scientific studies had to be conducted to assess what was happening in the communities (Tembo, 2014).

The third factor, and equally important, is that prior to the establishment of the Rhodes-Livingstone Institute of Social Research, the British government saw the need to establish an institute that would

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promote the education of the public in the study of Africa, its languages and cultures. Subsequently, scholars founded the International Institute of African Languages and Culture (IIALC) in 1926. Its headquarters was based in London (Lugard, 1928) and Frederick Lugard was the first Chairman of the institute. According to Lugard, the Institute of African Languages and Culture was established to enable a close association between scientific knowledge and research that would lead to practical solutions to the problems that affected African societies. To achieve the success of the institute, the board ensured that all the work of the institute conducted by researchers in different African countries was based on strict scientific principles and were carried out using scientific methods. The IIALC was also intended to link the research results to the lives of the African people. The intent was to utilise research outputs to draft policies that could be used by the administrators, educators, health and welfare workers for the benefit of the African population (Musambachime, 1996). Accordingly, it was anticipated that by fulfilling its aims, the Institute would provide a connecting link between science and the needs of societies in Africa. To achieve the above aims, the IIALC in 1928 announced a five-year research plan of how to solve problems facing changing African societies and under this plan many research fellows produced studies which advanced both theories and methods of social sciences in Africa (Gluckman, 1944b). However, Gluckman mentioned that due to dwindling financial support, the five-year research plan was not implemented as it became increasingly difficult to continue funding the growing numbers of scholars who were based outside Britain. It brought about the decision to establish a social science research Institute within Africa in Northern Rhodesia.

The fourth factor, and the most influential, was the strike by mineworkers. While acknowledging that the factors discussed above should form the basis for the social science research institute to be established in Northern Rhodesia immediately, the Northern Rhodesian government did not see the urgency to do so at the time. It was not until the first major African mineworkers' strike involving three of the four great copper mines namely Mufulira, Nkana and Roan Antelope in Luanshya occurred on the Copperbelt in May 1935 that the colonial administrators decided to establish the research institute in Northern Rhodesia (Musambachime, 1993;1996; Tembo, 2014). Prior to the 1935 strike, the Copperbelt was a mining economy that had experienced unprecedented growth during the post-world war years. It attracted thousands of African and European workers from the region, Britain and the rest of the British Empire leading to rapid urbanisation. The strikes at the Northern Rhodesian Copperbelt came after the rapid growth of most of the mining towns in the mid-1920s, leading to the growth of townships situated near Nkana mines in Kitwe, Mufulira and Luanshya Mines, and Ndola and Nchanga Mines in Chingola (Gewald, 2015; Larmer, 2016; Musambachime, 1993). The Copperbelt therefore became 'a melting pot' of African and European migrants working on the mines, but under very different labour working conditions.

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Some scholars, (Gewald, 2015; Parpart, 1986; Vaughan, 1963) have pointed out that strikes on the Copperbelt were mainly as a result of inequalities in the working conditions and facilities of the African and the Europeans working in the mines. African workers were confined to the large compounds with inadequate living and recreational facilities, while their European counterparts had much better facilities and working conditions. For example, black African mineworkers were subjected to a reduction of their wages following a sudden 'native tax' increase for those living in urban areas (Berger, 1974). Consequently, a confrontation emerged on the Copperbelt between the mining houses and many unhappy Africans because of the discrepancies in working conditions of the two groups of miners (Frankema & Van Waijenburg, 2012). Hochschild (1956) has a different view of why these discrepancies in conditions existed. He argues that the differences in the service conditions were justifiable as the Europeans had advanced qualifications and undertook more risks working under difficult conditions, compared to their African counterparts. His argument was that at the time, the Copperbelt was underdeveloped, with no amenities and with great risks of Malaria and black fever. To persuade the skilled labour force of white miners to work on the Copperbelt, the unions of Southern Rhodesia, South Africa, United Kingdom, Australia, Canada and United States had to offer exceptional packages to the white miners as without these the mines could not have opened.

The strike that took place in 1935 on the Copperbelt of Northern Rhodesia was the first mine workers strike and it was characterised by spontaneous protests against the colonial government (Henderson, 1975; Perrings, 1977; Tembo, 2014). The strike was brutally suppressed as the police opened fire on a crowd at Roan Antelope mine in Luanshya town resulting in six miners being killed by the police and 22 wounded, while the presumed strike leaders were detained by the provincial administration (Henderson, 1973; 1975). The mine managers were taken by surprise by this strike action because prior to this strike mine operations ran smoothly. Accordingly, the mine managers were under the impression that the mineworkers were happy, especially as large numbers of people came to the Copperbelt in search of jobs after the Depression. The managers saw these large numbers as an indication of job satisfaction (Henderson, 1973; Tembo, 2014). Yet, the studies that were conducted by the British and Northern Rhodesian governments revealed that there were deep-rooted challenges in the country which needed to be addressed (Gluckman, 1941; 1944b). The studies also confirmed that there was little known about the conditions in the mine compounds and the feelings of the African mine workers. This implies that had the mine-managers allowed research to be conducted prior to the strikes instead of assuming that all was well, they would have established the basis on which to engage with the workers and avoid such a strike and the loss of lives. A commission of inquiry was instituted by the colonial administrators to establish the causes of the strike. The commission concluded that the tax increase was realistic and that there were inadequate grounds for the strike, ignoring the

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actual causes of the strike. Realising the dangers of pursuing the strike, and due to the loss of their colleagues, even though the mineworkers had not achieved their purpose, they decided to call off the strike.

The strikes were a clear demonstration of the growing worker dissension among the African mineworkers and that they needed to have trade unions. In this regard, when the European mineworkers realised the intentions of the African mineworkers, they decided to use this African worker consciousness to their own advantage. They suggested to the African mineworkers that they should only be appended to the European workers' union rather than forming their own. This suggestion was rejected by the African mineworkers and thus, the European mineworkers formed their own union in 1936 to protect their own interests from the threat posed by the African mineworkers (Henderson, 1975; Simutanyi, 2008; Vickery, 1999). Through their newly formed union, in 1940, the European miners were awarded a wage increase citing the increase in the cost of living caused by the Second World War. The deprived African miners did not receive a wage increase. This led to the second mineworkers strike in 1940 that resulted in the deaths of 13 miners and 71 wounded of whom 4 died later (Mulenga, 2011).

Lamenting the injustices that took place in the mines, the African mineworkers in Nkana put a poster that read:

> *Know how they cause us to suffer, they cheat us for money, they arrest us for loafing, they persecute us and put us in gaol for tax… See how we suffer with the work and how we are continually reviled and beaten underground. Many brothers of us die for 22s 6d, is this money that we should lose our lives for? (Shillington, 2013: 1700).*

It is important to note that although the mineworkers failed to achieve their intended purpose for the strikes, the outcomes of the strikes formed an important landmark in imperial labour history and the awareness of colonial issues in Britain that led to future industrial activism in Zambia. For instance, by 1948 the first unions were formed at each of the four major mines on the Copperbelt. These unions merged in 1949 to form the Northern Rhodesia African Mineworkers Union (NRAMWU) and this later led to the formation of the Northern Rhodesia Trade Union Congress (NRTUC) in 1951. By 1952, the union consisted of 19,000 members, and were led by Lawrence Katilungu and John Chisata. The union went on a peaceful three-week strike, resulting in substantial wage reward increases (Perrings, 1977; Uzar, 2017). Other studies also confirmed that due to the strikes of 1935 and 1940 on the Copperbelt, and the formation of trade unions in Zambia the African copper mine workers' wages increased substantially. The Copperbelt miners were among the best-paid mineworkers in Sub-Saharan Africa

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(De Zwart, 2011; Frankema, 2011; Frankema & Van Waijenburg, 2012; Juif & Frankema, 2018). Thirdly, and most importantly to this study, the strikes of 1935 and 1940 formed a basis for the researchers at the then Rhodes-Livingstone Institute (current Institute for Economic and Social Research) to conduct research on the issues of labour movements in Zambia (Mijere, 1987; Simutanyi, 2008), and legal frameworks for the operations of trade unions in Zambia (Parpart, 2008; Uzar, 2017). Following the 1935 strike, the Governor of Northern Rhodesia H. W. Young emphatically indicated that the growth of industrialisation on the Copperbelt was "beyond the experience of local administration" and that there was need for an Institute to be established. The purpose of the institute would be to study this major problem that was misunderstood and poorly handled by the government in the absence of expert advice (Musambachime, 1993: 238). To achieve this, the government realised the importance of running of the country based on scientific research findings that would provide the colonial administration with the knowledge to make intelligent planning possible (Brown, 1979; Musambachime, 1993; Schumaker, 1996). According to Musambachime (1993). Initially, the idea did not receive the attention it deserved from the colonial office until the appointment of Ormsby-Glore to the colonial secretary position in 1937. Ormsby-Glore welcomed Young's earlier proposal and he ordered that funds for the new Institute be availed immediately. This was done immediately and the name Rhodes-Livingstone Institute for Social Research was suggested with the intention to link the Institute with the year 1940, the jubilee of the foundation of the two Rhodesia's in 1890 by Cecil Rhodes and the centenary of the departure of David Livingstone for Africa in 1840 (Musambachime, 1993; Tembo, 2014).

Commenting on the proposal of the Rhodes-Institute, Governor H. W Young in his speech in 1937 (cited in Musambachime, 1993: 11) noted:

> *Broadly speaking, the object of the Institute is to set up a research Organization in Northern Rhodesia which will assist the Governments concerned in the solution of the difficult problem of permanent and satisfactory relations between the native and the non-native, a problem or urgent important …We have a chance of working out the ideal relations between the two communities inhabiting the territory, whose willing cooperation is essential to the full development of its natural resources. The establishment of the Rhodes-Livingstone Institute will be a step forward towards the fulfilment of that opportunity and towards the attainment of working ideal for those of us whose lives are spent partly or wholly in British Central Africa.*

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The Rhodes-Livingstone Institute Bill was presented to the Legislative Council and adopted by unanimous vote. This paved the way for the establishment of the Institute in January 1938. Lieutenant Godfrey Baldwin Wilson, information officer in the South African Army was appointed the first Director of the newly established Institute in 1938 soon after its establishment, and was assisted by several research officers (Hansen, 2015). Although the Institute was established as an autonomous body with its intellectual freedom assured, it was controlled by a board of trustees with members drawn from the Government, the European settler community and representatives of the influential mining companies. The headquarters for the Rhodes-Livingstone was first housed at the Rhodes-Livingstone Museum in Livingstone. Initially, the Rhodes-Livingstone Museum, founded in 1934 as a memorial to David Livingstone, was also part of the Institute with its director, J. D. Clark as the secretary of the Institute. However, in 1942, these two units became independent of each other, and later the Rhodes-Livingstone Institute moved its headquarters from Livingstone to Lusaka. The administrative secretary of the Institute moved to Lusaka in 1952. The Institute was officially opened by His Excellency, Sir Gilbert Rennie, Governor of the Northern Rhodesia, and President of the Board of Trustees of the Rhodes-Livingstone Institute on Thursday, 22 October 1953 (15 years after it was established). More than 100 guests and most of the staff of the Rhodes-Institute were present at the official opening of the Institute.

The construction of the headquarters in Lusaka started at the end of 1951 with capital expenditure amounting to £29 000 designed to meet the costs of the building being financed entirely by the Colonial Welfare and Development Funds (Musambachime, 1993). At its inception, the funding of the Institute mainly came from Northern Rhodesia (52%), with donations from the mining companies operating in Northern Rhodesia namely Rhodesia Selection Trust, Anglo American Corporation (the British South African company), and the British territories in East Africa (Gluckman, 1944b; Kuczynski, 1944). However, in the late 1950s the British government decided that the Institute was too prosperous to qualify for further assistance. The loss of British funding meant that the Federal and Northern Rhodesia government had to fund the institute. After 1965, when the Rhodes-Livingstone Institute was incorporated into the UNZA system, funding came from the Zambian government.

3.5 Contributions of RLISR to Social Science Research in Zambia

To understand the successes of the RLISR, its contributions are assessed against the mandate that was given to the institute at its inception, and the focus the institute had in terms of the types of research and publications that they focused on.

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During its existence, the Rhodes-Livingstone Institute for Social Research made contributions that earned it an international reputation for its research work. In commending the works of the institute, Gwassa (1978: 103) notes:

> *Research institutes in Africa have to undertake "the twin problems of research" which involve the search for and discovery of the process of social development. Research institutions in Africa have to undertake research by analysing internal economic and social conditions in order to determine the characteristics, variables, and the criteria for national economic and political actions within a given country. This has become the functions of many social science research institutions in Sub-Saharan Africa and the pioneer in all this is the Rhodes-Livingstone Institute for Social Research.*

This statement implies that the Rhodes-Livingstone was the pioneer for research utilisation by policymakers in Sub-Saharan Africa in general, and Zambia in particular. Strictly speaking, the origins of social science research utilisation by policymakers in Zambia can be traced to the establishment of Rhodes-Livingstone in 1937. Therefore, the first major contribution of the Rhodes-Livingstone Institute for Social Research is its contribution towards research use by policymakers.

The second contribution is through its research outputs in terms of publications. It is important to note that the success of the Institute in its publications and research was primarily due to the high calibre of the directors appointed to run the institute. In this regard, the assessment of the contributions of the Institute in terms of publications is based on the first three directors, while noting the periods that the successive directors served. The reasons for this are twofold: firstly, the first three directors are considered pioneers of the Institute and its contribution to research utilisation and research publications in Zambia. This is obvious from the contributions that they made in their quest to ensure that social science research is promoted and the research findings are used by policymakers to solve the social problems that existed in Northern Rhodesia, as Zambia was known at the time. As research pioneers in Zambia, the first three directors collected, compiled and disseminated research at great personal sacrifice. Their sacrifices are well documented in the literature and includes spending months and years living among their subjects in tents, sleeping on camp-beds and using candles or kerosene lamps. This was a life they were not accustomed to in their countries of origin and they were treated harshly by the government as they were considered allies to the mineworkers (Gluckman, 1944b; Musambachime, 1993).

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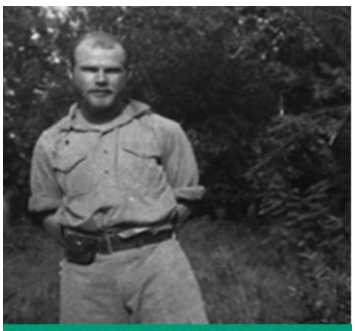
Lieutenant Godfrey Baldwin Wilson, 1938-1941

The third contribution is that the first journals out of which research publications were established in Zambia are attributed to these first three directors. The first research publications in Zambia were published after the establishment of the Institute and the appointment of the first director, Lieutenant Godfrey Baldwin Wilson (Wilson, 1940). Shortly after his appointment, Wilson noted that it was important for the future of the Institute to have immediate publications by staff. In view of this, he proceeded to publish his own research findings on the Ngonde and Nyakyusa, followed by a study co-authored with his wife entitled "A Study of an African Society" (Beidelman, 1979; Wilson, 1949). Under these difficult circumstances, in 1939 Wilson undertook field research among the African mineworkers and his study methodology included living among the African workers. The idea of living amongst the mineworkers did not please the government, and therefore the management of the mine, as well as the government officials asked him to either change the methodology or have his research terminated. In addition, the mining company denied Wilson access to the mining compounds and the workers in the mines. The government was opposed to researchers living with the mineworkers and becoming acquainted with their poor living conditions. Wilson refused to adhere to what the government officials asked him to do. Consequently, the government asked him to abandon his research and to leave the country which resulted in his resignation. Although this prevented Wilson from conducting any further research in Zambia, it did not prevent him from collaborating with his wife on their book that in many ways laid the foundations for the future work of the Rhodes Livingstone Institute (Gewald, 2007).

Another remarkable contribution of Wilson is that prior to his resignation in 1941, he founded a series of Rhodes-Livingstone papers where he published an essay of the results of his research on the economics of detribalisation in Northern Rhodesia. Despite this research adding new information on the effects of industrialisation from his earlier publications of 1933 and 1938, the study was terminated by the government (Gluckman, 1944b; Musambachime, 1996; Wilson, 1977).


Prof. Max Gluckman, 1941-1947

Wilson was succeeded by Max Gluckman, who was born in 1911 in Johannesburg, South Africa, to Russian-Jewish parents (Gordon, 2018). He studied anthropology at the University of Witwatersrand from 1928 to 1934. He worked in Zululand, following his graduation before taking up his position of director at the Institute in 1941 (Wilson, 1940). Gluckman, unlike his predecessor Wilson, sought cooperation rather than confrontation with the government. Gluckman was therefore allowed to participate in

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several government-sponsored research studies on land usage to demonstrate his willingness to cooperate with the government (Gluckman, 1944a). Another contribution by Gluckman was that he published widely on the Lozi tribe in the Western Province of Zambia (Wilson, 1940). Gluckman also launched the *Rhodes-Livingstone Journal on Human Problems* in British Central Africa in 1944 that contained short articles written with scientific accuracy to explain societal issues in Central Africa. Some of the publications culminated into larger studies published as books. These publications, and others, advanced the institute in gaining an international reputation (Gluckman, 1944a; Musambachime, 1993). Although Gluckman maintained a cordial relationship between the Institute and the government, he also received harsh criticism, especially in relation to his seven-year plan for research in Central Africa (Gewald, 2007).

The 'Seven-Year Plan' was an investigation of the effects of labour migration in relation to the differing ethnic groups. The participants involved in the study were selected based on their varying labour migration rates. Gluckman justified his research plan by stating that the study was vital to cover the major social developments in the region and deal with the most important social problems confronting the government of the territory (Gluckman, 1945). Gluckman's 'Seven-Year Plan' extended the influence of the Institute beyond the borders of Northern Rhodesia, but the government did not approve of this (Musambachime, 1993). Musambachime (1993: 241) confirms this notion by stating:

> *[A]lthough Gluckman's plan was approved by the trustees, highly praised by fellow anthropologists in Britain and South Africa, warmly approved by the Colonial Social Science Research Council in London and won the prestigious Welcome Medal in 1945 by the Royal Anthropological Institute in recognition of the plan's significance, his plan was roundly condemned by all Provincial Commissioners in Northern Rhodesia.*

Out of frustration, like his predecessor, Gluckman left the Institute in 1947 to take up a position as Lecturer at Oxford, and later moved to Manchester University where he was instrumental in establishing publishing arrangements for the Rhodes-Livingstone Institute of Social Research (Gluckman, 1944b; Musambachime, 1993).

Professor Elizabeth Florence Colson, an American social anthropologist born in Hewitt, Minnesota on 15 June 1917, took over from Gluckman first as acting director of the Rhodes-Livingstone Institute at the beginning of 1948, while still at Oxford, and later as Director in June the same year. She held the position until 1951 (Musambachime, 1993). Prior to taking up

Prof. Elizabeth Florence Colson, 1948-1951

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the position of director of the Institute, Elizabeth Colson obtained bachelor's and master's degrees in anthropology from the University of Minnesota, and a PhD in social anthropology from Radcliffe College. She first worked at the Institute as a senior research fellow (Musambachime, 1993; Wilson, 1977).

When Colson took over the directorship, the aims of the Institute were modified to focus on the systematic analysis of social problems, and to stimulate general interest in sociological research approaches (Musambachime, 1993: 242). These changes in the objectives transpired as rural and urban communities were constantly changing and adapting to changing environments, and as a result there was a need to research and find solutions to new social problems using sociological research approaches. In this regard, it can be argued, that even with the modified aims and objectives, the Institute's original focus of using research outputs to solve social problems, and to inform policy was maintained.

Colson's main contribution to social research in Zambia is based on her seminal study of the potential effects that the construction of the Kariba dam and hydro-electric power plant would have on the Gwembe Tonga of Northern Rhodesia (Colson, 1960; 1971; Crooks, Cliggett & Gillett-Netting, 2008). Professor Colson's works pioneered several studies that focused on the impact of the construction of the Kariba dam and its effects on the displaced people. The displacement took place when the governments of Zambia (then Northern Rhodesia) and Zimbabwe (then Southern Rhodesia) made a collective decision to construct the Kariba dam along the Zambezi River in 1956. The dam was constructed to create a hydroelectric power plant to process copper from the mines in the Copperbelt in Zambia, and to supply electricity to growing cities in Zimbabwe. The Kariba dam was funded by the World Bank and it is the largest man-made dam (by volume) in the world covering a surface area of 5,400 sq. km with a capacity to hold 180 cubic kilometres water. At the highest point the dam is 97 meters deep and it has a catchment area of 663 000 sq. km. However, while the construction of the Kariba dam was necessary, it resulted in the displacement of 57,000 Gwembe Tonga-speaking people who lived in the Zambezi Valley (Colson, 2003). These people were forcibly removed for the construction of the dam. Colson and Scudder conducted a study to investigate the social change, and adaptation of the Gwembe Tonga people after the resettlement (Clark, Colson, Lee & Scudder, 1995; Scudder & Colson, 2002). The study was called the Gwembe Tonga Research Project (GTRP). The results of the study indicated that several disparities arose in the resettlement process. Firstly, there was little consultation with the local people as they were informed of their resettlement a few days before they were moved. The resettlement sites were invariably selected without considering the availability of their livelihood opportunities or preferences. Thus, they found themselves in an area

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that was not as fertile as their previous settlement. Secondly, the study also found that these people were not adequately compensated. Even though the Gwembe Tonga people lived relatively comfortable and materially secure lives during the 1960s and early 1970s, they faced numerous challenges in the years that followed as food crops were low, water was scarce, and they had no access to quality education or medical services (Clark et al. 1995).

In terms of her study's contribution to research utilisation, Colson's (1960) study prompted the World Bank to revisit its social policy aimed at improving the handling of compensation and resettlement issues in the dam construction. In addition, several studies were commissioned by Zesco (Electricity supplier) and the World Bank to assess the needs of the people. The result of these studies led to the conceptualisation of the Gwembe-Tonga Development Project, which was implemented in 1998 to mitigate some of the negative impacts of the resettlement. The Gwembe Tonga Research Project also motivated other organisations to assist the Gwembe Tongas in alleviating the negative impacts. For instance, World Vision (WV) undertook some projects in 1983 and 1992, during the drought period in the Gwembe valley, and supported the families that needed food and other support.

This study also focused on the consequences of forced resettlement on culture and social organisation (the effects of economic pressure on familial relationships, rituals, religious life, and even drinking patterns) (Cliggett, Colson, Hay, Scudder & Unruh, 2007). This research directly contributed to the academic discussions of resettlement, migration, and refugee communities in applied and development anthropology. Most of her works were deposited at the Elizabeth Colson Research and Documentation Centre, at the Institute for Economic and Social Research Library. This is a section named after her in recognition of her contributions to research in Zambia during and after her time at the Institute. After leaving the Institute she went to Manchester University, first as a Simon Senior Fellow and then as a senior lecturer. From 1955 to 1959, she was an associate professor and research associate at the African Studies Program, Boston University. After her retirement from active research she settled in Monze, a town situated in the Southern part of Zambia where she passed away on 3 August 2016. She was buried in Monze on 5 August 2016 as per the Tonga traditional culture.

James Clyde Mitchel, a British sociologist and anthropologist succeeded Colson and became the fourth Director of the Institute in 1952, after working for several years as a senior sociologist. Mitchel was educated in South Africa where he obtained his first degree, a BA in Social Science, at Natal University College in 1942. After three years of war service in the South African Air Force as an air navigator, he enrolled at the University of Cape Town, where he graduated with BA (Honours) in Sociology in 1948. From Cape Town he went to Oxford and was awarded a D.Phil. in Social Anthropology in 1950 (Kashoki, 1978; Musambachime, 1993; 1996).

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Charles M. N. White obtained his M.A degree at Oxford is Classics and Jurisprudence, and came to Northern Rhodesia in the Provincial Administration in 1938, serving mainly in North-Western Province until 1949. He was seconded as the director of the Rhodes-Livingstone Institute in 1955 to 1956, and again from 1960 to 1962. From 1963, until his retirement in 1969, he continued working in Zambia as a local courts adviser (Musambachime, 1993; 1996; Wilson, 1977).

Henry Fosbrooke succeeded James Clyde Mitchel and became the fifth Director of the Institute after retiring from Colonial Service in 1956. Prior to taking up the position of Director at the Institute, between 1949 and 1952 he worked as a government sociologist in Zambia before he resigned in 1961. He went back to Tanzania as conservator at the Ngorongoro Conservation Unit following his resignation. Henry Fosbrooke was born in Lanchashire in 1908. He obtained his BA and MA degrees at Cambridge University in 1930 and 1934 respectively (Musambachime, 1993; 1996).


Prof. Alistair Heron, 1963-1967

Alistair Heron, a British psychologist and writer born in Edinburgh, UK in 1915 (Heron, 1964) was appointed the sixth Director of the Rhodes-Livingstone Institute and served in this position for 4 years (1963-1967). In 1967, he resigned as director, but continued serving as professor of psychology and director of the Human Resource Development Unit at the University of Zambia until 1968. Alistair Heron's main research contributions were in the field of human development, and in cross-cultural studies. His contributions in Zambia were acknowledged and recognised by the Zambian government as he became a member of the Distinguished Service in October 1971. The government awards this honour on persons who have made remarkable contributions to the country. Alistair obtained his MSc in Psychology at the University of Manchester in 1949 and his PhD in London in 1951 (Musambachime, 1993).


Dr. Philip Nsugbe, 1968-1971

Philip Nsugbe was a Nigerian anthropologist. He succeeded Alistair Heron in 1968 and became the Eighth Director of the Rhodes-Livingstone Institute. Phillip Nsugbe studied at Edinburgh University and obtained his MA in Social Anthropology in 1958. Later the same year, he was awarded the Dutch Government International Fellowship in 1958, and in 1960, he obtained his Master of Sociology with Economics and Politics from the Netherlands Institute of Social Studies. Prior to his appointment as Director, he worked at the Centre for African Studies first as the head of administration and then as acting director. After completion of his term of office as director

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in 1971 he transferred to the department of Sociology, UNZA, as senior lecturer (Musambachime, 1993).

Other directors of the Rhodes-Livingstone Institute whose contributions were not detailed in the reviewed literature, but whose contributions as directors, and in many other respects, cannot be ignored include the following:


Prof. Jaap van Velsen, 1970-1973

Professor Jaap van Velsen, a Dutch-born British anthropologist was the first professor of sociology at UNZA. Prior to this he was the director of the Institute of African Studies from 1970 to 1973. Jaap van Velsen studied law at Utrecht, before studying anthropology at Oxford and Manchester. He did fieldwork among the Tonga in Nyasaland, developing a method of 'situational analysis' in his 1957 PhD studies (eventually published as The Politics of Kinship), and later fieldwork among the Karamajong in Uganda. In 1959 he joined the African Studies department at the University College of Rhodesia and Nyasaland, but was deported in 1966 due to his opposition to Ian Smith's UDI. In 1973, he moved to the University College of Wales, Aberystwyth before retiring in 1983. (Kashoki, 1978; Musambachime, 1993; Wilson, 1977).


Prof. Mubanga E. Kashoki, 1973–1978

Jaap van Velsen was succeeded by a Zambian, Professor Mubanga Kashoki, who served as director of the Institute for African Studies from 1973 to 1978. After his tenure of office as the Director for IAS, he was appointed principal of the UNZA Ndola campus from 1978 to 1992. He has since worked as a researcher in the socio-cultural programme at the Institute for African Studies, presently INESOR. Professor Kashoki has published widely in his area of specialisation – socio-linguistics. His publications are ‘Keeping in Step with Modern Times: A Comprehensive Account of Lexical Adoptives in Ichibemba’ and ‘What on Earth is a Ruling Party in a Multiparty Democracy?’ (Akakandelwa, Moyo & Kanyengo, 2016; Macwan'gi, Mumbi & Kanene-Mwale, 2016).

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Prof. Robert N. Serpell, 1978 – 1983

Robert Serpell, born in 1944 in England is a professor of Psychology at UNZA. He served as the director of the Institute for African Studies from 1978 to 1983. From 2003 to 2006, he was the vice-chancellor of the University. Professor Serpell has conducted numerous studies in cultural aspects of human development, intelligence, multilingualism, literacy, assessment and family services for children with disabilities, educational curriculum development, and on gaps in academic performance between ethnic groups (Akakandelwa et al. 2016; Musambachime, 1993).


Dr. Steven P.C. Moyo, 1983 – 1988

Dr Steven P. C. Moyo served as the Director for INESOR for five years from 1983 to 1988. He holds a PhD in Political Economy and Linguistics and a Master's Degree in Linguistics. Upon assuming the directorship, Dr Moyo managed the reorganisation of the then Institute for African Studies. This reorganisation opened up participation by non-academics in commissioned research, monitoring, evaluation and feasibility studies to complement the core business of basic research, and to ensure that the Institute's research programmes and other activities were self-funded (Akakandelwa, Moyo & Kanyengo, 2016; Macwan'gi, Mumbi & Kanene-Mwale, 2016; Musambachime, 1993).


Prof. Oliver S. Saasa, 1989-2001

Prof Oliver Saasa, a renowned economist in Zambia, served as Director for 12 years from 1989 to 2001. Prior to that, he was the head of the department of Development studies at UNZA. Professor Saasa has written numerous publications and conducted research on various economic issues within the region. He holds a Master's of Science in International Studies and a PhD in International Economic Studies from Southampton University in the United Kingdom (Akakandelwa, Moyo & Kanyengo, 2016; Macwan'gi, Mumbi & Kanene-Mwale, 2016).


Dr. Mutumba M. Bull, 2005-2008

Dr Mutumba Mainga Bull, a historian and governance expert, served as director of INESOR from 2005 to 2008. After her tenure as director, Dr Bull continued working at INESOR as a senior research fellow. She obtained her PhD degree (PhD) in history from the University of London in 1969, after obtaining a Master's degree from Cambridge University. She was the first Zambian woman to obtain a PhD and the first woman director of the INESOR (Akakandelwa et al. 2016; (Akakandelwa, Moyo & Kanyengo, 2016; Macwan'gi, Mumbi & Kanene-Mwale, 2016).

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Dr. Philemon Ndubani, 2008-2010

Dr Philemon Ndubani, a public health specialist, served as director of INESOR from 2008 to 2010. Dr Ndubani obtained his PhD at Karolinska Institute in Stockholm, Sweden. After leaving INESOR, Dr Ndubani joined the Centers for Disease Control and Prevention (CDC-Zambia) as the public health and behavioural specialist in-charge of HIV prevention. Dr Ndubani's research contributions are in health systems, health seeking behaviours (examining obstacles to health services accessibility and utilisation by communities (especially the vulnerable groups) and gender issues including male sexuality, Gender Based Violence and male involvement in health (Akakandelwa, Moyo & Kanyengo, 2016; Macwan'gi, Mumbi & Kanene-Mwale, 2016).


Prof. Mubiana Macwan`gi, 2010-2016

Professor Mubiana Macwan'gi served as Director of INESOR from 2010 to 2016. She holds a Ph.D. in Public Health, Health Behaviour and Health Education from University of North Carolina at Chapel Hill, USA. Professor Macwan'gi became the director when the Institute's academic staffing levels were low and it relied on research contract funding. She responded to these challenges by strengthening research partnerships with relevant local and international institutions, and consultancies. She has more than a decade's experience in qualitative and quantitative research, monitoring and evaluation, program conceptualisation and development. Her research contributions have been in primary health care (health reforms) such as health financing, User Fees, Referral Systems (Akakandelwa et al. 2016; (Akakandelwa, Moyo & Kanyengo, 2016; Macwan'gi, Mumbi & Kanene-Mwale, 2016).

This section has demonstrated that the contributions made the featured directors made Rhodes-Livingstone Institute for Social Research one of the foremost centres of Social Research, and its research publications have not only contributed to research utilisation, but have also made Northern-Rhodesia one of the best documented areas in the continent in Africa. In the next section, the discussion focuses on social science research in Zambia post-independence.

3.6 Social Science Research in Zambia Post-Independence

The previous discussion outlined the different names INESOR have been known by over the course of its history. In 1962, the Institute became part of the newly established University College of Rhodesia and Nyasaland. In 1964, the first university was established in Zambia following the country's political

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independence. During this period the RLISR was transferred to the newly established University of Zambia and was renamed the Institute of Social Research becoming the oldest element of the new University. After the institute became part of UNZA, there was a change in its focus, not only in terms of its operations, but also in terms of its structure and research agenda. Although it was an independent entity that served the research needs of the university, the institute was initially designed to function as the research arm of the School of Humanities and Social Sciences (Kashoki, 1978: 361). However, due to UNZA's precarious financial situation the institute was inadequately funded resulting in its inability to broaden its base to make it interdisciplinary within the social sciences as initially planned. Thus, to continue serving its purpose, new aims were formulated to focus on two important aspects which were firstly to make research programs truly interdisciplinary, with social sciences broadly interpreted, and secondly to make the work of the Institute relevant to the needs of Zambia (Gwassa, 1978).

To achieve the first aim which was to make its research programme interdisciplinary, the Institute drew research fellows from different disciplines in the various departments of the School of Humanities and Social Sciences namely Development Studies, Political Science, Economics, Psychology, Public Administration etc. The Director of the Institute for African Studies had to run the affairs of the Institute in consultation, and in close and constant cooperation, with colleagues in the School of Humanities and Social Sciences (HSS) (Van Velsen, 1974). The Director also worked in close conjunction with the Institute Programme Committee on which all the departmental heads in HSS were represented. In addition, the Research and Higher Education Committee co-ordinated all research work in the university, and it consisted of all the deans of schools and directors of research units. This Committee was an important point of contact as it provided a platform for exchanging ideas between the director and colleagues in areas in which the director may not be competent. In addition, the School Research and Higher Degrees Committee brought together all the departmental heads in the school, as well as the directors of the institutes, and the Rural Development Studies Bureau to plan and review research projects to ensure coordination (Kashoki, 1978).

The second aim emphasised that the research projects carried out at the institute should be relevant to, and geared to the contemporary needs of Zambia, either as a country itself, or a part of the broader African context (Musambachime, 1993; Stabler, 1968). What this implied was that if the focus of the research conducted at the institute was to enhance development by addressing the needs of the Zambian people, the research outputs emanating from the research conducted by the institute should therefore be perceived as useful. One of the most important uses of social science research is to have its research outputs used by policymakers for evidence-based decisions, otherwise it would not be

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profitable (Kashoki, 1978; Musambachime, 1996). However, it is important to note that the institute deviated from the second aim which required focusing on applied research to pure research, as Van Velsen referred to this as "a quest for knowledge for the sake of knowledge detached from the social environment in which it was pursued" (Van Velsen, 1974: 4). This was not in line with the founding objectives of RLISR.

Rhodes-Livingstone focused on undertaking anthropological and sociological research aimed at assisting the government to address the social problems in the country and other parts of Africa (Mufuzi, 2011). Instead of focusing on research that would inform policy, INESOR began to conduct more commissioned research for donor agencies and a few for the government. This is mainly because the funding the institute used to receive from the government had dwindled over the years and the institute needed to continue with its mandate of conducting social science research. It is important to note that over the years the funding of INESOR has continued to dwindle and the institute still undertakes more research commissioned by donors, than research commissioned by the government (Masaiti & Mwale, 2017; Mkandawire & Ilon, 2018). Table 3.7 below illustrates this point as it shows the pattern of the consultancy in which INESOR has been operating from 2005 to 2014 (no information is available for 2006 and 2007) while the next table (Table 3.8) shows the major funders who contributed to INESOR.

Table 3.7: Major Funders for INESOR

YEAR	DONOR	GOVT	SELF	TOTAL
2005	3	2	1	6
2008	10	9	1	20
2009	8	4	0	12
2010	19	5	1	1
2011	11	8	1	20
2012	13	10	1	24
2013	16	10	5	31
2014	22	13	0	33
TOTAL	**101**	**61**	**10**	**172**

Source: UNZA (2014a)

Table 3.8 provides an indication of the relatively high level of reliance on donor funding at INESOR. Apart from the Economic Association of Zambia, the remainder of the research funding was consultancy-based research.

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Table 3.8: INESOR Major Funders of Research from 2005-2014

	SOURCE OF FUNDING	AMOUNT (USD)	AMOUNT (ZMK/W)
1	USAID	US$1,460,484,	ZMK5,343,336,000
2	NORAD	US$300,000	ZMK1,128,000,000
3	Swedish	US$184,000	ZMK691,840,000
4	World Health Organization (WHO)	US$11,000	ZMK41,360,000
5	Economics Association of Zambia	US$79,000	ZMK367,350,000
6	National AIDS Council (NAC) (United Nations Children's Emergency Fund (UNICEF), Global Fund, United Nations Development Programme (UNDP), Ministry of Health (MOH), Ministry of Community Development Mother to Child Health (MCDMCH), Centre for Disease Control (CDC), United States Agency Independence Development (USAID), Population Council)	US$322,580.64	ZMK1,500,000
7	United Nations International Children's Emergency Fund (UNICEF), United Nations Population Fund (UNFPA), World Health Organisation (WHO) and World Bank	US$600,000	ZMK2,889,000
8	Economic and Social Research Council, Nairobi, Kenya	£33,744	ZMK278,556,720
9	Research Triangle Institute (RTI)	US$1,964,285.71	ZMW1,000,000
10	University College London, Leonard Cheshire Disability and University of Stellenbosch	£185,000	ZMW1,859,702,85

UNZA (2014b)

Note: Zambian currency was rebased by removing out one zero and the trading currency of ZMK became obsolete and was replaced by ZMW on June 30 2013. Available at: http://www.xe.com/currencytables/?from=ZMW&date Accessed on: 13/02/2018

Source: INESOR Annual Reports, 2005 and 2014 (Excluding 2006 and 2007)

The implications of dependency on donor funding by African countries has been discussed by a number of scholars (Wight, 2008; Wight, Ahikire & Kwesiga, 2014) and they argue that donor-funded research has a number of challenges in relation to national development, institutional development, as well as individual progression of the researchers in universities. These arguments are interconnected with the first argument being that with this kind of funding from the donors, researchers from African countries do not have the opportunity to set their own research agendas. Donor-funded research implies that often the researchers complete the work as consultants without ownership of the resultant research outputs or the utilisation thereof. Consequently, this may hinder the effective use of research findings by the researchers and the policymakers in the country. Using the same argument in the case of INESOR, these studies are not only likely to deprive Zambia from using research outputs to inform policy, but they are also likely to deprive the country from using local knowledge for development. However, while this may be so, it is also important to note that some donor-funded research do have a policy direction, mostly those that come through bilateral

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agreement between the donor and the receiving government to solve a specific problem. For instance, most programmes directed at HIV prevention, Malaria and provision of child immunisation vaccines in Africa in general, and Zambia in particular, are donor-funded but with a focussed direction to provide policies for prevention and treatment of specific diseases.

The second argument concerns the inequalities that exist in the collaborations that exist between the funders and the recipients of research funds (Bulmer, 1982; 1984). It has been argued that the collaboration between the funders and the funding recipients is unequal in terms of ownership of research outputs and publications in donor-funded projects (Gaillard, 2010; Tijssen, 2007). Since INESOR is dependent on donor-funded research, it is most likely that it has some collaborations with some of the funding institutions in developed countries. In these instances, the researchers and the institution is unlikely to be subjected to these unequal terms when it comes to ownership of research outputs and publications. Research conducted by several scholars suggest that the collaboration between the funding countries and the funding recipients in African countries have their obstacles which are reflective of the unequal relationships (Boshoff, 2010; Jentsch & Pilley, 2003). In their studies, they conclude that while collaboration in research is desirable as it is expected to generate scientific papers in national and international journals that involve the collaborators and African researchers as co-authors, this is not the case. They point out that there are some structural inequalities and historical patterns of dominance by the North over the South where research outputs are predominantly authored by the western scholars at the expense of their African counterparts. Dahdouh-Guebas, Ahimbisibwe, Van Moll & Koedam (2003) conducted a bibliometric study of research carried out in 48 least developed countries, and found that 69% of papers based on research carried out in the developing countries involving at least one author from a developed country, did not acknowledge collaborators from developing countries in the research paper as co-authors. Yet, they acknowledged in their survey that they had collaborated intensively with scholars from developing countries. The study also found that about 40% of corresponding authors indicated that the North-South collaboration research mostly included the developing country researchers conducting fieldwork in their own countries on behalf of foreign researchers. These results are similar to Wight (2008), who submits similar findings from his study and indicate that there is a tendency of utilising African researchers to only contribute towards collecting data, while researchers from the developed countries analysed and used the results for their publications. To this effect, Mouton (2008) argues that this situation exacerbates inequalities as researchers in African countries are limited in gaining opportunities towards acquiring technical skills and contributing to publications conceptually. Yet, one must acknowledge that building indigenous research capacity can enable researchers from developing countries to be able to translate results of studies carried in their national settings.

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Eventually results of such studies can also increase their knowledge-base which is needed for them to contribute to finding appropriate solutions that can inform policy in their countries.

It has further been argued that consultancy work fails to build institutional research capacity. Wight argues that most of the research commissioned by donors results in reports that are not usually disseminated to a wider audience, thus not contributing to the body of scholarship in a field (Wight, 2008). Another argument is that consultancy work also leads to academic staff getting diverted from teaching, supporting colleagues or publishing (Costello & Zumla, n.d.; Jentsch & Pilley, 2003; Wight, 2008). Yet publishing is one of the most important requirements for academic progression in most universities and the public-funded universities in Zambia are no exception.

The question remains why African researchers still continue to collaborate under such unequal conditions and why researchers in African countries are not collaborating amongst themselves. Studies have shown that as a result of a lack of funding, collaboration among African scholars is low (Abrahams, Burke & Mouton, 2009; Falagas, Karavasiou & Bliziotis, 2006). Mouton (2008) explains that this lack of collaboration among African researchers is compounded mainly by a lack of funding for these researchers to travel and exchange ideas with colleagues within Africa, as well as the absence of organisations that could play a facilitative role in bringing African scholars together. As a result, there has been limited platforms on which to share their research outputs regarding the nature and impact of research utilisation in Africa. He adds that in the absence of funding, researchers from some of the African countries are not members of any scientific society or academy of science and this has resulted in some of them failing to attend a single conference in a year. To this effect, Mouton (2008) suggests that it is important for researchers to be part of the scientific academies and professional societies as this enables them to attend conferences and to network with other researchers. Consequently, these platforms allow African researchers the opportunity to disseminate their research findings, exchange knowledge and learn of possible publication outlets. Thus, ultimately promote and advance science among various stakeholders.

In Zambia, a lack of funding to higher learning institutions generally, and to research-related activities in particular, has a long historical base which stretches as far back as the 1970s when oil prices rose and copper prices fell on the international market. The low price of copper on which Zambia's economy depended on, in combination with the rise in the oil price, saw Zambia's economy dwindling to the levels to such an extent that it had to borrow heavily from the World Bank and the International Monetary fund. In the following section, a detailed account is provided of the factors that led to a lack of funding in higher learning institutions, and the consequences a lack of funding has had on social science research in Zambia.

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3.7 Historical Factors leading to lack of Government Funding for Social Science research in Zambia

Zambia faced several challenges in its economy leading to the crisis of funding in the education sector and research activities in public universities (Kelly, 1991). These challenges the world economic recession, and excessive borrowing from the IMF/World Bank under harsh conditions which the Zambian government could not meet. Zambia supported the liberation (of wars) struggles in Southern Africa, and these were accompanied by the closure of traditional export and import routes that passed through Zimbabwe. These factors were exacerbated by an over-reliance on the mining industries and the failure by the Zambian government to settle the external debt. These factors impacted negatively on the funding of universities, and ultimately affected social science research output and research utilisation in Zambia.

