Conditions constraining and enabling research production in Historically Black Universities in South Africa

Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

at

Rhodes University

By

Evelyn Muthama

December 2018

Supervisor: Professor Sioux McKenna

Abstract

The South African higher education system has a highly uneven landscape emerging from its apartheid past. Institutions remain categorised along racial lines within categories known as 'Historically Black' and 'Historically White' institutions, or alternatively 'Historically Disadvantaged' and 'Historically Advantaged' universities. Alongside such categorisations, universities fall within three types, which arose from the restructuring of the higher education landscape post-apartheid through a series of mergers: traditional universities, comprehensive universities, and universities of technology. This study which is part of a larger National Research Foundation-funded project looking at institutional differentiation in South Africa, sought to investigate the conditions enabling and constraining production of research in the Historically Black Universities (HBUs).

By providing clarity as to the nature of truth and the concept of knowledge underpinning study, Critical Realism ensures that the study moves beyond the experiences and events captured in the data to the identification of causal mechanisms. Archer's theory of Social Realism is used alongside Critical Realism, both as a meta-theory to provide an account of the social world and as a more substantive theory in the analysis of data. Social Realism entails understanding that the social world emerges in a complex interplay of powers in the domains of structure, culture and agency. Identifying the powers in each of these domains that enabled or constrained research development meant moving beyond suggesting simple causal relationships to ensure that I identified the complexities of the interplay of mechanisms.

Data was collected from all seven institutions designated by the Department of Higher Education and Training as HBUs, by online survey, in depth interviews with academics and heads of research, and through the collection of a range of national and institutional documentation. Using analytical dualism, I endeavoured to identify some of the enablements and constraints at play.

There were a number of areas of strength in research in the HBUs. There has also been a significant increase in research output over the last decade; however, the study also identified a number of mechanisms that constrained research productivity. The study found that while there were a number

of mechanisms that appeared to have causal tendencies across all the institutions, there were a number of very specific institutional differences.

There was very little consistency in understanding of the purpose of research as being key to what universities and academics do. The implication of this incoherence in the domain of culture (i.e. beliefs and discourses in Archer's terms) is that various interventions in the structural domain intended to foster increased research output often had unintended consequences. Unless there are explicit discussions about how and why research is valuable to the institution and to the country there is unlikely to be sustained growth in output. In particular, the data analysis raises concerns about an instrumentalist understanding of research output in the domain of culture. This in part emerged from the lack of a historical culture of research and was found to be complimentary to managerialist discourses.

Another key mechanism identified in the analysis was the use of direct incentives to drive research productivity. Such initiatives seemed to be complementary to a more instrumentalist understanding of the purpose of research and thereby to potentially constrain the likelihood of sustained research growth. While many of the participants were in favour of the use of research incentives, it was also evident that this was often problematic because it steered academics towards salami slicing, and other practices focused on quantity as opposed to quality research. Predatory publications, in particular, have emerged as a problem whereby the research does not get read or cited and so it fails to contribute to knowledge dissemination.

Another constraint to research production was related to the increased casualisation of academic staff, which has exacerbated difficulties in attracting and retaining staff especially in rural areas. In South Africa, 56% of academics in universities are now hired on a contract basis which constrained the nurturing of an academic identity and the extent of commitment to the university and its particular academic project. In the HBUs, these employment conditions were exacerbated by increased teaching loads as a result of increased number of students (undergraduates and postgraduates) that have not been matched with similar increases in academic staff.

There was a nascent discourse of social justice that focused on research as a core driver of knowledge production in some of the HBUs. This is potentially an area of strength for the HBUs

especially emerging from their rural position as there was a complementary culture of social concerns. There was evidence that the nexus between research and community engagement could be a strong means of both strengthening institutional identity and increasing research productivity. But unless the nexus is clearly articulated, a systematic process of support is unlikely to emerge**.** Given the extent to which the rural positioning of HBUs has been acknowledged to constrain research engagement, this finding has a number of positive implications.