3.7.1 Over-Reliance on Mining Industries and the Decline of Copper Prices

Zambia's economy relied more on mining industries in general, and specifically on copper, for several years instead of diversifying its economy to include manufacturing, tourism and agriculture. The following figures demonstrate the extent to which Zambia has depended on mineral production in its early years. From 1966-1970, receipts from taxation on mineral production and sales constituted more than 55% of annual government revenues, 60% of annual government expenditure, 44% of the GDP, and 95% of export earnings while during the period 1973-1984 copper exports accounted for 92.2% of Zambia's economy (Mcculloch, Baulch, & Cherel-Robson, 2001). Due to Zambia's dependence on copper, the collapse of the price of copper in 1975, resulted in Zambia's foreign assets exceeding its external public debts, and this happened at a time when the government did not expect a downturn in the price of copper (Kelly, 1991). To maintain the levels of the much-needed imports, the government had to make use of its external reserves and engaged in short, medium and long term borrowing from multilateral agencies for major public projects and for general budgetary support. The debt was exacerbated by the fact that as the balance of deficit grew, the government turned to the IMF for a balance of payment support. However, while the IMF supported these requests, the support offered by the IMF and World Bank was accompanied by conditions that the government did not always meet. For example, under the leadership of Kaunda the agreements with the IMF/World Bank were nullified, often restraining the country's relationship with the donor community (Babalola, Lungwangwa & Adeyinka, 1999; Barton & Barton, 2016). This is illustrated by Kaunda cancelling the IMF/World Bank reforms in 1987, and replaced them with a development plan based on the notion of development from the country's own resources. He did this without offsetting the debt that Zambia owed the IMF/World Bank. Yet, it is important to note that meeting the conditionalities of SAPs was

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the basis upon which Zambia entered economic ties with the community of donors. The nullification of the agreements with the IMF/World Bank, increased Zambia's national debt threefold by 1980 (Kelly, 1991: 13). The cost of servicing these loans also increased drastically between 1984 and 1986 rising from 13% exchange earnings in 1984 to 43.3% in 1985, and almost 100% in 1986 (Kelly, 1991). By 1987, Zambia's debt had escalated beyond what the country could pay. Subsequently, due to this cumulative debt and the failure by the government to offset it, the government opted to forego the IMF's help; the result of this was an accumulation of more debt. Babalola, Lungwangwa & Adeyinka (1999) observe that under Kaunda's rule, national policies were influenced more by his ideological, political, historical and social considerations, than the systematic economic analysis of the technocrats inside or outside his government.. It should therefore be noted that while the Structural Adjustment Programmes (SAPs) acted as the dominant force that significantly influenced the logic of the decision-making process in education throughout the 1980's in Zambia. The effects of SAPs on education was due to the Zambian government's internal inefficiency to adhere to the conditionalities, effect good policies, and to effectively manage its resources. This goes to show that the Zambian governments' policies in some cases exacerbated the consequences of the economic decline leading to a lack of funding to the education sector, and ultimately a lack of research funding in public universities. This lack of local funding meant that the universities had to increasingly depend on funding from external donors. The economic decline is also exacerbated by the fact that the country's manufacturing and industrial sectors including its mining industry are still heavily dependent on importation of capital goods and raw materials from industrialised countries. This situation has seen Zambia's development to potentially be determined by external forces which it has no control over.

3.7.2 Introduction and Implementation of SAPs

Another historical factor that contributed to the lack of funding for higher learning institutions, and ultimately to a lack of research funding in Zambia was the introduction and implementation of the SAPs (Masiye, Chitah & McIntyre, 2010) . Zambia first entered into economic reform agreements with the IMF and the World Bank in the mid-1970s, but the more formal SAPs were undertaken in the mid-1980s. However, according to Kelly (1999) even though SAPs were formalised in the mid-1980s, the United National Independence Party (UNIP) government led by Dr Kenneth David Kaunda did not fully implement them, leading to some consequences which are discussed later in this chapter.

The full implementation of SAPs took place during the 1991 transition of the Multi-Party Democracy government until 1995, and it was during this time that the effects of SAPs impacted negatively on the education sector in Zambia. This was mainly due to harsh economic conditions resulting from the demands made by the advocates of SAPs to cut expenditures on all the social sectors including

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education (Kelly, 1991; 1999). While this reduction in resource allocation to education affected all sectors of the education system, higher education suffered more as one of the demands made by the advocates of SAPs was that the government should reduce their spending on higher education and invest more on basic education. This led to the withdrawal of the government's financial support to higher education in favour of basic education, and in the process research and development drastically declined. For example, between 1975 and 1984, before the introduction of SAPs, the percentage of the national budget for education was an annual average of 12.2%, the share of education in the national budget dropped to an annual average of 9.0% cent since the country implemented the conditionalities of SAP in 1984 (Babalola et al. 1999). With little resources allocated to universities, and considering other competing needs of the universities such as remuneration for staff and other running cost, it becomes obvious that there was little, if any, resources allocated to research and this situation exacerbated the lack of research in the universities. Some studies on the higher education system in Zambia lists various challenges arising from SAPs. Prominent among them are studies conducted by Kelly (1991) and Takala (1998) who submitted that the crisis of SAPs resulted in reduced government spending to the education sector to the extent of transferring responsibilities for educational costs to the parents or the communities. (Babalola et al. 1999) adds that SAPs contributed to retrenchment, retirement, unemployment, poverty and reduction in the quality of life. These two sentiments indicate that it is likely that some parents who were retrenched and at the same time forced to take over the responsibilities of educational costs were unable to educate their children amidst poverty.

Other scholars further argue that SAPs have contributed to a lack of teaching materials and maintenance, overcrowded classrooms and dilapidated educational facilities in the educational sector. At the university level unattractive conditions of service for lecturers resulted in the exodus of lecturers who migrated to neighbouring countries and consequently the decline in the quality of higher education (Kelly, 1991; Noyoo, 2017). These studies have reached similar conclusions viz. that the education sector has been in a major crisis in Zambia during the period of SAPs. From the findings of these studies the issues raised compounded the challenges leading to lack of research and research output in higher learning institutions, and ultimately to research utilisation.

3.7.3 Steep Decline in Copper Prices

While analysing the challenges arising from SAPs is pertinent, it is important to note that the crisis of funding for education and for research produced by public universities in Zambia cannot be exclusively explained by this factor alone. There are several other external and internal factors that contributed to implementing the SAPs, and ultimately to lack of funding in the education system in Zambia. Firstly,

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it is important to note that to most African countries in general, and Zambia in particular, SAPs came as a possible way out of the economic difficulties and to maintain political legitimacy and stability. It should be noted that at the time Zambia entered into the SAPs agreement with the IMF/World Bank, the economy had reached significant levels of strain (Babalola et al. 1999; Bosman et al. 2017). The indicators of the strain in Zambia were the steep decline in the price of copper that was, and remains, the country's major export and foreign exchange earner, and the rise in the importation bill. These factors combined with the rise in the re-routing of the trade route from the south to the north in Tanzania; the devaluation of the local currency; the liberation wars in Southern Africa supported by Zambia, and the heavy subsidies to social services and parastatal sectors caused economic difficulties, and Zambia easily became a candidate for SAP. This was exacerbated by the Zambian government's failure to meet the obligations of the loan agreement with the IMF/World Bank resulting in the accumulation of interest, and ultimately to excessive borrowing and less spending on the universities. The outcome of all these issues has had unprecedented consequences for UNZA in general, and more so for the social science research institutes in Zambia.

The question that remains however is how these financial difficulties impacted on social science research in Zambia. The next section focuses on how these factors have affected social science research in Zambia.

3.8 Lack of Government Support and Its Impact on Social Science Research in Zambia

The challenges faced by social science research in Zambia resulting from lack of government support especially in terms of funding, are numerous, complicated and are found in a wide range of issues. Prominent among these issues are the closure of social science research institutes and research bureau established at the same time as INESOR in 1966; poor conditions of service resulting into the exodus of lecturers; the closure of some social science journals; inconsistency in the publication of these journals, and to some extent the lack of financial resources to enable researchers attend conferences. Chapter Five provides a detailed overview of the inconstancies in publication of journals as a result of a lack of financial resources.

3.8.1 Closures of Social Science Research and Research Bureaux

Post-independence, in 1966 several research institutes and bureaux, including the Institute for Social Research, were established. These included the Centre for Continuing Education, the Centre for the Arts, the Education Research Bureau, the Rural Development Studies Bureau, and the Institute of Human Relations (Musambachime, 1990; 1996; 1997). Each of these units were headed by a director. The activities of these units were primarily funded by the university from its own resources allocated

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to it by the government. Therefore, when the government funding to the University was adequate, research activities were adequately funded for teaching and research staff in the university. The research institutes also conducted research on behalf of organisations outside the university. However, from the late 1980s, onwards government funding to the university declined, and this affected research funding within the university. Consequently, research projects could not be conducted and research staff received salaries with no monies for operational or running expenses. In the end, the lack of government funding necessitated a review of the research facilities in the university (Phiri, 2001). This review led to the closure of some research institutes and bureaux. The Education Research Bureau was closed first, and its staff transferred to the School of Education and the Institute of for African Studies (IAS) in 1992. The Rural Development Studies Bureau (RDSB) was closed in 1994 and its staff was transferred to teaching departments in accordance with the expertise of the individual researchers, while some went to the Institute for African Studies (IAS). Later in the same year, the Institute for Human Relations (IHR) also closed, as well as the Centre for the Arts while the Centre for Continuing Education was restructured and became the Directorate of Distance Education (DDE), and some staff members were redeployed in the School of Education. These changes prompted changes in the School of Graduate Studies that became the Directorate of Research and Graduate Studies (DRGS). The DRGS still exists and provides services to the research and postgraduate studies of the academic staff. However, poor funding negatively affected the provision of these services, especially staff research and travel to conferences which is still a challenge at UNZA. As a result, DRGS now focuses mainly on postgraduate programmes and some in-house research-related training programmes such as workshops and seminars for academic staff.

3.8.2 Brain Drain at Universities in Zambia

When UNZA opened in 1966 it offered commensurate conditions of service for its academic members of staff (Kelly, 1991; Phiri, 2001). It therefore succeeded in recruiting highly qualified staff that could provide academic and administrative leadership. Teaching resources were readily available, and UNZA had a Staff Development Programme which facilitated the training of outstanding graduating students for Master's and doctoral studies abroad. After completion of their postgraduate programmes, many staff development fellows returned to serve as lecturers and researchers, a reflection of the high morale of the academic members of staff resulting from good conditions of services. However, in the mid-1980s, UNZA began to face serious financial challenges and salaries of staff were no longer attractive compared to previous years. Consequently, from the 1980s to 2000 salaries and conditions of service at UNZA diminished to such an extent that highly qualified staff departed to the neighbouring countries.

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The issue of low salaries and poor conditions of service for lecturers resulting in the loss of lecturing staff has been a subject of inquiry on several occasions. In 1982 the government instituted the Nyirenda Commission of Inquiry to "inquire into, and made recommendations on the salaries, conditions and terms of service of the academic staff and other staff appointed on academic conditions of service" (Phiri, 2001) and this directive was further reinforced by the Statutory Instrument No. 113 of 1982. The findings of the Nyirenda commission stated that the university salaries in Botswana and Zimbabwe were higher than those of academic staff at UNZA, while salaries of academic staff in Malawi were lower. The high academic salaries in Zimbabwe were attributed to the higher salary system that was introduced for white academic staff. In Botswana salaries for academic staff were higher as the economy in that country could sustain such salaries for academic staff. However, the Nyirenda Commission noted that academic salaries in Malawi were low because salaries in other sectors in that country were generally low.

In addition, the Nyirenda Commission stated that in all the countries they visited university salaries were related to those in the public sector where a particular office determined the ceiling amounts. In the case of Botswana in 1982, the salary of the Secretary to the Cabinet was the highest and the salary of a Professor was equal to that of a Head of a Department. In Malawi, on the other hand, a Professor was paid slightly higher than a Principle Private Secretary (Permanent Secretary). In the Zambian context, the salary of the Chief Justice was the highest and acted as the ceiling amount (Phiri, 2001). In view of these findings, the Nyirenda Commission recommended that at the government-funded universities, salary reviews should consider the civil service salaries and conditions of service. This decision is the cause of poor salaries and conditions of service for UNZA's academic staff as lecturers and researchers were no longer remunerated as professionals with special skills and training. Since then, academic salaries at UNZA not only remained low by the Zambian standards, but remained the lowest in the region. Thus, with the coming of the Third Republic under the Movement for Multi-Party Democracy (MMD) where the government's focus was on liberalisation of the economy, there was a lot of hope that the university salaries would improve. However, the results were disappointing as the MMD Government did not respond accordingly. This resulted in the continued loss of highly qualified academic staff who migrate to neighbouring countries.

Once again, to redress the mass exodus of lecturers at UNZA and the Copperbelt University, President Frederick J. T. Chiluba appointed the Bobby Bwalya Commission on 30 April 1997 to inquire into all aspects of the universities. In its report, the Bobby Bwalya Commission commented on the low salaries and poor conditions of service for academic staff at the two universities and stated that:

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> *"The Commission recognizes and acknowledges that the market for the academic, professional and technical staff transcends the borders of Zambia as well as the borders of the continent and, therefore, unless the nation values them and remunerates them accordingly, they will continue leaving the country for better conditions of service elsewhere" (Bobby Bwalya Commission, 1998).*

It must be noted that most lecturers left as the university salaries were low in comparison with other Southern African countries, even if it was relatively higher than those paid in the other areas of the Zambian economy. This was confirmed by the Bobby Bwalya Commission as it illustrated this point by indicating in its report comparative salaries in Kwacha equivalent offered to academic university staff in Botswana and Swaziland, in comparison to those offered to the staff at UNZA and Copperbelt University. Table 3.9 illustrates this point:

Table 3.9: Comparative salary scales for academic staff in three SADC countries (Zambian Kwacha)

Post	Zambia	Botswana	Swaziland
Professor	12,793,020	48,148,408	35,997,786
Associate professor	11,985,480	42,957,804	33,906,303
Senior lecturer	11,985,480	42,957,804	33,906,303
Lecturer	10,407,744	33,806,824	24,482,406
Assistant lecturer	9,833,940	26,851,094	N/A
SDF	1,700,400	13,370,400	N/A

Source: Phiri (2001)

The commission observed that the poor salaries had been a major cause of the departure of academic staff at the two universities. The Commission further observed that without significant attention to the retention, motivation and commitment of the critical mass in the universities, the problem of quality in the core functions of the universities would be compromised. Consequently, the Bobby Bwalya Commission recommended that salaries for academic staff be competitive and comparable to others in the region. As shown in Table 3.10 below, the Commission made the following recommendations for the salaries of lecturers at UNZA and the Copperbelt University in 1997.

Table 3.10: Recommended Salaries by the Bobby Bwalya Commission in 1997

Scale	Post	Existing basic salary	Recommended entry point (k) per annum	Recommended maximum point (k) per annum
VCS1	Vice-Chancellor	18,000,000	40,233,164	
VCS2	Deputy Vice-Chancellor	14,400,000	37,013,030	
ACS1	Professor	13,512,780	32,501,518	36,000,000
ACS2	Associate Professor	12,543,480	30,876,442	34,200,000
ACS3	Senior Lecturer	11,709,273	29,332,620	32,490,000

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ACS4	Lecturer	10,040,724	27,865,989	30,865,900
ACS5	Assistant Lecturer	9,833,940	26,472,690	29,322,225
ADS	SDF	2,400,000	8,059,086	11,090,650

SOURCE: Phiri (2001)

The Commission also recommended that to enhance the quality of teaching and research, the two universities should develop policies and strategies on rewards and ensure that salaries and benefits are consistent with the policies of enhancing the quality of teaching. However, no attempt was made to implement the recommendations, much to the disappointment of lecturers and researchers. This resulted in the continued loss of highly qualified academic staff. In addition, due to a lack of funding at the two universities, the Staff Development Programmes could no longer be sustained, especially for the fellows who were studying abroad. These fellows went for several months without receiving a salary due to a lack of foreign exchange in the country. This situation impacted negatively on their studies and therefore some could not complete their study programmes, while others withdrew from their studies as they failed to pay the required fees in their various universities. The majority of the fellows, especially the PhD holders, left Zambia after returning from abroad, and sought employment in the neighbouring countries where salaries and conditions of services were better. Table 3.11 below illustrates the magnitude of the academic exodus by 1999.

Table 3.11: Academic Staff Exodus by School in 1999

School	Number
School of Agricultural Sciences	20
Computer Centre	01
School of Education	29
School of Engineering	25
School of Humanities and Social Sciences	67
Institutes	10
School of Law	24
University Library	13
School of Medicine	29
School of Mines	10
School of Natural Sciences	38
School of Veterinary Medicine	02
Technical Advisory Unit	01
Total	**269**

Source: Phiri (2001)

While the table above shows that the situation was not peculiar to the social sciences, it is important to note that most lecturers (143 out of 269) were from the social sciences as the School of Humanities and Social Sciences had the largest number of staff followed by the School of Education. The School of Humanities and Social Sciences, and the School of Education have been leading in terms of student numbers since the inception of UNZA. This clearly had a negative impact on the social sciences as most

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of the departments remained only with a skeleton staff to run the courses required. In addition, this has had even more negative impact in terms of research as most of the lecturers who left were PhD holders (Phiri, 2001). These lecturers could have been the drivers of social science research, not only in the university, but in the whole country once they completed their studies (Phiri, 2001).

The brain drain at the two universities was compounded by the fact that areas where conditions of service were considered more satisfying and materially more rewarding tended to attract potentially promising academics away from the university and research institutions to (Phiri, 2001). As such, in 1991 when the MMD formed a government under the leadership of the late Dr Frederick Chiluba, many lecturers opted to stand for election. Several lecturers successfully won elections and were appointed to ministerial positions, while others were deployed as Permanent Secretaries in government ministries. Most of these lecturers left the university as it was more rewarding to be a Minister or Permanent Secretary than being an academic staff member, thus government became a major internal source of the brain drain from the University. However, when this happened, it was expected that these ministers or permanent secretaries would lobby for improved salaries and conditions of service when they were in government. This did not happen (Phiri, 2001).

3.8.3 Lack of Reading Space and Reading Materials in the University Library

The reputation of every university lies in its academic performance which is defined by the quality of teaching, the quality and relevance of research, the quality and the productivity of its graduates and the effectiveness of the services rendered and a well-established library. As Fowler (2016: 1) rightly pointed out: “[t]he library is the heart of the university is an oft-repeated metaphor used to describe the role or centrality of the library“.

Access to information and learning materials is crucial for the economic and social development of every nation, and Zambia is no exception. However, it is a well-known fact from the discussion in this chapter that for many years, lack of financial resources has been the real inhibiting factor on many issues that affect knowledge production and research output at UNZA. The university library has suffered from a severe collapse of its library and information services for many years (Chifwepa, 2006; Kanyengo, 2009) .

The main library of UNZA was built with resources that came from ordinary Zambians and was opened in August 1969. It was designed with a seating capacity for 1,650 readers and accommodates 300,000 volumes of information sources (Kanyengo, 2009b). However, while the numbers of enrolment of students has risen significantly since then, there has been no expansion of the library to cater for these growing numbers of students. The student population of more than 22,000 students exceeds the

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original reading space for the main library that was designed for 1,650 study and work spaces. The challenge of reading space is worsened by the fact that most the student population is housed on the campus, and therefore they require space to spend their time when they are not in class. Table 3.12 shows the growing numbers of enrolments at the University of Zambia from 2003-2014.

Table 3.12: University of Zambia Undergraduate enrolments by School from 2003-2014

YEAR	SCHOOL									
	Agric. Sciences	**Education**	**Eng.**	**Hum & Social Sciences**	**Law**	**Medicine**	**Mines**	**Natural Sciences**	**Vet Medicine**	**Total**
2003	228	2 583	358	1 906	449	551	134	1 629	71	7 909
2004	238	2 969	353	2 261	425	613	121	1 629	74	8 683
2005	298	3 757	354	2 164	469	579	106	1 606	77	9 410
2006	358	4 225	343	2 222	461	624	138	1 432	108	9 911
2007	398	4 415	364	2 059	435	712	173	1 403	132	10 091
2008	423	4 974	378	2 087	409	807	201	1 427	136	10 842
2009	462	6 420	415	2 594	348	939	234	1 566	140	13 118
2010	413	7 387	399	3 056	399	1 064	216	1 372	174	14 480
2011	413	8 703	399	3 477	300	1 298	200	1 420	176	16 386
2012	356	10 224	418	4 078	245	1 715	195	1 330	210	18 771
2013	357	11 338	482	4 691	244	2 068	228	1 010	215	20 633
2014	328	12 174	482	5 147	262	2 108	237	1 629	186	22 553
Total	4 272	79 169	4 745	35 742	4 446	1 3078	2 183	17 453	1 699	962787

Source: UNZA (2014c)

Table 3.12 shows that most the students enrolled at UNZA over the years are from the social sciences. This means that with limited reading spaces in the library, most of the students have to read either in their rooms or on the university grounds. Once again, while it is appreciated that the limited spaces for reading in the library affects all the disciplines, it is students from the social sciences that are mostly affected. This is mainly as the mode of their assessment requires referencing from different sources, including books and journals. The majority of the reference books are stored in the main library, either on short loan or in special collection sections, and are usually loaned to students for a limited time. It is not peculiar to see students at UNZA reading on the grounds of the university due to the of lack of reading space in the library. This makes it difficult for students to concentrate, and even more difficult for them to conduct research.

One of the solutions to negate the lack of reading in the library is to construct faculty-based libraries. It is argued that these libraries will be integrated in the faculties and may help in creating more space

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for library users. However, it is not clear when these plans will be realised as the university receives limited funds from the government.

The second challenge resulting from a lack of funding of the university library is a lack of reading materials in the library. A library is a storehouse of information, and students, academic faculties and researchers turn to it for data and information. However, the funding situation at UNZA has continued to impact negatively on the subscriptions to journals and as a result reading materials have been lacking for many years. Akakandelwa (2009) states that subscriptions to most journal literature at the UNZA stopped around 1984 to 1986, and that the few titles that the library received around 2007 were donor-supported with major contributions received from development agencies like the Book Aid International (BAI), the International Network for the availability of Scientific Publications (INASP), the African Journal Distribution Program (AJDP), AAAS, DFID and Elsevier.

According to the UNZA library report of 2016, the university decided to spend almost U$190 000 towards the purchase of electronic journals subscriptions to journals published by Elsevier; purchasing of Library Management software and the purchasing of electronic books from 2014 to 2106. The majority of the funding was sourced by the Central Administration, while subscriptions resorts under the Zambia Library Information consortium where the UNZA library is a member and pays a minimum subscription. In addition, UNZA also pays fees amounting to US$4 500 towards journal subscriptions. The university has also benefitted from subscriptions of e-journals meant for the developing countries. Table 3.13 shows the e-journals to which the UNZA library has subscribed to in 2016.

Table 3.13: University of Zambia Subscriptions to Journals and Library Management Software

	SUBSCRIPTION	**US$**
1	EIFL (Paid for by the UNZA library)	462.91
2	ZALICO (Paid for by the UNZA library)	5,000.00
3	Elsevier Subscriptions (Paid for by UNZA Central Administration)	1,341,337.00
4	Library Management Software (Paid for by UNZA Central Administration	49,327.00
	Total	**189,023.69**
	Total Kwacha	**1,831,639.72**

Source: UNZA (2016i)

In addition, it is envisaged that the institution would increase subscriptions to electronic journals and books so that students and researchers can access these resources on the campus networks, as well as off-campus. UNZA introduced library fees of K100 for undergraduate students, and K200 for postgraduate students to raise funds. These fees were approved by the UNZA Council in October 2016 and it is hoped that the library would be able to spend these financial resources on books and journals.

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3.9 Summary

This chapter has reviewed the history of higher education in Zambia and the history of social science research in Zambia since its genesis as the Rhodes-Livingstone Institute of Social Research (RLISR) in 1938 to its current name as INESOR. The Rhodes-Livingstone was established on the basis that it would conduct social science research, and the findings were used by the government to come up with evidence based policies. Social science research in Zambia owes much to the works of the first three directors of the Institute namely: Godfrey Wilson, Max Gluckman and Elizabeth Colson, as well as the subsequent directors of the Rhodes-Livingstone Institute and other researchers at the Institute. These researchers pioneered social science publications in Northern Rhodesia, as Zambia was known then. The same scholars established the first social science journals in Zambia, ultimately raising the profile of the Institute, and social science research in Zambia and in Africa. Most of the scholars who pioneered research at RLISR were anthropologists who had to live and experience the life of their participants, an idea that was not supported by the government, and as such they worked under harsh conditions. However, it is the resilience of these researchers that led to the Rhodes-Livingstone Institute being recognised in the world of scholarship.

The chapter also showed that the use of social science research for policy which was the original mandate given by the colonial government to the Rhodes-Livingstone Institute of Social Research, changed after the Institute was incorporated into UNZA. Consultancy or “research for hire” as Wight (2008) called it became the predominant mode of research. The reason for this shift was mainly due to a lack of funding from the government. However, the challenges with this change of focus is that, depending on the donor and the type of research, a dependency on donor funding for research can often hinder the effective utilisation of social science research, especially in situations where the researchers are simply hired to carry out research on behalf of the funders. In these situations researchers cannot publish their research findings and ultimately use them to inform policy. Conversely, it was argued that there are some research that INESOR has conducted where the government has been involved and has worked in collaboration with the donors to commission social science research for a specific problem, and the research has had some policy implications.

Lack of funding from the government has had other negative effects on research utilisation in Zambia. It has led to the closure of a number of social science research institutes and bureaux that possibly could have enhanced research utilisation in Zambia. The lack of funding also contributed to the brain drain from the universities, especially UNZA (Phiri, 2001). The evidence suggests that most of the researchers who left the country were senior lecturers from the social science disciplines. This ultimately had a direct impact on social science research utilisation in Zambia as most senior

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researchers who left the country could have contributed to research utilisation through their publications and mentoring of young social scientists. The brain drain was worsened by the appointments of lecturers to government positions as Ministers, Permanent Secretaries and think-tanks. Again, evidence suggests that many of these lecturers were from the social science disciplines in comparison to other disciplines. To address the issue of brain drain during the last 10 years, government has improved the conditions of service for the lecturers at the three public universities. This was achieved through the harmonising of salary scales with other universities in the region, and universities within the country. As a result, the number of lecturers leaving the university for government positions and elsewhere has declined in comparison to the 1990s when there was a skeleton staff in the departments. In addition, there has been a change in policy where most of the lecturers who were working on contract are now on permanent and pensionable conditions of service, except for those who had already retired by the time the policy came into effect in 2017. This has motivated a number of lecturers, especially the younger scientists as they feel there is some sense of security, as they need not worry about contract renewals every few years. Under permanent and pensionable conditions of service, lecturers are permitted to study abroad on paid study leave for a period of 3-4 years. Upon their return from studies, they continue to work without having to worry about renewal process of their contracts. This change in the conditions of service has enhanced the number of academicians pursuing their PhDs abroad. A PhD is a requirement for academic progression in most universities, Zambian universities included.

The chapter showed that a lack of funding also contributed to the closure of some journals, as their operations could not be sustained in the absence of government funding. This led to a diminished research output in the social sciences at UNZA. Notwithstanding these challenges, it is important to note that since 2005 efforts have been made to rekindle social science journals and establish new journals to encourage publications, especially at UNZA. The details of new journals are discussed in Chapter Five.

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CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter discusses in detail the methodological choices and the research design process of this study based on the research purposes and research questions. Specifically, the chapter explains why a mixed methods approach was considered as being appropriate for this study. In this regard, the chapter is divided into the following sections: The first section discusses a brief history of the paradigm debates that led to mixed methods and the philosophical assumptions underpinning these debates. The second section discusses the methodology and the reasons why a mixed method sequential explanatory design was eventually selected. The third section outlines the main features of the Sequential Explanatory Design that were adapted to meet the needs of this research. And finally, how the design was implemented including the data collection methods and techniques. The last section discusses how the ethical issues for this study were addressed.

4.2 Paradigm Debate

Many researchers believe that research studies need to be situated in a selected paradigm. It has therefore been argued that the first task a researcher needs to embark on when undertaking a research is to position themselves paradigmatically (Barren, 2005) because "a methodological choice does not exist within a philosophical void" Barren (2005: 7). It is therefore imperative that the paradigm(s) upon which a research proposal and design is based on are clear and fully understood in the research itself (Mertens, 2010; Wilson, Petticrew, Calnan & Nazareth, 2010). There are many definitions of a paradigm and a four are offered in this study. According to Mertens (2007: 215) a paradigm "provides a tool to identify one's own worldview or, in research terminology, identify one's paradigm: a metaphysical construct associated with specific philosophical assumptions that describes one's worldview". Neuman (2006: 81) refers to paradigm as "A general organizing framework for theory and research that includes basic assumptions, key issues, models of quality research, and methods for seeking answers". Morgan (2007: 50) defined a paradigm as "the shared beliefs among members of a specialty area"; it can be used to summarise researchers' beliefs. In other words, a paradigm reflects the researchers' values, beliefs, and interpretation of reality. A paradigm influences the questions that researchers pose and the methods they employ to answer them (Morgan, 2007). Denzin and Lincoln (2008: 22) describe paradigm as follows:

The net that contains the researcher's epistemological, ontological, and methodological premises may be termed a paradigm...All research is interpretive; it is guided by the researcher's set of beliefs and feelings about the world and how it should be understood and studied.

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The debates surrounding research paradigms have a long historical base which existed through the 1970s, the 1980s and beyond 1980s (Caracelli & Greene, 1997; Datta, 1997; Morse, 2010). In social science research the quantitative-qualitative debate can be traced as far back as the 19th century (Leech & Onwuegbuzie, 2010; Onwuegbuzie & Collins, 2007; Smith & Heshusius, 1986). Two schools of thought were mainly at the centre stage of the paradigm debate which was considered by some scholars as the paradigm 'war' between those who supported the quantitative and qualitative approaches (Creswell, 1994). On one end of the debate were the positivists who argued in favour of quantitative methods. According to the positivists, truth is achieved by verifying and replicating observable findings, thus subscribing to objective, observable, and measurable phenomena that can be readily generalised to other similar situations (Babbie & Mouton, 2001; Monti & Tingen, 1999). On the other end of the debate were the constructivists who argued in favour of the use of the qualitative methods. In the paradigm debates, both the positivists and the constructivists believed that their paradigms present the only viable views of reality for research purposes. They also believed that the two approaches are mutually exclusive, incompatible and parallel to each other and therefore it was practically impossible for the two paradigms to co-exist in one study (Sandelowski & Barroso, 2003). Consequently, these paradigm debates run through many years without a conclusive end to favour one or the other (Caracelli & Greene, 1997; Caracelli & Riggin, 1994; Casebeer & Verhoef, 1997; Datta, 1994; Morse, 1994).

Traditionally, research in many disciplines has been greatly influenced by the positivist paradigm which is linked with quantitative methodologies and this is because it was the first research paradigm that incorporated ontological, epistemological, axiological, and methodological assumptions and principles. As a result it was considered by many to be the "gold standard" (Leech & Onwuegbuzie, 2009). However, despite quantitative methodologies being dominant in different disciplines at the beginning and given the fundamentally different philosophical assumptions, quantitative and qualitative have resulted in an impression that it is impossible for the two approaches to be used in combination in one study (Sandelowski & Barroso, 2003; Smith, 1983; Smith & Heshusius, 1986). As a result, some researchers believed that the rivalry between the quantitative and qualitative paradigms was not helpful and that 'plurality of philosophical thought was more desirable' (Sandelowski & Barroso, 2003; Smith, 1983; Smith and Heshusius, 1986). Consequently, there have been considerable debates in literature regarding whether it is possible for qualitative and quantitative methods to co-exist in the same study (Brewer & Hunter, 1989; Bryman, 2006; 2011; Morgan, 2007; 2014; Steinmetz-Wood, Pluye & Ross, 2019). As a result, a mixed method approach was proposed as the third paradigm which was believed to be capable of bridging the gap between the quantitative and qualitative paradigm wars and thus able to offer a logical, complementary and practical alternative (Creswell,

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1999; 2011; Creswell, Shope, Plano Clark, & Green, 2006; Ivankova, Creswell & Plano Clark, 2007; 2011 Johnson & Onwuegbuzie, 2004; 2007; Tashakkori, Teddlie & Teddlie, 1998; Teddlie & Tashakkori, 2010). Some scholars regard mixed methods as a "third wave" or third research movement which is guided by philosophical assumptions that make it possible to mix quantitative and qualitative approaches in one study (Tashakkori & Teddlie, 2003).

4.3 Philosophical Assumptions in Mixed Methods Research

Pragmatism is usually regarded as the philosophical background underpinning the mixed methods approach (Alise & Teddlie, 2010). Pragmatism is a philosophy that distinguishes the methodological approach of purely quantitative approaches that are linked with the philosophy of positivism and purely qualitative approaches that are linked with the philosophy of interpretivism or constructivism (Johnson & Onwuegbuzie, 2004). It is based on the version of abductive and inductive reasoning process where the researcher moves back and forth between deductive and inductive reasoning to explore the variety of research conducted separately using quantitative and qualitative approaches (Babbie & Mouton, 2001; Morgan, 2007). Thus giving the researcher a chance to produce "properly integrated methodology for social sciences" (Morgan, 2007: 73) and ultimately help shed more light on how the two research approaches can be mixed effectively (Almalki, 2016; Hoshmand, 2003). The desired outcome of pragmatism is that the mixing of the two approaches should offer the best opportunities for answering the important research questions in the study.

4.4 Mixed Methods

The methodology used in this study was a mixed method sequential explanatory research design. By definition mixed methods is a procedure for collecting, analysing, and 'mixing' or integrating both quantitative and qualitative data at some stage for the purpose of gaining a better understanding of the research problem (Almalki, 2016; Ivankova, Creswell & Stick, 2006). A more comprehensive definition is provided by Creswell and Plano Clark (2007: 5) who define mixed methods as "A research design with philosophical assumptions as well as methods of inquiry that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone". In other words, a mixed method asserts that the most important aspect is to ascertain that the approach helps the researcher to answer the research questions and to enhance the understanding of the phenomena under study (Hanson, Plano Clark, Petska, Creswell & Creswell, 2005).

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Sociologists and cultural anthropologists were the first to start using mixed methods in their fields of study, early in the 20th century (Creswell & Plano Clark., 2007; Johnson & Onwuegbuzie, 2007). Since then mixed methods research has increasingly become important in several scientific areas (Creswell & Plano Clark, 2007; Tashakkori & Creswell, 2007; Tashakkori & Teddlie, 2003) including nursing (Carr, 2009; Dzurec & Abraham, 1993; Morse, 2010), health sciences (Morgan, 1998) and education (Johnson & Onwuegbuzie, 2004) to mention but a few. Mixed methods has also been a subject of discussion in books and journal articles for instance, (see Ivankova et al. 2006) and Plano Clark, Garrett and Leslie-Pelecky (2009) with some journals such as Journal of Mixed Methods Research and the International Journal of Multiple Research approaches focussing purely on mixed methods. Consequently, some renowned researchers such as Creswell (2007) predicts that mixed methods will eventually become a leading paradigm in the world of research. This is despite being criticised for defying quantitative and qualitative paradigmatic assumptions (Bryman, 2006; Sale & Brazil, 2004). This methodological approach stands on the premise that it is not desirable to select between the two traditionally known approaches (quantitative versus qualitative) and use them separately in different studies and argue that instead it is more fruitful to mix the two approaches in one study and use the results obtained from each one of them to enrich and improve our understanding of the phenomenon under study. In this regard, mixed methods research therefore provides an opportunity for researchers to address difficult research questions cannot be answered by a mono or classical method (quantitative or qualitative). However, Sale, Lohfeld and Brazil (2002) caution researchers that the use of quantitative and qualitative in combination does not mean that it is appropriate to do so in every study.

Several authors posit that there are two main factors which can help researchers ascertain the different types of mixed methods design (Ivankova et al. 2006; Leech & Onwuegbuzie, 2009; Morgan, 2007; 2014; Morse, 2010; Tashakkori & Creswell, 2007). These two options are priority approaches and implementation of data collection. Priority of approaches refers to the fact that a researcher can give the same priority, weight or status to both the quantitative and quantitative phase (equal weight design), or alternatively the researcher may give greater weight to either quantitative or qualitative phase (different weight designs).

Implementation of data collection/time orientation refers to the order in which the researcher collects qualitative and quantitative data either at the same time that is simultaneous, concurrent or parallel design or collecting data at different point, thus sequential or two stage designs. It is the way in which the researcher combines the two factors that will determine the resulting design. Morse (2010) proposed a more helpful way of representing the different possible mixed methods designs by providing some abbreviations where she uses “quan” and “qual” to stand for quantitative and

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qualitative components in that order. In this case, the method that is given greater weight is written in capital letters (QUAN-QUAL) while the one given the lesser weight is written in lower case (quan-qual). In addition, the symbol "+" is used to indicate simultaneous design, whereas the arrow "→" refers to a sequential design. Consequently, the different combinations of data collection strategy and priority produce four blocks that give rise to nine mixed methods designs (Johnson & Onwuegbuzie, 2004):

- Equal weight, simultaneous: (1) EQUAL+QUAN
- Equal weight, sequential (2) QUAL→QUAN (3) QUAN→QUAL
- Different weight, simultaneously: (4) QUAL+quan; (5) QUAN+qualDifferent weight, sequential: (6) qual→QUAN; (7) QUAL→quan; (8) quan→QUAL; (9) QUAN→qual

4.5 Mixed Method Sequential Explanatory Design

The Mixed Method Sequential Explanatory Design is an approach which is conducted across two sequential phases. More emphasis is usually placed on the initial quantitative phase, followed by a second qualitative phase (Creswell, 2003; Creswell & Creswell, 2005; Creswell, Shope, Plano Clark & Green, 2006; Ivankova et al., 2006; Tashakkori & Creswell, 2007; Tashakkori & Teddlie, 1998) and this design has been applied in social science research (Janz et al. 1996; Klassen & Burnaby, 1993). The aim of the sequential explanatory design is to collect and analyse quantitative data first to provide a general understanding of the research problem. The findings of this initial phase are then used to inform the second phase, which collects and analyses supporting qualitative data to refine, explain or refute the statistical finding (Klassen, Creswell, Plano Clark, Smith & Meissner, 2012). The rationale of using this design is that when used in combination, quantitative and qualitative data yield a more complete analysis and they complement each other (Creswell, 1994, 2011; Ivankova et al. 2006; Johnson & Onwuegbuzie, 2004; Morgan, 1998; 2014; Morse, 2010; Onwuegbuzie & Combs, 2010).

According to Ivankova et al. (2006) mixed methods which normally include two or more stages are difficult to comprehend. In this regard, they point out that a graphical representation of mixed methods procedures assist the researchers to visualise the sequence of the data collection, and the connecting and mixing points of the two approaches within a study. The value of presenting the information in a visual method or research design matrix and the procedures has also been widely documented in mixed methods literature (Brown, 2012; Creswell, 2011; Hanson et al. 2005; Ivankova et al. 2006; O'Cathain, Murphy & Nicholl, 2010). The following matrix is therefore presented to show the sequence of data collection and data analysis in this study.

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Table 4.1 Research Design Matrix

PHASE 1 RESEARCH QUESTION What is the state of Social Science Research in Zambia?				
Research Question	Research Design	Population and Sampling	Data Collection	Data Analysis
What type of social science research is done in Zambia by public research institutions?	Bibliometrics	All publications by Zambian authors indexed in WoS	No sampling	Bibliometrics (Quantitative)
What agendas drive social science research in both Government and public institutions in Zambia?	Survey	Web based survey of social science research and scientists in Zambia	Survey questionnaire	Univariate and Bivariate Analysis
What are the main sources of funding of social sciences research in Zambia?				
What are the main modes of research dissemination used by social scientists in Zambia?	Survey	Web based survey of social science research and scientists in Zambia	Survey questionnaire	Univariate and Bivariate Analysis
	Interviews	Interviews with Chief Editors	In-depth interviews	Qualitative Content Analysis
PHASE 2 RESEARCH QUESTION From the Researchers perspective, under what conditions have specific Social Science Studies informed policy?				
What evidence is there that the Zambian government utilises Social Science Research?	Interviews	Purposive sampling of Researchers	In- depth interviews	Qualitative Content Analysis
For what purposes is social science utilised by the Government?				
What are the contributing factors that resulted into research utilisation?				

Source: Author

4.5.1 Bibliometric analysis

The first phase of the analysis consisted of a bibliometric analyses of Zambia's articles in the Web of Science. Bibliometrics as a method of study was established partly as a sub-discipline of library and information science where it was extensively used in collection management, especially in the 1970s (Iskra, 2013; Kumar, 2014; Nwagwu, 2006). At that time, researchers in Library Information Studies used bibliometrics to determine various scientific indicators, evaluating of scientific output, the selection of journals for libraries, as well forecasting the impact of specific disciplines (Åström & Hansson, 2013; De Bellis, 2009; Cox, Gadd, Petersohn & Sbaffi, 2019). Since then, bibliometric methods have been used in other fields of social science for different purposes such as describing patterns of publication within a particular field of body of literature (Corrall, Kennan & Afzal, 2013).

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Daim, (2006), Diem and Wolter (2006), have also used bibliometric methods to explore, organize and analyse vast amounts of both historical and current data and this has helped them to identify patterns that were useful to policy makers in their decision making processes. In terms of self-assessment, researchers in fields such as sociological studies of science, information management, economics, history of science, innovation research and science policy scholars such as (Cancino, Merigó, Coronado, Dessouky & Dessouky, 2017; Bonilla, Merigó, & Torres-Abad, 2015; Carvalho, Fleury & Lopes, 2013) have used bibliometric methods to assess their own research performance in terms of the quality of their research outputs, as well as gauging the influence or impact of their research fields. Large scale bibliometrics have been used to study regional patterns of research, the extent of cooperation between research groups and national research profiles (Thanuskodi, 2010). In addition, bibliometric indicators have also been helpful in tracing relationships amongst academic journal citations (Åström & Hansson, 2013; Bladek, 2014; Durieux & Gevenois, 2010; Gumpenberger, Wieland & Gorraiz, 2012; Valérie & Pierre, 2010). Furthermore, at a global level bibliometric methods have been used to rate the research performance of different universities to provide a rationale for acquiring research funding, as well as for strategic planning purposes in universities (Diem & Wolter, 2013; Durieux & Gevenois, 2010). More importantly, university policy makers have used bibliometric indicators to rate individual academics, providing transparent data in support of academic merit review, tenure, and promotion decisions (Corrall, Kennan & Afzal, 2013; Diem & Wolter, 2013; Rokach, Kalech, Blank & Stern, 2011). It is therefore envisioned that the bibliometric results discussed in this chapter on the performance of social science research in Zambia will stimulate policy changes at UNZA and at national level and improve the research performance of social science for policy use in Zambia.

The bibliometric analysis for this study was conducted using CREST's version of the Web of Science (WoS) database. The WoS is owned by Clarivate Analytics (formerly by Thomson Reuters and originally established as the Institute of Scientific Information's (ISI). It is designed to provide access to multiple databases, cross-disciplinary research, and specialised subfields within an academic or scientific discipline (Li, Rollins & Yan, 2018).. For many years the WoS produced by Thomson Reuters in 1960 was the sole international database available which encompassed all scientific journals in all domains (Boshoff, 2017; Boshoff & Akanmu, 2018; Mongeon & Paul-Hus, 2016) and because of this it enjoyed a monopoly in the production of bibliometric analysis. However, this monopoly ended when Scopus was launched by Reed Elsevier in 2004, the same year that Google Scholar was also launched (Martín-Martín et al. 2018; Mongeon & Paul-Hus, 2016)

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4.5.3 Survey data analysis

The second component of the design of this study involved the secondary analysis of web-based survey data, collected under the African Young Scientists Project at the Centre for Research on Science and Technology (CREST) between May 2016 and February 2017. The target population of the Africa Young Scientist Study mainly constituted Young African scientists who were identified through several proxies in the study. Firstly, they were involved in institutionalised research activity in one or more scientific disciplines. Forming part of the scientific community, the communication of their results and findings to their peers is through publications and other means. Another characteristic of these scientists was that they needed to have been born and currently working in an African country. The primary issue, in this case, was the influence of the national and/or continental contexts on the scientists' career trajectory. Although the study had its focus on "young" scientists, age was not the key criterion used for identifying respondents. In actual fact, the only 'entry point' of the target population of the study was their publications. Therefore, the study was able to get responses from all the members of the scientific community in the African countries surveyed. From the responses to the survey received, it was possible to disaggregate by age and a range of other demographic variables such as the scientific field, nationality, gender, sector of employment and highest qualification.

Like other participants from different countries who took part in the Young African Scientists project, the Zambian researchers in this study were identified through corresponding authors' emails from the Web of Science (WoS) and Scopus databases. The inclusion criteria used to select the respondents from Zambia was based on similar requirements as those in the Young African Scientist project namely: the respondents were either lecturers or researchers at the University of Zambia and were actively participating in institutionalised research in one or more scientific disciplines, they were actively disseminating their research findings through publications both locally and internationally and most importantly, they had bibliometric data between 2005 and 2015 in the Web of Science or Scopus. Data collection for this study was done within the timeframe of the Young Scientists project and also concluded at the end of February 2017. At the close of the survey exercise, a total number of 128 scientists from Zambia had completed the questionnaire.