Abstract in Swahili

Muhtasari

Mfumo wa elimu ya juu nchini Afrika Kusini umekuwa na mandhari isiyo laini hata kidogo katika kipindi cha taifa lenyewe kuondoka kwa historia yake ya ubaguzi wa rangi. Taasisi mbali mbali zimeendelea kutambulika kuwa ndani ya mojawapo ya makundi mawili makubwa yanayojulikana kama 'taasisi zaweusi Kihistoria' au 'taasisi za weupe Kihistoria,'au kwa majina tofauti, vyuo vikuu 'Vilivyopungukiwa Kihistoria' au 'Visivyopungukiwa Kihistoria.' Pamoja na kutambulika kwa namna hii, inakubalika kwamba kuna aina tatu za vyuo vikuu, aina zilizotokea baada ya marekebisho kufanywa kwa mandhari ya mfumo wa elimu ya juu baada ya kuisha kwa ubaguzi wa rangi kupitia kwa mfululizo wa miungano kadhaa. Aina hizi ni kama ifuatavyo: vyuo vikuu asilia, vyuo pana kimaarifa, na vyuo vya kiteknolojia. Uchunguzi wa somo hili, ambao ni sehemu ya mradi mwingine mkuu uliodhaminiwa na Taasisi ya Kitaifa ya Utafiti unaokusudia kuchunguza utofauti wa kitaasisi nchini Afrika Kusini, ulinuia kuchunguza hali zinazowezesha au kuzuia uzalishaji wa miradi ya utafiti katika Vyuo Vyeusi Kihistoria (VVK).

Kwa kuweka wazi asili ya ukweli na dhana ya maarifa iliyotumika kama msingi wa uchunguzi huu, mtizamo wa Uhakiki wa Uhalisi wa hali husika (almaarufu "Critical Realism" kwa lugha ya Kimombo) unahakikisha kwamba uchunguzi huu unapita mipaka ya uzoefu na matukio yaliyonaswa kwenye data ambatanifu hadi kufikia utambuzi wa taratibu zinazosababisha hali zenyewe. Nadharia ya Archer ya Uhalisi wa Kijamii inatumika kando kando ya ile ya Uhakiki wa Uhalisi wa hali husika, zote zikitumika kama makisio kwamba ukweli kuhusu mada ya uchunguzi huu unapita mipaka ya uzoefu na mitazamo iliyopo – kwanza kwa kueleza sababu hali ya kijamii ipo jinsi ilivyo na pili, kama nadharia madhubuti katika udadisi wa data. Uhalisi wa Kijamii unajumuisha kuelewa kwamba mazoea ya kijamii huibuka kama matokeo ya uchocheano changamani kati ya nguvu mbali mbali katika maeneo ya miundo ya jamii husika, mila na desturi, na mbinu. Kutambua nguvu zilizowezesha au kuzuia ukuzaji wa utafiti katika kila moja ya maeneno haya kulimaanisha kuvuka mipaka ya kidokezo rahisi kwamba ni matokeo ya mahusiano sababishi tu, ili kuhakikisha kwamba nimetambua uchangamani wa michanganyiko ya taratibu husika.

Data ilikusanywa kutoka kwa taasisi zote saba zinazotambulika na Idara ya Mafunzo na Elimu ya Juu kama VVK kupitia kwa uchunguzi kwenye mtandao, mahojiano ya kina na wasomi na viongozi wa utafiti humo, na kupitia kwa kukusanya hati mbali mbali za kitaasisi na kitaifa. Nikitumia mbinu ya udadisi wa mambo mawili kwa pamoja, nilijizatiti kung'amua vichocheo na vizuizi husika.

Kulikuwa na sehemu kadhaa zilizokuwa imara kuhusu swala hili la utafiti katika VVK na kumekuwa na ongezeko la miradi ya utafiti kwa kipindi cha mwongo mmoja uliopita; hata hivyo uchunguzi huu pia ulitambua taratibu kadhaa zilizobana na kuweka mipaka kwa uzalishaji zaidi wa kazi ya utafiti. Uchunguzi huu uligundua kwamba, japo kulikuwa na taratibu kadhaa zilizoonekana kuwa na mielekezo sababishi katika taasisi zote husika, kulikuwa pia na tofautu za kipekee kutoka kwa taasisi moja hadi nyingine.

Uthabiti wa ufahamu kwamba kuelewa malengo ya utafiti ni kiungo muhimu katika kazi ya vyuo vikuu na wasomi humo ulikuwa wa kiwango cha chini sana kutoka kwa taasisi moja hadi nyingine. Maana halisi ya ukosefu wa uthabiti huu hasa katika eneo la mila na desturi (yaani itikadi na maongezi tukitumia semi za Archer) ni kwamba baadhi ya juhudi za kuingilia kati katika eneo la miundo zilizokusudiwa kuimarisha ongezeko la uzalishaji wa utafiti mara nyingi zilizaa matokeo ambayo hayakutarajiwa. Kusipokuwa na mazungumzo wazi wazi kuhusu ni kwa jinsi gani na ni kwa nini utafiti ni wa thamana kwa taasisi husika na kwa taifa kwa jumla, hakuna matumaini makubwa ya kuwepo kwa ongezeko la uzalishaji. Hasa, udadisi wa data unaibua wasiwasi kuhusu kueleweka kwa matokeo ya utafiti kutumika kama chombo tu katika eneo la mila na desturi. Sababu mojawapo ya kuibuka kwa mtizamo huu ni ukosefu wa historia ya uzoefu wa kufanywa kwa utafiti. Mtizamo huu ulipatikana pia kuunga mkono mazungumzo yanayoegemea usimamizi unaonuia kuona matokeo fulani aini.

Utaratibu mwingine tendaji uliotambulika katika udadisi huu ni utumiaji wa moja-kwa-moja wa vichocheo kuendeleza uzalishaji wa utafiti. Vichocheo vya namna hii vilioonekana kuunga mkono mtizamo wa matokeo ya utafiti kutumika kama chombo tu, na hivyo kufanya kuwepo uwezekano wa kuzuia kukua endelevu kwa kazi ya utafiti. Japo wengi wa wahusika walivipa vichocheo vya utafiti kipau mbele, kulikuwa na ushahidi wa kutosha pia kwamba mwelekeo huo una shida ambatanifu kwa sababu uliwaelekeza wasomi kwa mtindo wa kutoa matokeo ya utafiti wao kwa vipande chembachemba, pamoja na mbinu zingine zinazotilia mkazo wingi wa utafiti badala ya

ubora wake. Majarida haramia hasa yameibuka na kufanyika shida kubwa maana matokeo ya utafiti hayasomwi wala kunukuiwa, na hivyo kukosa kuchangia usambazaji wa maarifa.

Kizuizi kingine cha uzalishaji wa utafiti kilikuwa na uhusiano na ongezeko la wasomi kuandikwa kazi kama vibarua, jambo ambalo limechangia pakubwa ugumo wa kuwavuta na kuwadumisha wafanya kazi, hasa katika maeneo ya mashambani. Katika nchi ya Afrika Kusini, asilimia 56 ya wasomi katika vyuo vikuu sasa huwa wameandikwa kazi kwa mfumo wa kandarasi, jambo ambalo lilizuia ukuzaji wa kutambulika kisomi, kiwango cha msomi kujitolea kwa chuo kikuu anachohusika nacho na mradi aini kisomi wa chuo chenyewe. Katika VVK, hali hizi za ajira ziliathiriwa zaidi kwa sababu ya kuongezeka kwa mzigo wa kufundisha uliosababishwa na ongezeko la idadi ya wanafunzi (wale ambao bado hawajafuzu, na wale ambao tayari wamefuzu shahada ya kwanza). Ongezeko hili la idadi ya wanfunzi halikulinganishwa na kuajiriwa kwa waalimu zaidi ili kuleta uwastani uafaao.