With regards to the research questions extracted from the African Young Scientist project, this study only focused on those that were deemed necessary to address the research questions of this study. These questions related to the researchers' dissemination strategies, collaborations, main sources of funding (either from government or international donors), and the type of research they conducted (consultancy, research sanctioned by the government to solve a particular emerging or existing problem, basic or applied research that is self-initiated), whether or not their research was used by

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policymakers and for what purpose the research was used. The challenges that were considered by researchers to have inhibited the use of their research findings by policy makers were also highlighted.

The data collected from the survey were recorded in computer files created in Microsoft Excel spreadsheets and later imported into IBM SPSS. IBM SPSS is a dedicated software package that is used for analysis of qualitative data. This statistical package was used to produce frequency tables, graphs and charts, and to generate appropriate statistics. In analysing the data in this study two broad categories namely univariant and bivariate were used. Univariate data analysis, as the name implies focuses on the analysis of individual variables which in this study took the form of frequency tables and summary statistics. On the other hand, bivariate data analysis is concerned with the relationship between two variables.

4.5.3 Analysis of interview data

The third component of this study design consisted of interviews with Chief Editors and with selected respondents who had participated in the survey and had indicated willingness to be interviewed. In the survey, all the researchers were asked to indicate whether or not they would be willing to be interviewed in order to provide more detailed information with regards to their studies. The approach to conduct interviews with the researchers was necessitated by the fact that the quantitative data (bibliometrics data and survey questions) could not adequately provide in-depth information on how the researchers used their research findings. In this regard, the qualitative data and their analysis helped the researcher to refine and explain statistical results by exploring the researchers' views in more depth (Alise & Teddlie, 2010; Creswell, 1999; Rossman & Wilson, 1985). Specifically, the qualitative questions were refined, purposeful sampling procedures were developed and data collection tool (interview guide) was established to extend the researcher's understanding of the qualitative results.

This study used content analysis technique to analyse the interviews with respondents who participated in the survey. Content analysis is one of the approaches used in qualitative methods for exploring textual information to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication (Elo et al. 2014; Hsieh & Shannon, 2005; Schreier, 2012). Atlas.ti version 8 was used to support the analysis of the data in this study and was used for coding the data from the 22 interviews that were conducted with researchers. Atlas.ti is qualitative data analysis (QDA) software used in academic research especially in social science disciplines (Friese, 2019). The coding of the data in this study was based on the themes and emerged during the interviews that were conducted in this study. The research questions used in the interview

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guide provided the direction for the coding system that was used in this study. This study employed an open coding with a deductive framework approach. According to (Neuendorf , 2019: 5), this approach entails that the researcher pre-determines a coding system of salient variables or themes that emerged during the interviews and are cardinal in addressing the research questions in the study. In this study such themes were sources of research funding by the researchers, the types of collaboration researchers were involved in, strategies used by researchers to disseminate their research findings, stakeholders researchers considered when conceptualising their research and the challenges encountered by these researchers that would have inhibited their research findings to be used by policy makers. Another theme related to these themes was the recommendations that respondents felt would enhance the utilisation of their research findings by policy makers.

With regards to the face-to-face interviews with Chief Editors, those did not require open coding because from the onset of each interview the Chief Editors and Chief Executive themselves, gave express permission to the researcher to use their real names. This is mainly because most of the Editors and Chief Executives were of the view that a combination of their submissions during the interviews and the evidence from other researchers who will participate in this study would enhance their case in advocating for research funding for local journals from the policy makers at the University of Zambia.

4.6 Limitation of the design and methodology

This study design like others has its strengths and weaknesses and these have been widely discussed in literature (Creswell, et al. 2006; Creswell, Fetters & Ivankova, in press; Hanson et al. 2005) Its advantages include straight forwardness and opportunities it offers the researcher to explore the quantitative results in more detail. In addition, Morse (2010) and Ivankova et al. (2006) point out that the design can be more useful when unexpected results arise from the quantitative study. The limitations of this design are that it can be time consuming and possibility of having resources to collect and analyse both types of data may not be feasible (Ivankova et al. 2006).

In this study while the mixed method sequential explanatory design was deemed suitable, gaining acccess to local Zambian journals was more of a challenge. The major problem was that most of the local journals are still in print form (e.g. *Zango*, *Journal of Social Science Research*, *Journal of Humanities and Social Sciences*, *Journal of Education* etc.). This is compounded by the fact that these print journals are stored in different locations where the publishers or association publishing that particular journal are located. For instance, the researcher's visit to the Institute for Economic and Social Research (INESOR), which is supposed to be the hub and custodian of all journals publishing

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social science research, revealed that the Institute mainly keeps the *Journal of Social Science Research* and only a handful of the rest of social science research journals. Other journals are kept by various schools that produce them. For instance, the *Journal of Education* is kept by the School of Education; the *Journal of Law* is stored by the School of Law while the *Journal of Library and Information Science* is kept by the School of Education. The difficulty of accessing these journals is further compounded by lack of a depository where the all-electronic journal published in Zambia can be easily accessed. To address this challenge, the researcher had to physically visit all the locations where she could find the journals. This exercise was not only tedious and tiring but was also costly on the part of the researcher.

It was also challenging to obtain more information that would enable the researcher build profiles for the participants ahead of conducting interviews. Many of the researchers do not have profiles on the internet.

Timing is an important factor when recruiting researchers who have busy schedules which include teaching, conducting research, family responsibilities and other extracurricular. Keeping this in mind, the researcher resorted to holding face-to-face meetings with the participants in order to ask if it were possible have their profiles. The researcher was interested to know how long these participants had been conducting research and the disciplines in which they conducted research in. This information would be used to make follow up questions on how many researches they had conducted, who they had collaborated with, who their source funding was and the type of research they conducted – thus commissioned by government, consultancy of research commissioned by international funders or self-initiated researches funded by the researchers themselves and ultimately how their research findings were used. While this exercise was equally tedious, meeting the participants face-to-face afforded the researcher an opportunity to explain the objectives of the study and explain why she needed to create a profile of each one of them prior to conducting interviews with them. This approach also assisted the researcher to reconfirm the availability of the participants for the interviews and avoid response delays, low response rates and scheduling conflicts for the interviews. Using direct approach to provide details and recruitment information to the population of interest is said to be more effective than passive approaches (McGrath, Palmgren & Liljedahl, 2019).

4.7 Ethical Consideration

This section provides information on how ethical issues were addressed in this study. The information provided include the issues that needed to be addressed and how they were addressed in the study. These issues include Basic Ethical Codes of Conduct in Research, approval for research ethics, ethical considerations and informed consent.

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4.7.1 Basic Ethical Codes of Conduct in Research

Ethics are broader and more informal than laws and in the current research the researcher ensured that ethical norms were adhered to by ensuring that the participants were respected and to make sure that there was no loss of regard for all the respondents who participated in the study (Resnik, 2011; Sharma, 2019). This was done to promote the aims of ethics which among other things include enhancing a sense of accountability to the public and ultimately promoting values that are important, ensuring that there is trust, mutual respect and fairness in research as collaborative work.

4.7.2 Approval for research ethics

Like many institutions of a similar nature, the University of Zambia, School of Humanities and Social Sciences has established a Research Ethics Committee which has adopted specific codes, rules, and policies relating to research ethics (Kengne-Ouafo et al. 2014; Ringheim, 1995; Valentine & Barnett, 2003). Amongst the codes ,is the application of the basic moral principles addressing issues of protecting research participants against risks and the promotion of benefit, respect for human dignity, privacy and autonomy as well as taking special precaution with vulnerable populations (Haugen, 2010). In this case, written ethical clearance was sought and obtained from the University of Zambia School of Humanities and Social Science Research Ethics Committee (Kengne-Ouafo et al. 2014; Valentine & Barnett, 2003).

In addition, at the inception of the study in 2015, written permission was sought from the Registrar's office at the University of Zambia and written permission was given for the researcher to interview Chief Editors of University of Zambia journals and University of Zambia lecturers and researchers who have published in local journals as well as to use any relevant documents that were available for the study (Lemiengre, Dierckx de Casterlé, Van Craen, Schotsmans & Gastmans, 2007; Lemiengre, Dierckx de Casterlé, Schotsmans & Gastmans, 2014) . Further permission was obtained from the Copperbelt University Vice-Chancellor's office to interview researchers and use any documents which were deemed suitable for the study. A letter to seek permission to interview researchers and use any documents relevant to the study was also written to the Vice-Chancellor of Mulungushi University. However, the researcher did not get any feedback in terms of response from that office. Similar permission would have been sought from the journals' regulatory board if this board existed in Zambia as the case is in some African countries such as Ghana, but since there is none in Zambia, this was not done.

With regards to the permission to participate in the YSA survey of which the researcher was part of, a letter was written by Professor Johann Mouton, the Director of the Centre for Research on Evaluation,

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Science and Technology (CREST) at Stellenbosch University and Prof Catherine Beaudry of Polytechnique Montréal, Canada in which permission was sought from all the researchers who participated in the survey (Kaiser, 2009). The contents of the letter indicated that CREST and Polytechnique Montréal, Canada were conducting a survey on the research performance and career development of African scientists and that they were inviting researchers who were willing to participate in the survey to complete an online survey that was attached to the email (Kılınç & Fırat, 2017; Valentine & Barnett, 2003). Suffice to mention that there were some of the researchers who did not complete the online survey because they preferred to print the hardcopy and complete the survey manually, scan it and send a soft copy of the survey by email to the undersigned. These researchers were also included in the survey (Alby & Fatigante, 2014).

In order to address ethical issues in the survey, a full explanation of the study's aims and objectives was provided for the benefit of all prospective and consenting participants in the letter that was sent to all the respondents who participated in the online survey (Kılınç & Fırat, 2017; Miller & Boulton, 2007). In addition the content of the letter was also very detailed as it outlined the following ethical issues: Firstly, it indicated that the study had received formal ethical clearance from both Stellenbosch University and Polytechnique Montréal; Secondly, that participation in the survey was voluntary and that the participants were free to decline to answer any of the questions; Thirdly, that there were no known or anticipated risks on those who were willing to participate in the survey; Fourthly, that those who may have had concerns about the study were free to contact the Project Coordinator. Dr Charl Stewart whose email address was provided in the letter and finally, the letter also indicated that those who had concerns regarding their rights as research subjects could contact Ms Maléne Fouché at Stellenbosch University whose email address was also provided in the letter (Kaiser, 2009; Miller & Boulton, 2007) .

With regard to the interviews that followed the survey, these were conducted by the researcher of this study. During the survey, the respondents were asked to indicate their willingness to receive the final report of the YSA. The respondents were also asked to indicate their willingness to be interviewed and to provide more in-depth information pertaining to the study by providing their contact details. During the interviews, emphasis was also made that the provision of their details and their participation in the interviews were voluntary and not compulsory. As such the respondents were free to withdraw from the study at any time without being asked to provide any reasons (Marshall et al. 2014) .

As a standard ethical procedure, written informed consent from all the respondents was obtained prior to their taking participation in the interviews (Dixon-Woods et al. 2007; Schrag, 2011). This was

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in addition to a verbal explanation by the researcher to every single participant who consented to taking part in the study. Even though the study involved researchers, consideration was still taken for the importance of participants' understanding of their exact involvement in the study.

An explanation was also given for why the prospective participant was thought right for recruitment. This ensured that participants knew exactly what they were being asked to do. Such information included potential direct or indirect benefits and risks such participation entailed (Resnik, 2011). The researcher explained to the respondents that there were no known risks associated with participating in the study. However, while there were no direct benefits accruing to the researchers as individuals, the research outputs from this study would enhance the use of research findings by the policy makers at UNZA. All interviews were conducted on a one-to-one basis and in privacy within the time agreed with participants at commencement of the interview. It was expressly stated that participation was voluntary and would be treated confidentially with anonymity being maintained throughout the study duration and beyond. Permission was sought to continue the interview in instances where time was observed to be running out. The interview guide assisted in focusing on the research subject and sub-topics deemed to have the potential to yield information related to the study.

With regards to the Chief Editors and the Chief executive who were interviewed in order to provide more insights on what was documented in the history profile of the local journals, these were identified by the researcher through the Directorate of Research and Graduates where their appointment letters were originated from. Thereafter the researcher the interview made appointments to meet each one of them. These preliminary appointments were meant to find out when it would be appropriate to have an interview with them and to also explain to them the purpose of the study as well as the benefits and risks if any that were involved in participating in the study. In this regard, the editors were told the aims and objectives of the study and that the study was mainly for academic purposes for a attaining a PhD degree in Science and Technology studies attainable at Stellenbosch University. It was during these preliminary meetings that the researcher also asked each one of the editors if it was permissible to have their real names used in the study. None of the respondents objected to this request, they all responded in the affirmative. One of the reasons for agreeing to this request was that their appointments came from the Vice-Chancellor's office through the DRGS so the names of editors and the journals they represented were in the public domain. The researcher explained to the editors that there were no known potential risks that would come to them as a result of participating in the study. Rather, there were some benefits in that the findings of the study and subsequent recommendations may enhance their cause to source for funding from the central administration to support for local journals which were struggling to sustain themselves. The

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need to inform respondents on the benefits and risks of participating in a study are well documented by scholars as a basis for respondents to either consent or refuse to participate in a study (Resnik, 2011; Schrag, 2011).

4.8 Summary

This chapter has outlined the research methodological issues relating to this study. The chapter started by discussing the paradigm debates that brought about the mixed methods and the philosophical assumptions of mixed methods. This was followed by the methodological choices and the design processes that have been used in this study. The two main factors that are considered helpful for researchers to ascertain their choice for a particular type of research design best suited for their study (priority and implementation) have also been highlighted and the explanation for the choices made in this study to use sequential explanatory design were outlined. The chapter also highlighted how quantitative methods were complimented by the qualitative methods by providing some in-depth information on how the researchers disseminated their research findings. Further, this chapter has demonstrated how the implementation and integration of mixed methods in the study was done in order address the research questions with a purpose to explore the use of social science research for policy in Zambia.

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CHAPTER FIVE: SOCIAL SCIENCE JOURNALS AND PUBLICATIONS IN ZAMBIA

5.1 Introduction

This chapter is divided into three sections. The first section highlights the lack of the visibility of scholarly publications among developing countries including Zambia and the effects this has on social science research utilisation for policy. The second section focuses specifically on the performance of Zambian journals which were either founded by the University of Zambia or the Zambian social scientists through their various associations or networks. A brief history of each journal is provided followed by a detailed account of the publication record of each journal from its inception until the time of the data collection of this study in 2016. This is followed by a discussion on the challenges that have been identified in each journal which could have hindered the use of social science research results in the policymaking process.

5.2 Lack of Scholarly Visibility of African Research

Universities world over recognise the importance of not only conducting research but also publishing their academic research outputs in both local and international journals. There are various reasons why researchers publish in such journals. At the institutional level, most universities would like to compete with other higher learning institutions at global level in terms of publication output and rankings (Brankovic, Ringel & Werron, 2018). At an individual level, it is a requirement by most universities that academic staff and researchers publish their research findings in top quality journals in order to climb the ladder of the academic hierarchy (Van Dijk, Manor & Carey, 2014; Pinfield, 2005). Academics are also increasingly expected to participate in research dissemination and make their findings known to the general public, policymakers and funders of research (Altbach, 2013; McVay, Stamatakis, Jacobs, Tabak & Brownson, 2016). Thus, they have the mandate to disseminate their findings both locally and internationally through research publications in journals, and through presentations of their findings both at local and international conferences.

However, the literature shows that the visibility of publications produced by researchers in African countries is poor. For instance, Abrahams et al. (2009) submit that while the higher education sector in Southern Africa is in part dependant on universities' capacity to produce, communicate and utilise research output for educating future generations, research output in the majority of Southern African universities is not visible. Ezema and Onyancha (2016) add that visibility of scholarly research outputs in most African countries are mostly undermined by the lack of funding from the government.

According to Abrahams et al.(2009: 22):

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> *[V]isibility is comprised of a number of features including visibility of authors and content through abstracting and indexing databases, through availability in library collections, through web-based publishing, and visibility of research performance as measured through various bibliometric measures such as citation counts and impact factors.*

This implies that visibility is not just about research findings being accessible when they are published in hard copy at a university, rather it means that a scholarly publication is profiled through metadata in a way that makes it easily findable by search engines or databases without which the publication remains invisible. There are a number of studies that affirm the lack of visibility of scholarly outputs in Zambia, For instance, Ahmed, Kanyengo and Akakandelwa (2010) conducted a study where they assessed the visibility of both hard-copy and online publications published in the *Zambia Medical Journal.* For online journals they used literature on platforms such as Google Scholar, Research Gate, and academic databases such as Africa Journals Online. Their study revealed that that research output of scholarly research output is not very visible at global level.

More recently, Phiri (2018) conducted a study to assess the low online visibility of scholarly research output among the Higher Education Institutes (HEIs) in Zambia. The study highlights the low visibility of research output and the factors that might affect visibility of research in Zambia. His study revealed that for the Copperbelt University, the Institutional Repository only had digital objects published between 2011 and 2014, suggesting that there have been no inputs into the IR since 2014. With regard to the UNZA, while the IR was regularly updated with publications, most of the updates were only updated a year after they were published, clearly affecting the online visibility of the resources.

A number of challenges contribute to the 'invisibility" of research conducted by African researchers and one of them is the bias that is usually applied internationally to research activities and the metrics used to measure this value (Mouton, 2008; Nwagwu, 2013). For many years, a global system of scholarly publishing has been shaped, regulated, and dominated by the northern hemisphere (Collyer, 2012; 2016; Naude & Biljon, 2017). Researchers in the North use international models and metrics to evaluate research and publications of scholars, universities, disciplines, countries or regions in the world without taking into consideration the specific economic environment of their counterparts in African countries (Butler & Mcallister, 2011; Charlton & Andras, 2007; Jarwal, Brion & King, 2009). For instance, bibliometric studies have been widely used by scholars in the evaluation of research and scientific literature around the world to study trends and developments in different fields of knowledge/disciplines (Cortés-Sánchez, 2020; Volery & Mazzarol, 2015). Bibliometrics uses international indexing/citation databases such as *Web of Science* and *Scopus* with the *Web of Science* being the database with the most widely sourced bibliographic data in bibliometric studies, followed

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by *Scopus* published by Elsevier (Ani, Ngulube & Onyancha, 2017; Greenseid & Lawrenz, 2011; Zupic & Čater, 2015). However, the use of bibliometrics poses a challenge for African countries and this is mainly so because the metrics focus mainly on the output of highly-cited journal articles and ignore other outputs such as monographs, reports, conference papers or policy briefs – the type of outputs that are in relative abundance from many African universities (Mouton, 2008).

The second challenge which contributes to the non-visibility of African publications is the dominance of publishing houses which are predominantly based in developed countries. For instance, it is reported that between 2007 and 2008, it was estimated that there were about 2,000 scientific publishing houses globally, of which about 40 per cent were based in Europe alone, publishing about 50 per cent of the world's research articles (Deem, 2008). Another study by Stenson (2011) found that 66% of the journals in DOAJ are published in Europe and North America, while only 2% are published in the whole of Africa. These findings are a clear indication that having more publishing houses based in the West affects scholarship in African countries in that while most African academics are encouraged by the structure of their university promotion systems to publish and make their research outputs available to international audiences, the avenues to do so are limited. As a result, research output that may be considered important in solving problems in African countries may be considered too local, too African, or too uninteresting to readers in the west and are therefore not given priority (Trotter et al. 2014). In this regard, as Chan, Kirsop and Arunachalam (2011: 1) rightly point out 'if local content produced by African scholars is not available online, it may lead to "the misguided notion that little, if any, research of substance is generated in the global south'.

The third challenge is the dependency of African researchers on donor funding from the North in the form of collaborations and consultancies where researchers from Africa often have to conform to the types of research that donors consider a priority. African researchers are then torn between the desire to produce locally relevant research that is accessible and useful to their countries and a desire to produce research that conforms to the prevailing research interests of the donors even if that research remains largely inaccessible to national communities (Gray, Trotter, & Willmers 2012; Mouton, 2008).

In view of the above challenges faced by African researchers, it has been suggested that to enhance the visibility of African research, African researchers should publish in Open Access journals with pressure coming mostly from funding bodies which require that all research outputs from research funded by them be made Open Access (Fox & Hanlon, 2015). As a result the adoption or use of Open Access by researchers in African countries has not only been an issue of great concern to countries outside Africa but also among scholars within Africa (Björk & Solomon, 2012a; Chalabi & Dahmane, 2011; Fox & Hanlon, 2015; Nwagwu, 2013). However, ICT infrastructure needs to be improved in

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African countries and when there is political will for researchers to use Open Access, researchers and libraries in these counties could gain better access to free information (Fox & Hanlon, 2015; Peekhaus & Proferes, 2015). It is believed that Open Access would provide an opportunity for African researchers to have a far greater degree of freedom to exchange and collaborate and to translate their knowledge into useable forms (Bowdoin, 2011; Nwagwu, 2015). Subsequently, their research output would be more visible as it will be freely available on the public internet, thus permitting any users to read, download, copy, distribute, print and search or link to the full texts of these articles (Chan, Kirsop & Arunachalam, 2011; Ezema & Onyancha, 2016). The other benefits of publishing in Open access are that researchers from African countries are likely to have more speedy dissemination of their research findings to a wider audience and adequate archiving of scientific data (Ezema & Ugwu, 2013). In addition, publishing in Open Access online journals would also drive creation of institutional repositories in African countries (Maria, Correia & Teixeira, 2005; Nwagwu, 2015). While having online journals and Open Access are good avenues for enabling African researchers to both publish and disseminate their research results, the argument is that Open Access raises new challenges. Payment of subscription fees for instance has been cited as a substantial barrier that hinders most researchers in African countries from publishing in Open Access (Ezema & Onyancha, 2016; Ivwighreghweta, 2012; Ivwighreghweta & Onoriode, 2012). As Manista (2012) rightly points out 'open' does not mean free because while the end user does not pay for using articles, the cost of publication is on the author. A number of scholars have argued that this has negative implications for researchers from most African institutions who cannot afford the prices attached to publishing in Open Access (Okoye & Ejikeme, 2011).

In the face of such challenges, the alternative has been to publish African scholarship locally. However, this too has had its own challenges. For instance, most of the journals in African universities are not able to sustain themselves financially and as a result they are unable to publish their journals consistently (Björk, 2012; Solomon & Björk, 2012b). In most cases researchers leave it to commercial publishing firms to handle their locally published journals as the case is at the University of Zambia. Yet, some of these publishing firms do not have the capacity to advertise and distribute all the few copies they produce due to financial constraints and this affects the sustainability and visibility of the content of these journals.

This section has shown that there is need for research produced by African researchers to be more visible both internationally and locally but that while this is so, we have seen that there are a number of challenges that make it difficult for this to happen. In view of these challenges, the alternative has been to publish African scholarship locally. However, this too has had its own realities mainly

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bordering on scarce financial resources as will be seen in the next section that discusses the journals and publications in Zambia.

5.3 Journals and Publications by Zambian Scholars

This section discusses the efforts that have been made by Zambian scholars to establish local journals either through the universities or through their various associations so as to encourage Zambian scientists in both natural and social science domains to publish. The challenges if any, are also highlighted within the discussion of each journal. The information provided in this chapter is based on the collection of both hard copies and online journals that the researcher was able to have access to. The other information is based on the interviews that the researcher had with the Editors of the journals that were in existence in 2016.

Table 5.1 below shows the 14 journals published by the University of Zambia that were still in existence in 2016.

Table 5.1: UNZA Journals in existence in 2016

	Name of Journal	**Period of existence**
1	*African Social Research (Former Rhodes Livingstone Papers and Rhodes Livingstone Journal)*	1944- ongoing
2	*The Zambian Papers*	1967-ongoing
3	*Zambia Law Journal*	1969 ongoing
4	*Journal of Humanities*	1976-ongoing
5	*Zango: The Zambian Journal of Contemporary Issues*	1976-ongoing
6	*Journal of Agricultural Sciences*	1980-ongoing
7	*Zambia Journal of History*	1981-ongoing
8	*Journal of Science and Technology*	1996-ongoing
9	*Zambia Journal of Education (ZAJE)*	2000-ongoing
10	*Journal of Engineering (The Engineer)*	2010-ongoing
11	*Journal of Natural and Applied Sciences (JONAS)*	2012-ongoing
12	*Journal of Agriculture and Biomedical Sciences (JABS)*	2012-ongoing
13	*Journal of Law and Social Sciences*	2012
14	*Journal of Library and Information Science (Initially known as Journal of Zambian Libraries established in 1970)*	2013

UNZA (2016)

Among the fourteen journals listed above, nine (9) of them: *African Social Research*, *Journal of Humanities*, *Zambia Journal of History*, *Zango: The Zambian Journal of Contemporary Issues*, the *Zambian Papers*, *Zambia Law Journal*, *Journal of Law and Social Sciences*, *Journal of Library and Information Science*, *Zambia Journal of Education (ZAJE)*, and *Journal of Law and Humanities* all publish articles with a focus on the fields of Humanities and Social Sciences. The remaining five - *Journal of Agricultural Sciences*, *Journal of Science and Technology*, *Journal of Engineering (The Engineer)*, *Journal*

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of Natural and Applied Sciences, and *Journal of Agriculture and Biomedical Sciences* - publish articles in the fields of Natural and Applied Sciences as well as Agriculture.

Since this study is focussed on the social sciences, we begin our discussion with the nine social sciences related journals. After this, we turn our focus on a combination of other Zambian journals that exist outside the spheres of the University of Zambia but in which researchers from any of the universities in Zambia can publish.

5.4 Social Science Research Publications in Zambian Journals

This section provides a profile of each Zambian journal starting with those under the auspices of the University of Zambia and later on journals that exist in Zambia under the auspices of different associations.

5.4.1 African Social Research (ISSN 0002-0168)

African Social Research (ASR) is the oldest University of Zambia journal. It was initially known as the *Rhodes-Livingstone Journal of Human Problems in Central Africa* (RLJ) before the Rhodes-Livingstone Institute of Social Research became an integral part of the University of Zambia in 1966. The original thought of establishing the first Social Science journal in Zambia owes much to the works of Lieutenant Godfrey Wilson, the first Director of Rhodes-Livingstone Institute of Social Research and his successor Max Gluckman. Wilson founded the series of *Rhodes-Livingstone Papers*, which was later renamed the *Rhodes-Livingstone Journal* and became the pioneer research journal Northern Rhodesia. Wilson's first publication in the *Rhodes-Livingstone Papers* was an essay based on his research conducted on the Economic and Detribalisation in Northern Rhodesia, his preliminary tour in Bembaland and the studies he conducted in economic and social organisation of Broken Hill. Wilson resigned in 1944 and his successor Max Gluckman launched the *Rhodes-Livingstone Journal* and the first issue of the *Rhodes-Livingstone Journal* was published in June, 1944 in Northern Rhodesia by the Royal Anthropological Institute of Great Britain and Ireland (Gluckman, 1944b). This was followed by the second issue which was published by Manchester University Press in the same year. The subsequent issues were published by a number of publishers, among the notable ones was the Oxford University Press. The objective of the journal was to communicate and disseminate research outputs to academicians both within Africa and across the world. This pioneer journal gave the opportunity to civil servants, missionaries and others with suitable interests to also contribute to social research in terms of publications (Richards, 1977).

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After the Rhodes-Livingstone Institute of Social Research became part of the University of Zambia and was renamed the Institute of African Studies, the *Rhodes-Livingstone Journal* changed hands as it became the first journal of the University of Zambia and was renamed the *African Social Research Journal.* The first issue for the *African Social Research Journal* was published by UNZA Press in 1966 while the latest issue at the time of study was published in 2013. The journal has thus covered a period of 47 years.

Initially, just like the *Rhodes-Livingstone Journal*, the *African Social Research Journal* published articles which focussed on the general fields of social research in Africa especially in sociology, social anthropology, economics, human geography, demography, history and political science. However, the difference between the two is that unlike the *Rhodes-Livingstone Journal* which focussed on Central African countries in general, the *African Social Research Journal* gave special consideration to articles with Zambian content. From its inception, the *African Social Research Journal* had intended to have its issues published twice every year in June and December. However, this has not been achieved mainly because of lack of financial support from the university. For instance, issues 7, 10, 12, 15, 31, and 33 were not published while several issues had to be combined. There were also irregular number of articles per issue, ranging from 1 (Issue no. 50) to 49 (Issue nos.53/54), with an average of 12 articles. These inconsistencies in the publication of these issues have greatly affected the quality and the reputation of the journal both locally and internationally. Table 5.2 below shows the publication pattern of the *African Social Research Journal* from 1966 to 2013.

Table 5.2: Publication pattern of Journal of ASR from 1966 to 2013

Issue number	Number of articles
1	8
2	8
3	7
4	7
5	5
6	7
8	13
9	17
11	15
13	11
14	11
16	11
17	12
18	10
19	14
20	12
21	23

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Issue number	Number of articles
22	20
23	16
24	15
25	11
26	13
27	8
28	18
29	11
30	15
32	11
34	8
35	9
36	9
37/38	12
39/40	6
41/42	12
43/44	7
45/46	6
47/48	7
50	1
51	9
52	5
53/54	49
55/56	9
Total	478

Source: UNZA (2016a)

5.4.2 The Zambian Papers (ISSN: 1028-2351)

The *Zambian Papers* is an offshoot of the *African Social Research Journal*. This makes it the second oldest journal sponsored by the University of Zambia. Its first publication was in 1967. The contributions of the *Zambian Papers* come from all those working in the general field of social research in Africa, especially in sociology and social anthropology, economics, psychology, human geography and demography, history and political science. The journal also welcomes articles from those engaged on similar work elsewhere outside Africa especially when their research findings are applicable to Africa or if their findings provide important points of contrasts. Initially, the journal was published twice a year (June and December). However, as time went by the journal whose latest edition is number 23 published in 2011 started facing challenges in terms of the scarcity of publications received from scholars. The articles submitted for publication were too few to make up an issue and as a result sometimes the journal was published as a monographic series. Table 5.3 below shows the annual distribution of research output of the *Zambian Papers* from its inception in 1967 to 2011.

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Table 5.3: Annual distribution of research output of the Zambian Papers (1967-2011)

Year	Issue number	Number of articles
1967	1 & 2	4
1968	3	1
1969	4	1
1971	5 & 6	2
1972	7	1
1973	8	1
1974	9	1
1976	16	1
1978	10/11 & 12	2
1980	13	1
1982	17	1
1984	14 & 15	26
1985	18	1
1997	19	1
2001	20	1
2004	21	1
2010	22	1
2011	23	2
Total		49

Source: UNZA (2016b)

5.4.3 The Zambia Law Journal (ZLJ) ISSN: 1027-7862

The *Zambia Law Journal* (ZLJ) is one of the oldest journals produced by the University of Zambia. It was founded in 1969 under the School of Law with the intention of having it published bi-annually. *Zambia Law Journal* (ZLJ) has published 33 volumes since its inception in 1969. However, like the rest of the journals funded by the University of Zambia, the *Journal of Law* also suffered some interruptions in publication. For instance, volumes 3 and 4, 7-9, 21-24, and 25-28, were combined. Furthermore, although the journal was intended to be a bi-annual serial, it was mostly published as an annual serial. It was only published twice in one single year in 1969. In some years like the other issues earlier mentioned, issues 1 and 2 were also combined. There were an irregular number of articles per issue, ranging from 1 to 16, with an average of 4 showing some inconsistency in the number of publications per issue. This implies that the quality and the reputation of the journal has been affected in a negative way. Table 5.4 below shows the publication pattern of ZLJ from 1969 to 2016.

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Table 5.4: Publication pattern of ZLJ from 1969 to 2016

Issue	Number of publications
1	16
2	1
3/4	15
5	15
6	10
7/9	7
10	8
11	6
12	6
13	7
14	10
15	11
16	6
17	7
19	5
20	6
21	5
21/24	5
25/28	5
29	3
31	6
32	6
33	6
35	7
36	4
37	4
38	5
40	5
41	4
42	6
43	4
44	5
Special	10
Total	**226**

Source: UNZA (2016)

5.4.4 Journal of Humanities (ISSN: 1027-7455)

The Journal of Humanities is a peer reviewed journal that was established in order to complement the other existing social science journals and to provide a facility through which academics in the University of Zambia could publish. The Journal was first published in June, 1977 by the University of Zambia Press (UNZAPRESS) and its first and inaugural issue volume 1, issue 1 owes much to the inspiration of the then University of Zambia Chairperson of the Senate Publications Committee and

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Deputy Vice Chancellor, Professor Jorry Mwenechanya, who encouraged researchers to publish in journals. Since its inception in 1977, it was agreed that the *Journal of Humanities* would be funded by the School of Humanities and Social Sciences. The school took on the responsibility and that has been the process throughout its existence. Initially, the *Journal of Humanities* was intended to be a biannual publication for research work in the School of Humanities and Social Sciences and the School of Education within the University of Zambia alone. This is because the journal was intended to provide a service for teaching research to the community of the University of Zambia. However, this decision was rescinded as the journal aspires to have a wider academic readership and hence the journal accepts articles and book reviews by authors not only from outside the university but from outside Zambia as well, as long as the articles fall within the parameters of the philosophy of the journal.

Unlike other journals which have experienced financial support challenges for their publications, the *Journal of Humanities* has been able to get financial support for its publication. However, despite this financial support the journal has faced other challenges. One prominent challenge is that the journal has not been receiving enough articles to publish twice a year as planned, a similar challenge faced by the *Zambian papers*. According to Professor Bizeck Phiri, the Chief Editor of the journal at the time of this study, this scenario reflects the problem of a poor culture of scholarly publishing by academics in the social sciences in the University of Zambia. According to him, there are very few academic members of staff within the social sciences in the University of Zambia who are interested in doing research. For some it is because of lack of capacity to publish and as a result some of the articles submitted to the Editor by local researchers do not meet the required standards of the journal and therefore cannot be published. In addition, articles from outside Zambia are not usually enough and sometimes they are submitted late and cannot be published as this is against the Editorial Policy guidelines. The other challenge is that reviewers expect to be paid and when this is not done, they have a tendency of delaying article reviews on purpose. As a result of a combination of these factors, the expected frequencies of publications in the journal have not been met. During its existence, the journal has published 85 papers, mainly articles and a few book reviews. Table 5.5 below shows the annual distribution of publication from 1997 to 2011.

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Table 5.5: Annual distribution of publications for Journal of Humanities and Social Sciences

Volume Number	Year	Number of Articles
1	1997	3
2	1998-1999	10
3	2000-2001	8
4	2004	6
5	2005	12
6	2006	4
7	2007	13
8	2008	10
9	2009	10
10	2010	4
11	2011	5
	Total	**85**

Source: UNZA (2016d)

5.4.5 Zango: the Zambian Journal of Contemporary Issues (ISSN: 1028-3536)

Zango, the Zambian Journal of Contemporary Issues, is one of the oldest journal sponsored by the University of Zambia. ZANGO means 'forum', 'debate' or 'arena' for exchanging views. Zango was established in 1976 and is edited by a committee of faculty members of the University of Zambia and is published by UNZAPRESS. The journal publishes articles on African thought, development, politics, international issues, language and music. Zango contains inter alia information on bibliography of Zambia, university announcements and readers' comments. When ZANGO started in 1976 the intention was to have it as a bi-annual journal but in 1997 the journal received enough articles and it began to publish a continuous annual volume. However, while the initial intention of publishing Zango bi-annually was good, the journal did not last long before it was faced with financial challenges leading to no publications for thirteen years (1983 and 1996) - only to resume publication in 1997. As a result of lack of financial resources to publish, the journal resorted to its earlier plan of publishing once every two years from 1998 to 2011 with some of the issues being combined. For instance, 1998/1999; 2000/2001; 2002/2003; 2004/2005/2006/2007 and 2010/2011 were combined while there were no publications in 2008 and 2009 respectively. As such only a total of 15 volumes with 107 scholarly papers were published from 1976 to 2013 a period spanning 37 years. The research output of the journal is very small, ranging from 4 to 12 articles. The journal resumed publishing annually in 2012 and 2013. These inconsistencies in frequency of publishing and small numbers of publication in each volume are an indication that the journal has serious challenges and this is also a reflection of its lack of visibility internationally. Table 5.6 provides a summary of the annual distribution of publications for *Zango* from 1976 to 2013.

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Table 5.6: Annual distribution of publications for ZANGO from 1976-2013

Year	Number of publications
1976	4
1977	9
1979	6
1980	12
1981	4
1982	6
1997	5
1998/1999	4
2000/2001	6
2002/2003	9
2004/2005	5
2006/2007	7
2010/2011	9
2012	6
2013	6
Total	107

Source: UNZA (2016e)

5.4.6 Zambia Journal of History (ISSN: 1815-025X)

The *Zambia Journal of History* is one of the earliest journals established by the University of Zambia in order to encourage social science researchers to publish in local journals. The Journal is a publication of the Department of History in the School of Humanities and Social Sciences of the University of Zambia. The first issue of the Zambia *Journal of History* was published in 1981 by UNZAPRESS. The journal was established to showcase the on-going research activities in several dimensions of Zambian history namely: ecology, economics politics and ideology. The journal of History intended to expand its historical research base and to increase its visibility by providing a platform through which local and international postgraduate students could publish historical research. This meant that the future issues would therefore contain a more representative selection of people's works and a better coverage of pre-colonial history. In addition, although from its inception it was openly agreed that the *Zambia Journal of History* would give priority to publishing deserving results of research done in the University of Zambia, it was later agreed that there was need for the journal to have a wider academic readership. As a result, articles focusing on issues pertaining to other African countries have been and are still acceptable. Contributors to the journal therefore do not only come from members of staff and postgraduates in the Department of History but all other scholars outside the department who have written on issues relating to the history of Zambia and Africa. The journal accepts articles, letters and book reviews for publication on Africa and world history topics except for the first issue which was devoted to works on Zambian history.

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The *Zambia Journal of History* came into existence through the initiative of one of the former Deans of the School of Education who encouraged the departments to launch their own journals. Through this initiative, funds for publication were even allocated and this prompted the History Department to review its existing publishing commitments and decided, among other publishing commitments, to launch the journal. Initially, the journal was intended to be the major publication of the department and to be produced annually. However, the journal did not manage to publish in accordance with its initial annual plan. For instance, after the first issue was published in 1981, eight years passed before the second issue was released in 1989. This eight year gap in publication has been attributed to lack of financial support, staff turnover and incidental delays in typing and production of the issue. Before the publication of the second issue, the department acquired facilities required to run regular journal publications. This helped the journal to maintain the publication momentum for a few years until after the 1995 publication. Between 1996 and 2003, the Journal of History went without a single publication due to the liquidation of its main funder, the African Commercial Bank. As a result, after the liquidation the bank could not continue funding the journal's publications. When the bank stopped funding, other funders such as the *Centre de Recherché d' Echanges et de Documentation Universitaire* and Beit Trust came to the rescue of the journal. However, this funding was only a temporal measure as the *Centre de Recherché d' Echanges et de Documentation Universitaire* and Beit Trust only managed to fund issues No. 4 which was published in 1991 and another publication of a combined issue for Nos. 6/7 which were published in 1993/94 respectively. Thereafter, the Department of History had to look for funding elsewhere but this was not forthcoming until in 2004 when the Central administration of the University of Zambia released the funds that were owed to the department. These funds helped in the publication of the 2004 issue, now called Volume 1, No. 9. In order to reduce on the publishing costs, this issue was published in an A5 size as opposed to the earlier size of A4 which they used to produce. Since then, no other issue has been released and at the time of this study in 2016, the journal had placed an advertisement on the University of Zambia website for "call for papers" for publication in the journal.

The journal has experienced a lot of interruptions in publication such as the frequency of publications as well as long gaps between publications. For example, eight years passed between the first and the second publication, another eight years passed between the eighth and ninth publications and by 2016 eleven years had passed since the last publication (Vol.1. No. 9, 2004) and the department of history is still waiting for another publication. These hiccups in publication are what probably caused issues 6 and 7 to be combined (Nos. 6/7, 1993/94). Explaining the problem behind non-publication, one of the editors of the journal cited lack of commitment from the members, and not so much to do

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with funding. This are similar sentiments raised by Zambian papers and the Journal of Humanities an indication of lack of interest or capacity shown by Zambian scholars in the social sciences.

The journal has had too many book reviews in the issues such it seemingly became a norm to have more book reviews and less peer reviewed articles in every publication. For instance, there were more reviews than research articles in issue no. 2 in 1989 where there were 3 articles against 4 book reviews while issue No. 5, 1992 has 3 research articles against 7 book reviews and issue No. 6/7, 1993/94 has 4 research articles against 5 book reviews and 2 obituaries. Worse still some reviews are very short, even as short as half a page. This scenario could be analysed from two viewpoints, on one hand, that the book reviews are given precedence over original research while on another hand; one would attribute this to lack of enough people submitting research articles. The major types of documents published in the *Zambian History Journal* were articles, book reviews, obituary and article reviews.

Another challenge which is clear with the *Journal of History* is that some issues have no information on the authors such as institution one belonged to when they submitted their work. This makes it difficult to trace the contributors in cases where the reader would want to. Table 5.7 below provides a summary of the annual distribution of research output of the *Journal of History* from 1981 to 2004, a period of 23 years.

Table 5.7: Annual distribution of publications in the Journal of History from 1981 to 2004

Issue	Year	Frequency
1	1981	6
2	1989	7
3	1990	7
4	1991	9
5	1992	10
6 & 7	1993/94	10
8	1995	5
9	2004	7
	Total	**61**

Source: UNZA (2016f)

5.4.7 Zambia Journal of Education (ZAJE) ISSN: 1996-2645

The Zambia Journal of Education (ZAJE) is an offshoot of another journal that used to exist in the School of Education. According to the Editor of the newly introduced journal, the School of Education had a

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journal known as the *Zambia Education Review* some years back. In order to revive the journal and encourage academics to do research and use it to publish their research findings, it was considered necessary to revive the journal through a different name. ZAJE was first published in 2007 with a combination of both Volume 1 and Volume 2. ZAJE usually invites contributions of articles from researchers, teacher educators, institutional managers, teachers and other practitioners of education in Zambia within the sub-region and beyond. The journal seeks to provide the forum of these education professionals for the dissemination of current views and ideas on education practices, policies and development, and research findings in Zambia. The focus of the journal is to engage in research that would address a number of questions in Zambia's education system and the country as a whole. The research conducted therefore is expected to include among others issues that focus on basic schools, high schools, tertiary level institutions and/or management and support sectors in Zambia. It is envisaged that through this journal scholars will disseminate their results not to only to Zambia but to Africa and beyond. The school also intends to transform university scholarship into practice that helps the Zambian education system to strengthen and benefit its various target beneficiaries better. Consequently, articles that address educational issues in other countries but show how these would benefit Zambia are also considered on merit.

5.4.8 Zambia Journal of Library and Information Science (ZAJLIS) ISSN 2310-6395

The *Zambia Journal of Library and Information Science* (ZAJLIS) is an offshoot of another journal that existed in the early years of the University of Zambia. According to Dr Akakandelwa, the Chief Editor of ZAJLIS at the time of this study, the Department of Library Studies, prior to the established of *Zambia Journal of Library and Information Science* (ZAJLIS) had a journal known as the *Zambian Libraries* in the 1970s. The journal was started by a number of expatriate lecturers and it was spearheaded by Muhammadali and others. However, in the 1980s a number of expatriate staff in the Department of Library Information Studies left the University of Zambia leading to a shortage of academic staff in the Department. The shortage of academic staff in the Department of Library and Information Studies was compounded by the fact that there were very few Zambians who were trained in the discipline of Library and Information Studies. At the time others were still undergoing training abroad, notable among the early Zambian scholars in the field of Library and Information Studies are Dr Hudwell Mwacalimba and Dr Andrew Kaniki. As a result of the shortage of staffing, the journal was not published for many years during the 1980s. By 2013 the University of Zambia had trained a number of lecturers in the field of library and information studies and the establishment of the Department of Library Information Studies occurred. It was then that the Journal was resumed within the Library Information Studies Department (LIS) under the leadership of Dr A. Akakandelwa.

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Accordingly, the name of the Journal also assumed a new name from *Zambian Libraries* to the *Zambia Journal of Library and Information Science*. A different Editorial Board and new reviewers were also appointed. The journal is published biannually by the Department of Library and Information Science at the University of Zambia.

According to Dr Akakandelwa the journal seeks to publish manuscripts with cutting-edge research that breaks new ground, rather than merely making an incremental contribution to the field of Library and Information Science. The journal is particularly interested in publishing innovative papers that start up or redirect a line of inquiry and accepts manuscripts that provide different perspectives and those that deliberate controversial or challenging issues in the realm of library and information science. Therefore, ZAJLIS is interested in papers that are constructive in nature; which foster better understanding of the ever changing field and would result in better service provision to mankind.