Kulikuwa na mwanzo wa mazungumzo kuhusu haki ya kijamii yaliyoangazia utafiti kuwa kiini hasa cha kuendeleza uzalishaji wa maarifa katika baadhi ya VVK. Kuna uwezekano wa sehemu hii kuwa sehemu ya nguvu katika VVK hasa vinapoondoka maeneo ya mashambani, kwa sababu kulikuwa na uzoefu ambatanifu wa kuhusika na maswala ya kijamii. Kulikuwa na ushahidi kwamba mwungano kati ya utafiti wenyewe na kuhusika kwa jamii unaweza kuwa njia muhimu ya kuimarisha kutambulika kwa taasisi lengwa na kuongeza matokeo ya utafiti pia. Lakini mwunganiko huo usipoelezwa kinaganaga kiasi cha kueleweka vyema, mchakato wa kudumu wa kusaidia kufanyika kwa utafiti huenda usikuzwe. Kadri imekubalika kwamba maeneo VVK vilivyopo huchangia kuzuia kuhusika kwao na utafiti, kugundulika huku kuna maanisha kwamba kuna matokeo kadhaa ya heri njema.

Acknowledgements

I would like to thank a number of people who made it possible for me to take my PhD journey:

My supervisor and mentor, Professor Sioux McKenna, I am grateful for teaching me to be critical, for being my source of inspiration, for your dedicated time, advice, encouragement and continuous support throughout my PhD journey. I would also like to thank Dr Chrissie Boughey who helped in formulating the research question for this study**.** I am grateful to the Rhodes CHERTL staff, Nomfundo and Lavern, for your support and assistance in administrative issues.

To the institutional differentiation project group, I appreciate the moments shared in our online seminar meetings and for the moral support. The Rhodes University higher education doctoral scholars and supervisors, thank you for the thought provoking conversations and for providing a research platform that allowed me to bash out my ideas.

My friends and colleagues at UCT – a special thanks to you all and especially to Dale Taylor for inviting me to join the UCT CREE writing group. My CREE writing buddies, Kalpana and Anita. I am grateful for the creative space and time to write together.

To the Deans/ Directors of research, Heads of Departments and academic staff members from the institutions in this study – I sincerely appreciate your willingness to participate. I acknowledge and appreciate the financial support from the NRF that made it possible to complete this PhD study. I thank Martina van Heerden and Nelly Nyagah for proofreading and formatting my thesis and Cane Lake for transcribing my interview data.

My sister Monica, my bother Ben, my mum Beatrice and dad Joseph. I am grateful for their moral and spiritual support. My husband, Muthama, asanda muno for your love, unwavering support, and encouragement, and for believing that I could do it. My daughter and son, Mbithe and Tim. Thank for you for your patience and encouragement to keep going.

The Rondebosch High School prayer warriors. I am so grateful for your spiritual support and prayers. A special thank you to Gilly Low and Lynn Swanevelder for your support, encouragement and assisting with pick up when I was away from home. And finally, to God be the Glory!

Table of Contents

List of Tables

List of Figures

Acronyms

ASSAf	Academic of Science of South Africa
CE	Community Engagement
CEP	Cultural Emergent Properties
CESM	Classification of Educational Subject Matter
CHE	Council on Higher Education
CSIR	Council for Scientific and Industrial Research
DHET	Department of Higher Education and Training
DoE	Department of Education
DST	Department of Science and Technology
HBU	Historically Black University
HEQC	Higher Education Quality Committee
HWU	Historically White University
IBSS	International Bibliography of Social Science
ISI	Institute for Scientific Information
MEDUNSA	Medical University of South Africa
MUT	Mangosuthu University of Technology
NDP	National Development Plan
NPC	National Plan Commission
NPHE	National Plan on Higher Education
NRF	National Research Foundation
PEP	People Emergent Properties
PQM	Program Qualification Mix
RDG	Research Development Grant
RU	Rhodes University
SANC	South African Native College
SAPSE	South African Post-Secondary Education
SARChI	South African Research Chairs Initiative
SEP	Structural Emergent Properties
SOTL	Scholarship of Teaching and Learning
SU	University of Stellenbosch
TDG	Teaching Development Grant