The journal intends to have a wider academic scholarship and therefore publishes original manuscripts from both international and local scholars, and professionals in the field of Library and Information Science. The sphere of competencies of the journal include: Librarianship, Knowledge Management, Information communication Technologies (ICTs), Business Information and Marketing, Management of Information Systems, Records and Archives Management. The journal also welcomes articles in related fields such as Computer Science.

5.4.9 The Journal of Law and Social Sciences (JLSS) ISSN 2226-6402

The Journal of Law and Social Sciences is a new journal of the University of Zambia. It is one of the three journals which were established in 2012 under the Directorate of Research and Graduate Studies (DRGS). The other two are the *Journal of Natural and Applied Sciences* (JONAS) and the *Journal of Agriculture and Biomedical Sciences* (JABS). These three journals owe much to the initiative of Professor Imasiku. A. Nyambe, the then Director of the Directorate of Research and Graduate Studies. The main rationale for establishing the three journals was to encourage and provide a platform for University of Zambia postgraduate students to publish their research findings in conjunction with their lecturers. It was also intended to provide another avenue to lecturers who may not be able to publish in other journals which fail to publish frequently on account of lack of funding. *The journal of Law and Social Sciences* is supported and funded by DRGS and aims to advance academic research pertaining to social sciences (Chipeta & Nyambe, 2012).

According to the Chief Editor of the journal in 2016, Professor Charles Namafe when the journal was established, the Editorial Board embarked on a series of meetings to plan for its publications schedule which was to publish it bi-annually. The Chief Editor submits that in 2016, the journal had released

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two issues; the first one was in 2012 while the second one was in 2014. According to him, like other journals sponsored by the University of Zambia, the journal has not been spared from the challenges that other journals have been facing in the university. For instance, he pointed out that the quality and size of the latest two journals that had been released in 2016 differed significantly from those published in 2012 and 2014 respectively in terms of the quality of their cover pages as well as their features, a situation which was not originally planned for. The cover of the latest version was of low quality compared to the first two issues and these differences are a reflection of the challenges the journal is facing. According to the Chief Editor, there are three major challenges that the journal is facing. The first challenge is related to the fact the journal has not yet found a reliable publishing house which would provide a good product that the journal aims for while at the same time it has been difficult for it to rely on UNZAPRESS which from the journal's experience has not been able to print the journal's issue within the schedule that was given to them. The second challenge relates mainly to the quality of the manuscripts received from subscribers which were below the standards set by the journal and as such very few articles are eligible for publication. In view of this particular challenge and considering that this journal was established to encourage postgraduate students to publish their research findings before they graduate, the team of editors deliberated on how best they could address the issue and came up with a deliberate approach to produce a study manual which was meant to assist postgraduate students to come to grips with publishing. The third challenge relates to the reviewers within the country who expect to be paid for their time whenever they reviewed a paper, a practice which does not happen in other parts of the world. These series of challenges interacted among themselves affect the frequency in which the journal is released.

We now turn our focus on the other journals available in the country for social scientists to publish in which were founded by other scholars within Zambia and those which came through the initiatives of associations. These are the *Zambia Social Science Journal* and *Zambia Journal of Library Association.*

5.5 Other Social Science Journals in Zambia

This section discusses social science journals that were established under the auspices of different associations.

5.5.1 Zambia Social Science Journal [ZSSJ](ISSN No: 2079-5521)

The *Zambia Social Science Journal* is an interdisciplinary, peer-reviewed journal established under the Laws of Zambia in 2006. According the interview that the researcher had with the Executive Director of the journal Professor Manenga Ndulo, JSSJ is published under the auspices of the Southern African Institute for Policy and Research (SAIPAR), an independent, educational, research and development

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oriented research centre founded by Professor Muna Ndulo, a renowned Zambian lawyer. The Journal is published bi-annually, with editions coming out in April and November. The journal has subscription rates which are available on request. Through research, publications, documentation, seminars and dialogue facilitation, the Institute aims to contribute to improved policymaking, research capacity and governance. It also serves as a catalyst for new ideas, a repository of knowledge to pursue good governance, economic development in Zambia and the Southern African region. The primary objective of the journal according to Professor Ndulo is to publish scholarly work in the social sciences and development; therefore articles from any field within the social sciences relevant to Africa are of great importance and can be published in this journal. Professor Ndulo further stated that the journal however intends to have a wider readership and therefore welcomes articles from scholars and researchers at all career stages from within and outside Africa. Serving as a forum for argument, debate, review, reflection, and discussion, the journal is informed by the results of relevant and rigorous research. The published papers are peer reviewed by anonymous reviewers. Final acceptance or rejection of submitted papers rests with the Editorial Board which reserves the right to refuse any material for publication.

5.5.2 Zambia library Association Journal (ZLAJ) ISSN 0049-853X

The Zambia Library Association Journal (ZLAJ) now called the *Library and Information Association of Zambia Journal* (LIAZJ) is one of the earliest journals in Zambia. According to (Cheelo, 1972), the journal's history dates back to the establishment of the Library Association of Zambia which started during the Federation of Rhodesia and Nyasaland, comprising Northern Rhodesia (Zambia), Southern Rhodesia (Zimbabwe), and Nyasaland (Malawi) which was formed in 1953 and dissolved in 1963 (. Thus, its history falls into three stages: i) The Library Association of Rhodesia and Nyasaland; ii) The Library Association of Central Africa; and iii) The Zambia Library Association). It is published by the Association (LIAZ) and its editorial boards changes from time to time.

According to (Cheelo, 1972), the Federation of Rhodesia and Nyasaland was dissolved in December 1963. As a result, at the Annual General Meeting held in March 1964 the name of the association equally changed from the Library Association of Rhodesia and Nyasaland to the Library Association of Central Africa. Another development in the change of the association's name came after Northern Rhodesia attained its political independence on 24 October, 1964, and changed its name to Zambia (Cheelo, 1972; Lundu, 1984; Phiri, 1986) . Shortly after attaining its independence, in 1965 librarians formed a Zambia Branch of the Library Association of Central Africa. Due to the strained political relations resulting from the direct consequence of the declaration of independence of Rhodesia on 11 November 1965, it became difficult for the Library Association of Central Africa to administer branches

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in Malawi and Zambia (Cheelo 1972). It was therefore decided that each branch should function independently but should maintain loose administrative connections with the Library Association of Central Africa while the situation lasted. In 1966, the secretariat of the association moved to Lusaka and this gave the Zambia Branch further encouragement and enthusiasm to organise itself into an independent association. However an opportunity to form its own association made itself available in February, 1967 when the Annual General Meeting (AGM) of the Library Association of Central Africa scheduled to take place in Zambia was cancelled. When the AGM failed to take place, the members of the Library Association Committee in Zambia decided to form a new association and have a new constitution in place (Cheelo, 1972).

After forming their own association, a decision was made to have a journal designed to serve as the communications medium for the members in the various parts of the country. A Sub-Committee was appointed and was headed by Mr. James Burkett who was appointed as Honourable Editor. A sub-committee put forward its recommendation on 7 June, 1967, that the journal be produced quarterly and should be known as the *Zambia Library Association Journal* (Cheelo, 1972; Phiri, 1986).

We now turn our focus on research journal that are not social science related but are produced by the University of Zambia and one which is not produced by the University of Zambia. Those under the auspices of UNZA include the *Journal of Science and Technology, Journal of Engineering (the Engineer), Journal of Natural and Applied Sciences (JONAS), Journal of Agricultural Sciences, Journal of Agricultural and Biomedical Sciences (JABS)* while the *Journal of Medicine* is not produced by the University of Zambia.

5.6 Other University of Zambia Journals (Non-Social Science Journals)

This section discusses non-social science journals that exist within the University of Zambia. The majority of these journals are directly sponsored by University of Zambia through the Directorate of Research and Graduate Studies with only one sponsored directly by the Zambian Government. The reason for of discussing non-social sciences journals in this study is to show that the general financial constraints faced by social sciences journals that are supported either directly by UNZA or through the Zambian government are not any different from those in non-social sciences. The only variation found is in the consistency of support.

5.6.1 The University of Zambia Journal of Science and Technology (ISSN: 1027-4928)

The University of Zambia Journal of Science and Technology (JST) was established in 1996 and the first issue was published in 1997 (Chipeta & Nyambe, 2012) . *The Journal of Science Technology* is one of

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the University of Zambia journals funded by the National Science and Technology Council (NSTC). It is published twice yearly in June and December by the University of Zambia Press. Its mandate is to serve the publication needs of academics in the five science-based schools namely Agricultural Sciences; Natural Sciences; Mineral Sciences; Engineering and Veterinary Medicine. The Journal provides an outlet for research findings and reviews in areas of science and technology found to be relevant for national and international development. The biannual journal is intended, in its publications, to stimulate new research and foster practical application from the research findings. The Journal aims at publishing original research of such high quality in order to attract contributions from the relevant local, regional and international communities. It also aims at providing a unique channel for enhancing innovative ideas and developments in inter and multi-disciplinary areas covered by the journal. However, one critical challenge that is threatening the existence of the journal is lack of articles from researchers to enable consistency in the publication of the Journal. This situation has led to a gap of 4 years between 1999 and 2003 during which the journal has not published any issue. The journal only resumed publications with a special edition in 2004. Table 5.8 below shows the annual distribution of research output of the JST from 1997 to 2014.

Table 5.8: Annual distribution of research output of the JST

Year	Number of articles
1997	11
1998	9
2004	13
2005	6
2008	6
2009	6
2010	5
2011	10
2012	11
2013	6
2014	7
Total	**90**

Source: UNZA (2016g)

5.6.2 The Zambia Journal of Agricultural Sciences (ISSN 1018-791X)

According to the interview the researcher had with Dr Benson Chishala, the Chief Editor of the journal in 2016, the *Zambia Journal of Agricultural Sciences* is a University of Zambia journal which started around the early 1980s when some agriculture scientists, most of whom were young, decided to form an association for agricultural scientists . A few years after the association was formed, it almost died because of lack of activities with one meeting or two per year. It was only in the late 1980s, when through the Dean of the school of Agricultural Sciences then, Dr Wilson Mwenya, that an executive

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committee was formed. Dr Mwenya and Dr Davies Lungu were part of the Executive Committee which managed to get a sponsorship from Canada through AGROMIS, an association based in Canada and with that, the association became a bit more active. One of the main activities the association embarked on was the establishment of the *Zambia Journal of Agricultural Sciences*. According to the Chief Editor, the journal has not been produced consistently as expected. He pointed out that the journal had lack of consistency to the extent that there have even been a calendar year or two where there has not been an issue produced. The Editor submitted that while in the early years and especially around the 1990s, the journal did not perform well due to lack of scholarly papers to be published but in the later years the major problem advanced for this lack of consistency in publishing the journal is lack of funding. However, at the time of this study, the Editor stated that the association intended to establish an institute for agricultural scientists that would help find funders of the journal and that they were working on papers to be presented to government for the establishment of the institute. The association was therefore optimistic that the journal will improve in its frequency of publications.

The Editor also indicated that as a way of encouraging scholars and to provide an opportunity for them to publish, the journal does not charge anything for publishing. Consequently, following that decision, the journal had received a remarkable number of articles from the previous seven or eight articles in each issue to 15 articles in each issue in 2014, 2015 and 2016. These were to be published together with 20 articles for the 2016 issue which had already been reviewed and ready to be published. The increase in the number of articles in the three issues is attributed to a number of innovative ideas the school has come up with on how to source for money and the change in the mind-set of the agriculture scientists' circles to publish. The journal hopes to sustain its publications by finding an established funder for the journal among its partners.

5.6.3 Journal of Natural and Applied Sciences (ISSN: 2226-6402)

The *Journal of Natural and Applied Sciences* (JONAS), like the *Journal of Law and Social Sciences,* is another new journal at the University of Zambia established in 2012 under the Directorate of Research and Graduate Studies (DRGS). The journal covers publications from the School of Natural Sciences and School of Agricultural Sciences produced by both lecturers and postgraduate students. It was intended to provide another avenue in addition to the existing journals in the university to lecturers who may not be able to publish in other journals that are not publishing frequently on account of lack of funding. The journal however has only managed to produce two issues from 2012 to 2016 with an average of 6 articles in each issue.

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5.6.4 Journal of Agricultural and Biomedical Sciences (JABS) (ISSN: 2226-6410)

The Journal of Agricultural and Biomedical Sciences (JABS) is one of the three journals earlier discussed which were established in 2012 under the Directorate of Research and Graduate Studies (DRGS). It was founded on similar principles as those of the *Journal of Law and Social Sciences* and *Journal of Natural and Applied Sciences* respectively. The journal covers publications from the School of Agricultural Sciences and School of Medicine produced by both lecturers and postgraduate students. It was intended to provide another avenue to encourage lecturers and postgraduate students to publish together before the students graduate. JABS like JONAs has also managed to only produce two issues.

5.7 Other Zambian Journals by Different Associations

The journals discussed under this section are not supported or funded by the University of Zambia but are linked to different associations and scholars from universities both within and outside Zambia.

5.7.1 The Journal of Engineering Institute of Zambia (ISSN: 1608-6678)

The Journal of Engineering Institution of Zambia (the Engineer) operates under the auspices of the Engineering Institution of Zambia, the organisation whose mandate is to promote and regulate the engineering profession. The journal publishes technical and research papers reporting significant experimental, theoretical or observational extensions of engineering knowledge, or advances in the practical application of known engineering principles. The scope of the journal is broad and encompasses: agricultural engineering; applications of GIS; civil engineering, electrical and electronic engineering, environmental engineering, mechanical engineering; metallurgy, mineral processing and mining engineering, surveying; company profiles and any other engineering related topic. By publishing papers from both academia and industry, the journal provides a forum for discussing current developments and encourages engineers, both in industry and the academia, to respond to emerging needs of society. All papers received by the journal are sent anonymously to three independent experts in the subject area of the article for blind refereeing. Referees' comments and advice are returned to the authors. Papers are only published in the journal on positive recommendations from referees. The *Zambian Engineer* is published bi-annually, in January and July..

5.7.2 The Medical Journal of Zambia (MJZ) ISSN: 0047 651X

The Medical Journal of Zambia (MJZ) is one of the oldest journals in Zambia founded in the late 1960s under the Northern Rhodesia government. The *Medical Journal of Zambia* is a peer-reviewed quarterly journal which aims at providing medical researchers, biomedical scientists, and clinicians

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and all allied health workers a forum to enhance their publication skills. It focuses on those with specialities in Internal Medicine, Surgery, Paediatrics and Obstetrics & Gynaecology and their subspecialties, basic sciences, public health, social medicine and medical politics. The journal also welcomes contributions from experienced individuals describing the way they deal with particular problems (i.e. intended to pass on the art of medicine). The journal is administered under the auspices of the Zambia Medical Association (ZMA). The journal is indexed in Medline, PubMed and African Journals on Line (AJOL) and uses Open Journal Systems (OJS) 2.4.3.0, which is open source journal management and publishing software developed, supported, and freely distributed by the Public Knowledge Project under the GNU General Public License

5.8 Summary

This section has discussed the different journals that exist in Zambia and has shown that there have been a lot of commitment and initiative from various scholars who established journals that are meant to enhance scientific publishing in Zambia. However, while these efforts have been made, there has been lack of consistency in journal publications in Zambia. This is mainly due to a number of factors with the main one being the lack of financial support for research from the Zambian government. This challenge has been highlighted by almost all the journal Editors in social science domain aside from the journal of Humanities which is sponsored by the School of Humanities and Social Sciences and the Journal of Law and Social Sciences which is sponsored by DRGS. The inconsistency in publications are also as a result of lack of interest in publishing and also mainly because of lack of supply of good quality papers as demonstrated by poorly written manuscripts submitted for publication. These two challenges can also be attributed to lack of research funding in that most researchers are not trained to write scholarly work that can be published in both local and international journals. As a result most of these researchers either shun away from publishing or submit manuscript which do not meet the set standards by Editorial Boards of these journals. This goes to show that while it is good to encourage and establish journals as a way of encouraging researchers to publish, these journals cannot typically be sustained by the passion and commitment of individual champions however well intended. Unless there is sustained funding, the necessary publishing infrastructure and sufficient supply of high quality articles, it is clear that journals cannot survive. In addition, it is also clear that it is also very difficult for a single university to sustain more than a few journals if there is not sufficient supply from elsewhere in the country.

In the next chapter we turn our focus on the bibliometric analysis of social science research outputs emanating from the bibliometric secondary data obtained from the Web of Science (WoS). This

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bibliometric analysis provides information on how social science is performing at global level in terms of the world share and publications.

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CHAPTER SIX: BIBLIOMETRICS RESULTS FOR ZAMBIA'S PUBLICATION OUTPUT

6.1 Introduction

The previous chapter presented the results of the investigation into the state of local journals in Zambia. In this chapter the study first focuses on the broader picture of Zambia's research performance at a global level by using bibliometric data that was extracted from the Web of Science (WoS) between 1980 and 2018. This is followed by a presentation of the results of bibliometric analyses of the social science publications in terms of Zambia's distribution of research output across all fields, Zambia's distribution of research output across all research fields, Zambia's top performing research institutions, Mean Normalised Citation Scores (MNCS) from 1980-2018 in 2 year, 5 year and 10 year citation windows, Zambia's publication collaboration profiles, Zambia's publication profile in all fields and the top performing institutions in Zambia within that period.

6.2 Results of Zambia's Research Performance across All Fields Between 1980-2018

This section presents the results of Zambia's performance across all fields between the years 1980-2018 and focuses on Zambia's world share and publication output, Zambia's rank among all countries across all research fields, Zambia's distribution of research output across all research fields, Zambia's top performing research institutions, Mean Normalised Citation Scores (MNCS) from 1980-2018 in 2 year, 5 year and 10 year citation windows, Zambia's publication collaboration profiles, Zambia's publication profile in all fields and the top performing institutions in Zambia within that period. These analyses were conducted on the Web of Science database.

6.2.1 World Share and Publication Output of Articles and Reviews

Our results show that between 1980 and 2018 Zambia produced a total of 5403 publications, giving an average of 138 publications per year. The results show that publication output from 1980 to 2004 was very low and fluctuated considerably. This is most likely because of the relatively low coverage of African countries in the early years of the Web of Science. From 2005 onwards, we witness a more steady increase and consistent output from 98 to 515, with a peak in 2017 when the country recorded 529 publications. Zambia's world share of the global publication output was insignificant and varied from 0.01% in 1980 to 0.03% in 2018. Zambia's average annual growth rate at global level was 0.013%. Figure 6.1 below presents Zambia's world share and publication output of articles and reviews only from 1980 to 2018.

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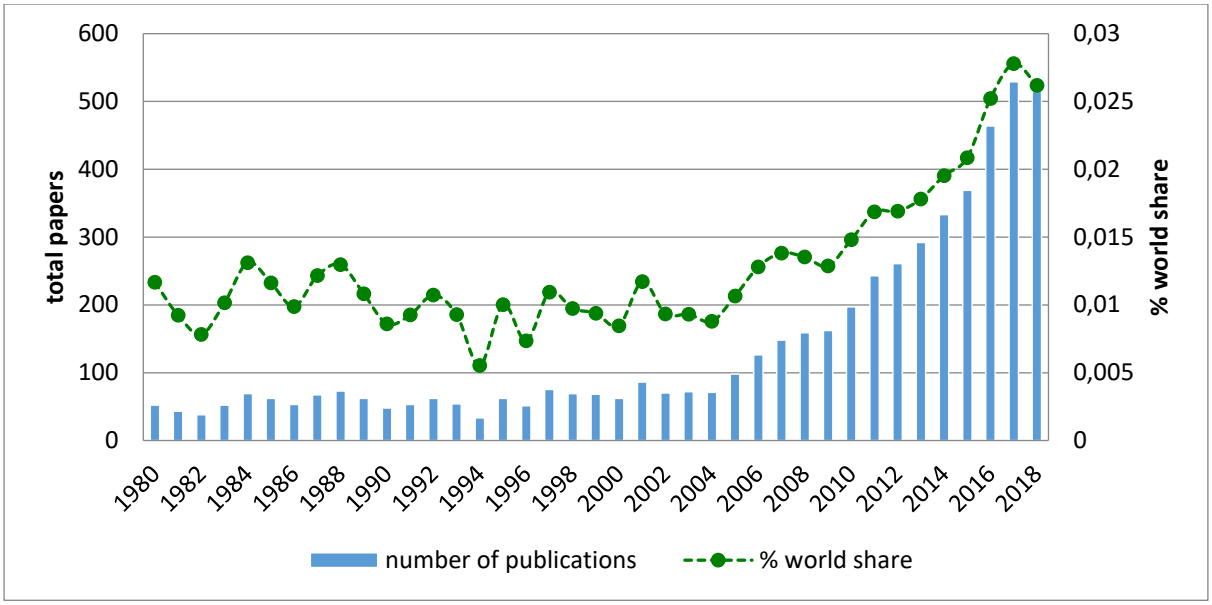

Figure 6.1: Zambia World share and Publication output 1980-2018 (articles and reviews only)

6.2.2 Zambia's world rank across all Research Fields From 1980-2018

This section presents Zambia's ranking at global level from 1980 to 2018. The results show that there has been a significant decline in the ranking of the country over the period under study. Figure 6.2 below shows how Zambia has performed in terms of ranking globally across all research fields.

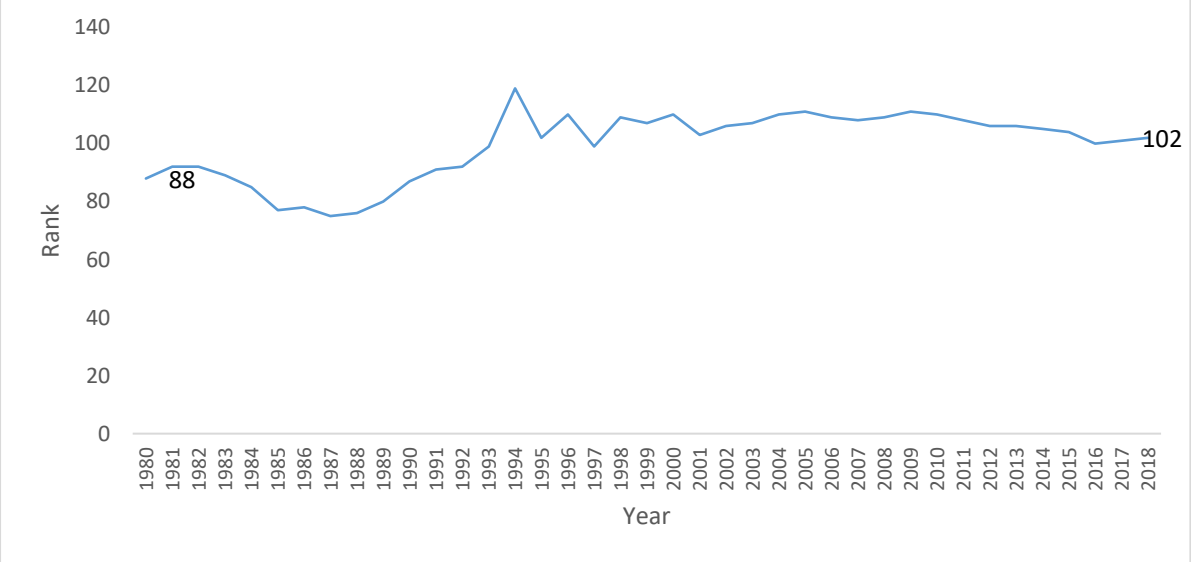

Figure 6.2: Zambia's rank among all countries across all research fields

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6.2.3 Publications by scientific field

This section presents the distribution of Zambia's publication output across fields from 1980 to 2018 (Figure 6.30) . The results for individual fields are similar to the overall picture presented above. Across all fields – but especially in the health sciences – output started to increase from around 2005 onwards. Again it is worth noting that these increases would be linked to two factors: the improved coverage of the WoS through the inclusion of more journals around that time; and an increase in international collaboration in mega health projects with more Zambian scientists partnering with foreign scientists.

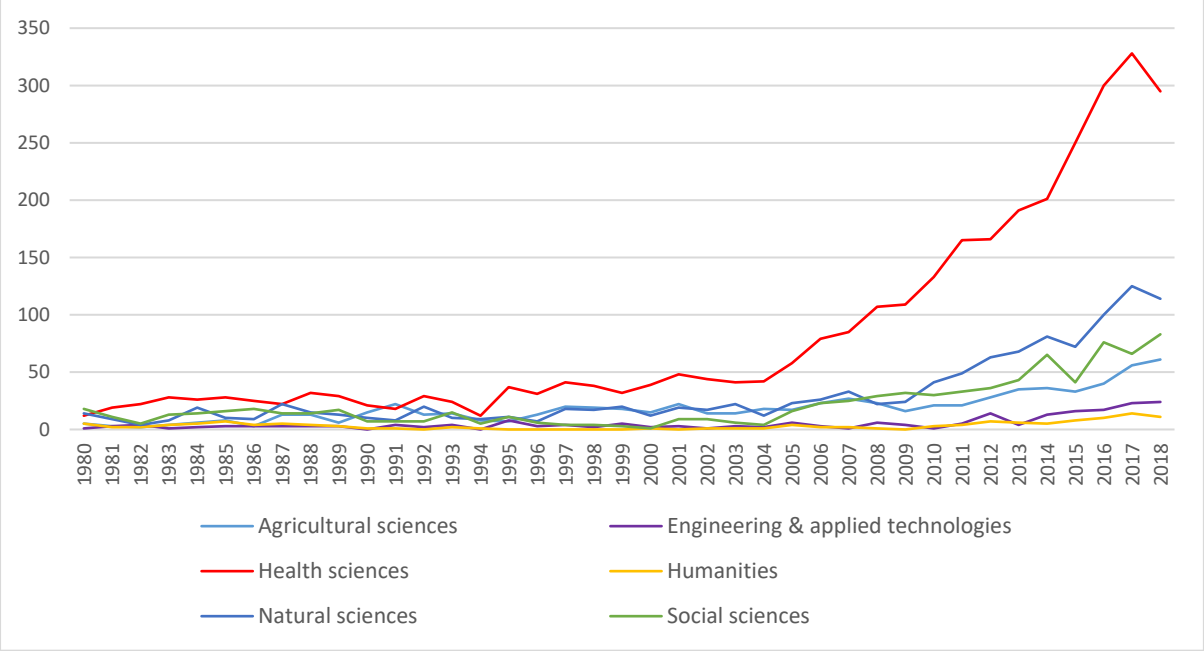

Figure 3.3: Zambia distribution of research output across fields

6.2.4 Trends in research collaboration

This section discussed Zambia's collaboration publication profile in all fields from 1980 to 2018. The results show that single authored publications dominated Zambia's research output in the early year (1980-1991) ranging from 38.7-69.2%. Since 2005 – when the absolute numbers of publications became more substantive – the trends in collaboration have stabilised with the vast majority of papers (more than 80%) involving co-authorship from scientists from elsewhere in the world. Figure 6.4 below shows Zambia's publication collaboration profiles in all fields.

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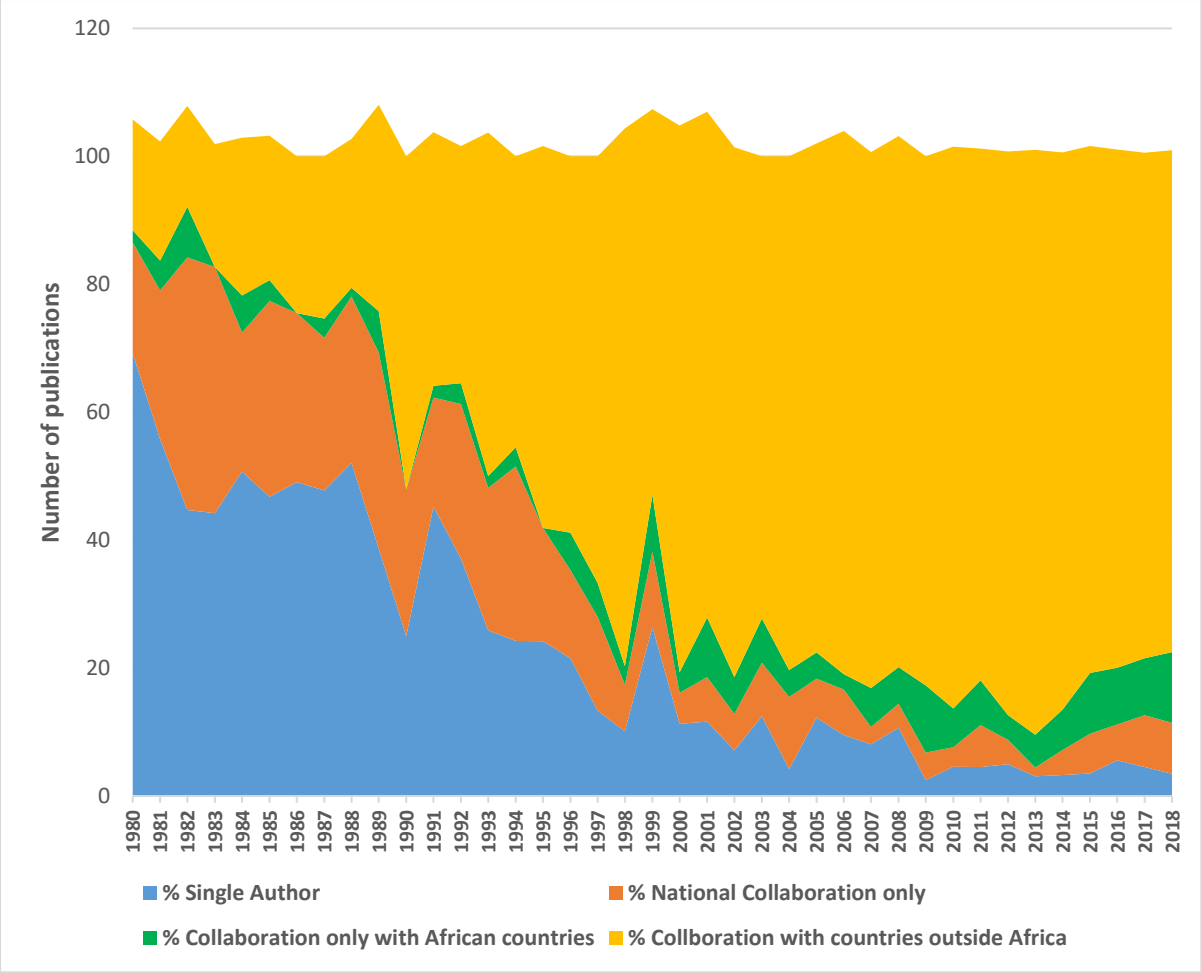

Figure 6.4: Zambia publication collaboration profiles in all fields

6.2.5 Citation impact of publications

This section presents the results of the citation impact analysis (using the MNCS indicator) across all fields from 1980 to 2018 in 2-year window, 5-year window, and 10-year windows (Figure 6.5). The MNCS value is the ratio of the actual number of citations a paper received in comparison to the "expected" citation count (Watman, 2015). It is obtained by first calculating, for a given set of publications, the total number of citations actually received and the expected total number of citations and by then taking the ratio of the actual and the expected total number of citations (Bornmann & Haunschild, 2016; Colledge, 2014). For instance, the actual total number of citations of a set of publications in field X equals 30 while the expected total number of citations equals 34. The MNCS for this set of publications is the ratio of the actual and the expected total number of citations equals 30 / 34 = 0.88. The fact that the ratio is below one indicates that the total number of citations actually received is below expectation (Bornmann & Haunschild, 2016; Watman, 2015). The number of citations is partially dependent on the research fields (some fields are 'fast', others are 'slow'), and

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need to be corrected to allow fair cross-field comparisons. This is what the 'field-normalised citation score' (MNCS) does.

The results show that the majority of the Zambian publication output from 1980 to 2005 recorded a MNCS-score of less than 1.0, implying that during this period Zambian publication output were less cited as compared to similar publications in other countries. The results further reveal that from 2006-2018 Zambia's publication output recorded MNCS-values ranging from 1.07-2.76 in the 2 year citation window, 1.08-2.60 in the 5 year citation window, and 1.12-2.61 in the 10 year citation window. However, our focus would be more on the period since 2006 where the citation impact has increased significantly (MNCS score above 1.0). . The results for the mean normalized citation scores for Zambia from 1980 to 2018 in 2 year, 5 year, and 10 year citation windows are presented in Figure 6.5 below.

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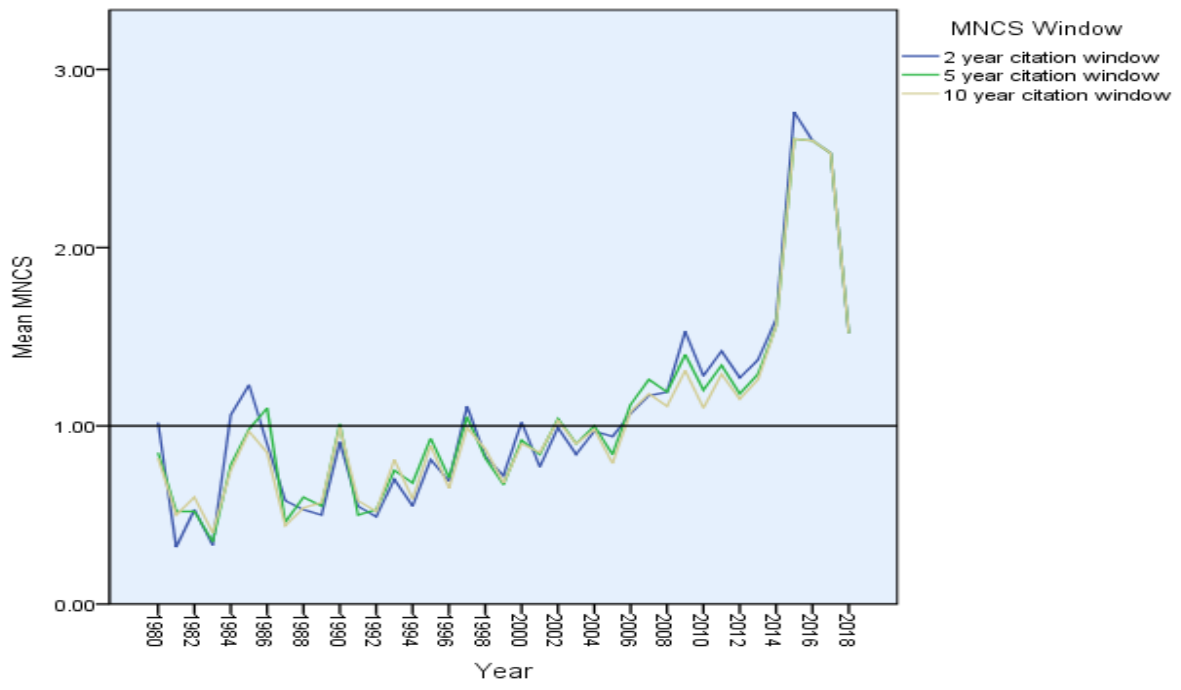

Figure 6.5: Zambia Mean Normalised Citation Score

6.2.6 Top Performing Research Institutions in Zambia from 1980 To 2018

This section presents the results of the publication output by research performing institution (Table 6.1). Not surprisingly, two universities (the University of Zambia plus its Teaching Hospital and the Copperbelt University) together with the Ministry of Health and the Centre for Infectious Disease Research dominate output in the country. . Table 6.1 below shows the top research performing institutions from 1980 to 2018.

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Table 6.1: Zambia top performing research institutions from 1980 to 2018

RN	Research Institution	nPubs
1	University of Zambia	2 128
2	University Teaching Hospital	670
3	Ministry of Health	335
4	Centre for Infectious Disease Research in Zambia	275
5	Copperbelt University	202
6	Tropical Diseases Research Centre	165
7	Ministry of Agriculture and Livestock	160
8	Zambia AIDS Related Tuberculosis Project	106
9	Lusaka District Health Management Team	82
10	Zambia-Emory HIV Research Project	74
11	University of Zambia-University College London Medical School Research and Training Programme	72
12	Macha Mission Hospital	70
13	University of Lusaka	68
14	The Salvation Army Chikankata Hospital	44
15	Zambia Center for Applied Health Research and Development	42
16	Zambia Wildlife Authority	40
17	Chainama Hills College Hospital	38
18	Malaria Institute at Macha	36
19	Ministry of Community Development, Mother and Child Health	33
20	Malaria Control and Evaluation Partnership in Africa	32
21	Ndola Central Hospital	27
22	Zambia-ICRAF Agroforestry Project	27
23	Zambia National Blood Transfusion Service	27
24	Saint Francis' Hospital	25
25	World Health Organization, Zambia	23
26	National Food and Nutrition Commission of Zambia	21
27	Chainama College of Health Sciences	19
28	Zambia Carnivore Programme	18
29	Ministry of Transport, Works, Supply and Communications	18
30	Hokudai Center for Zoonosis Control in Zambia	17

6.2.7 Zambia Relative Field Strengths across all fields from 1980-2018

This section presents Zambia's relative strength in various fields over two time periods. Relative Field Strength (RFS) analysis is one of the standard indicators used in bibliometrics to measure whether a country or region or institution is particularly active or strong in a particular field, in this case taking the world share as the point of reference (Beaudry et al. 2018; Joshi, 2014). An RFS value of 1 means that the country's output in that field is commensurate with the proportion of articles in that field in the world. On the other hand, when the RFS value is greater than 1, the country is said to be more active or relatively stronger in that field compared to its outputs in other scientific fields.

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Table 6.2 below shows Zambia's relative strength in the various fields from 2005 to 2010 when compared with the later period. Three salient points are worth making:

1. We have indicated in GREEN those fields where the relative activity (compared to the other fields) has increase between the earlier and later periods. This applies to the social sciences, physical sciences and especially the health sciences.
2. We have indicated in LIGHT RED those fields where their RFS scores have declined – this applies to the natural sciences in general, multidisciplinary sciences and mathematical sciences and ICT.
3. The third point to make refers to those fields which reflect very low levels of activity: these fields (Engineering, Education, Economic and management sciences and even agricultural sciences) represent fields where Zambian scientists are not very active or strong.

Table 6.2: Zambia Relative Field Strengths

Field	RFS 2005 to 2010	RFS 2011 to 2015
Sociology & related studies	2.37	1.80
Social sciences	2.22	2.75
Religion	2.07	2.15
Psychology	1.81	1.48
Physical sciences	1.79	2.09
Natural sciences	1.32	0.66
Multidisciplinary sciences	1.28	1.02
Mathematical sciences & ICT	1.13	0.93
Law	0.94	1.00
Language & linguistics	0.89	0.55
Health sciences	0.59	1.67
Engineering sciences & applied technologies	0.44	0.53
Education	0.26	0.38
Economic & management sciences	0.16	0.14
Earth sciences	0.15	0.19
Clinical & public health	0.15	0.19
Chemical sciences	0.09	0.09
Biological sciences	0.08	0.02
Basic health sciences	0.05	0.03
Agricultural sciences	0.00	0.28

6.3 Zambia's Performance in Social Sciences from 2005-2016

This section presents results on Zambia's performance in the field of social sciences. For these analyses we focused only on the period 2005 and 2018 where sufficient numbers of papers were produced to warrant bibliometric analyses. We report on the same indicators as in the previous section.

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6.3.1 *Zambia's Share of the Total World Research Output in the Social Sciences*

The total number of articles and reviews in the social sciences over the period 2005 to 2018 was 598 (Figure 6.6).

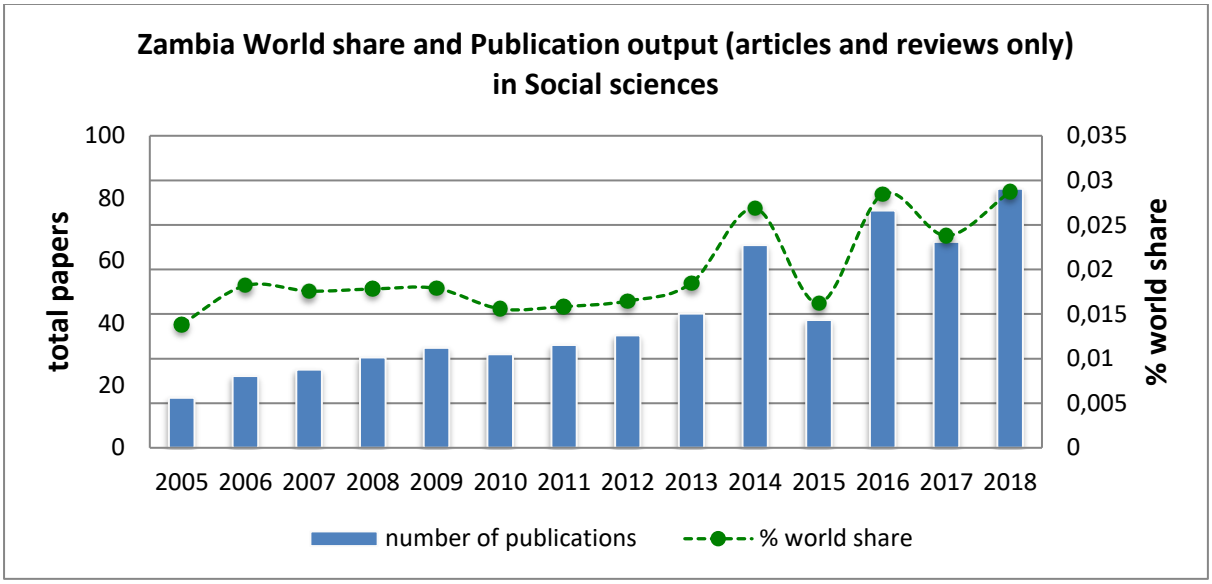

Figure 6.6: ***Zambia World share and Publication output in Social sciences***

The results show that during the period under review Zambia recorded a slow growth rate with an annual average growth rate of 4.34%. The results further show that Zambia's world share of the global publication output in social sciences was insignificant but at least increased from 0.01% in 2005 to 0.03% in 2018.

6.3.2 *Zambia Relative Field Strength in Social Sciences*

This section presents Zambia's relative strength in social sciences. Figure 6.7 below shows that during this period Zambia's social science relative strength in social sciences remained fairly stable over the reporting period. However, it is important to caution about reading too much into these results as the year-on-year fluctuations are indicative of the relatively small numbers of publications – only between 40 and 80 per year.

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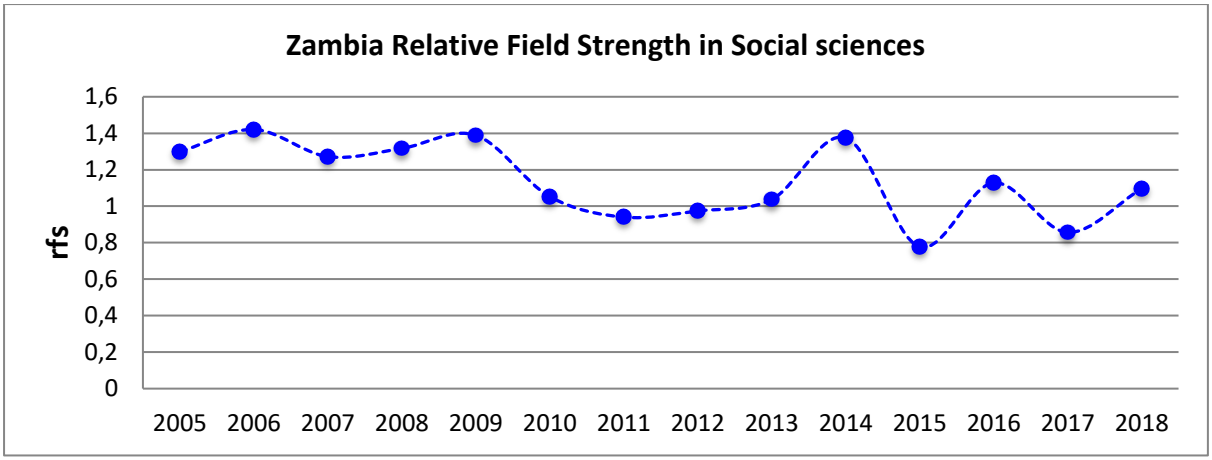

Figure 6.7: Zambia Relative Field Strength in Social sciences

6.3.3 Zambia Mean Normalised Citation Score (MNCS) in Social Sciences

This section presents the MNCS for social sciences in Zambia. Again, these results should be qualified because of the small sample size.