UCFH	University College of Fort Hare
UCDG	University Capacity Development Grant
UCT	University of Cape Town
UDW	University of Durban-Westville
UFH	University of Fort Hare
UL	University of Limpopo
UNIN	University of the North
UNIVEN	University of Venda
UNIZULU	University of Zululand
UoT	University of Technology
UP	University of Pretoria
UWC	University of the Western Cape
Wits	University of the Witwatersrand
WSU	Walter Sisulu University

Chapter One: Introduction

Overview and Context of the Study

1.1 Introduction

Producing new knowledge through research is a core function of universities and one which is in particular demand in the current context of technological advances and the need to address various social and ecological ills. Universities around the world, and specifically in South Africa, are under enormous pressure to produce research and develop researchers in the current era of knowledge economy. The new South African higher education policies (Department of Higher Education and Training [DHET], 2013a; Department of Science and Technology [DST], 2008; National Planning Commission [NPC], 2011) drive universities to play a key role in the transformation agenda in terms of social redress and in driving the economy through knowledge production and the development of researchers.

This study looks at how knowledge creation has been enabled or constrained within one particular type of institution in South Africa, the Historically Black University (HBU). The production of research and development of researchers in the South African higher education sector in general and in particular in the Historically Black Universities (HBUs) is seen as important in redressing the imbalances of racial and gender profiles and in improving the quality of teaching and learning (Department of Education [DoE], 1997; DHET, 2013a; Singh, 2011) for a fair and just society. A fair and just society is interpreted as one which offers opportunity though higher education to improve society and promote the social mobility of under- and postgraduates (Moleke, 2005)

In addition to improving society and offering opportunities for social mobility, higher education and universities are expected to produce research and researchers that can compete globally in an economy based on knowledge production. The impact of these views can be seen in the steady increase of research output in publications and throughput of under- and postgraduate students in the past two decades in South African higher education institutions (DST, 2008; NPC, 2011). It can also be seen in the way in which research is highly valued for its prestigious status by most

universities and the academics staff members. However, production of research and the development of researchers is unevenly distributed across South African universities and the growth has been very slow in terms of meeting the social economic needs of the country (DST, 2008; Council on Higher Education [CHE], 2016; NPC, 2011). This is despite a strong belief both at national and institutional levels that research, and the development of researchers, is a key to what all South African universities do.

This study aimed at understanding and explaining the phenomena of research production in Historically Black Universities in South Africa. It works towards identifying the conditions enabling and constraining research production in South African higher education system in general and HBUs in particular. Given the demand for universities to produce research for social and economic development and the effects of the history of HBUs and the restructuring of higher education landscape into different types of universities in post-apartheid era, the study aimed at examining how these aspects, among others, were playing out in terms of research production and the development of postgraduate students. Isike (2018) contends that if issues of inequalities of the past and the need for quality education and research in HBUs are to be addressed, there is need for interrogating how the current differentiation of institutional types intersects with complex factors, including the histories of institutions. Thus, the main goal of this study is to look holistically at the complex conditions that have enabled and constrained production of research in HBUs.

Consequently, the research question that this study seeks to answer is:

> What conditions enable and constrain production of research in Historically Black Universities (HBUs) in South Africa?