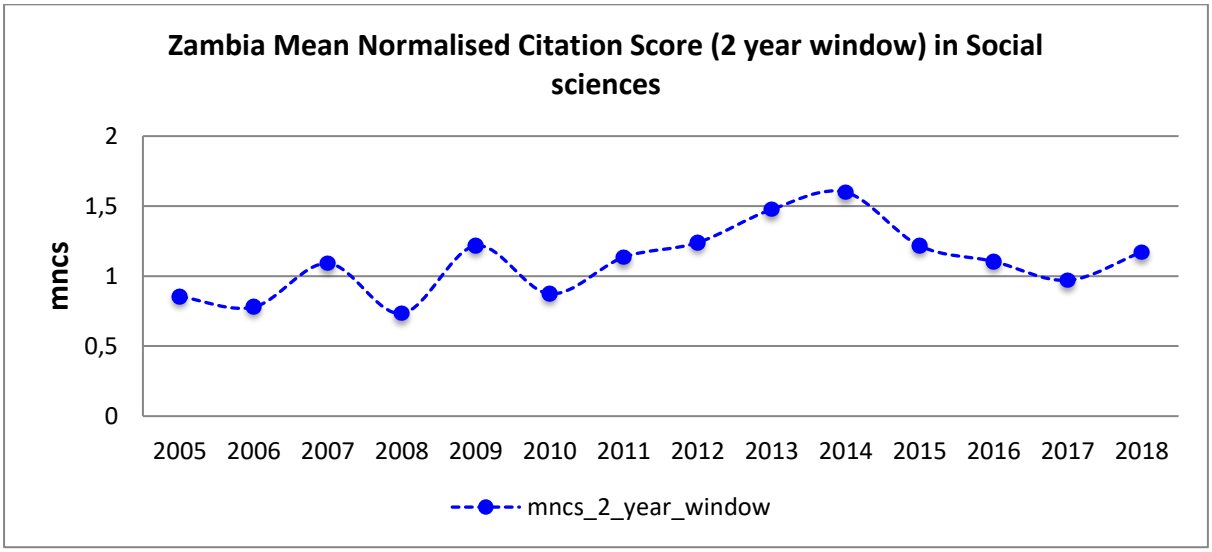

Figure 6.8: Zambia Mean Normalised Citation Score in Social sciences

6.3.4 Zambia Percentage of Publications in Social Sciences in the Top Citation Percentile Intervals

This section presents Zambia's percentage of publications in social sciences in the top percentile intervals. One of the ways of measuring the impact of research is by looking at citation percentiles, i.e., the number of publications that belong to the world's top x% of most cited publications (Waltman, L. & Schreiber, 2013). Using citation percentiles allowed for an easy comparison of a Zambia's relative

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performance in the different percentiles. Figure 6.9 below shows Zambia's social science research output published in the top 1%, 5% and 10% and the most cited publications from 2005 to 2015.

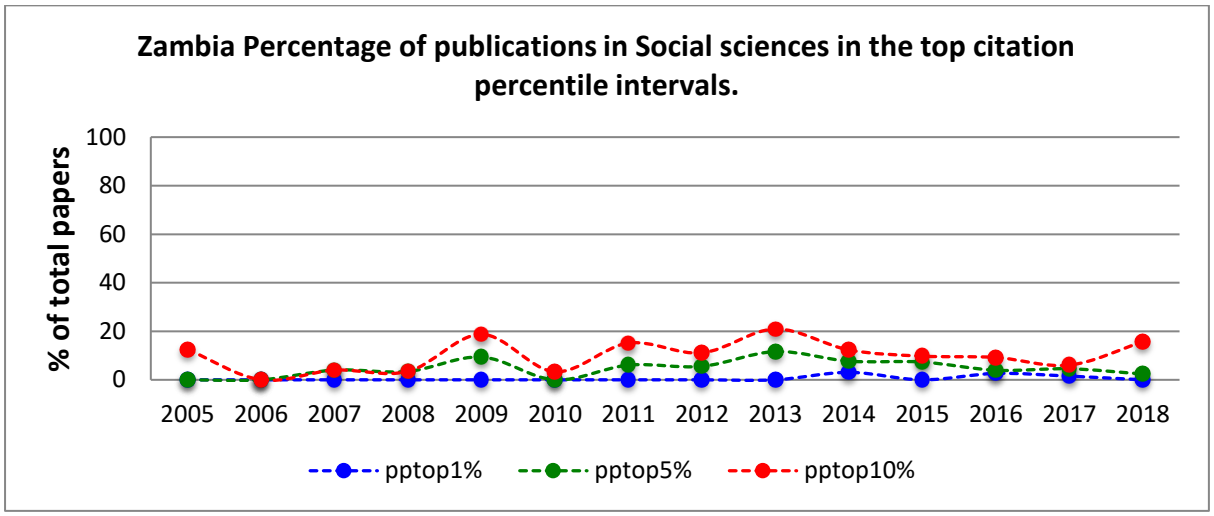

Figure 6.9: ***Zambia Percentage of publications in Social sciences in the top citation percentile intervals***

The results show that while for most of the period 2005-2018, there was no research output in the social sciences that was published in the world's top 1% percentile in the years 2012, 2013, and 2014, Zambia recorded publications in this percentile at 3.2%, 2.5%, and 1.6%, respectively. Similarly, Zambia published zero percent research in the top 5% percentile in 2005, 2006 and 2010. However, in 2007 the share of Zambia's research output among the 5% percentile increased to 4.3% but slightly declined to 3.7% consecutively in 2008 and 2009, before dropping to 0.0% in 2010. From 2011 to 2013 the country recorded a steady increase at 5.6%, 9.7%, and 10.0%, respectively. In the remaining three years the country witnessed a fluctuating decline of 4.9% in 2014, 6.3% in 2015, and 3.9% in 2016. Again these results should be read against our caveat above of the small sample sizes.

6.3.5 Positional analysis

The final bibliometric analysis, a positional analysis, combines two variables: the citation impact of a field or subfield with the score on the relative field strength index. This section is essentially identifying those fields that are relative active fields (relative to the world output in the field) and highly visible. The two-dimensional Figures 5 and 6 below plot fields on these two axes. The fields that score high on both of these two indicators would typically be in the top right-hand quadrant. The size of the bubble is commensurate to the number of publications in that subfield, the larger the bubble the bigger the volume of output.

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Figure 6.10 below shows the MNCS vs RFS for subfields of social sciences in Zambia for the period 2005-2010. Only the subfield of medical ethics stands out as having above average impact and strength. The field of philosophy is an area in which Zambia had very high impact, although its RFS is weak (just below 1). Government and law, law, audiology and speech-language pathology had relatively high MNCS but very low RFS scores. Language and linguistics, art, and history and philosophy of science had very low scores in both indicators. Ethics had relatively high RFS scores but low MNCS scores. Figure 6.10 below shows the MNCS vs RFS for subfields of social sciences from 2005 to 2010.

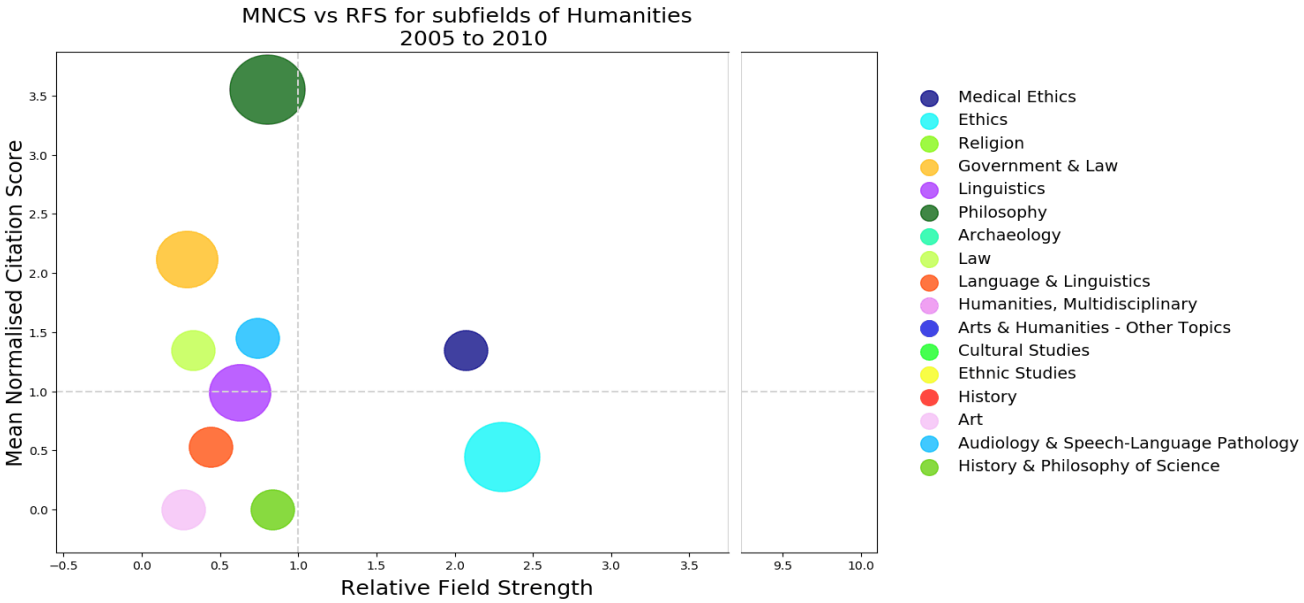

Figure 6.10: MNCS vs RFS for subfields of social sciences, 2005-2010

Figure 6.10 presents the results of the same analysis for the more recent period of 2011 to 2015. Only the subfield of ethnic studies stands out as having above average impact and strength. It worthy to note that the subfields of medical ethics and ethics were areas in which Zambia was very strong, although their citation impacts were on the borderline (astride the score 1). Philosophy had high MNCs, i.e. above 1.0 while Government and law was on the borderline. Language, linguistics, art, history and philosophy of science had very low scores in both indicators. Lastly, law and cultural studies enjoyed relatively high RFS scores but very low MNCS scores. Figure 6.11 shows the MNCS vs RFS for subfields of social sciences in Zambia for the period 2011-2015.

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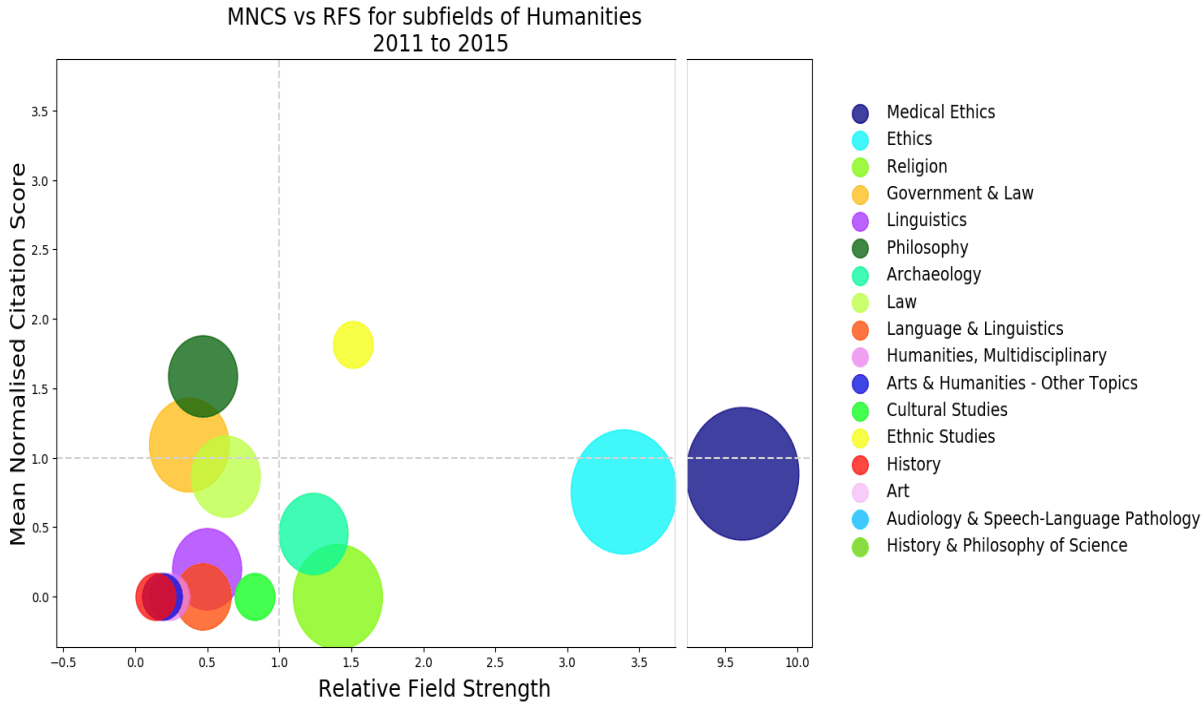

Figure 6.11: MNCS vs RFS for subfields of social sciences, 2011-2015

6.3.6 Zambia Publication Collaboration Profiles for Social Sciences

This section reports on trends in research collaboration for social sciences in Zambia through analysing patterns in the co-authorship of publications. According to (Johann & Mayer, 2018), co-authorship is defined as the joint publication of a work by two or more authors. The implication of co-authorship is that when two or more authors are listed as co-authors for the same study, it is highly likely that they have collaborated in some way implying that there is a likelihood of a stronger connection between the collaborating authors (Bozeman & Boardman, 2015). On the other hand, international collaboration happens when an article has at least two different countries listed in the author's institutional affiliation and (Adams & Gurney, 2016). However, if an article has only one author affiliated with institutions in two different countries such an article is not counted as an internationally-collaborated article but as a single-authored article (Lewis, Ross & Holden, 2012). Research is becoming more and more international and therefore researchers collaborate every day with others at institutional, national and international level-writing through joint research, organizing of conferences, and presenting of research papers at conferences (Bozeman, Fay & Slade, 2013). Consequently, single-authored papers are becoming less and less common because co-authored papers are cited more often than single-authored papers (Pečlin et al. 2012; Lancho-Barrantes et al. 2012). This is especially so when the papers are co-authored by researchers from different countries

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(Wilsdon, 2011). Figure 6.12 below shows Zambia's collaboration publication profile for social sciences.

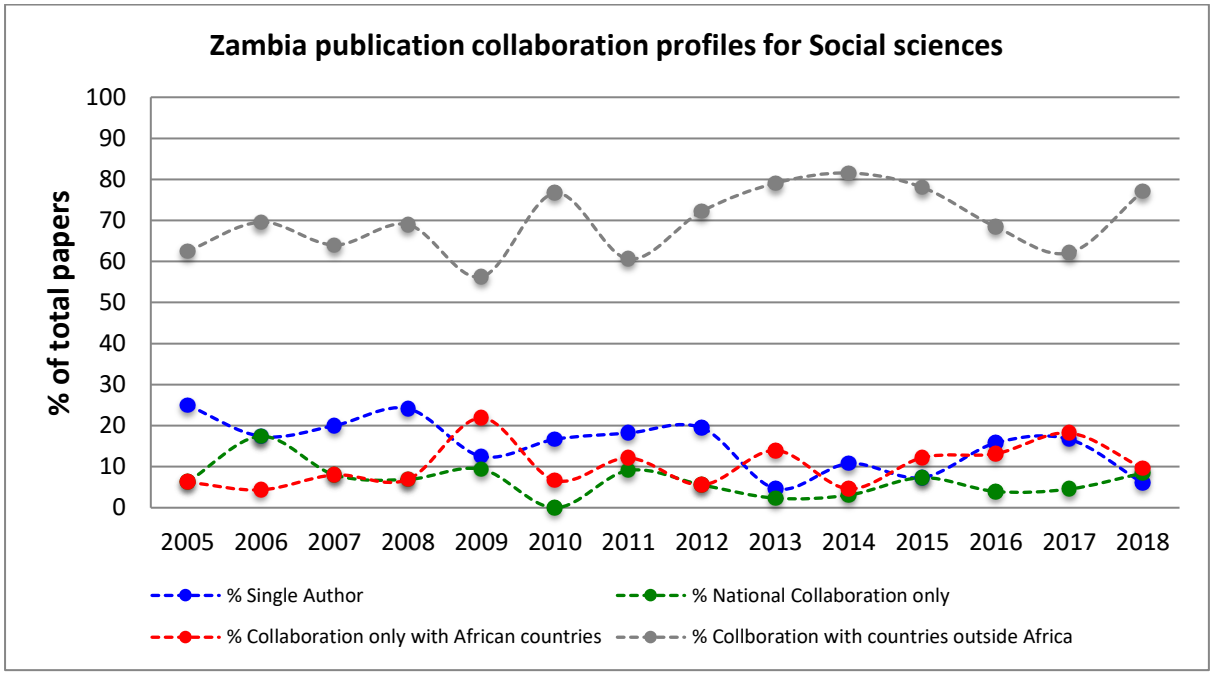

Figure 6.12: Zambia publication collaboration profiles for Social sciences

The results show that in the period under review, Zambia's internationally-collaborated research output in social sciences grew from almost 20% of its annual research output to 86% in 2018. Research output produced through collaboration with countries outside Africa ranged from 53% in 2005 to 77% in 2018). The results further reveal that Zambia's collaboration with other African countries as well as national collaboration remained low. What is most interesting is the strong decline in single-authored publications: 25% in 2005 to 6% in 2018. These results show that on average 70.0% of Zambia's research output in the social sciences is produced in collaboration with countries outside Africa; 7.0% produced with African countries only, 8.0% produced with national collaboration only, and 15.0% single-authored. These results therefore reveal that the trend favours international collaboration, which comprised almost 70% of the papers.

6.3.7 Zambia Rank among all countries in Social Sciences

This section presents findings on Zambia's global ranking with regard to social science research output during the period 2005-2018. Table 6.3 show that Zambia's ranking during the period under review remained fairly stable at around position 96 in the world.

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Table 6.3: Zambia's rank among all countries in Social sciences

Publication year	Rank
2005	96
2006	88
2007	95
2008	93
2009	96
2010	95
2011	94
2012	100
2013	98
2014	92
2015	101
2016	93
2017	116
2018	97

6.3.8 Institutional Landscape of Social Science Research in Zambia

This section discusses the bibliometric results indicating how different institutions where social science research is conducted in Zambia have performed during the period 2005 to 2010 and 2010 to 2016. The results show that between 2005 and 2010 the top seven institutions where social science research was mostly conducted were the University of Zambia (85), University Teaching Hospital (13), the Ministry of Health (11), Ministry of Agriculture (10), the Zambia AIDS Related Tuberculosis Project (6), the Salvation Army Chikankata Hospital (6), and Chainama Hills College Hospital (4). During the period 2011-2015 the top nine institutions were the University of Zambia (95), Copperbelt University (19), University Teaching Hospital (17), Zambia Carnivore Programme (11), Indaba Agriculture Policy Research Institute (10), Ministry of Agriculture and Livestock (9), Ministry of Health (8), Centre for Infectious Disease Research in Zambia (8), and Zambia Wildlife Authority (7). Table 6.4 below presents a list of Zambia's top performing research institutions in the social sciences in two time periods, 2005-2010 and 2011-2015.

Table 4: Zambia top performing research institutions in Social sciences

2005 to 2010		Rank	2011 to 2015		Rank
Research Institution	**#Pubs**		**Research Institution**	**#Pubs**	
University of Zambia	85	1	University of Zambia	95	1
University Teaching Hospital	13	2	Copperbelt University	19	2
Ministry of Health	11	3	University Teaching Hospital	17	3
Ministry of Agriculture and Livestock	10	4	Zambia Carnivore Programme	11	4

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2005 to 2010		Rank	2011 to 2015		Rank
Research Institution	**#Pubs**		**Research Institution**	**#Pubs**	
Zambia AIDS Related Tuberculosis Project	6	5	Indaba Agricultural Policy Research Institute	10	5
The Salvation Army Chikankata Hospital	6	6	Ministry of Agriculture and Livestock	9	6
Chainama Hills College Hospital	6	7	Ministry of Health	8	7
Centre for Infectious Disease Research in Zambia	4	8	Centre for Infectious Disease Research in Zambia	8	8
Chainama College of Health Sciences	3	9	Zambia Wildlife Authority	7	9
Ministry of Transport, Works, Supply and Communications	3	10	Zambia AIDS Related Tuberculosis Project	6	10
Zambia-Emory HIV Research Project	3	11	ZESCO Ltd	5	11
Food Security Research Project	3	12	Department of Forestry	4	12
Japan International Cooperation Agency, Zambia Office	2	13	Chainama College of Health Sciences	3	13
Zambia-ICRAF Agroforestry Project	2	14	University of Lusaka	3	14
African Wild Dog Conservat	2	15	Centre for Energy, Environment and Engineering	3	15
Zambia Prevention, Care and Treatment Partnership	2	16	The Salvation Army Chikankata Hospital	3	16
Copperbelt University	2	17	South Luangwa Conservation Society	3	17
University of Lusaka	2	18	Zambia Center for Applied Health Research and Development	2	18
Lusaka District Health Management Team	2	19	World Health Organization, Zambia	2	19
Project Concern Int	1	20	Bank of Zambia	2	20
RAPIDS Program Management Unit	1	21	International HIV/AIDS Alliance, Zambia	2	21
RuralNet Associates Ltd	1	22	Ministry of Transport, Works, Supply and Communications	2	22
SHARe Project	1	23	Mumbwa District Health Management Team	2	23
Utilink Ltd	1	24	Ministry of Community Development, Mother and Child Health	2	24
WorldFish, Zambia	1	25	ERES Converge IRB	1	25
World Health Organization, Zambia	1	26	Livingstone District Health Management Team	1	26
World Vision International, Zambia	1	27	LinkNet	1	27
Zambia Health Education & Community Trust	1	28	EMORY UNIV	1	28
Zambia Med Association	1	29	Loloma Mission Hospital	1	29
Zambia Revenue Authority	1	30	Life Time Food Price Volatil Res	1	30

6.4 Summary

This chapter presented the results of Zambia's publication performance in two parts. The first part of the chapter presented a holistic picture of Zambia's performance of different fields at the global level

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between the years 1980-2018. The results show that Zambia's research publication output was low and that Zambia's world share of publications across all fields remains insignificant. The results also show that Zambia's rank at the global level across all disciplines declined over this period. Researchers from Zambia in all fields collaborated more with the countries outside of Africa than they did with researchers from African countries and those within the country.

The second part of this chapter focused on the performance of social sciences at the global level during the period 2005-2018. The results show that during the period under review Zambia recorded a slow growth rate with an annual average growth rate of 4.34%. Zambia's share of the total world research output increased slightly from 0.01% to 0.3% during this period. The most significant finding from this analyses was the trend towards greater international co-authorship in the social sciences.

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CHAPTER SEVEN: NATURE OF SOCIAL SCIENCE RESEARCH, ITS UPTAKE AND USE IN ZAMBIA

7.1 Introduction

This chapter is devoted to a discussion of the analysis of the web-based survey results which formed part of the project on 'Young scientists in Africa' and the subsequent face-to-face interviews with respondents who took part in the survey. The chapter is divided into four main subheadings and starts by providing a profile of the 128 respondents from the University of Zambia who completed the survey in 2017. Thereafter, comparisons are made with other disciplines to assess the performance of the social sciences against other disciplines in terms of funding received; expected research outcomes; overall quality assessment of the research outcomes; main modes of research dissemination; the number of research output produced; and intended beneficiaries of the research. This is followed by a discussion of the extent to which social science research findings have been utilised by policymakers as reported by the respondents in the survey and the interviews. The last section is devoted to a discussion of the contributing factors that may, or may not have facilitated utilisation of research outputs by government in policymaking decisions and the effect of the challenges researchers faced which could have a negative impact on the utilisation of research by policymakers.

7.2 Demographic characteristics of the respondents

This section describes the demographic characteristics of the 128 respondents who participated in the survey. The background information provided in this section includes gender, age, highest qualifications, positions/rank and employment status of the respondents.

7.2.1 Gender of respondents

The 128 respondents were asked to indicate their gender and the results show that 102 (80%) were males, while only 26 (20%) were females. It is not surprising that the number of female respondents is considerably smaller than that of males. It is an indicator of gender disparity existing among academic staff at Zambian universities, which shows the general gender equality challenges faced by the country as a whole. The gender distribution of the respondents appears in Figure 7.1 below.

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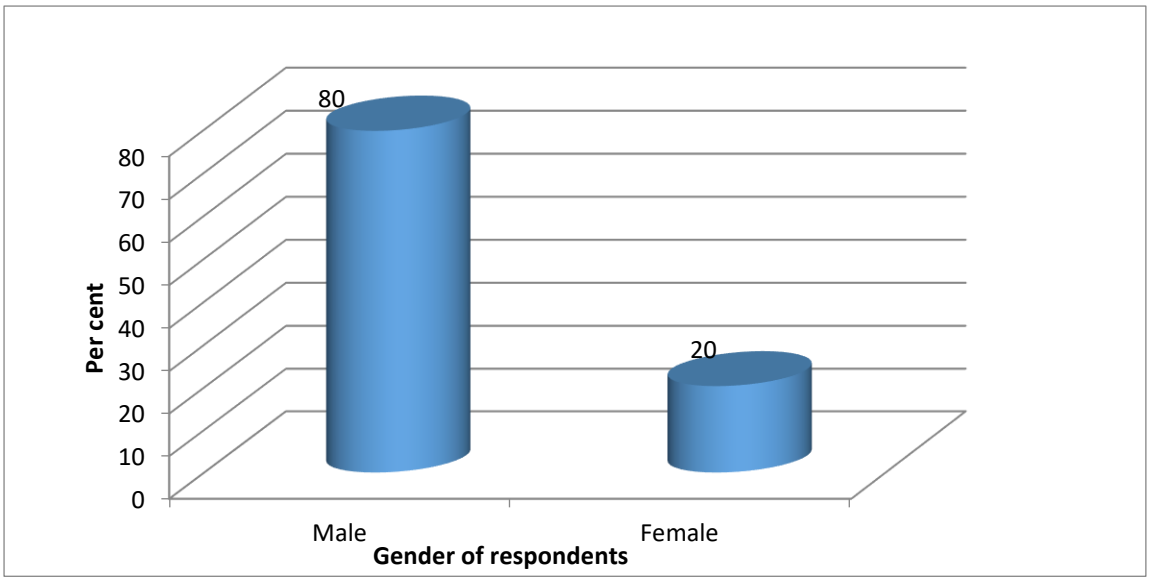

Figure 7.1: Gender percentage distribution of respondents (N=128)

7.2.2 Gender distribution by field

To understand the distribution of gender across fields and to have some insight on how social science was performing against other fields, cross tabulations of gender versus field was done. The results are shown in Figure 7.2 below.

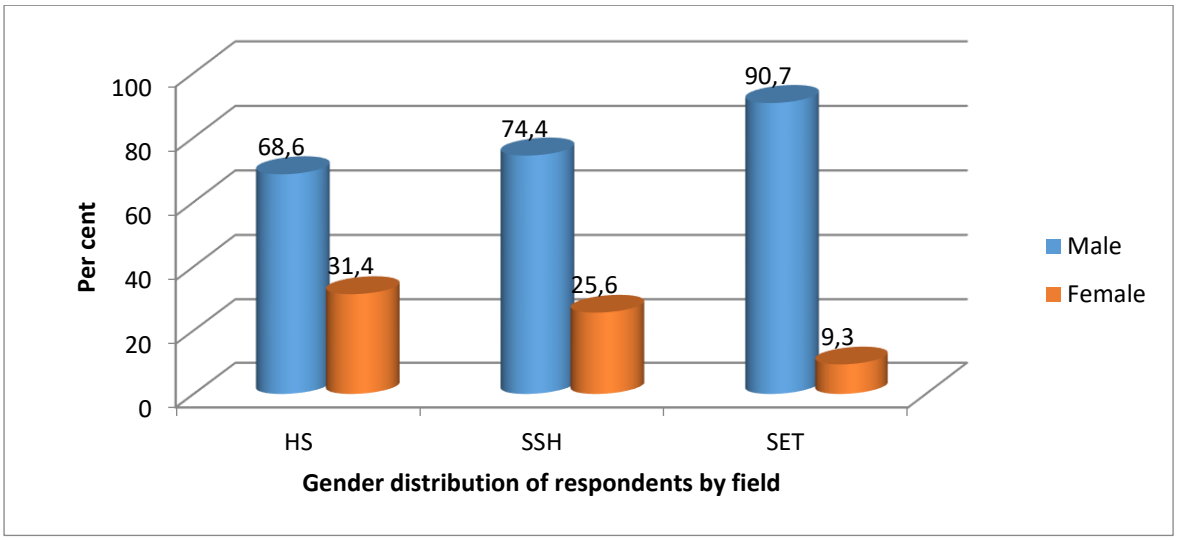

Figure 7.2: Gender distribution of respondents by field

The gender distribution of respondents according to fields show that males dominate al fields. The SET fields have the largest number (91%) of males with only 9% females, followed by SSH that accounted for 74% males compared with 26% females, and HS 69% males and 32% females (Figure 7.2).

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7.2.3 Age distribution of respondents

The respondents who took part in the survey were requested to indicate their age, which was aggregated into five age categories from 20-29 years, 30-39 years, 40-49 years, 50-59 years and 60 years and above. The results are shown in Figure 7.3 below.

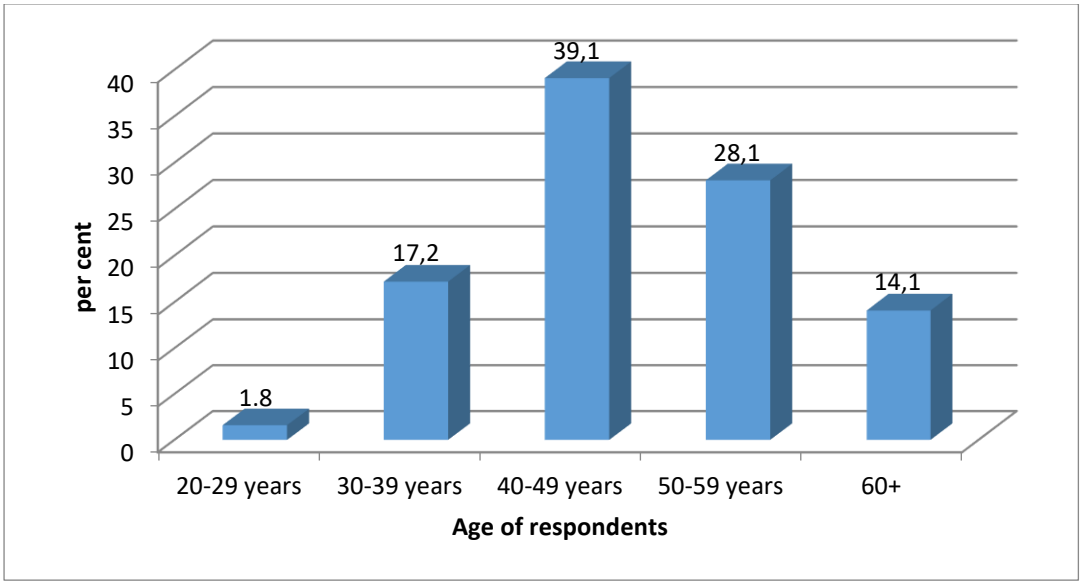

Figure 7.3: Age distribution of respondents (N=128)

Of the 128 respondents, only 2 (1.8%) of the respondents were younger than 29 years of age. This is expected at UNZA as someone younger than 29 years would normally not have attained a minimum qualification of a master's degree. The majority of the respondents 50 (39%) were found in the age group 40-49 years. Those in the age group 50 to 59 years accounted for 36 (28%) of the total number of respondents. There were 22 respondents (17.2%) were in the age group 30 to 39 years while 18 (14%) were in the group of respondents above 60 years.

In order to establish the age distribution of respondents according to their fields, cross-tabulations of the two variables were done and the results are as shown in Figure 7.4 below.

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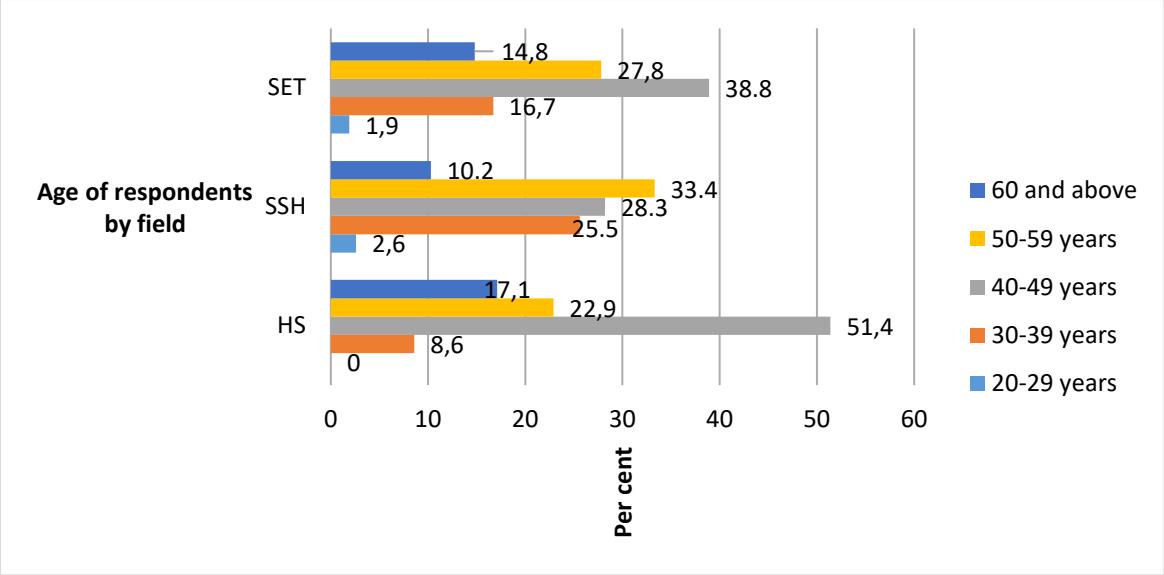

Figure 7.4: Age percentage distribution of respondents by field (N=128)

When considering the age groups of the respondents according to fields, the results show that overall, the majority of the respondents were in the age range of 40-49 and 50-59 across all the three fields. Out of these, those in the field of HS accounted for the highest number, 51% of the total number of respondents in the age group of 40-49 followed by 22% of respondents in the age group 50-59. Among the remaining respondents 17% were in the age range of 60 years and above, while 9% were in the age range of 30-39 years. The field of SSH had slightly more respondents; 33% in the age range of 50-59 with 28% of respondents in the age range of 40-49. The remaining respondents were in the age range of 30-39 (26%) while 10% were 60 years and above. Among the respondents in the field of SET 39% were in the age range of 40-49 followed by 28% in the age range of 50-59. The other respondents were in the age range of 30-39 (17%) while 15% were 60 years and above.

7.2.4 Highest qualifications by respondents

The results of the highest qualifications held by the respondents show that those with doctoral or equivalent 76 (59%) dominated the sample population followed by those with masters degrees 52 (41%). The results of the respondents are shown in Figure 7.5.

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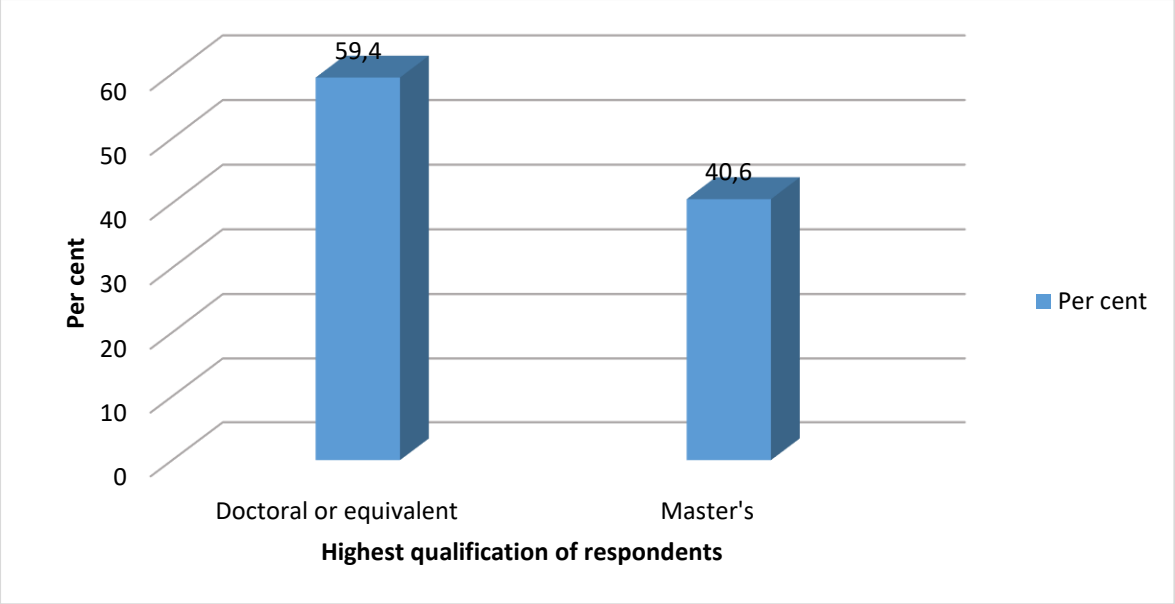

Figure 7.5: Highest qualifications of respondents

Cross-tabulations were done on the highest qualifications held by the respondents and field. The results are shown in Figure 7.6 below.

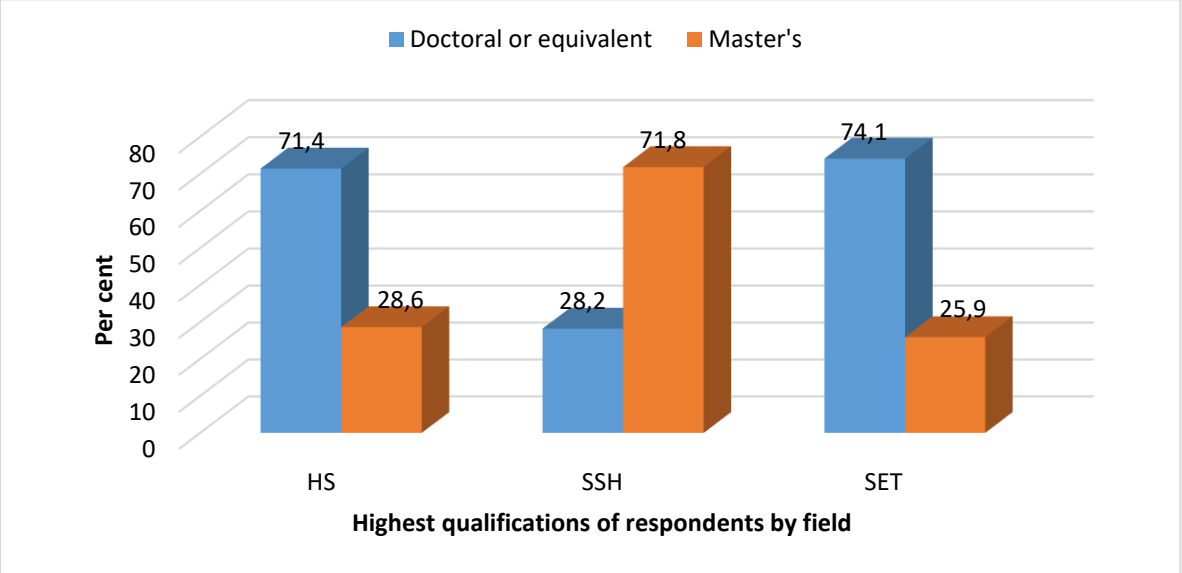

Figure 7.6: Highest qualification percentage distribution of respondents by field (N=128)

The results indicate that SET had the highest concentration of respondents with a PhD (74%), followed by HS (71%) while SSH accounted for 28% of respondents. Conversely, HSS had the highest number of respondents with a Master's degree (72%), followed by HS at 29% and the least SET at 26%.

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7.2.5 Positions of respondents

All the 128 respondents were asked to indicate their academic ranks and Figure 7.7 below shows the positions held by the respondents.

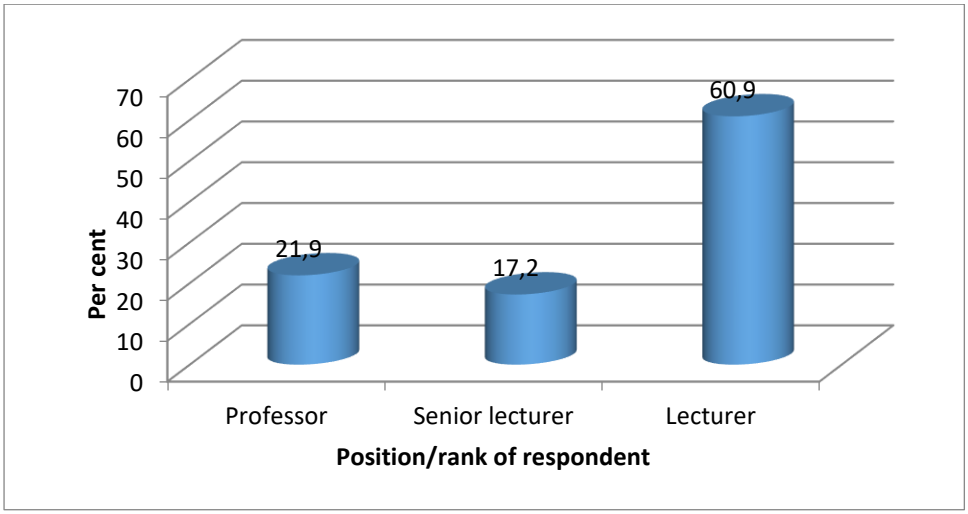

Figure 7.7: Position/rank percentage distribution of respondents (N=128)

The results show that the majority, 61% of the respondents were employed at the level of lecturer, followed by 22% of those in the position of Professors and Associate Professors and 17% in the position of Senior Lecturer. It is important to note that apart from senior lecturer, the positions may be composites consisting of more than one position. The position of lecturer at UNZA for example has three bands including lecturer III, II and I while the professor position is a combination of Associate and Full Professor. These positions include researchers from research institutes such as the Institute for Economic and Social Research.

In order to understand how the SSH respondents were performing against other fields in terms of rank in the university, a cross-tabulation of positions held by respondents by field was done. The results indicate that there were more academic staff at professorial level in SET (46%) than in the other fields. This was followed by HS with 43% of respondents professorial and 10% of the respondents in this category were from SSH. The results indicate similar trends in the position of Senior Lecturer where most of the respondents 59% were in SET followed by 27% in HS and 14% of the respondents in SSH. Furthermore, the results show that those in the Lecturer category were mainly from SET with 43% of respondents, followed by 31% of lecturers in SSH slightly more than HS, which accounted for 27% of respondents. Figure 7.8 below shows the positions of the respondents according to fields.

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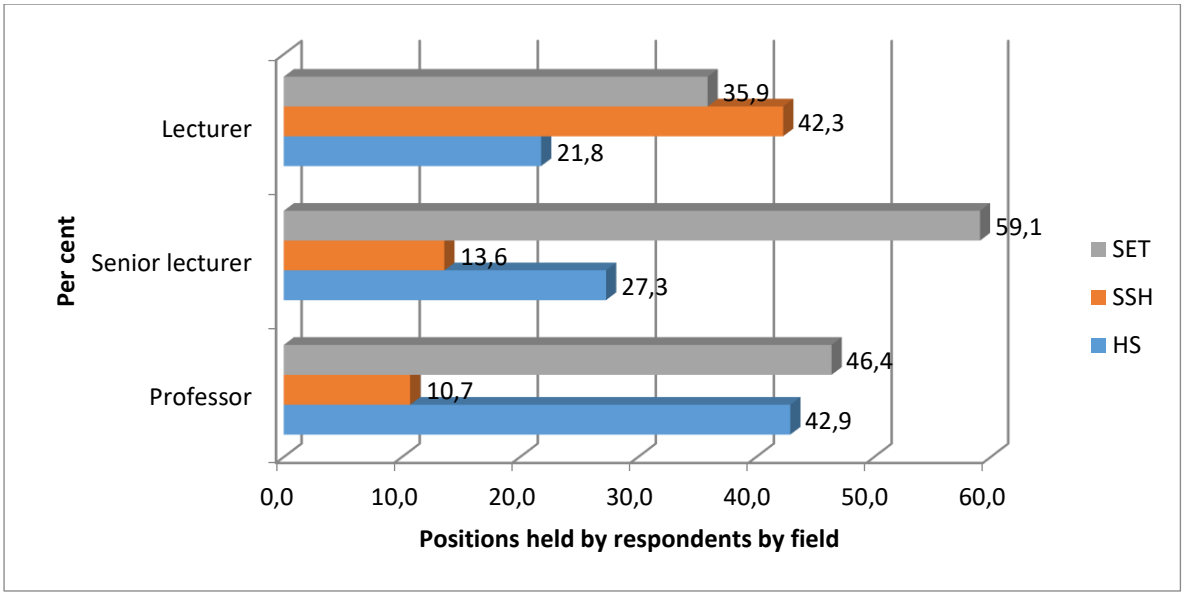

Figure 7.8: Position of respondents by field (N=128)

7.2.6 Employment Status of the respondents

The respondents were asked to indicate whether their positions in the university were permanent or whether they worked on contract. Those in permanent positions work until the retirement age of 55 years, while those on contract are employed for four years. Once this time has lapsed the institution or the staff member make the decision to either renew or terminate the contract. However, it is important to note that the final decision to renew the contract lies solely with the employer. The results of the status of the respondents are shown in Figure 7.9 below.

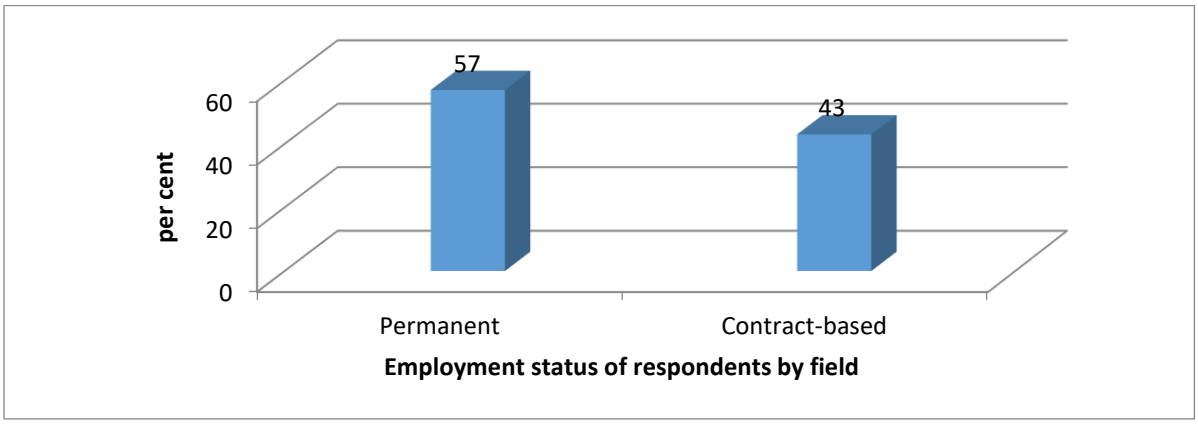

Figure 7.9: Employment status of respondents (N=128)

The cross-tabulations for the field category and employment status, show that 44% of the 128 respondents on a permanent basis were from SET, followed by 34% from HS and 22% from SSH. Those employed on contract, 42% were from SSH, followed by 40% from SET and 18% from HS. Figure 7.10 below shows the employment status of respondents by field.

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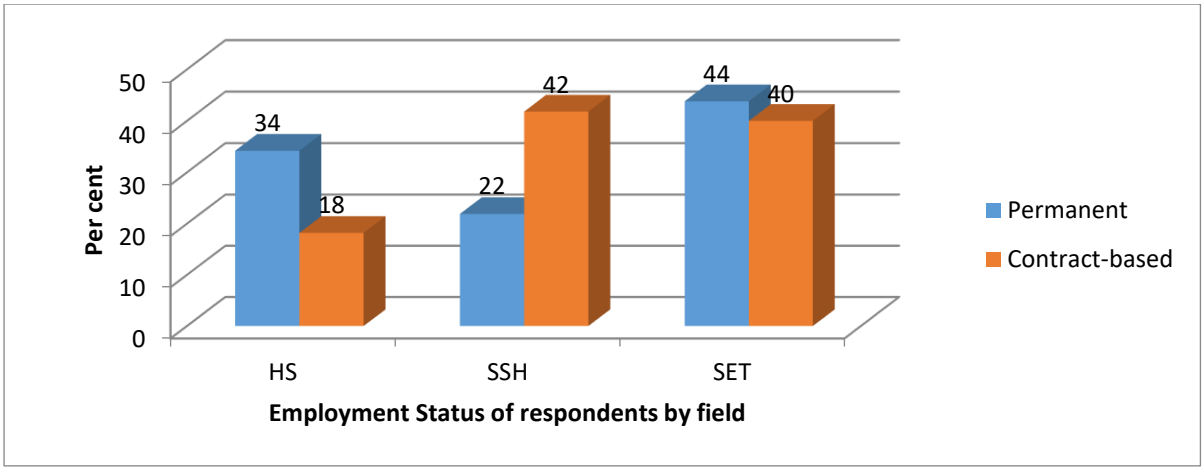

Figure 7.10: Employment status of the respondents by field N=128

7.3 Main sources of funding for social science research in Zambia

The analyses and findings in this section are based on the sources of research funding that the 128 respondents had indicated they had received from either national or international sources during the (2014/2016) period.

Respondents were asked three questions in relation to their sources of funding. The first question was aimed at establishing whether or not the respondents received any research funding over the preceding three years and whether they were the primary recipients of the funding in all research projects, only in some cases or only when they participated in the research. This was followed by questions that sought to understand the proportions of the amount of funding they had received from either national or international sources. The proportion of funding ranged between 10% and 100%. The purpose of this question was to make a comparison between the two sources of funding and establish which one provided the most funding to the researchers. The last question was a follow up and was aimed at finding out the amounts of research funding the respondents had received from either the national or international sources. The amounts of research funding ranged between less than US$10 000 and US$1 000,000.

7.3.1 Research funding received by respondents

The 128 respondents were asked to indicate whether or not they had received any research funding, either as primary recipients/grant holders or as participants in the studies that they had conducted during the preceding three years. Figure 7.11 below shows the responses provided by the respondents.

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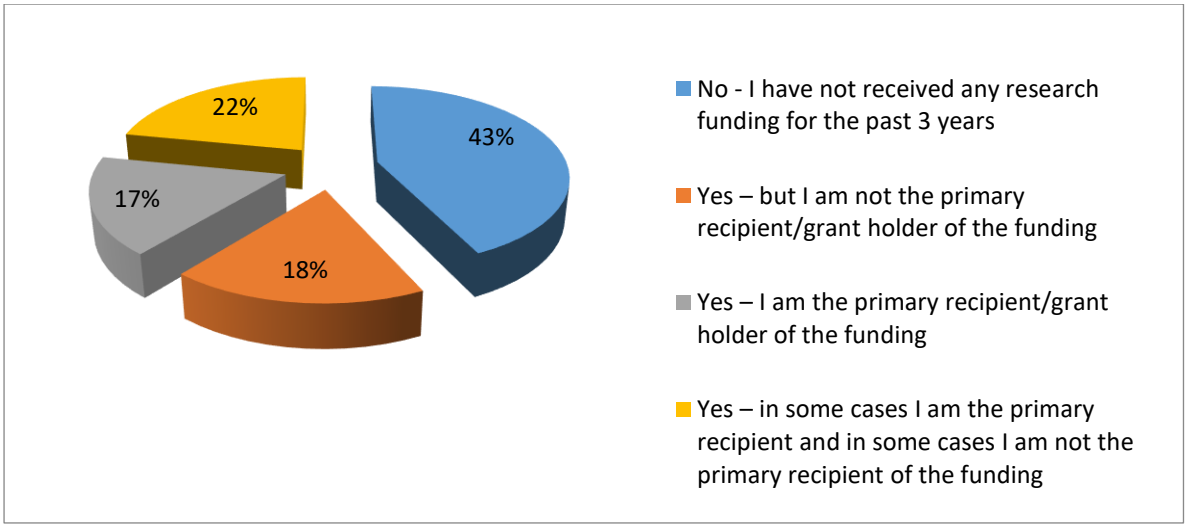

Figure 7.11: Percentage of respondents who received research funding for the past 3 years (N=128)

In response to whether the respondents had received research funding over the preceding three years from either national or international sources, a significant number 73 (57%) of the respondents responded positively, while 55 (43%) had not received any research funding. The results further show that of the 73 respondents who had received research funding, 22 (17%) were the primary recipients, 23 (18%) participated in the research that received funding while 28 respondents (22%) were the primary recipients of the research funding only in some cases.

7.3.2 Funding received by respondents by field

Figure 7.12 below shows the cross-tabulations of received research funding as principal recipients in all cases, principal recipients only in some cases, only participated in research that received funding and those who had not received any research funding.

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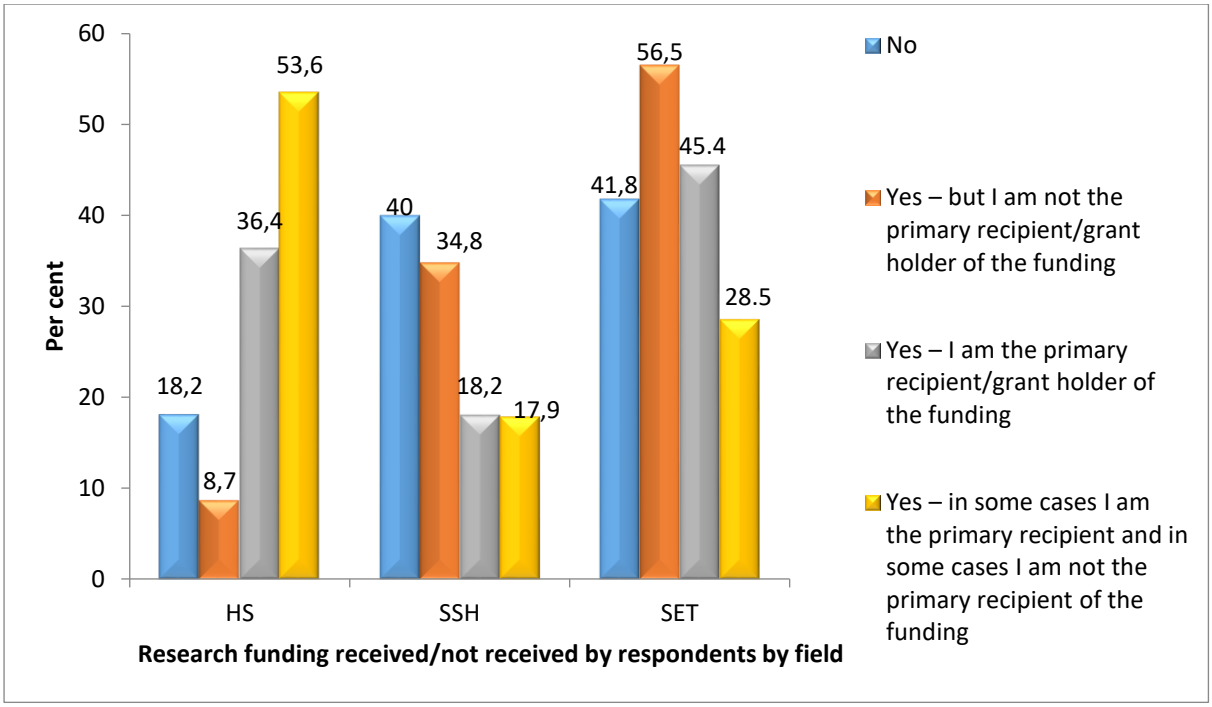

Figure 7.12: Research funding received/not received by respondents by field

The disaggregation by scientific field show significant differences among the fields. The results show that primary funding recipients in SET were at 46%, followed by HS at 36%, with the least from SSH at 18%. Among the respondents who had received research funding as primary recipients in some cases, slightly more than half of the respondents were from HS (54%), followed by SET (29%), while SSH had the least number of respondents accounting for only 18% of the total respondents. Even among the respondents who only participated in research that had received funding, more than half the respondents were from SET (57%), SSH (35%) fared better than HS which only accounted for 9%. Among the respondents who said they had not received any research funding, the majority 42% were from SET followed by those from SSH (40%) and 18% from HS.

7.3.3 Amounts of research funding received by the respondents

The 73 respondents who indicated that they had received research funding were asked to indicate the range of the amounts of research funding they had received. Figure 7.13 below shows the responses provided by the respondents.

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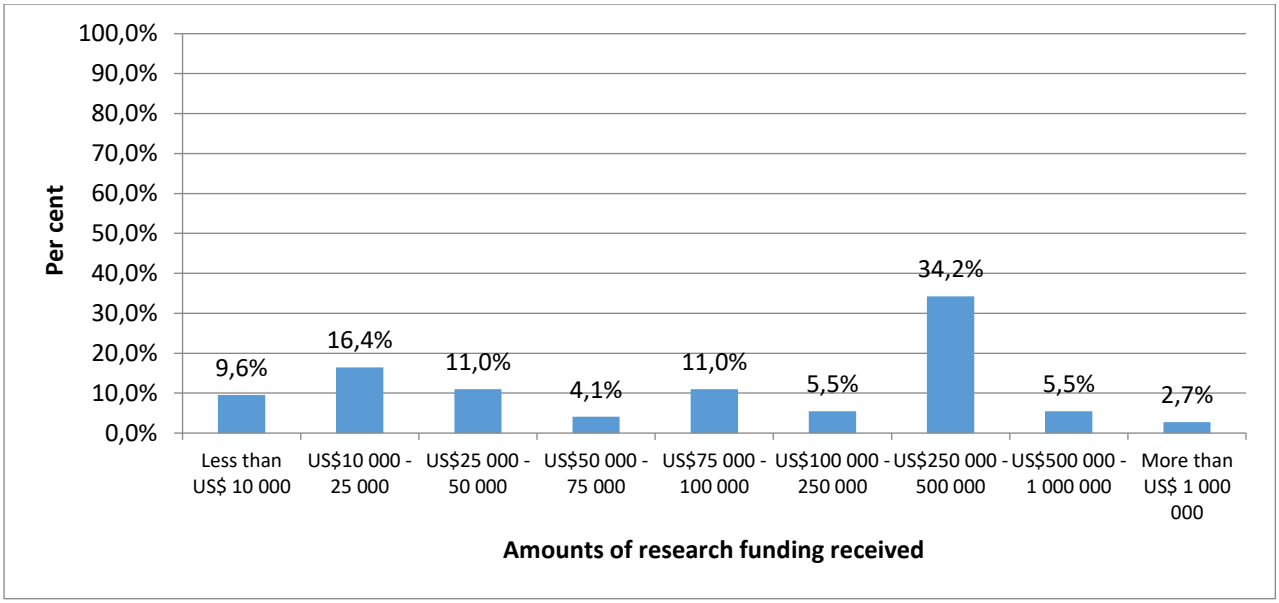

Figure 7.13: ***Percentage of respondents and category of research funding received from 2014-2016 (N=73)***

The results show that of the 73 respondents who had stated that they had received research funding, 2 (3%) received more than US$1,000,000; 4 (6%) received between US$500,000 and US$1,000,000 while the majority 25 (34%) received between US$250,000 and US$500,000. Others, 4 (6%) received between US$100,000 and US$250,000; 8 (11%) received between US$75,000 and US$100,000 while 3 (4%) received between US$50,000 and US$75,000, 8 (11%) received between US$25 000 and US$50,000; 12 (16%) received between US$10,000 and US$25,000 and 7 (10%) received less than US$10,000.

7.3.4 Amounts of research funding received by respondents by field

Cross tabulations for field and amounts of funding received by respondents were correlated to establish the amount of research funding received by those in SSH. Figure 7.14 shows the amounts received by respondents according to their fields.

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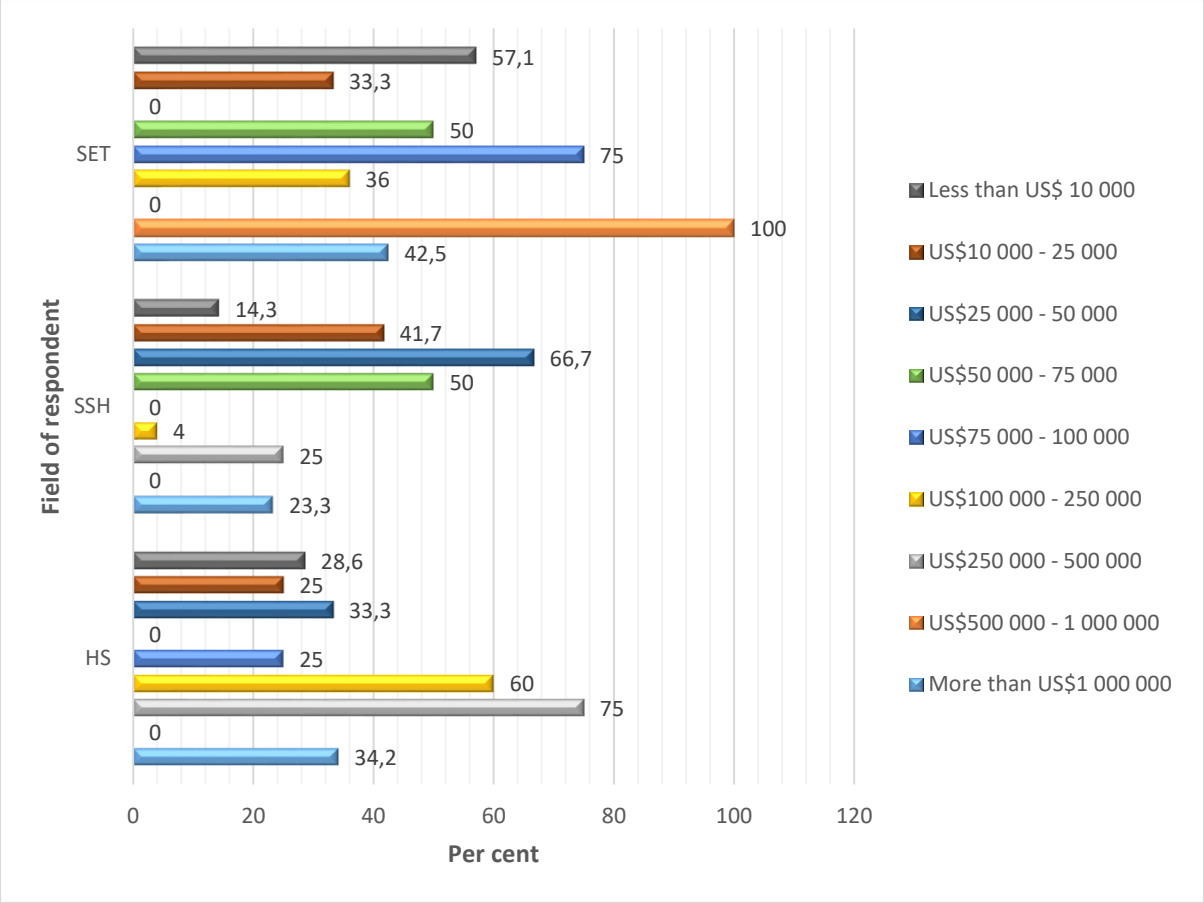

Figure 7.14: Amounts of research funding received by respondents by field

The disaggregation by scientific field show that respondents in SET were the only ones who stated that they had received research funding amounting to US$1 000 000 in the preceding three years prior. The rest of the respondents in SET (36%) reported that they had received research funding in the range of US$250,000 and US$500,000; 75% between US$100,000 and US$250,000; 50% received between US$75,000 and US$100,000; 62% received between US$25,000 and US$50,000, 33% received US$10,000 and US$5,000, while 57% of the respondents stated that they had received less than US$10,000.

Those in SSH, 25% of the respondents reported that the maximum amount of research funding they had received was in the range of US$500,000 and US$1,000,000, followed by 4% of those who received between the range of US$250 000 and US$500 000. The remaining respondents in SSH, 50% of the respondents received between US$ 25 000 and US$100 000; 68% received between US$50 000 and US$75 000; 38% received between US$25 000 and US$75 000; 41% received between US$10 000 and US$10 000 and US$25 000, while 14% of the respondents in SSH stated that they had received a minimum of less than US$1 000.

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A significant percentage of respondents in HS (75%) stated that the highest amount of research funding they had received was in the range of US$ 500 000 and US$1 000 000, followed by 60% who received research funding ranging between US$ 250 000 and US$500 000; 25% received between US$100 000 and US$250 000. The remaining respondents (33%) received between US$250 000 and US$75 000; 25% received between US$10 000 while 29% reported that they had received less than US$10 000.

7.3.5 Proportion of research funding received by respondents

The 73 respondents who had indicated that they had received research funding were asked to indicate the proportions of research funding they had received from either national or international sources. Figure 7.15 below shows the responses from the respondents.

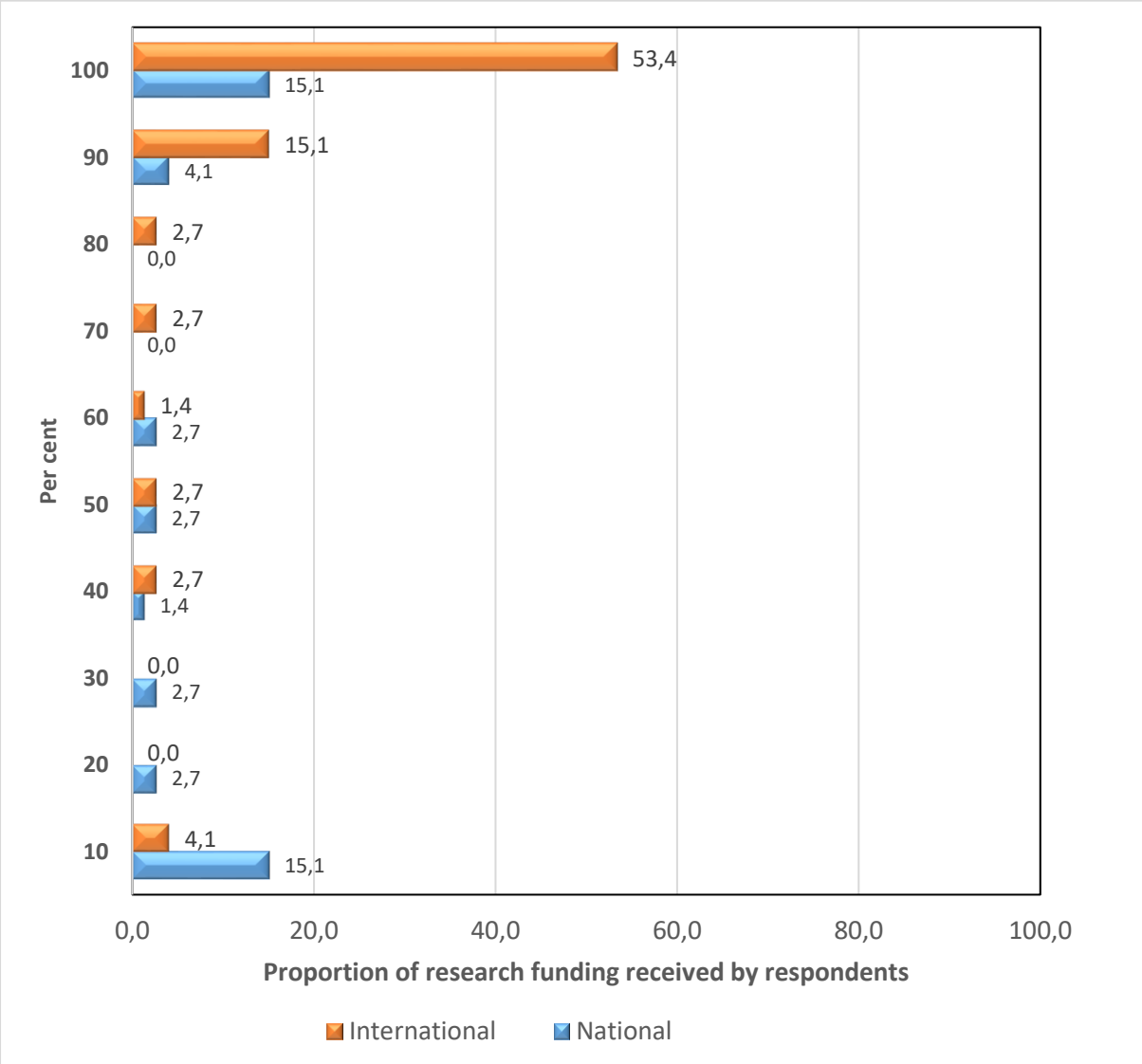

Figure 7.15: Proportion of research funding from national and international sources

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Results show that out of the 73 respondents who had indicated that they had obtained some research funding, 53% received 100% funding from international sources, while 15% received 100% from national sources. The results also show that even among the respondents who had received 90% of research funding, 15% of the respondents obtained the funding from international sources, and 4% received the same proportion of funding from national sources.

Cross-tabulations between field and proportions of amounts received from national and international sources were done to establish if respondents in SSH had received as much funding as their counterparts in the other two fields. Table 7.1 shows the proportion of research funding obtained from national sources by field.

Table 7.1: Proportion of research funding obtained from national sources by field

Research funding obtained from National sources	HS		SSH		SET		TOTAL	
	f	%	f	%	f	%	f	%
10	6	54.5	3	27.3	2	18.2	11	100.0
20	1	50	1	50	0	50	2	100.0
30	1	50	0	0	1	0	2	100.0
40	0	0	1	100	0	100	1	100.0
50	0	0	0	0	2	0	2	100.0
60	2	100	0	0	0	0	2	100.0
90	2	66.7	1	33.3	0	0	3	100.0
100	4	36.4	1	9.09	6	54.4	11	100.0

Results show that 11 respondents received 100% funding from national sources. Of those 6 (55%) were from SET while 4 (36%) were from HS and 1 (9%) from SSH. The respondents who received 90% were three, and of those 2 (67%) were from HS and 1 (33%) from SSH. Two respondents received 50% and both were from SET. One respondent from SSH received 40% research funding. Two respondents received 30% research funding, one from HS and another from SET. Those who obtained a proportion of 20% of their research funding from national sources were two, one from HS and another from SSH. There were 11 respondents who received 10% of research funding from national sources and of those, 6 (54%) were from HS, 3 (27%) were from SSH while 2 (18%) were from SET. None of the respondents indicated that they had received either 70% or 80% of research funding; hence those two categories have been omitted from the above table.

Cross-tabulations were done to determine the proportion of research funding that was received by respondents from the international sources according to fields. Table 7.2 below shows the responses of the proportion of research funding received by the respondents.

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Table 7.2 Proportions of research funding received from the international sources

Research funding obtained from international sources	HS		SSH		SET		TOTAL	
	f	*%*	*f*	*%*	*f*	*%*	*f*	*%*
10	2	66.7	1	33.3	0	0	3	100
20	2	100	0	0	0	0	2	100
30	0	0	0	0	2	100	2	100
40	0	0	1	100	0	0	1	100
50	1	50	0	0	1	50	2	100
60	1	50	1	50	0	0	2	100
90	6	54.5	3	27.3	2	18.2	11	100
100	9	23.1	10	25.6	20	51.3	39	100

The results show that 39 respondents received 100% from international sources. Of those 9 (23%) were from HS, 10 (26%) from SSH and 2 (18%) from SET. Those who received 90% were 11 and of those 6 (55%) were from HS, 3 (27%) from SSH while 2 (18%) were from SET. Two respondents received 90% from international sources with 1 (50%) from HS and another (50%) from SSH. Two respondents receive 70%, 1(50%) from HS and another 1(50%) from SET. There was only one respondent from SSH who received 60% from the international sources. Two respondents from HS received 50%, while 2 respondents from SET received 30% research funding from international sources. There were 3 respondents who received 10% and these were 2 (67%) from HS and 1 (33%) from SSH.

7.3.6 Major funding organisations mentioned by the respondents

The respondents were asked to provide the names of three main funding organisations from which they had received some research funding. The respondents received research funding from various agencies in the Zambian government, Japan, Australia, New Zealand, NGOs and research foundations in USA and Europe. Some of the funders were difficult to identify, especially when the funding came from bilateral governmental partnerships. The major funding organisations mentioned by the respondents and the number of times they have provided research funding are presented in Table 7.3 below.

Table 7.5: Most frequently named funders by the respondents

Institution	Frequency of Funding
National Institute for Health (NIH)	9
Japan International Cooperation Agency (JICA)	4
NORAD	4
Government of the Republic of Zambia (GRZ)	4
National Science and Technology Council (NSTC)	2

During the interviews, most respondents confirmed that their research funding was obtained from international sources, and explained that the funding were either from the submission of grant proposals, consultancies or collaborations. Others stated that the financial support for their research

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came from various donor-funding organisations. For instance, Changala[1], a respondent who had conducted several studies in health sciences, outlined her multiple sources of research funding as follows:

> *Yes, 100% of my funding is from international organisations such as SACIDS, Welcome Trust, J-Grid (AMED) and SATREPS (JICA). So the SACIDS was a funding for my PhD. (D1: 1:4)*

Another respondent who conducted several research projects in a similar field, Mumba, added that the research she had conducted was funded by an international organisation:

> *More recently, we were given a small grant from of about $70, 000 from World Health Organization (WHO to do some research on micro-bio resistance with our colleagues from the school of veterinary medicine. (D11, 11:5)*

Although the survey results showed that most of the respondents in social sciences had not received research funding, a few researchers who had received research funding from international sources also described how they managed to receive research funding from international sources. For example, Chitalu, a researcher at the Institute of Social and Economic Research, has conducted several studies on poverty alleviation. He described how he managed to receive research funding from international sources:

> *The other project is what we called dynamic drivers of diseases in Africa consortium and that was funded by ESSPA which is Eco-System Services for Poverty Alleviation in Africa and which gets its funding from DFID and the Research Council in the UK. (D15, 15.4)*

Kanya, another social scientist who had also conducted several studies, echoed similar sentiments that most of her research funding was obtained from international sources through collaborations and the submission of grant proposals with other researchers, from Africa and abroad. She recounts:

> *Over the years of my research career, I have been funded by several organisations. Some of the funding you compete like Associations of African Universities they do fund research so you compete and others like CODESRIA you also compete by putting in a research proposal. Others are by association like National Institute for Health (NIH) from the United*

[1] The names indicated in the thesis are pseudonyms and not the real names of the respondents. This is done to ensure anonymity and confidentiality.

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> *States of America, Royal Tropical Institute of from the Netherlands and various other funding bodies. (D2: 2:2)*

Other respondents while outlining the sources of their research funding explained how the research funding they had obtained from international sources had benefitted not only themselves, but a number of postgraduate students whom they supervised at Masters and PhD levels. For instance, Imanya, a Professor who specialises in water resources management, had a number of research-funded projects and described his sources of funding and its benefits to postgraduate programmes in the following quote:

> *We have a project which came from the Melinda Gates Foundation through Water Resources Commission where we have 1 PhD and a masters' student who has already submitted the thesis for examination. This year again in February we launched another project called 'Water Energy and Food nexus' programme where I am looking for at least 1 PhD to be here at the centre and start a project in the Lusemfwa area on water quality – mapping up water areas and this is supposed to start in September this year. (D9, 9:6)*

Njuni, another social scientist who recently graduated with a PhD at UNZA, explained how she obtained research funding from international sources to conduct a big study and complete her PhD. She shares her experience as follows:

> *I have received research funding from international sources and I would say the most recent one is the one which concerned my PhD. I wrote a proposal to the National Swiss Science Foundation through the University of Basel in Switzerland and that is how I got that funding. (D4, 4:3)*

When asked if the respondents had received any research funding from the government, most stated that they had not received any research funding from the Zambian government. When probed further for the reasons why they had not received research funding from the government, the respondents provided several reasons. For instance, Kanya, a Senior Lecturer in SSH stated that she had not applied for research funding from the government and that this was mainly because she had not seen any research funding opportunities being advertised by the government. She remarks:

> *No, I have not received any funding from the government because I have not made any efforts to source funding from government at all and the reason is that somehow perhaps it is a perception issue that I think there is no funding from the government. Also I have not seen any advertisements from the government for research funds. I have only seen*

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> *from National Science and Technology Council but I have never really bothered because there was nothing within my discipline - that is social sciences. (D2, 2: 16)*

Matengo, another social scientist who had worked for 10 years at UNZA stated that he had not heard or seen anyone being assisted with research funding from government in his field. He shares his experience as follows:

> *For the 10 years that I have been here, I have not seen or heard of any funding for research for example, in Public Administration in order to study how government can effectively be structured in order to efficiently provide public services. Apart from the Commission surveys through Anti-Corruption Commission (ACC) or through cabinet office it is difficult to say but there is almost no funding. (D16, 16:8)*

Bwato had worked for the university for a number of years pointed out that since he joined the University he had submitted proposals but received no funding. He expounds his experience as follows:

> *I can say ever since I joined the university in 2010 as a Staff Development Fellow and in 2012 as a full time lecturer, I have never gotten money from the Zambian Government. I have tried to write research proposals but nothing has come through from the Zambian government. (D7, 7:5)*

The other reason respondents provided for not receiving research funding from the government was that their efforts to source funding from government thwarted as they were constantly informed that the government had no funding for research. One of the respondents, Nawakwi laments:

> *… but here in the university, the issue of funding is like a song, all the time they say there is no money. Like this you do not get anywhere. (D20, 20:2)*

Changala, reiterates and stated that even partial funding was difficult to get from the Zambian government:

> *Yes, so at one time I did apply for funding from government because I had received a partial scholarship for some studies and I needed extra funding and I remember that nothing came through over that application. (D1, 1: 41)*

Sobozi echoes similar sentiments and adds that getting research funding from the government was almost impossible. He puts it this way:

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> *It is very difficult to be funded by the government especially the government of Zambia. I do not know of any academia that have benefitted from funding by the Zambian Government. (D12, 12:7)*

Another respondent who made several efforts to get research funding from the Zambian government without success concludes that research funding from government was non-existent. Ndalama narrates:

> *I have not really tried to get funding directly from the government but I know that I have written a couple of requests to the management of the University of Zambia (UNZA) and the answer is always that they do not have money. There is a research fund provided but it is like it practically not there. (D22, 22:27)*

Mumba, one of the professors at UNZA who had not received research funding from the government came to a conclusion that the government does not support the research activities at the university and this leads to low research output. Below are his sentiments:

> *The University doesn't have support from the government. I think to my knowledge I have not received any coin from the university to say this is money from our government that you need to do research. Of course they have their own priorities but funding for research has been a major constraint in the university. We believe that if we had the resources that we needed to do research we could have done more probably you could have had much better output than we have. (D11, 11:11)*

Only one of the 22 interviewees indicated that she had received research funding from the university in the form of "seed money". "Seed money" is a term used to refer to a research fund which was initiated by the then Director of the Directorate of Research and Graduate Studies at UNZA to enable one member or a group of researchers from each school to conduct research. In her view, Bandure felt that though little, the "seed money" enabled her and her colleagues to conduct some research. Bandure recounts her experience as follows:

> *There was one time when there was seed funding provided by the University of Zambia through the Directorate of Research and Graduate Studies, so I tried to apply… My colleagues and I, the three of us wrote a proposal on the impact of cerebral malaria on children ending up with disability. We applied and we were given. (D14, 14:20)*

In summary: The results from the survey and interviews clearly indicate that most of the respondents in this study obtained their research funding from international sources rather than from national

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sources. A breakdown by fields has also shown that those in the fields of SET and HS seem to have received more research funding from international and national sources than the respondents in the SSH. This conclusion is gathered from the fact that firstly there were larger numbers of respondents from the fields of SET and HS who indicated that they had either mostly, or in some cases, received research funding as principal recipients than those in the field of SSH. Secondly, the respondents in SET and HS also reported to have received high proportions and larger amounts of research funding than those in SSH.

7.4 Expected research outcomes

One of the ways of measuring research utilisation is to understand from the researchers' perspective which research outcomes they expected from their own research and how they felt these were achieved. The expected outcomes of research shows the actual intended purpose for which a particular research was conducted and this can be either be to advance knowledge or to solve social problems that affect society through policy recommendations. To answer this question, respondents were given a list of 9 pre-determined research outcomes and were asked to rate them according to their (perceived) level of success. Figure 7.16 below shows the results of the expected research outcomes and the level of success from the respondents' perspectives.

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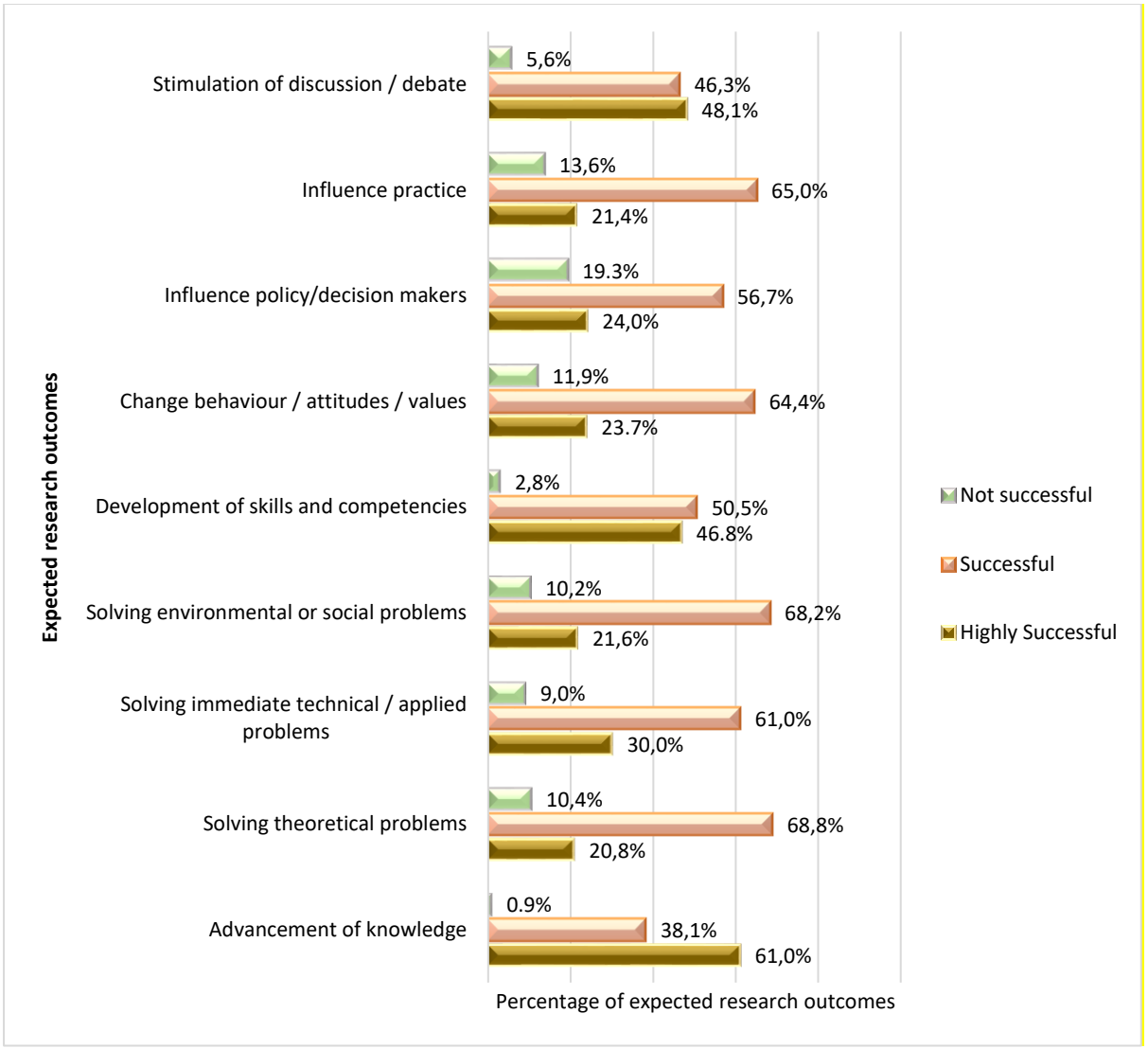

Figure 7.16: ***Expected research outcomes and the level of success from the respondents' own perspectives***

The results show that 61% of the respondents indicated that advancement of knowledge was an expected research outcome, followed by simulating discussion at 48%. The third highest rated expected outcome was development of skills and competencies at 46%. Influencing policy/decision-makers was one of the lowest rated expected outcome accounting for 24%. The expected outcomes which were considered successful to some extent were solving theoretical problems and solving environmental problems with each accounting for 68% of the stated responses. These were followed by influencing practice at 65% and changing behaviour, attitudes and values at 64%. Influencing policy was again among the least successful expected outcomes at 56%.

It can therefore be concluded from these responses that most of the research done by researchers at UNZA are done for the pursuit of knowledge with very few studies expecting their research outcomes

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to influence policy decisions. This could be attributed to the fact that all the respondents in this study were researchers and lecturers whose focus has been on teaching and research that could contribute to the body of knowledge and hence paid less attention on how their research would influence policy. In this case, the trigger for conducting research was mainly their own curiosity and perhaps the desire to attain academic promotion. To determine whether the respondents in the social sciences considered influencing policy decisions as an important aspect of their research, the results were disaggregated according to fields. In view of this, cross-tabulation against the expected research outcomes and the level of success by fields were calculated. The results are shown in Table 7.4 below.

Table 7.4: Expected research outcomes and the level of success by field from the respondents' perspectives

Advancement of knowledge								
	HS		**SSH**		**SET**		**Total**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Highly Successful	22	30.6	16	22.2	34	47.2	72	100
Successful to some extent	9	20.0	19	42.2	17	37.8	45	100
Not successful	0	0.0	0	0.0	1	100	1	100
Total	31	26.3	35	29.7	52	44.0	118	100
Stimulation of discussion/debate								
	HS		**SSH**		**SET**		**Total**	
	f	%	f	%	f	%	f	%
Highly Successful	16	30.6	16	22.2	34	47.2	72	100
Successful to some extent	12	24.0	15	30.0	23	46.0	50	100
Not successful	1	16.7	0	0.0	5	83.3	6	100
Total	29	26.9	31	28.7	48	44.4	108	100

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Development of skills and competencies								
	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
Highly Successful	12	23.5	16	31.4	23	45.1	51	100
Successful to some extent	17	31.5	14	25.9	23	42.6	54	100
Not successful	1	0.0	1	33.3	2	66.7	3	100
Total	29	26.9	31	28.7	48	44.4	108	100
Influence Policy/Decision-makers								
	HS		**SSH**		**SET**		**Total**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Highly Successful	8	32.0	14	56.0	3	12.0	25	100
Successful to some extent	17	28.8	15	25.4	27	45.8	59	100
Not successful	4	20.0	4	20.0	12	60.0	20	100
Total	29	27.9	33	31.7	42	40.4	104	100
Solving environmental or Social Problem								
	HS		**SSH**		**SET**		**Total**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Highly Successful	5	26.3	8	42.1	6	31.6	19	100
Successful to some extent	17	28.3	13	21.7	30	50.0	60	100
Not successful	0	0.0	5	55.6	4	44.4	9	100
Total	22	25.0	26	29.5	40	45.5	88	100
Change behaviour/attitudes/values								
	HS		**SSH**		**SET**		**Total**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Highly Successful	6	25.0	14	58.3	4	16.7	24	100
Successful to some extent	23	35.4	13	20.0	29	44.6	65	100
Not successful	1	8.3	4	33.3	7	58.4	12	100
Total	30	29.7	31	30.7	40	39.6	101	100

The results show that a significant number of respondents from SET (47%) rated advancement of knowledge and stimulation of debate as the most successful outcomes of their research followed by development of skills at 45%. Very few respondents from SET (12%) rated influencing policy decisions as being successful. In fact a large majority of the respondents (60%) rated influencing policy decision as an expected outcome that was not achieved at all.

The results of those working in the Health Sciences were different as they believed that research may have been successful in influencing policy decisions (32%), followed by advancement of knowledge (31%) and stimulating debate (31%). Among other expected outcomes that the respondents rated as successful but with low responses were changing of behaviour (25%), solving environmental and social problems (26%), and development of skills and competencies (24%).

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And finally, interestingly, respondents from SSH rated changing behaviour at 58%, influencing policy decisions (56%), and solving environmental and social problems (42%) as the most successful outcomes of their research. Their research outcomes were also highly successful to some extent at advancement of knowledge and competencies (42%).

In summary, the results in this section have shown that while the majority of respondents generally stated that the highly successful expected outcomes of their research were advancement of knowledge, simulating discussion, development of skills and competencies and to a lesser extent influencing policy decisions, these expected outcomes vary according to fields. For instance, while the primary focus of researchers in SET is advancement of knowledge, stimulation of debate and development of skills, those in HS indicated that the expected research outcome of their research was mainly to influence policy decisions made by policymakers, as well as to ensure that their research advances knowledge and stimulates debate. Alternatively those in SSH conducted their research with the aim of ensuring that their research findings are utilised by policymakers, in addition to ensuring that their research findings also changed behaviour and solved environmental and social problems.