Using the theoretical framework, which I introduce in Chapter Three, the sub-questions I ask are:

> What structural, cultural, and agential conditions at institutional, national, and international levels enable or constrain the production of research?
>
> How does the production of research in HBUs emerge from the interplay between these structural, cultural, and agential conditions?

As will be discussed in section 2.3.1and subsequent chapters, the power of the knowledge economy discourse is so pervasive that even in my research question(s) I use the terminology 'research production' which might be seen to suggest an instrumentalist understanding of research rather than an intellectual endeavour. But the phrase is commonly used to refer to research in the field of higher education and so for ease of understanding, I have elected to use it.

1.2 The context of the study: Historically Black Universities

The Historically Black Universities (HBUs) were founded on the apartheid ideology of separate development that supported differentiation of higher education institutions across racial groups - the White population group (English and Afrikaners) and the Black population groups (African, Coloured, and Indians[1]) - and ensured significant inequalities based on these differences. The segregation of higher education in South Africa, however, went as far back as mid-1800s, long before apartheid was a national policy. For example, the University of Fort Hare was established in 1916 in order to educate a native elite to be employed within their education system (Bunting, 2002a; Cooper & Subotzky, 2001).

When the National Party came into power in 1948, segregation was already entrenched and was then institutionalised through the *Extension of University Education Act* of 1959 which restricted black students from accessing institutions designated for white people and provided for the establishment of separate institutions for black people. Bunting (2002a: 74) states that the establishment of HBUs was

> overtly political and instrumental, they were not established because of an academic need for the institutions of the kind they became. They were instrumental institutions in the sense of having been set up to train black people who would be useful to the apartheid state, and political in the sense that their existence played a role in the maintenance of the overall apartheid socio-political agenda. Their 'useful graduates'

[1] It should be noted that all terms used to reference different race groups are inherently problematic given the social nature of racial categorisation. However, it is imperative to make frequent mention of racial categories in this thesis given its focus area and given the ways in which race remains one of the means by which resources are allocated around the world. As a result, I have elected to use the South African Department of Labour terminology that is being used for the purpose of redress and transformation in current legislation but which is identical to those categories used under apartheid. For instance, 'Coloured' is a particular category of mixed-race people, and Indian refers to South Africans of Indian descent.

were primarily the black teachers required by black school system and the black civil servants required by the racially divided civil service of the RSA.

Ten historically black universities were established in two historical phases for the different ethnic groups in South Africa. In phase one, the University of Fort Hare (which existed prior to apartheid) was designated in 1959 for the Xhosa and Sotho groups and in the early 1960s, two urban and two rural universities were established. The two rural institutions were the University of Zululand, which was established in 1960 in rural KwaZulu Natal to serve the Zulu and Swazi groups, and the University College of the North, which was founded in 1959 for Sotho, Tsonga, Tswana, Venda, and Ndebele groups in the Northern Province (Cloete et al., 2006). The urban universities were University of Western Cape (UWC), which was established in 1960 on the Cape Flats, in Cape Town, for the Coloured group, and the University of Durban-Westville (UDW), which was established in 1972 in KwaZulu Natal for Indian students. The building of UWC and UDW in semi-urban areas followed the apartheid thinking that the institutions were to serve the Coloured and Indian middle-class social groups (Boughey & McKenna, 2011).

The second phase of establishing HBUs saw the introduction of four universities in the 1970s and 80s, namely the University of Transkei in 1977, the University of Bophuthatswana in 1980, the University of Venda in 1982, and a campus of the University of the North founded in the rural area of Qwa Qwa in 1982 (Subotzky, 1997; DHET, 2013b); all of which were in what were known as the TBVCs or 'independent homelands' The four TBVC republics of Transkei, Bophuthatswana, Venda, and Ciskei were created by the apartheid government through the *Promotion of Bantu Self-Government Act of 1995* which provided for the establishment of separate black governments in rural areas. The apartheid regime considered the republics as legally independent countries, although internationally they were not recognised but were rather regarded as 'creatures' of the apartheid state (Bunting, 2002a:36).