In the next section, the focus is on how the respondents disseminated their research findings during the conceptualisation stage of their research. The aim is to determine whether or not the dissemination modes they used would promote research utilisation by the policymakers.

7.5 Main modes of research dissemination used by the respondents

This section presents a discussion of the modes of dissemination used by the respondents. The research output types include peer-reviewed articles produced in academic journals, monographs, book chapters, published conference proceedings, conference presentations, policy documents, popular articles, patents/applied granted, computer programmes, research reports and creative artistic work.

The respondents were asked to indicate from a list of 10 research output types how many of each they had produced in three years prior to the study (2014-2016). Table 7.5 below shows the research output types produced by the respondents according to volumes.

Table 7.5: Research output types according to volumes produced

Research Output types	**Volumes of research outputs produced by respondents**					
	1-3	**4-6**	**7-10**	**11+**	**Total**	**%**
Articles in academic journals	40	28	13	29	110	85.9
Monographs	20	6	1	0	27	21.0
Book Chapters	42	5	3	0	50	39.0
Published conference proceedings	49	12	6	9	86	67.0

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Research Output types	Volumes of research outputs produced by respondents					
	1-3	4-6	7-10	11+	Total	%
Conference presentations	49	22	8	15	94	73.4
Policy documents	56	13	4	1	74	57.8
Popular articles	36	9	4	6	55	42.9
Patents Applied or granted	5	3	2	0	10	7.8
Computer programmes	7	4	0	1	12	9.3
Research Reports	49	14	3	5	71	55.4
Creative Arts	1	1	0	1	3	2.3

The results show that the majority of the respondents (86%) indicated that the disseminated their research findings mainly to their peers in the academic field by publishing of articles in peer reviewed academic journals followed by conference presentations (73%), published conference proceedings (67%) and policy documents (56%). The results also show that very few respondents (8%) disseminated their research findings through patents and much less through creative arts (2%).

The results also show that when disaggregated according to volumes, articles produced in peer-reviewed journals had higher volumes of 11+ followed by conference presentations which had more respondents in the range of 7-10.

7.6 Specific dissemination modes used by respondents

This section discusses the specific dissemination modes used by respondents, firstly in terms of volumes produced by the respondents, and secondly according to fields.

7.6.1 Articles in academic journals

The results show that not many of the respondents (23%) had produced more than 11 articles in peer-reviewed journals while those who had produced in the range of 7-10 accounted for only 10% of the respondents. The remaining 31% had produced articles in the range of 1-3 with 20% of the respondents producing articles in the range of 4-6 articles. Others (14%) had not published any articles in the years prior to the study. Figure 7.17 below shows the volumes of articles published in academic journals by the respondents.

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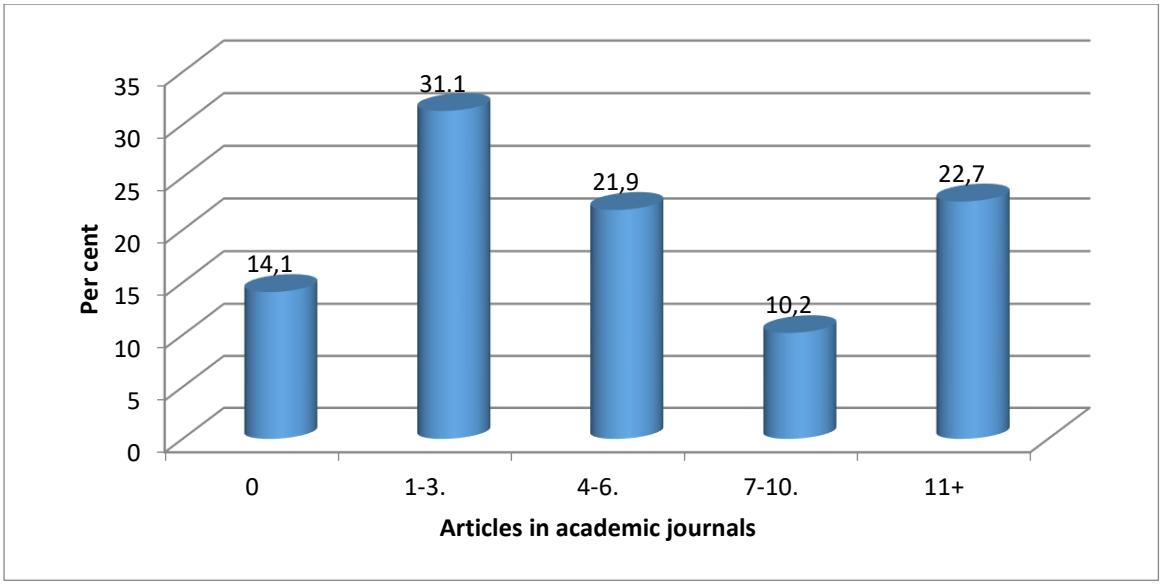

Figure 7.17: Articles in academic journals

Cross-tabulation of academic journals and fields were done to determine how social scientists performed against their counterparts in other fields in terms of disseminating their research findings through publication of articles in academic journals. The results are shown in Table 7.6 below.

Table 7.6: Academic articles produced by field

	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
0	4	23.0	9	50.0	5	27.0	18	100.0
1-3	4	10.0	16	40.0	20	50.0	40	100.0
4-6	7	25.0	15	42.9	9	32.1	28	100.0
7-10	6	46.2	1	7.7	6	46.1	13	100.0
11+	14	48.3	1	3.4	14	48.3	29	100.0

The results show that almost half of the respondents in SET (48%) and in (HS) 48% had published the highest number of articles in academic journals in the range of 11+, and in the range of 7-10, than those in SSH who accounted for 3% of respondents with more than 11 articles, and 6% had produced articles in the range of 7-10. SSH was leading in journal articles published in the range of 4-6, followed by SET at 32%, while the least in that category was HS at 25%. Among those who published articles in the range of 1-3, there were more in the field of SET (50%) than those in SSH (40%) with the least in HS at 10%.

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7.6.2 Conference presentations by respondents

The results show that there less than half of the respondents (38%) had conference presentations in the range of 1-3, followed by 31% of those who said they had presented conference papers in the range of 4-6. Very few respondents (2%) stated that they had presented conference papers in the range of 7-10 and another 2% said they had produced more than 11 papers at conferences. Figure 7.18 below shows the volumes of conference presentation made by the respondents.

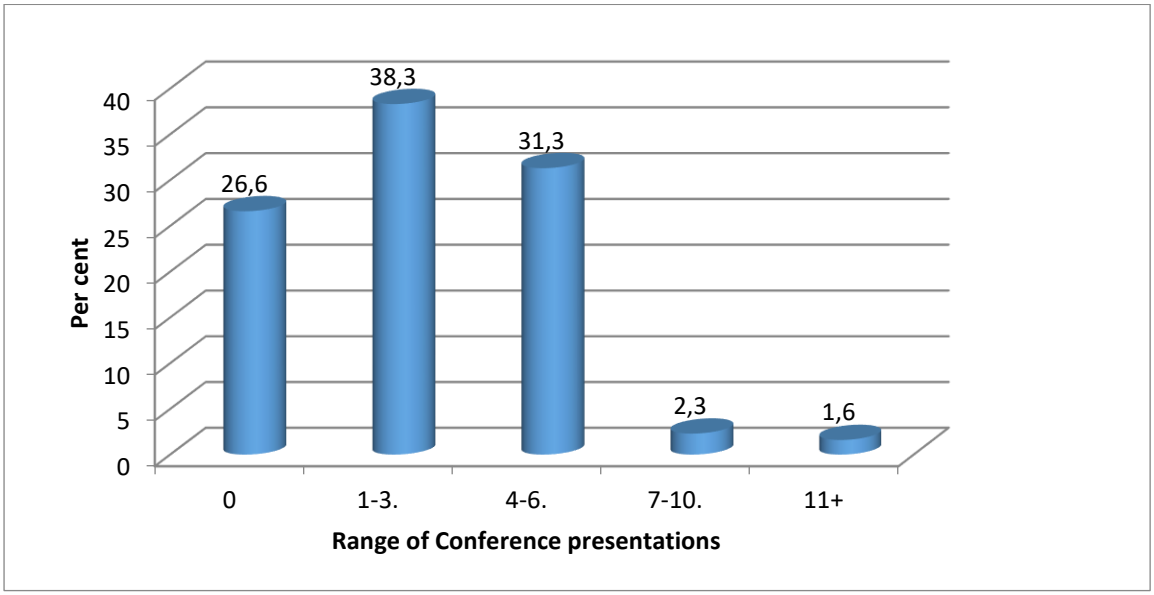

Figure 7.18: Conference presentations made by respondents

7.6.3 Conference presentations by field

The results for the cross tabulations of conference presentations according to field are presented in Table 7.7 below.

Table 6: Conference presentations according to field

	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
0	6	17.6	11	32.4	17	50.0	34	100.0
1-3	10	20.4	15	30.6	24	49.0	49	100.0
4-6	18	45.0	10	25.0	12	30.0	40	100.0
7-10	1	33.3	2	66.7	0	0.0	3	100.0
11+	0	0.0	1	50.0	1	50.0	2	100.0

The results indicate that only two respondents, one from the field of SSH and another from the field of SET had made more than 11 conference presentations in the preceding three years. Other respondents made presentations in the range of 7-10 and these were dominated by respondents in SSH (67%), followed by HS (33%) while none of the respondents from SET presented any conference

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papers in that range. Slightly less than half, 45% of the respondents in HS made conferences presentations in the range of 4-6, followed by respondents in the field of SET (30%) and SSH (25%). The rest of respondents made presentations in the range of 1-3 with 50% from SET followed by 31% from SSH and the least were from HS with 20%.

7.6.4 Conference proceedings presented by respondents

Another dissemination mode that was used by the respondents was conference proceedings which are presented in Figure 7.19 below.

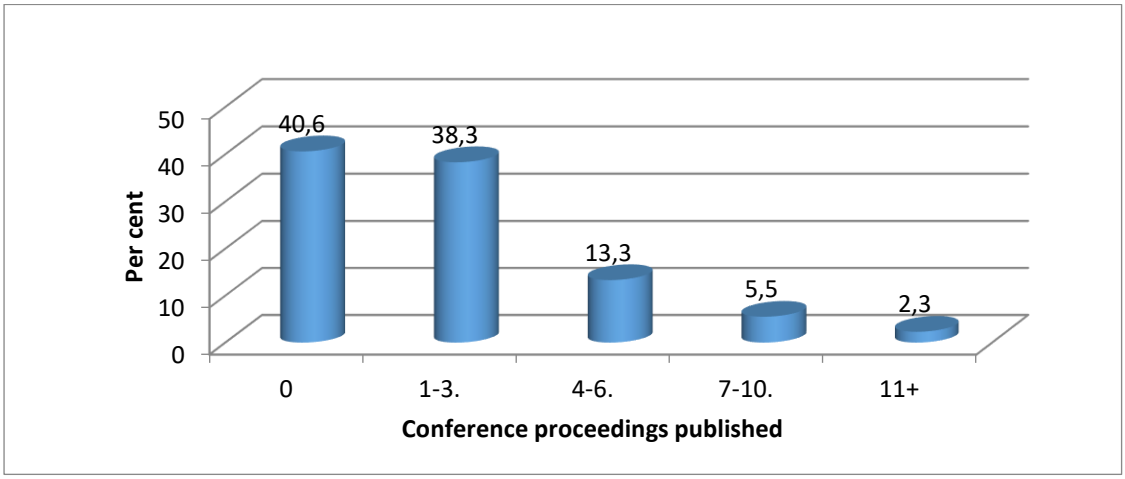

Figure 7.19: Conference proceedings published by respondents

The results revealed that 2% of the respondents had produced more than 11 conference proceedings, 6% in the range of 7-10, and 13% in the range of 4-6. The rest, 38% had published in the range of 1-3 while the remaining 41% did not publish any conference proceedings in the preceding three years.

7.6.5 Published conference proceedings by field

In order to establish how many of the published conference proceedings were produced by social scientists, cross tabulations on field and published conference proceedings were calculated and the results are shown in Table 7.8 below. ‘

Table 7.8: Published conference proceedings by field

	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
0	12	23.1	19	36.5	21	40.4	52	100
1-3	15	30.6	16	32.7	18	36.7	49	100
4-6	6	35.3	3	17.6	8	47.1	17	100
7-10	0	0	1	14.3	6	85.7	7	100
11+	2	66.7	0	0	1	33.3	3	100

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The results show that more respondents in HS (67%), followed by SET (33%) while none of the respondents in SSH had produced 11+ conference proceedings. The results further revealed that there were more respondents from SET (86%) who produced 7 – 10 conference proceedings, followed by HS (31%), and very few respondents (14%) in SSH. Even among the respondents who had produced 4 – 6 conference proceedings, SSH was still the lowest with 18%. This category was dominated by respondents from SET at 47% followed by HS (35%). SSH only performed slightly better in the range of 1-3 where it was second to SET and slightly higher than HS.

Some respondents used policy documents as a way of disseminating their research findings. Figure 7.20 below shows the volumes of the policy documents published by the respondents.

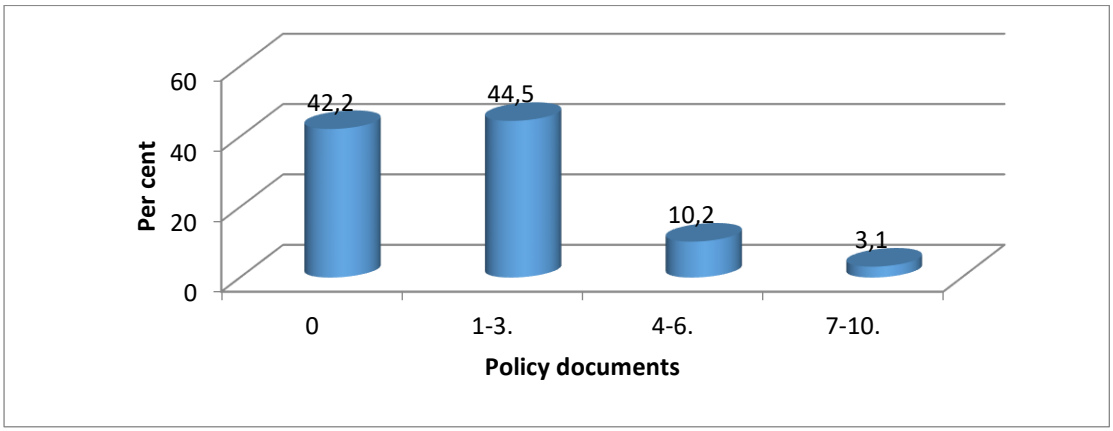

Figure 7.20: Volumes of Policy documents produced by respondents

The results in Figure 7.19 above show that less than half of the respondents (45%) had produced policy documents in the range of 1-3, followed by 10% who had produced policy documents in the range of 4-6, and 3% of the respondents had produced 7-10 policy documents. Table 7.9 below shows the policy documents produced by respondents according to fields.

Table 7.9: Policy documents produced by respondents by fields

	HS		SSH		SET		Total	
	F	%	f	%	f	%	f	%
0	13	24.1	16	29.6	25	46.3	54	100.0
1-3	17	29.8	15	26.3	25	43.9	57	100.0
4-6	5	38.5	5	38.5	3	23.0	13	100.0
7-10	0	0.0	3	75.0	1	25.0	4	100.0
Total	35	27.3	39	30.5	54	42.2	128	100.0

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The results show that more than 75% of policy documents in the range 7-10 had been produced by respondents in SSH and SET (25%). There are also more respondents in SSH (39%) and HS (39%) who produced policy documents in the range of 4-6 with the least in SET with 23%. SET had more respondents (44%) who had produced policy documents in the range of 1-3 than HS (30%) and SSH (26%).

During the interviews, when asked about their research outputs, most respondents acknowledged that they had actually disseminated their research findings mainly through articles which they had published in peer reviewed journals. Some of the respondents explained how these came about in the following quotes:

Sobozi, one of the researchers who conducted a research where he published his first article in a journal shared his experience as follows:

> *… well, it was publications basically because it was a requirement from that funding that in the end you were supposed to come up with one publication. (D12, 12:5)*

One of the senior researcher, Mumba who has supervised a number of postgraduate students shares that the main mode that he has used to disseminate is research findings is through publications in scientific journals. Mumba narrates:

> *The majority of our research outputs have been scientific publications that has been our research output but most of these also have been linked to capacity building that is training of both masters and PhD students. (D11, 11:10)*

Some respondents further explained by outlining the number of journal articles they had actually published in peer reviewed journals. Yale, for instance, explained that his articles were published from his PhD thesis and had this to say:

> *Yes I published 6 articles in peer reviewed journals and the publications came about mostly from my PhD studies. (D13, 13:5)*

Another respondent, Chitalu, indicates the number of journal articles she had published in peer-reviewed journals and further notes that these were as a result of a collaborative project which she had been involved with. She explains:

> *Yes I have published 12 articles in the last three years. Some of them, I am first author as a directive out of my research project and others are some collaborative with other people. (D1, 1:6)*

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One of the respondents also indicated that his main mode of disseminating his findings was through articles published in journals. He was quick to caution that even though that was the case, publications in peer-reviewed journals cannot adequately measure the influence that research has on policy as research publications are not always accessible to policymakers. Sobozi advanced his argument as follows:

> *I am not very sure whether the policymakers at the Zambian level are able to access those publications which I made. So I am thinking that publications are really not the good measure of influencing policy because policymakers may not have access to those publications. (D12, 12:2)*

The respondent further qualified his argument and added that even if the articles were accessible, the policymakers may not bother to look for recommendations made in publications when making decisions. Therefore, this aspect makes publications not to be a good measure of influencing policy.

Sobozi explains further:

> *I think that the only issue is not only about access but also probably the interest in the policymakers to use research because once they access those publications they should be able to find suggestions on how those results can be used to influence policy. There are sections which talk about how the research can be applied to solve particular issues that have been raised in the publication but this is not usually the case. (D12, 12:3).*

In summary: The findings show that the most frequently used mode of dissemination by the respondents is publications of articles in journals. These results are not surprising because publishing articles in peer-reviewed journals is one of the predominant criteria used for promoting researchers and lecturers in most universities, including UNZA. It is therefore understandable that most of the respondents did not mention published conference proceeding as one of the important research outputs during the interviews, even though it was second to peer reviewed articles published in journals. Their focus was on peer-reviewed publications as a career-enhancing strategy.

The results also show that the field of SSH performed better than SET and HS in terms of producing policy documents and making presentations at conferences but was the least successful at publishing in conference proceedings.

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7.7 Intended beneficiaries considered by respondents

It was equally important to take note of whom the respondents considered as the beneficiaries of their research findings when conceptualising their research. To this effect, the respondents were given a list of 7 pre-determined possible beneficiary categories out of which they were asked to indicate which ones they targeted as likely beneficiaries of their research findings. Figure 7.21 below shows their responses.

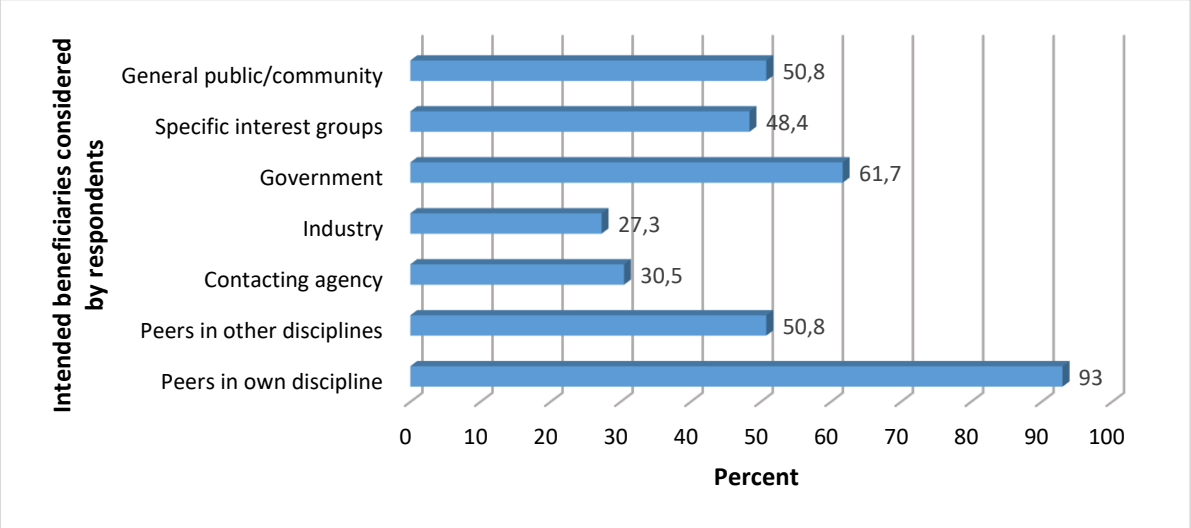

Figure 7.214: Intended beneficiaries considered by respondents when conceptualising their research

The results show that the majority (93%) of the respondents considered peers in their own disciplines, followed by 62% who considered government and 52% who considered specific interest groups. These were followed by 51% of respondents who considered peers in other disciplines, and 48% who considered the community. Contracting agencies and industry/business/firms were among the lowest with contracting agencies considered by 30% of the respondents. Industry was considered by 27% of the respondents.

To establish the choices made by social scientists in terms of the intended beneficiaries they had considered when conceptualising their research a cross-tabulation of field and intended beneficiaries were calculated and the results are shown Table 7.10 below.

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Table 7.10: Intended beneficiaries considered by respondents by field

	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
Peers in own discipline	34	28.6	38	31.9	47	39.5	119	100.0
Peers in other disciplines	14	21.5	17	26.2	34	52.3	65	100.0
Contracting agency	11	28.2	13	33.3	15	38.5	39	100.0
Industry/business	6	17.1	9	25.7	20	57.1	35	100.0
Government	28	35.4	21	26.6	30	38.0	79	100.0
Specific interest groups	17	25.8	17	25.8	32	48.5	66	100.0
General Public/Society	14	22.2	19	30.2	30	47.6	63	100.0

The results indicate that among the respondents who considered peers in their own discipline, 40% were from SET, 32% were from SSH, while 27% were from HS. Those who considered peers in other disciplines were mainly from SET (52%), followed by 26% from SSH and 22% from HS. Contracting agencies were mainly considered by those in SET 39% and SSH 33%. Again, those who considered peers in other disciplines were mainly from SET (52%), followed by SSH (26%), and the least were those from HS (22%). Industry was mainly considered by respondents in SET (57%), but rarely considered by those in SSH (26%) and HS (17%). Among the three fields, government was considered by 38% SET respondents, and HS (35%) than those in SSH (25%). Slightly less than half of the respondents from SET (49%) considered specific interest groups when conceptualising their research followed by 26% of respondents from each of the remaining two fields.

In summary: The results show that there are some variations in the manner in which each field views, and prioritises, the intended beneficiaries or end-users during the conceptualising stage of research. For instance, those in SET seem to target peers in other disciplines which means that their focus is on conducting multi-disciplinary research. They also consider specific interest groups and industry but they least consider contracting agencies and government. Conversely, respondents from HS mostly consider government, peers in their own discipline and contracting agencies but they rarely consider peers in other disciplines and industry. This means that it is likely that their primary focus is on the funding agencies, and on collaboration with other researchers in other disciplines. With regards to respondents in SSH, their focus seems to be mainly on peers in their own discipline, the community, and contracting agencies but they rarely consider industry (not unexpectedly) and specific interest groups. This means it is likely that their focus is to conduct research with their peers within their own disciplines with the intent of solving social problems, as well as meeting the requirements set by the funding agencies that fund their research.

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During the interviews respondents acknowledged that during the conceptualisation stage of research they reflected not only on how the stakeholders were likely to benefit from their research findings, but rather on the role that some of them would play in utilising research findings. They advanced various reasons why they would prioritise certain stakeholders over others. The following excerpts represent the views of the respondents who considered government as a major stakeholder.

Ndalama:

> *I am thinking about the government because ultimately whatever happens, whether it is in the private sector or in public, the government ultimately makes things happen or not happen. So I am always thinking about them, how they will receive this research, how they will implement this research output and how they will eventually use it to effectively bring positive change in society. (D22, 22:14)*

Emphasising the role that the government plays in research utilisation for policy another respondent, Sipelu who strongly feels that researchers cannot improve the lives of people without the government's involvement adds:

> *The government by definition has the power to distribute resources so if you are interested in improving human conditions then it is very unwise to ignore them you need to get them on your side because if you think you know better than them then you have to be very diplomatic on how you explain to them how they can actually do things better. (D18, 18:10)*

Mweemba echoes similar sentiments and remarks:

> *… so whatever comes out of here the government is an implementer. They also make their programmes to say from these results we are going to do this and that. For instance, there will be activities to stop the disease, to prevent the disease, to manage the disease, so the government will be an implementer. (D6, 6:15).*

Sobozi, on the other hand while agreeing that government was an important stakeholder in the utilisation process of research finding, was more concerned about the need for knowledge producers and policymakers to effectively collaborate for research to inform policy in a more effective and efficient manner:

> *…I think I talked about the government ministries in terms of them being the legitimate channel through which our research output should go because they are the ones that are*

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> *mandated by our constitution to deliver services to the people. So what we have in mind is that they are working for the people and there has to be that collaboration between the knowledge producers and people that are involved in policymaking process. (D12, 12:20)*

In agreeing on the important role that government plays in research utilisation, Licho expressed the need for researchers to include policy implications of their research for it to be useful to policymakers. His views are represented in the following quotation:

> *…you would want to think about government agencies especially maybe if you are thinking about funding. You would like to think about which government agency would fund my research, you would like to think about whether this kind of research has got policy implications that government can actually take into consideration or you would want to review the existing policies. (D8, 8:21)*

The community was another stakeholder that the respondents felt were important for researchers to consider during the conceptualising of their research. One of the respondents who held this view qualified his argument by pointing out that the community were an important stakeholder in his research because they provide information to researchers during data collection. Simoonga emphasises this point as follows:

> *The community is very important because it were the information is if anything is going to come out of this research they are most likely to be the beneficiaries, ministries are the users of that information if it if it is going to result in any policy change or anything. So we think about them and also when we are conceptualizing the research they are important sometimes we go to discuss with them and try to find out what you can do and sometimes we need help from them for us to go in the field… (D15, 15:16)*

In addition, another respondent echoed similar sentiments and pointed out that communities are some of the primary beneficiaries of research outcomes and therefore should not be left out during the conceptualising stage of the research. Sobozi remarks:

> *…I think first of all I will start with the community. I think that every study should think about who will benefit from it and I think for me people who should benefit are the people from the community. We are supposed to do things for the people and not to do things for ourselves so when we conceptualise studies it is important to bear in mind that the major stakeholders who are supposed to consume the end products of the knowledge are the ordinary people on the ground. (D12, 12:19)*

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Another respondent, Mweemba stated that other than being beneficiaries, communities contribute a lot to research outcomes. He argues:

> *If it is disease identification it should start with them because we are not there, the government is not there but the local people who are there, the community is there and they are the ones who see these problems first. So these should also be part of the whole strategy to control the diseases. (D6, 6:18)*

Speaking from a health promotion point of view, Bandure underscored the need to consider the community and argues that everything starts with the community. She argues:

> *… I will take the community first. The community is an institution which must be respected. According to my understanding of healthy living you cannot talk about health outside the community. Living and life basically begins in the community before I come for work, before I go to school, before I go anywhere it starts within the community where I live. Understanding my responsibility as an individual towards a healthy living even when you talk about health promotion it takes place in the community so I take them as very important. (D14, 14:11)*

Emphasising the importance of considering communities as important stakeholders in research, Licho, points out that the practical work of research cannot be conducted without the involvement of the communities and succinctly puts it this way:

> *… the communities themselves because just like our area theorizing is useless unless it is put into practice, research is equally useless unless it has practical benefits for the communities or for persons out there and therefore you would want to think about the communities themselves. (D8, 8:20)*

Contracting agencies were also considered a major stakeholder, mainly by respondents who were involved in consultancies that are donor-funded. Two main reasons noted by the respondents who considered contracting agencies as the major stakeholders were primarily accountability of research funds and understanding the terms of reference for the study. Njuni, for example, stated that the main reason why she considered the contracting agencies was due to the funding, and therefore she needed to know their terms of reference that she needed to follow. She observes:

> *For the contracting agencies I think really there is no much option because if they give you work to do and since they are the funding agencies you just have to follow their terms of*

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> *reference and do what they would like you to do because they are the ones who are funding and you just have to follow their instructions. (D4, 4:20)*

Licho echoes similar sentiments in the following statement:

> *The contracting agencies that is if there is any funding involved because funding almost always comes with some sort of conditions so you would want also to work within the conditions of the funders themselves. (D8, 8:22)*

While agreeing that contracting agencies were an important stakeholder as facilitators for resources that are used in research, he cautions that while this was so, the main interest of contracting agencies is not to influence policy outcomes but to ensure that their money is put to good use. He explains:

> *The contracting agencies give money but in most cases actually they are not very much interested in the outcome, they are just there to help you do the work but they don't in any way try to influence the outcome of the results but they are interested in the outcome as well because they want to see their money being put to good use and changing lives especially for example ESPA is very much interested in the outcome and how their money is changing people's lives. So they once in a while send you emails to say can you highlight what you have done and how that has impacted lives of the people in the areas where you are doing your research. (D15, 15:21)*

One of the respondents who considered her peers in her own discipline as important stakeholders felt that her peers understood research in that field much better and that they were likely to complement each other's knowledge within that specific discipline. Njuni puts it this way:

> *My colleagues from my own discipline, firstly, I will learn from them and secondly they will even make my work better as we will pull our strengths together and also there are some of my colleagues who have been conducting research for a long time than myself, I feel if I worked with them I will learn more from them and in that way they will make my work better. (D4, 4:19)*

Sobozi stated that it was through the works of the peers in one's field of study that can help that person to identify the gaps in research. He submits his views as follows:

> *Hmmm! Well, when you are doing a research you first and foremost look at or think of your colleagues, have they done any research similar to this and you would want to consult them if they have done any research similar to that kind of research you want to embark on so that you don't do the same thing but also that you will kind of discover some research*

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> *gaps that would concentrate on or see whether they could come on board and then do the research together. (D1, 8:19)*

In summary, the results in this section suggest that generally the respondents interacted more with peers in their own disciplines and considered government as the main stakeholder for various reasons. The results also show that there are variations in terms stakeholders considered by different disciplines. For instance, while researchers in SSH seem to predominantly consider contracting agencies and the community, and rarely considered industry, those in SET favoured industry but at the same time, they seem to consider other stakeholders similarly. Conversely, their counterparts in HS seem to consider government as the main stakeholders and the international organisations where they obtain their research funding.

7.8 Utilisation of social science research by Zambian government

Since the main thrust of this study was to explore and describe how social science research has informed policy in Zambia, there was a need to understand from the respondents' lived experiences the extent to which they felt the government was using research outputs to inform policy in Zambia. Hence, during the interviews, the respondents were asked to give an account of the extent to which they felt the government was using their research outputs. The arguments raised by most respondents point to the fact that the government used research outputs to a lesser extent than expected. Some of these sentiments are reflected in the statements by the respondents as follows:

Kalengo, whose research findings had not been utilised by the Zambian government but knew that there were a number of social science studies that had beenconducted by academicians in the university did not know of any social scientist whose research findings had been utilised by policy makers. He stated that felt that the government needs to use research findings more than they are doing. He emphasises his point as follows:

> *I think to a lesser extent but I don't think that they use research outputs much. If we had to put it at a scale of 1 to 100 I think I would say only 20% of the research outputs are used by the government. (D6, 6:15)*

Another researcher, Sobozi, who has conducted a number of social science studies that had not been utilised by policy makers also felt that the government needed to harvest such knowledge and use it to solve social problems. He remarks:

> *Aaah! I do not think that the Zambian government really uses knowledge that comes from the universities. … so to some extent the government involves some academic staff in their*

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> *projects but in terms of them harvesting knowledge produced by the academic staff I think that only happens to a lesser extent if at all it does especially within the social sciences.*

Sobozi adds:

> *So my own understanding is that when the government uses academic staff it is when they have a project to implement and not coming to harvest knowledge which is already in the university. (D12, 12:29).*

Other respondents felt that the government uses research findings to a lesser extent, but also felt that sometimes the government does not use research findings at all even when commissioning research. They present their sentiments as follows:

Chibombo, one of researchers who has taken part in a number of commissioned research by the Zambian government stated that most of the time they do not know whether or not their research has informed policy as this information is not usually shared with them.

> *I would say to some extent yes, but you see because sometimes influencing policy as we say as social scientists we do engage directly with policy but in the final analysis you may be involved in this research but you don't know how much of it will finally go into the final document of policy whether it may influence policy, it may influence policy but when you look at the final document of that policy you may not be able to see that this policy came from my research. (D19, 19:5)*

Matengo who has equally participated in a number of studies that were commissioned by the government shared similar sentiments and stated that:

> *Government uses research output to a lesser extent. I don't think they are using the research outputs. For example, the research I talked about concerning the Anti-Corruption Commission (ACC) was done with ACC. If some of the recommendations were implemented, I think there would be a change, but look at the levels of corruption they are still high and it is quite difficult for people like me to constantly be involved in such kind of work because we know at the end of the day nothing is going to happen the report is just shelved. (D16. 16:21)*

> Njuni:

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> *I feel that most of the research work, even that which is funded by government themselves just end up gathering dust, and it is not really used in any way to improve the quality of life of the people in the country. (D4. 4:31)*

Imanya reiterates that there are times when government has made assurances to follow up on certain research findings, but never did. He narrates as follows:

> *Very, very little, it is very little. I have been to foras where after you have spoken, you will hear our politicians saying this thing is very good, we will come and that is it, they will never come. (D9, 9:26)*

Some respondents opted to give reasons why the use of research findings by government is low. For instance, Simunji argues that research agendas in Zambia are driven by donors, because the country has no national policy guidelines that could be used to drive research agendas that would enhance national development. He explains:

> *I think I would give it 3, it is very low. I think most policy decisions are not based on what is happening locally. If I look at most changes in our policy, mostly they are driven by donors. For instance in health, it is those guidelines we follow. In most cases we don't have our own national guidelines to say based on this, this is what we can do or need to do even in agriculture. (D4, 4:31).*

Nchimunya agreed that although the government rarely used research outputs to solve social problems in society, she was of the view that things were slowly improving. She attributes the lesser extent of use of research findings to the weak links between government and academic as she notes:

> *Government uses research to a very small extent because as I earlier said, the link between government and the academia is very weak. It is increasing slowly for instance we find ourselves being invited to so many workshops and launches as academia which never used to happen in the past which means things are slowly improving. (21, 21:19)*

One of the respondents viewed the lack of acknowledgement of research by the government as the reason for lesser utilisation of research findings. In addition he attributed the lack of research utilisation for policy to the fact that systems in government had more political cadres in decision-making positions than technocrats.

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Ndalama supported his argument as follows:

> *I think I will be very blunt, I think to a very minimal extent and basically for me that emanates from the fact that instead of having a government system or sectors that are professional, a lot of government ministries and departments have been staffed with what I would term political cadres who do not appreciate research that is authenticated, that is original and that is adding value to the governance system, and just, the basic governance of the state. So because these are people who do not appreciate that kind of work the uptake of what we produce as the academia and researchers is very minimal because basically they do not appreciate for them they believe in as when kind of interventions and usually it is on the spot. (D22, 22:18)*

Another respondent who had worked in government as a policymaker and as an academic at UNZA pointed out that from his experience policymakers were not receptive to research, and it was therefore difficult to influence them to use research findings. His views are illustrated in the following statement:

> *The first one is because the policymakers where we write or send our reports to, they seem not to appreciate the magnitude of results that we get. So even if you write a report, you cannot precisely advice government to say you do this or this. So to me those two are the main issues which I would classify as reasons why the policy uptake is very poor. (D10, 10:1)*

Another social science researcher, Bwato, confirmed the lack of research utilisation and attributed this to the policymakers' tendencies of under-valuing research as a tool for decision-making. He laments:

> *I think there is just that thinking where they think that researchers are in their own world, they are theoretical, they just think of the impossible and then they take their own area of operation as being practical side and all that and sometimes you find they just tell you that your data only exists in your books, in your brain and all that. I mean that can be seen even in terms of what is happening in the country. For instance we have had a lot of policy reversals like I can give an example of when they initially moved the Mother and Child Health from the Ministry of Health to the Ministry of Community Development, it was just someone's idea. (D17, 17:34)*

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Bwato equally felt that policy makers often undermine academic research findings and adds:

> *Most of the policies start as pronouncements then later on if they feel that things are not working the way they feel may be then someone can may be come and do some research but then already something has been done. I think there is really not so much interest. (D17, 17:36)*

Emphasising the lack of acknowledgement for the use of research findings by government, Isakoph in sharing his experience summed up his views as follows:

> *First of all, the lack of funding for research tells you that government's recognition of research output is not exactly very good because if they knew that informed decisions come from research, they would fund the research so that they can have facts in order for them to make well informed decisions from the research output. Reports are littered in corridors of power everywhere because whenever we do research or when a project ends, government gets reports. (D10, 10:20)*

Unlike other respondents who categorically said government used research outputs to a lesser extent, one of the respondents stated that he was not sure to what extent the government used research findings. He hence suggested that there was need to conduct a similar research which will only focus on documenting on how the Zambian government uses research outputs. He expressed his views as follows:

> *In terms of what extent the government is utilizing research outputs I wouldn't know, it would be good to have a survey or a research such as yours probably to kind of document or to have some sort of reflection of whether government is even interested in the research outputs from University of Zambia. (D8, 8:27)*

While most of the respondents were of the view that the government rarely uses research outputs to inform policy, some of the respondents had contrary views which suggested that it was not in all cases that the government had not used research to inform policy. Based on their lived experiences the respondents indicated how the Zambian government had utilised their research findings. For instance, Kalengo, stated that her research had resulted in a number of policy documents that had been utilised by policymakers:

> *Yes my research has resulted into 4 policy documents. We did a study with the Royal Tropical Institute of the Netherlands that looked at access to information for health workers in the hospitals. That study resulted into the formulation of what they called then*

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> *Central Board of Health centre. The other study was looking at digital health libraries in Zambia and specifically at the University of Zambia and that study has actually led to a project where the University of Zambia library is digitising documents for both Ministry of Health and the University of Zambia. The third one was a study where we looked at HIV/AIDS and how to get information in Zambia. The study was funded by UNICEF and we came up with standard operating manuals for the district HIV/Aids resource centres that are Lusaka based. (D2, 2:1).*

Njuni participated in a number of research projects, commissioned by the Zambian government and donor-funded projects, pointed out that while she was not sure of how the other research outputs had been used, she recalls that a report on the re-entry of girl children had a major impact. This is a policy which allows an opportunity to girls who got pregnant while in school and to go back to school after delivery. She recollects:

> *I think one particular study that has resulted into a written policy document is based on the re-entering of girls who drop out of school due to pregnancy. So as a result of that my colleagues and I were given this task to go round the country to find out how these girls could be helped. We did recommend that actually indeed if these girls were put back into school they will be given a second chance to continue with their education and the findings therefore went into formulating a policy referred to as 'the re-entering policy'. So far I think that policy is being implemented because we now see young girls who drop out of school being able to go back to school and being able to continue with their education. (D4, 4:1).*

Imanya, one of the professors whose focus is on water related research pointed out that his research had produced three documents, t of which two were research policy documents being used by UNZA, while the other policy document was on integrated water resource management used by the Ministry of Mineral and Water Resources in Zambia. He gives this account as follows:

> *Yes we produced three written documents relating to research policy. The first one was on intellectual property right, the other one is the regulations for postgraduate studies guiding postgraduates. The third one is on integrated water resource management which is one area I have pushed from zero to the adoption of the policy.*

Imanya adds:

> *In fact I forgot to mention that by 2010 our policy was fully fledged, I mean the integrated water policy. (D9, 9:13)*

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In terms of research pertaining to politics, one of the respondents narrated that different stakeholders observed that elections held in Zambia were marred with violence before and after the elections. Consequently, a study spearheaded by the Electoral Commission of Zambia (ECZ) was conducted to find ways in which the media would be able to monitor and report elections in a fair and ethical manner. Ndalama participated in the study and recounts how this policy was implemented:

> *I remember clearly the one for Electoral Commission of Zambia which is being used to monitor and advise media personnel and media houses on how best they can cover elections in a fair, ethical and professional manner so that the various players such as the politicians and citizenship are well informed so that they are given this balanced information for them to be able to make informed and objective decisions on the electoral choices that they make. That one I am very sure because it was widely used and implemented in the 2016 general elections. (D22, 22:4)*

One of respondents, Matengo took part in writing on the status of the extractive-industry-transparency initiative research report in 2008. He explained that he was certain that their report contributed to the improvement of extractive-industry policies. He explains:

> *The Extractive Industry Transparency Initiative is fully operational in Zambia, so to some extent our pioneering work has led to changes in that area and you can see that a lot of civil society organizations and other stakeholders have joined the movement and they are calling for transparency in the extractive industry, this has improved mining policies and so on and so forth. (D16, 16:5).*

While the above respondents were sure that their research outputs had been used to inform policy, others only assumed that their research outputs had contributed to policy in one way or another. Their views are outlined in the statements below:

Chibombo:

> *The other one I do not know how far it has gone now in the modernisation of the civil system here where they wanted to produce some biometric cards which is a size like of a Bank card which would integrate all the information about an individual. So that is one research where I participated and I was providing some demographic input pertaining to issues of what information from the demographics can be used there and that was supposed to lead into the revision of pieces of legislation that should allow the implementation of that biometric systems. I think I have read in some of the newsletters*

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> *that, that system is now in the process of being used but I do not know how far they have gone. (D19, 19:4)*

Nchimunya:

> *I think so because for instance, a study we did for United Nations (UN) Habitat for the state of the World cities, I think we contributed to that policy document. (D21, 21:1)*

Sipelu:

> *I think that the work which we did under the heading the national campaign with the disabled children was very much policy oriented. (D18, 18:1)*

Licho:

> *Yes I felt my kind of research on both climate change and mercy killings – not necessarily individually but collectively with others, has kind of yielded some sort of success towards informing policy. (D8, 8:2).*

In summary: This section has shown that there seems to be a general perception among the respondents who participated in the survey and the interviewees that government uses research to a much lesser extent than expected, especially when the research was not commissioned by the government or their bilateral partners. While this might be the case there were a number of respondents who testified that their research had been used by government regardless of whether their research was commissioned by the government or their bilateral partners. Respondents who reported that their research had been utilised by policymakers attributed this to several factors including, their participation in committees with government officials. Their participation ensured that their recommendations were included in the final policy documents. Other factors include taking deliberate efforts to ensure that recommendations made from research, as well as policy briefs were submitted to government ministries. .

The next section focuses on the challenges that respondents had encountered and were likely to have hindered their research findings from being utilised by policymakers.

7.9 Challenges negatively affecting research utilisation by respondents

The challenges that researchers face in their careers are likely to affect their research outputs aimed at development, solving social problems and informing policy. Therefore, the 128 respondents were given a list of 10 challenges out of which they were asked to indicate the extent to which each one of them had negatively impacted their career. Figure 7.22 shows the challenges that have negatively

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affected the utilisation of research outcomes of the respondents which ultimately have a bearing on the use of their research to inform policy.

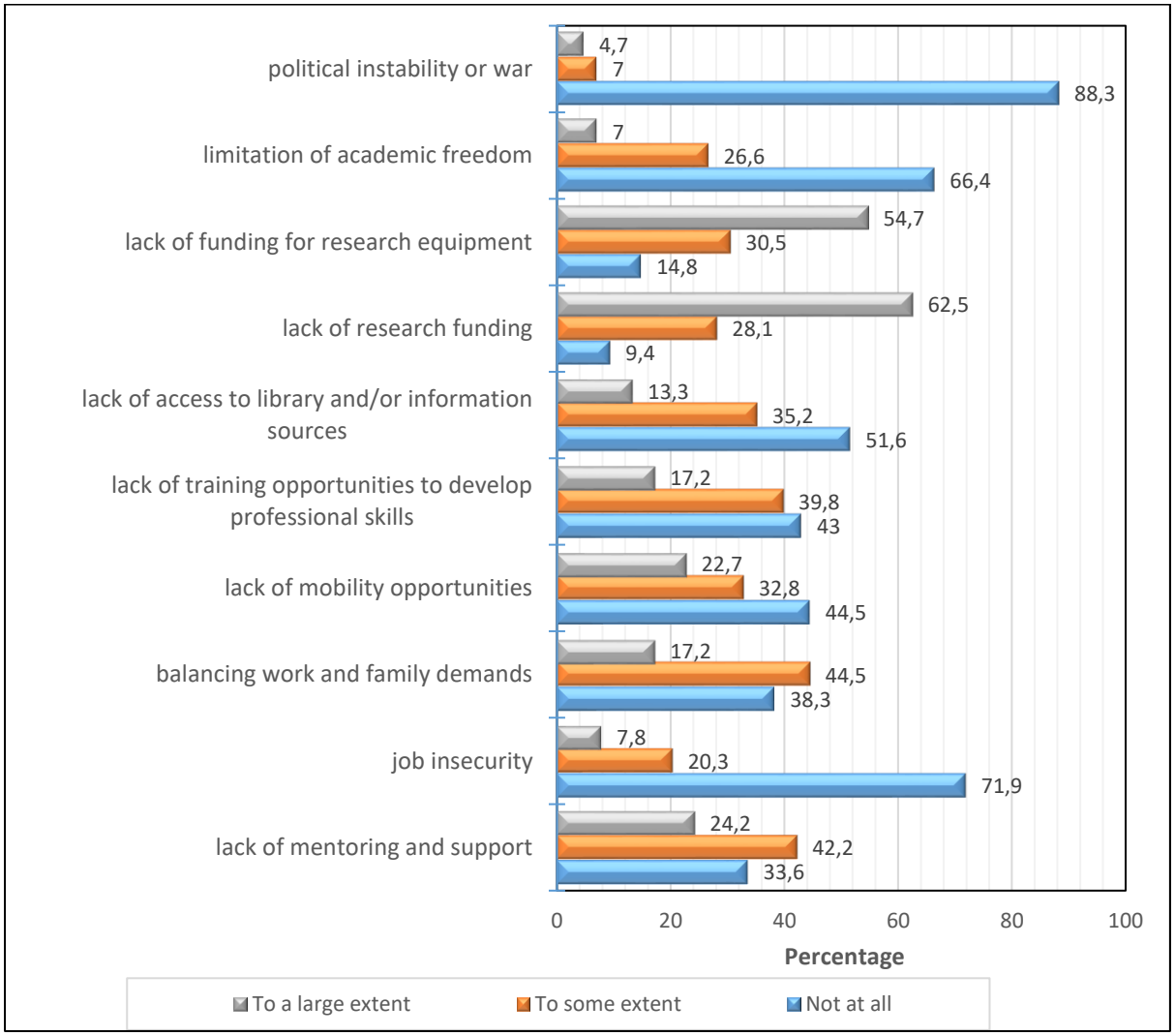

Figure 7.22: Challenges negatively affecting respondents

The results show that the prominent factors that mostly affected the respondents in their career as researchers and academics, to a larger extent, were lack of research funding (63%) followed by lack of funding for research equipment (55%). The other factors that negatively affected the respondents to some extent include balancing work and family demands (45%), and lack of mentoring and support (42%). The results also show that the factors with the least negative impact on the career of the researchers are political instability (88%) or war and job insecurity (72%).

7.10 Challenges negatively affecting respondents by field

Challenges vary across disciplines, what might be a challenge in one discipline may not be the case in another. Therefore, cross-tabulations of the challenges that were identified as the major challenges

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were also done s to identify the ones that particularly affected social science researchers. Table 7.11 below shows the major challenges according to fields.

Table 7.11: Challenges faced by respondents by field

Lack of research funding								
	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
To a large extent	14	17.5	27	33.8	39	48.7	80	100.0
To some extent	16	44.4	9	25.0	11	30.6	36	100.0
Not at all	5	41.7	3	25.0	4	33.3	12	100.0
Total	35	27.3	39	30.5	54	42.2	128	100.0
Lack of funding for research equipment								
	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
To a large extent	14	20.0	22	31.4	34	48.6	70	100.0
To some extent	10	25.6	12	30.8	17	43.6	39	100.0
Not at all	11	57.9	5	26.3	3	15.8	19	100
Total	35	27.3	39	30.5	54	42.2	128	100.0
Lack of mentoring and support								
	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
To a large extent	7	22.7	12	38.8	12	38.5	31	100.0
To some extent	14	25.9	17	31.5	23	42.6	54	100.0
Not at all	14	32.6	10	23.3	19	44.1	43	100.0
Total	35	27.3	39	30.5	54	42.2	128	100.0
Balancing work and family demands								
	HS		SSH		SET		Total	
	f	%	f	%	f	%	f	%
To a large extent	6	27.3	10	45.5	6	27.3	22	100.0
To some extent	19	33.3	17	29.8	21	36.8	57	100.0
No at all	10	20.4	12	24.5	27	55.1	49	100.0
Total	35	27.3	39	30.5	54	42.2	128	100.0

The results indicate that lack of research funding is a problem across the fields but to a larger extent in SET (49%) and SSH (34%). It is still a problem in HS as 44% of the respondents in that field said it is a problem to some extent.

In terms of lack of funding for research equipment, the results show that this is a problem, particularly in SET (49%) followed by SSH (31%) and to a lesser extent in HS with a significant number (58%) of respondents in that field stating that lack of research equipment is not a problem at all.

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Overall lack of mentoring and support seems to be a problem across the fields, but to a large extent among respondents in SET (39%) and SSH (39%), and to a lesser extent in HS as 23% said that it was a problem to some extent.

Balancing work and family demands seems to be a major challenge among the respondents in SSH (46%) than in SET (27%) and HS (27%). It is however still a problem among respondents in HS and SET as 33% of respondents in HS and 37% of respondents in SET still said it was a problem to some extent.

During the interviews, lack of research funding was mentioned as a major challenge that impacted negatively on the respondents' career as researchers and ultimately this hinders research utilisation by policymakers. For instance, Simunji put it this way:

> *Number one challenge is lack of funding, there is no money locally for research so if you are not linked up to someone outside the country or somewhere it is very difficult to get money for research …. (D15, 15:22)*

Some of the respondents explained the implications of the lack of government funding. These implications varied according to the experiences of different researchers. Those who had participated in commissioned research and consultancies saw the lack of research funding from the Zambian government as a hindrance to ownership of research findings by the local researchers and policymakers. For instance, Njuni had conducted both commissioned research and consultancies stated her argument as follows:

> *I think the main challenge is the lack of funding by government because as I said it means that if we are going to depend on funding from other institutions who are not really government like those organisations who come in for a particular work to be done, they fund and they go away with whatever you have produced. (D4, 4:28)*

Another respondent highlighted how the lack of research funding hindered him from international exposure. He laments:

> *… so there are certain things that you may wish to do using some research funds for instance you may want to present your findings at certain conferences but because you do not have the funding you are not going to. (D19, 19:7)*

He adds:

> *So because since there is no funding you do not make use of those opportunities and somehow it limits your growth in terms of getting ideas from especially those well-*

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> *established experts at international level and help you to grow in your research so that you can work on the part where there is some deficiencies. (D19, 19:8)*

Other respondents indicated that because of lack of research funding from government, the country does not set its own research agendas, but instead abide to the objectives set by the funding agencies and therefore does not focus on the needs of the country and cannot inform policy. The following quote represent their views:

Changala:

> *Because of lack of funding from government, the research that is carried out is not focussed on areas of need in the country but is based on what the donors or scholarship funders want. So in that way that is a negative output because in as much as we do our research and the research gives good results, if you look at it in terms of development of the country as a whole, it might not have a positive impact on that because it is not related to the specific needs of Zambia. (D1, 1:7)*

Isakoph:

> *Yes, as I have said before, most of our research is funded by outsiders and objectives of the research are driven by the funders who are outsiders. So, we have our own priorities as a country where we want to go... However when you go to a donor and start looking for funding in, you will get zero funding because it is not their priority. (D10, 10:15)*

Mweemba:

> *… in other words I am saying in Africa the research agendas is not supported in the way it is supposed to be supported, we depend so much on our outside Africa collaborators. (D6, 6:10)*

Another respondent pointed out that lack of research funding from government affected the productivity of their research output as there is no consistency in the manner in which they publish articles in peer reviewed journals. Mumba remarks:

> *So lack of funding has been a major constraint so you find that in our career life there are peaks. You have a peak when you have got publications then you have got dry spells like that. (D11, 11:11).*

The second challenge highlighted by respondents is a lack of mentorship. This challenge was more prevalent among early-career researchers. For instance, Kalengo joined the university a few years ago

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stated that young researchers were not properly mentored by senior researchers. The following were his views:

> *So the first thing is mentorship. Here at the university we work as individuals much more than a young scientist being natured by senior colleagues so in other words we work like we are 'academic orphans' hahaha for lack of a better term we can coin that, we are fatherless or motherless as young scientists so you discover things on your own. (D5. 5:20)*

Another respondent, Changala, echoed similar sentiments by saying that mentorship was lacking in the university and stated that as a young researcher one would be lucky to find a mentor within their discipline. Changala states:

> *Mentoring is another issue. Mentoring is also very important in that you can learn how to publish. I don't know for all situations but for our situation here mentoring is by luck. You might be lucky to find someone whom you are in the same field who would actually mentor you. (D1. 1:27)*

These observations were not only made by early-career researchers, but some senior researchers were also identified lack of mentorship as a challenge. Kanya, a senior researcher, was able to pinpoint that mentorship was lacking in the university as she narrates:

> *I think one of the major challenges is that there is lack of mentorship. Mentorship is lacking. (D2, 2:14)*

Another senior researcher, Simunji confirmed that while there were many supervisors, there were few who had the patience to mentor upcoming researchers. He explains as follows:

> *Mentoring is also a problem, yah it is a problem. There are very few people who are willing to mentor – mentors who have the patience to work with upcoming scientists and tolerate all the errors they make and try to guide them to do the right things. There are many people who supervise people but the actual mentoring - very few people do it. (D15, 15:25)*

Imanya, a professor in the university agreed that while mentorship was a challenge, the lack of financial resources that would help enhance the mentors to conduct research and build their own capacity before they could mentor others. He clarifies his viewpoint as follows:

> *Lack of mentoring is also an issue but sometimes what creates that is also the lack of resources for people to mentor others. That is what I have noticed because if my role is just to teach and have no research experience, what is it that you are going to mentor*

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> *someone on. In other words if one does not have the resources and the capacity then it becomes difficult to mentor someone. (D9, 9:23)*

Sobozi equally supports the fact that mentorship was lacking but states that this is mainly because the university did not have a deliberate policy to make mentorship compulsory. He explains his viewpoint as follows:

> *The other point is about mentorship. We do not have a deliberate policy at the University of Zambia and probably as universities in Zambia to mentor our young researchers or scientists. If you do not have mentorship as a young researcher, it becomes very difficult for you to penetrate the academic environment, the academic industry because you will be competing with people that have broader experience so you would not be able to compete with well experienced researchers. (D12, 12:26)*

One of the respondents, Kanya acknowledged that mentorship was one of the major challenges but contended that this was compounded by lack of passion and curiosity for more knowledge among the researchers in the university. Her argument is presented in the following quotation:

> *The other challenge is laziness. I don't see our scientists… there is no scholarship basically. There is no thirst for knowledge – it is not there, it does not exist. So may be the major challenge is laziness because mentorship – yes it is lacking but in today's world mentorship you can find it everywhere if you are looking for it. (D2, 2:16)*

The third challenge identified by the respondents was a lack of infrastructure and equipment as explained by some respondents in the following quotations:

Changala:

> *The other challenge also is lack of equipment… like the University of Zambia is also a research institution but if you look at the equipment facilities they are really run down. We can only do very basic research. (D1, 1:26)*

Kalengo:

> *The infrastructure within, it shows that probably the institution and government in general doesn't appreciate us because they will leave you in a horrible office. For instance if you were to ask the university to buy you a laptop, since I came to UNZA the university or government has never bought me a laptop. (D5, 5:22)*

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In summary: The above findings show that the main challenge Zambian researchers are grappling with is the lack of research funding from the government. The lack of funding of government has a number of effects on researchers and the development of the country. At the national level, the challenge is that the lack of research funding strengthens the dependency on international funding. Consequently, a lack of funding inhibits researchers from using their research findings as the funders dictate how these should be used. Thirdly, when funders dictate how research findings should be used, it is unlikely that they would consider the needs of the country, and it may also be unlikely that the research findings would contribute towards policy.

The second challenge identified in this section is a lack of mentorship. This is related to a lack of research funding and results in the fact that early-career researchers are faced with mentors who need to build their own research capacity. In the absence of having the capacity to mentor others, they are unable to transfer knowledge to the early-career researchers.

The third challenge is a lack of equipment to use for research to enable researchers conduct their research. This is evident from one of the respondents who indicated that he did not have a laptop to use in the field. Related to lack of equipment is a lack of infrastructures that are in a deplorable state.

The fourth challenge identified in this section is a lack of a policy about mentorship, thus making mentorship not compulsory. A direct consequence of this is a lack of researchers that have the capacity to conduct research that would be utilised by policymakers.

Only one respondent, a senior lecturer identified laziness as a compounding factor to lack of research outputs that could be used by policymakers!

7.11 Summary

In this chapter, the results obtained from the survey regarding social science research for policy in Zambia have been analysed in comparison with the health sciences and the science, engineering and technology fields. The survey results were supplemented by 22 interviews which were conducted among the respondents who indicated their willingness to participate in the interviews. The results from the various research questions have been analysed and cross-tabulated by field to have a clear understanding on how social science research compares with the other the fields of HS and SET in relation to research utilisation for policy. The factors considered included research funding received by each field, expected outcomes produced by each field with a focus on policy outcomes, intended beneficiaries of the research outcomes from the researchers' perspective by field, and the modes of research dissemination used by the researchers by field have been analysed. Furthermore, social

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science research utilisation for policy and the challenges that hinder social science outcomes from being utilised by policymakers has also been analysed.

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CHAPTER EIGHT – DISCUSSION AND CONCLUSION

8.1 Introduction

This chapter summarises the main findings of this study and highlights the contributions to research utilisation scholarship. Two main research questions were considered in order to structure this inquiry.

- 1. What is the state of social science research in Zambia?
- 2. Under what conditions have specific social studies informed policy in Zambia?

For the purpose of understanding some of the dynamics fundamental to the utilisation of social science research for policy in Zambia, these two overarching research questions were divided into two phases. The first main research question which sought to understand the state of social science research in Zambia had four specific research questions, and these are: What type of social science research is conducted by the research institutions in Zambia? What agendas drive social science research in both government and public institutions in Zambia? What are the main sources of funding of social sciences research in Zambia? What are the main modes of research dissemination used by social scientists in Zambia? The second question was considered in Phase 2 and was intended to understand whether or not the Zambian government had utilised findings from social science research, the purposes for which social science research findings were utilised and the contributing factors that resulted into research utilisation.

8.2 Evidence of Research Utilisation of Social Science Research Findings by the Government

The results from this study show some evidence that the government has utilised some of the research findings from social science research in their policymaking decisions but to a lesser extent than expected. The results further show that there was an instrumental use of research findings by the policymakers in most cases where respondents indicated that the outcome of their research findings translated into a policy. This is evident from the accounts given by the respondents who clearly recalled, and stated how their findings were used by the policymakers. This however, does not imply that there were no other types of research use such as symbolic use where the policymakers could have used the findings to confirm or promote pre-existing policies, or conceptual use of research findings indicating that the findings could have been used at a later stage. This is due to the fact that some interviewees were not certain of whether or not their research findings had influenced policy at some point. It was clear in the responses of respondents who were involved in collaborative or

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commissioned research but were not involved in the outcome of the project, and did not have access to the final report. Some of the respondents even raised concerns that there have been some cases where although the government commissions research, it has rarely engaged researchers to share the outcomes of the research.

The following are examples of studies that were commissioned by the Zambian government, and the findings have been utilised by policy makers. Examples can be drawn from the following studies that have been reported by the respondents to have informed policy in Zambia

- Research on accessing information for health workers in hospitals resulting in the formulation of the Central Board of Health. (D2,2:1)
- Study on how to get information on HIV/AIDS in Zambia which resulted in the development of Standard Operating Manuals for the District HIV/AIDS Resource Centres that are Lusaka based. (D2, 2:1)
- Research on drop-out school-going children due to pregnancy resulting into 'the entering policy' where the girl children who dropped out of school are given a second chance to go back to school. (D4,4:1)
- Research on Integrated Water Management which resulted in the Integrated Water Policy in Zambia (D9, 9:13)
- Research on how best to cover elections in a fair and ethical manner so that various stakeholders are well-informed manner – the policy was formulated to allow media houses to monitor elections. (D22,22:4)
- Research on the transparency in the extractive industry, resulting in the Extractive Industry Transparency Policy in Zambia. (D16,16:5)
- Study on the use of biometric cards to integrate information of citizens in Zambia resulted in a policy that is being used in the country.

However, the results also show that there are studies that have been commissioned by the government, but the results have not been utilised - e.g. the study that was commissioned by the Anti-Corruption Commission of Zambia (ACC) have not been applied by the Zambian government. In some cases, the respondents were not sure if their research findings had been utilised by the government.

8.3 Factors for Research Utilisation

This section discusses the factors that enhanced the utilisation of social science research by policy makers.

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The findings in this study indicate that respondents who participated in the Committees with officials from the government ensured that their research outputs were implemented. However, this is not a common trend as only a few researchers get such opportunities as engagements between the policymakers and researchers only occur when there is a pressing issue that the government needs to resolve. A number of scholars have submitted that being involved in committees that include both researchers and policy makers has had positive outcomes. Through their interactions in committees researchers and policy makers were able jointly to define research questions, keep in contact after the research is completed and discuss the findings and the likely implications in the policy making process (Bell, 2016; Stufflebeam & Coryn, 2014). Similarly, some scholars have emphasised that lack of strong linkages between researchers and policy makers is a critical barrier to research utilisation (Cherney et al. 2011; Cherney & McGee, 2011; Hall & Jennings, 2010; Jennings & Hall, 2011; Oliver et al. 2014; Van der Arend, 2014).

Results from this study also show that the respondents who participated in research that was commissioned through a bilateral relationship had a better chance of having their research output utilised, especially where the government needed solutions to a particular problem.

8.4 Barriers to Research Use by Policy Makers

This section discusses the barriers that inhibit policymakers from utilising research outputs. These barriers include among others lack of research funding, lack of visibility and accessibility of research findings, focus of researchers when conceptualising research, lack of political will by the government, lack of engagement between researchers and policymakers, lack of national guidelines for research and in the case of Zambia, the loss of the initial focus that the institute for social research was intended to achieve.

8.4.1 Inadequate research funding

The major barrier hindering the utilisation of social science for policy in Zambia is a lack of research funding from the Zambian government. This has a trickle effect on many aspects that relate to the use of social science research findings by policymakers as will be articulated in the following sub-sections.

8.4.2 Sustainability of local journals

This study also revealed that there have been goodwill and initiatives from various scholars who established local journals aimed at increasing research publications among social science researchers at UNZA. However, this goodwill has not translated into practice due to lack of funding from the

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government to sustain the local journals, resulting in inconsistent publishing patterns. It is clear that without sustained funding, the journals cannot survive.

8.4.3 Restrictions in the modes of dissemination research findings

The survey results and the follow-up interviews indicate that most researchers in the field of social science disseminate their research findings mainly through local Zambian journals. The results also reveal that almost all the journals available for social scientists to publish their work in at UNZA are in print format. Publishing in print format influences the visibility and accessibility of such research findings from being utilised by other stakeholders outside academia, key among these being the policymakers who are capable of implementing some of such research findings in the policymaking processes. The non-visibility of research findings in print format is in line with a study by Amed et al. (2010) who assessed the visibility of both hard copy and online journals published in the *Zambia Medical Journal* and found that research output in hard copies were not visible at a global level.

The findings further suggest that researchers seem to focus too much on publishing their research findings. Yet publications are not a good measure of influencing policy because most policymakers may not have access to them and often lack time to read through long documents. Several scholars (Bulmer, 1982; Cameron et al., 2011; Howlett & Wellstead, 2011) have documented the time that research findings take before they are made available to policymakers who have busy schedules and deadlines to meet as one of the major setbacks in research utilisation.

8.4.4 Lack of Visibility and Accessibility of research findings

The lack of visibility and accessibility of research findings produced by institutions in Africa is substantiated in the literature. For instance, Abrahams et al. (2009) examined the productivity, visibility and accessibility of scholarly communications among universities in the SADC region, and found that scholarly publications in most of African countries covered in the study were not only low, but also not visible. While it is true that all these factors contribute to the non-visibility and accessibility of research findings produced by social science researchers in almost all the African countries, the findings in this study suggest that lack of research funding from the Zambian government is a major factor that is hindering research utilisation of social science research by policymakers. This was evident during the face-to-face interviews where most of the respondents cited lack of research funding from the Zambian government as the major factor that hindered the visibility and accessibility of their research outputs, both at local and international level. A study on the global visibility of African scholarly research conducted by Ezema and Onyancha (2016) indicate

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that the challenge most of African researchers have in relation to poor visibility and lack of accessibility to research findings is mainly due to lack of funding from the various governments in their countries.

As this study has shown, the negative effects of the lack of research funding is also evident in the performance of social science research at a global level. The bibliometric results clearly showed that the publication output in the social sciences for Zambia was insignificant, an indication that very few researchers publish in high-impact journals that are visible and accessible online as these are mostly cited by other scholars. The study also revealed that the performance of social science research outputs in the world's top 5% percentile have fluctuated during the period under review and the country has not recorded any research outputs in the 1% per centile. These factors combined could also be an indication that most of the social science research produced by Zambian scholars are not visible and rarely cited at a global level.

8.4.5 Restrictions in participating in setting of research agendas

In the absence of research funding from the Zambian government, most researchers in this study indicated that they had to either source from international organisations through collaborations with international institutions or through commissioned research via the bilateral relationships with the government. In the worst-case scenarios they had to fund their research themselves. All three options have serious implications on whether, and how research findings can be utilised by policymakers. The respondents who received funding through the bilateral relationships were most likely to have their research utilised by policymakers as the research commissioned by the government is meant to solve a particular problem and was therefore considered a better option by the respondents. However, the challenge has been that this type of funding was difficult to access, especially for young researchers who were in the early stages of their academic careers and did not have established research networks.

The researchers who reported to have sourced their research funding through collaborations, mainly with countries from outside of Africa, had their own challenges. Some of the challenges are related to the research guidelines presented to them by their counterparts, indicating several, what they perceived as unfavourable conditions. In this regard, some respondents indicated that they felt that the studies that were being conducted did not address the overarching needs of the country, but they had to participate in the studies to improve their research skills. Some felt that despite having similar qualifications as their counterparts, and regardless of their participation, they were not acknowledged in the final reports. In some cases they did not even see the final reports. These findings are similar to a number of studies (Gray et al. 2012; Mouton, 2008) where researchers from African institutions have

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to conform to the research agendas set by their collaborating partners from the developed countries. This would suggestthat massive foreign funding could impose agendas that are not necessarily congruent with the needs of the country or even the desires of the policy makers in the country.

8.4.6 Lack of mentorship among researchers

The findings from this study also indicate that there is a lack of mentorship among the researchers in the field of social science at UNZA. This has been demonstrated by a lack of supply of high quality papers as demonstrated by the poorly written manuscripts submitted for publications. Ultimately, the lack of mentorship also significantly contributed to the inconsistencies in publishing of scholarly works that could provide relevant research findings that could be used by the policymakers. Lack of mentorship has also been attributed to a lack of research funding from the government to enable senior researchers to train the early-career researchers in writing publications that can be published in local and international journals. During the survey and follow-up interviews most of the respondents, especially those who had just joined the university as lecturers/researchers, deplored a lack of mentorship. Similar sentiments were also echoed by the Chief Editors of local journals who stated that lack of mentorship has contributed to poorly written manuscripts which do not meet the standards of the journals.

8.5 Focus of researchers when conceptualising research

Responses to expected outcomes are an indication of the intended purpose for which a researcher conducts research, and this has implications for the research utilisation. In this study, the results revealed that most the respondents were motivated to conduct research, mainly to advance their knowledge, followed by stimulating debates and to a lesser extent to influence policy. From UNZA's perspective, these finding is not surprising and could be attributed to the non-existence of a policy that mandates researchers to demonstrate how their research findings will contribute towards policy. This is evident from the responses that were provided by the respondents both in the survey and during the face-to-face interviews where very few respondents stated that their research focussed on policymakers while conceptualising the research in this case the government as the major stakeholders that would drive the utilisation of their research findings.

Respondents in other fields indicated that the major outcome of their research had very little to do with policy implications, but rather that they come up with innovations. One example is the toolkit to detect Ebola that one of the respondents invented, and has since been adopted by the World Health Organisations (WHO). However, some of the respondents who had participated in committees with policymakers stated that they had since seen the need to include policy implications in their studies,

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though they were quick to highlight that this was a new phenomenon at UNZA. They further went on to say that because of their involvement in policy committees, they have since started including policy briefs in their research findings.

8.6 Lack of political will by the government

The findings in this study have also shown that there is minimal political will on the part of the government to use research findings in their decision-making processes. Interviewees pointed out that this is evident from the way the government sector is run in Zambia where most professionals in government and government departments who are mandated to guide policy decisions and implement policies have very little influence in the policymaking decision processes. The respondents explained that this is because the government ministries have employed many political cadres and they have been given more authority to influence the policy decisions than the officials. Yet political cadres do not value proven research findings and are not knowledgeable about the types of interventions that may be needed to curb a particular social problem. Consequently, researchers and professionals in decision-making positions are not able to advise the government on the appropriate interventions. As a result, there has been several policy reversals by the Zambian government because most policies start as a pronouncement and when they fail the government commissions the relevant research.

The results in this study also suggest that there is no engagement between the researchers and the policymakers. This makes it challenging to work together and find common grounds to make research a driver of development.

8.7 Lack of national guidelines for research

Zambia has no national guidelines that could be used to drive research agendas that would bring equity between the funders and the researchers in terms of sharing roles and how research outcomes should be treated in an unbiased manner. In the absence of such guidelines, and without research funding made available to researchers by the Zambian government, research agendas continue to be driven by the funding agencies who set the guidelines that should be followed when executing the research project.

The lack of national guidelines has also affected the focus on the initial mandate that was given to social science research research centres in Zambia. The findings show that over the years the publication practices in the field of social sciences has changed focus and researchers are focusing more on publishing in local and international journals with the intent to meet the requirements of

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climbing the academic promotion ladder. Yet, the initial mandate for which social science research centres were developed in Zambia were to conduct studies which were directly linked to the early development of the economy and solving social problems in society. Such studies depicted national issues and were disseminated in monographs and policy briefs which were made available to policy makers. This mandate has been well documented in literature by different scholars (Lockwood Report, 1963: Musambachime, 1993, 1996; Stabler, 1968; Tembo, 2014).

8.8 Recommendations

This section provides the recommendations made by the researcher based on the findings of this study. These recommendations include what the Zambian government should focus on for research findings to be effectively utilised by the policy makers in their policy/decision-making processes. Other recommendations focus on what remains to be accomplished by the researchers and the policy makers to improve research utilisation by the policy makers. Last but not the least this study also recommends the type of research that should be conducted to promote and strengthen the linkages between the researchers and the policy makers. These recommendations are as follows:

1. The government of Zambia must realise that research is one of the key drivers of development, and therefore a keen interest in funding research must be cultivated, especially at public universities that are government-funded.
2. There is need for a national framework with guidelines to ensure fair research participation whether commissioned by the government through bilateral relationship or through collaborations. This would enable research that is beneficial to the needs of the country.
3. Stronger links between the researchers and the policymakers must be established, and strengthened where they exist. It will create a valued perception of the importance of research in national development, and the gaps that exist due to underplaying the utilisation of research findings.
4. The Zambian government should employ technocrats, and not political cadres, in decision-making positions. The interests of political cadres often not in sync with the interests of the taxpayers who deserve appropriate policies that can address their needs.
5. Researchers should conduct relevant research that has policy implications. They should make deliberate efforts to submit policy briefs to the policymakers, and encourage them to use them for the betterment of the country.

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8.9 Limitations of the study

The first challenge was that there is a lack of information on studies in research utilisation that have been conducted in the field of the social sciences in Africa. Most of the studies in research utilisation have been in the field of health with a few in the library studies. The majority of the studies were conducted in developing countries and this gave the study a limited scope in terms of making comparisons of how social science research has informed policy in other parts of Africa.

This study focused on the research utilisation for policy in Zambia and initially it should have covered three public universities namely: The University of Zambia, Copperbelt University and Mulungushi University. This meant that there was need to ask for authorisation to use information from their universities. The letters in this regard were written to them but no response came in time. One of the universities opted to post the letter to permit the researcher to go ahead and collect data from the institution but it was received after the data collection was done. Consequently, researchers from Copperbelt and Mulungushi universities did not participate in the study. The option that remained was to focus on the University of Zambia that has a number of social science faculties and an institute for economic and social research.

The other challenge was that while the survey was conducted, it coincided with the University migrating from an earlier version of an e-mail server to the Webmail server that is currently in use. This made it difficult for the researcher to have the desired response from the respondents as most of them did not have functional emails at the time. This resulted in a low response rate.

In terms of the bibliometrics, publications from Zambian authors unlike publications from developed countries only starting appearing in the Web of Science in the last few years and hence the sample size was low. However, the study still wanted to show this as one of the challenges related to lack of visibility of publications from most African countries which Zambia is part of.

Last, but not least, the face-to-face interviews were collected at the time when the University of Zambia was on recess and most of the lecturers were either marking or supervising studies in the field. This made appointments very difficult as most of the lecturers were busy and the researcher had to negotiate to interview them in the field. A number of follow-up telephone call had to be made and often appointments were cancelled.

8.10 Future Research

This study is the first one to focus on the use of social science research in Zambia. It is also the first one to mainly focus on the utilisation of social science research that is produced by an institution of

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higher learning in Zambia. This study also focused on the research providers, and how they felt their research had been utilised by policymakers. Based on the research findings of this study, future studies in the field of research utilisation should:

1. Investigate how the government or policymakers are utilising research that is produced by public funded universities and other higher learning institutions.
2. Investigate the linkages if any, between public universities and industry, and establish the extent to which industry has utilised research findings from universities.
3. Investigate how much research funding the government is receiving from bilateral partners and how this funding is used to meet the needs of the country.
4. Investigate how research funding allocated to universities in the yellow book are utilised.
5. Investigate the challenges technocrats experience in implementing research findings from higher learning institutions. This is in view of the current situation where political cadres have more influence in the policy-decision making process than the technocrats.
6. Investigate the role that universities play in engaging policymakers to utilise research
7. Explore the role that universities are playing in engaging and partnering with the private sector to fund research.

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APPENDIX 1: SAMPLE OF INTERVIEW GUIDE

1. Let us talk about the survey you participated in first. In the survey you did not indicate how many written official policy documents you produced during the past three years (by 2016). I would therefore like to know how many written official policy documents you have produced between 2014 and 2016 when you participated in the survey.

2. As a follow up to question 1 above, you have stated in the survey questionnaire that the overall value or outcome of the researches you have conducted as being highly successful at influencing policy, yet you have also said that your research has not produced any written official policy document. Please explain what you mean by that.

3. You have stated that you have collaborated with researchers from your own discipline and other disciplines within Zambia. How did these collaborations come about and what was involved in these collaborations?

4. I would like to believe that each institution had a role to play in the collaboration. Can you please explain what your role was and what the role of your counterparts was in the collaboration?

5. I am interested to know how you managed to fund the activities you undertook during the collaborations.

6. I am also interested to know if there were any research outputs that emanated from the collaborations with your colleagues from other institutions within Zambia. Please elaborate on how these research outputs were used by both institutions?

7. I am aware that that you have collaborated with other researchers from other institutions within Africa. I am interested to know when these collaboration started, who initiated these collaborations, where did the funding come from, what activities were involved in these collaborations and how did you share the roles to ensure the collaborations were a success?

8. I am interested to know if there were any research outputs that emanated from the collaborations with other African countries. If so, please elaborate on how these research outputs were used by both institutions?

10. Can you please tell if you still have some ongoing collaboration with research institutions within Africa?

11. You indicated in the survey that you have often collaborated with researchers at institutions outside of Africa (e.g Europe, North America, Asia). I am interested to know in detail how these collaborations came about, when, who initiated these collaborations, what was involved in these collaborations and where the funding came from.

12. I am interested to know if there were any research outputs that emanated from the collaborations with other researchers from institutions outside Africa and how these research outputs were used by both institutions.

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13. In the survey questionnaire you said that you have not received any research funding during the past three years. Can you please explain the reasons why this has been so and what efforts you have made to source for funding from the government and international donor agencies?

14. You rated lack of funding for research as the major factor that has impacted negatively on your career as an academician and researcher. Can you please elaborate how lack of funding has effected your research output?

15. In the survey you described the overall value of your research and the extent to which you believe it has attained its value as highly successful at influencing policy/decision-makers, please explain what you mean by highly successful in this aspect.

16. You indicated that when you are conceptualising your research, you consider the beneficiaries of your research or stakeholders such as the contracting agency, specific interest groups (e.g. farmers, researchers, nurses, doctors, and consumers) and the general public/society/community. Can you please explain why you think these stakeholders are important in the outcome of your study?

17. In your own view as a Senior Lecturer, former Head of Department and Researcher, to what extent do you think the Zambian government is using research produced by higher learning institutions such as universities to enhance national development and to solve social problems in the country?

18. What suggestions would you like to make to ensure that research produced by research institutions such as the University of Zambia are used by policy makers in solving social problems and in the development of the country?

END OF INTERVIEW
THANK YOU VERY MUCH FOR YOUR TIME

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APPENDIX 2: INFORMATION FOR PARTICIPANT

Dear Colleague,

My name is Felicitas N. Moyo. I am a PhD student at the Centre for Research on Evaluation, Science and Technology at the Stellenbosch University, South Africa. I am conducting research on **"The state of Social Science Research for Policy Utilization in Zambia"**. The research is only targeting members of staff of the University of Zambia who are employed as lecturers or researchers. It is for this reason that I am contacting you, in your capacity as an academic member of staff at the University of Zambia to kindly request your participation in the abovementioned study. The study is in partial fulfilment of a Doctor of Philosophy degree in Science and Technology Studies (Specialisation in Research Uptake and Utilisation) which I am enrolled for at Stellenbosch University, South Africa.

The objective of this PhD research study is to explore and describe how social science research conducted at the University of Zambia has been utilized by policy makers and the challenges that could have possibly inhibited the use of social science research by policy makers. The study further makes a comparison between social sciences and others sciences with the intention to provide an indication of research utilization, dissemination strategies, funding, stakeholders considered when researchers conceptualizing by researchers and collaborations between the two sciences.

You have been chosen to participate in this interview because you participated in the online survey that was distributed by Professors Catherine Beaudry, Johann Mouton and Heid Prozesky from the Centre for Research on Evaluation, Science and Technology at the Stellenbosch University. The interview will take approximately 20-30 minutes to complete. Like the case was when you participated in the survey I wish to reiterate that even in this case, rest assured that all your responses will be treated confidentially and anonymity of your responses in the final report is guaranteed. I also wish to assure you that your participation is voluntary and that you may withdraw from the study at any stage without any negative consequences. Although your name is a necessary requirement in the questionnaire, it will only enable identify duplicate responses. I assure you that all responses received will only be used for scientific purposes within the framework of this study. Should you wish to enquire on any further information concerning the study, please email me at fellymoyo2@yahoo.co.uk. Alternatively, you can phone me on +260977892117. Thank you for being willing to participate in this survey.

Name of Participant	Date	Signature
Name of Investigator	Date	Signature

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APPENDIX 3: SURVEY QUESTIONNAIRE

THE STATE OF SOCIAL SCIENCE RESEARCH FOR POLICY UTILISATION IN ZAMBIA

Demographic background

In this section we would like to find more about you.

1. Gender (Please tick the appropriate answer)

[ ] Male
[ ] Female

2. What is your age?
[ ] <25 years
[ ] 25-34 years
[ ] 35-44 years
[ ] 45-54 years
[ ] 55-64 years
[ ] 55-64 years

3 Educational background

In this section, I would like to obtain information about your highest qualification.

What is your highest qualification? (Tick only one).

[ ] Three-year Bachelors
[ ] Honours or four-year Bachelors
[ ] Masters
[ ] Doctoral or equivalent
[ ] Other (Specify)

4. Research Output types produced by researchers

In this section, I would like to establish how you disseminated the results of your research. Please indicate alongside the dissemination modes indicated below the number of research outputs you have produced over the last three years:

[ ] Books (i.e. monographs and edited volumes)
[ ] Book chapters (including co-authored)
[ ] Conference papers published in proceedings
[ ] Presentations at conferences to predominantly academic audiences
[ ] Written input to official public policy documents
[ ] Research reports (contract/consultation research)
[ ] Articles in popular journals/magazines, essays, newspaper articles or other public outreach media
[ ] Patents (applied for and/or granted

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[ ] Computer programmes (including co-writing)
[ ] Creative/artistic works of art performed or exhibited (e.g. music, sculpture, paintings, theatre, film)
[ ] Others, Please specify

_____

5. Overall value/Outcome of research

In this section, we aim to establish what you wanted to achieve from your research findings and the extent to which you rate the success of these outcomes.

As far as your research is concerned, which of the following statements best describe the overall value or outcome of the research you have produced over the last three years? Also rate the extent to which you believe that these have been successfully attained.

	Highly successful	Successful to some extent	Not successful at all
Advancement of knowledge	[ ]	[ ]	[ ]
Solving of theoretical problems	[ ]	[ ]	[ ]
Solving of immediate technical/applied problems	[ ]	[ ]	[ ]
Solving of environmental or social problems	[ ]	[ ]	[ ]
Development of skills and competencies	[ ]	[ ]	[ ]
Change behaviour/attitudes/values	[ ]	[ ]	[ ]
Influence policy/decision-makers	[ ]	[ ]	[ ]
Influence practice	[ ]	[ ]	[ ]
Stimulation of discussion/debate	[ ]	[ ]	[ ]

6. Stakeholders considered when conceptualising research

In this section I would like to establish which among the stakeholders (intended beneficiaries) you had in your mind during the conceptualisation stage of your research.

Please indicate which intended beneficiaries/stakeholders you considered when you conceptualised your research. (Tick all those applicable).

[ ] Colleagues/scholars/peers in own discipline
[ ] Colleagues/scholars/peers in other discipline
[ ] The contracting agency
[ ] Industry/business/firm(s)
[ ] Ministry/government agency
[ ] Specific interest groups (e.g. farmers, researchers, nurses, doctors, consumers)
[ ] General public/society/community

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7. Funding

In this section I would like to establish the sources, If any, of your research funding over the past three years with the following questions below.

1. Have you received any research funding over the past three years? Please tick the appropriate response from the ones provided below:

[ ] Yes - but I am not the primary recipient/grant holder of the funding
[ ] Yes- I am the primary recipient/grant holder of the funding
[ ] Yes – In some cases I am the primary recipient and in some cases I am not the primary recipient of the funding

2. [Only if FUN 1 =Yes] What proportion of this funding was obtained from national and international sources? (10% intervals)

[ ] % National
[ ] % International

7. [Only if FUN 1 =Yes] Which amount best correspond to the total amount of research funding you have received during the past three years?

[ ] Less than US$10 000
[ ] US$10 000 - 25 000
[ ] US$25 000 - 50 000
[ ] US$50 000 - 75 000
[ ] US$75 000 - 100 000
[ ] US$100 000 - 250 000
[ ] US$250 000 - 500 000
[ ] US$500 000 - 1 000 000
[ ] More than US$ 1 000 000

8. Collaboration

In this section I would like to know the types of collaboration that you have had with institutions and the extent of collaboration.

How often do you collaborate, either in joint research or through joint publications, with the following categories of researchers:

	Never or very rarely	Rarely	Sometimes	Often	Very often/ always
Researchers at your own institution	[ ]	[ ]	[ ]	[ ]	[ ]
Researchers at other institutions in your own country	[ ]	[ ]	[ ]	[ ]	[ ]
Researchers at institutions in other African countries	[ ]	[ ]	[ ]	[ ]	[ ]
Researchers at institutions outside of Africa (e.g. Europe, North America, Asia, etc.)	[ ]	[ ]	[ ]	[ ]	[ ]

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9. Challenges

In this section I would like to know the challenges that you as a researcher is faced with that may hinder your research outputs.

Indicate, where applicable, the extent to which the listed factors below have impacted negatively on your career as a Researcher.

	Not at all	To Some Extent	To a large Extent
Lack of mentoring and support	[ ]	[ ]	[ ]
Job insecurity	[ ]	[ ]	[ ]
Balancing work and family demands	[ ]	[ ]	[ ]
Lack of mobility opportunities	[ ]	[ ]	[ ]
Lack of training opportunities to develop professional skills	[ ]	[ ]	[ ]
Lack of access to a library and/or information sources	[ ]	[ ]	[ ]
Lack of research funding	[ ]	[ ]	[ ]
Lack of funding for research equipment	[ ]	[ ]	[ ]
Limitation of academic freedom	[ ]	[ ]	[ ]
Political instability or war	[ ]	[ ]	[ ]
Other, please specify	[ ]	[ ]	[ ]

THE END
THANK YOUR VERY MUCH FOR YOUR VALUABLE TIME AND EFFORT

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APPENDIX 4: REQUEST TO PARTICIPATE IN A SURVEY ON THE RESEARCH PERFORMANCE

Survey on the research performance and career development of African scientists

Dear Colleague

You are hereby invited to take part in a survey on the research performance and career development of scientists in Africa.

We are quite aware of the demands made on people – and especially academics and scientists – to complete surveys of this nature. Given the importance of the study and the fact that it should not take you more than **20 minutes** to complete the survey, we sincerely hope that you will take the time to do this.

Participation in this survey is voluntary and there are no known or anticipated risks. This study has received formal ethical clearance from both Stellenbosch University and Polytechnique Montréal. You may decline to answer any of the questions. All data collected will be treated as confidential and you and your organisation's anonymity will be protected in any reports or publications produced from the survey.

If you have any questions or concerns about the research contact the project manager, Dr Charl Swart (charlswart@sun.ac.za). If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; (+27) 0-21 808 4622] at Stellenbosch University's Division for Research Development.

We would like to thank you for your willingness to participate.

Cordially yours

Prof Johann Mouton
Director CREST
Stellenbosch University

Prof. Catherine Beaudry
Polytechnique Montréal,
Canada

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APPENDIX 4: PERMISSION LETTER TO ACCESS SURVEY DATA

Stellenbosch University https://scholar.sun.ac.za

DST-NRF Centre of Excellence in
Scientometrics and Science,
Technology and Innovation Policy

27 November 2019

Dear Ms Felicitas Moyo

Permission to access survey data

You are hereby granted permission to access, for the purposes of your PhD research, a subset of anonymised survey data that were collected in the period 2016–2017 as part of the "Young scientists in Africa" project. In addition to permission to analyse the survey responses, you are also given permission to contact the respondents from Zambia who have indicated (and given their consent) to be interviewed subsequent to completing the survey. This permission to have access to the data only applies for use for your PhD and not for any other (future) project. Please also note that you are not allowed to share this data with a third party.

Yours sincerely,

Prof. Johann Mouton
Director: DST-NRF Centre of Excellence in Scientometrics and STI Policy

Stellenbosch University https://scholar.sun.ac.za

APPENDIX 5: PERMISSION LETTER TO CONDUCT RESEARCH

THE UNIVERSITY OF ZAMBIA
OFFICE OF THE REGISTRAR

Great East Road | P.O. Box 32379 | Lusaka 10101 | Tel: +260-211-251 593
Fax: +260-1-253 952 | **Email:** registrar@unza.zm | **Website:** www.unza.zm

10th August 2015

Ms. Felicitas N. Moyo
School of Humanities and Social Sciences
Department of Social Development Studies
P O Box 32379
UNZA

Dear Ms Moyo

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

Reference is made to your letter dated 8th August, 2015.

This serves to inform you that approval has been granted for you to conduct research at the University of Zambia and use relevant documents related to your PhD study entitled "***The State of Social Science Research for Policy Utilization in Zambia***". This approval is on condition that the data collected will be used purely for academic purposes for your PhD in Science and Technology Studies tenable at Stellenbosch University.

Yours sincerely

Sitali Wamundila (Mr)
REGISTRAR

cc: Dean, School of Humanities and Social Sciences
Head, Department of Social Development Studies

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