Within the same period of the 1970s to 1980s, two specialist universities were established: The Medical University of South Africa (MEDUNSA), which was established in 1976 in response to demand for medical care for the black population, and Vista University, which was established in 1982 to offer teacher education. Vista University was a multi-campus institution with seven

satellite branches located in areas designated for the black population throughout the country (Cooper & Subotzky, 2001; DHET, 2013b).

The HBUs were disadvantaged and discriminated against in terms of funding, networking, research, postgraduate education, autonomy, geographical location, and in governance and management (Bozalek & Boughey, 2012). This had, and continues to have, an implication on the development of research in these institutions. These issues are now discussed in a bit more depth, though I return to these issues throughout the study.

1.2.1 Funding

The apartheid government developed discriminatory funding policies which resulted in constrained resources and underdeveloped infrastructure for research and other activities in HBUs. The policies led to differences in funding mechanisms for HBUs and Historically White Universities (HWUs). HWUs were funded using a funding formula referred to as the South African Post-Secondary Education (SAPSE) formula. These institutions had considerable freedom and power to plan and manage their financial affairs without interference from the state (Bunting, 2002b). For example, the institutions could decide on how to spend their funding, how many staff members to employ, and how to invest any surplus funds they had received from the government. This allowed the institutions to build reserves and plan for the development and maintenance of their facilities and infrastructures.

However, this was not the case with the 'negotiated budget' funding system for the HBUs. The HBUs had to prepare budgets that needed to be approved by the appropriate government department. The annual increment for the following year needed to be agreed upon (Bunting, 2002b). These restrictions had a number of consequences, including that the institutions were not able to develop their administrative and management capacity. The government was in control of all the key appointments and this depended on the agreement made with the funding body.

The negotiated budget system also required the institutions to return any unspent funding to the relevant government department at the end of the financial year (Bunting, 2002b; Bozalek &

Boughey, 2012; Boughey & McKenna, 2011). This prevented the HBUs from building reserve funds, becuase the institutions had to follow a 'use it or lose it' policy whereby all funds had to be spent within the year or retuned to the state. While the HWUs had *carte blanche* in how they spent their block grants, HBUs were prevented from making choices about how to spend the funds (Bunting, 2002b), and they had to follow the state-imposed budgets. This made long-term projects and investment impossible. It also disadvantaged the universities in terms of development of institutional facilities and infrastructure, like libraries and technical laboratories, which would support research activities, which then impacted on the level of students who enrolled at such institutions (Education Policy Unit, University of the Western Cape [EPU-UWC], 1997).

Another effect of the 'use it or lose it' funding policy was that the HBUs developed a tendency to use up the remaining funds in an annual spending spree at the end of the year (Bunting, 2002b). Such a culture, as noted by Bozalek and Boughey (2012), has had a continued impact on the ability of the HBUs to manage their finances in a sustainable way in the post-apartheid era; this is an issue to which I return in later discussion of the study data.

These institutions also had limited opportunities to attract funding from diverse sources like government and private contracts. This made the institutions depend entirely on government subsidies and student fees for their income; yet, their student body had scare resources for fees (Subotzty, 1999; Bunting, 2002b). In addition, reduction in government funding to the higher education sector immediately after the democratic government took power forced the HBUs to rely even more on student fees as part of their regular income. This placed a burden on the institutions and the students; as a result, over the years, the institutions accumulated huge amounts of fee debts because the majority of the students came from poor backgrounds (Bunting, 2002b; Cooper, 2015). All this had implications for the quality of education and research production in the HBUs.

The current funding formula (discussed in Chapter Six) was implemented in 2004. It is based to some extent on performance and does not distinguish between universities, though it provides a small redress line item to HBUs**.** That we have one 'flat' funding formula skewed to reward postgraduate education, research output, and science and technology fields, areas in which the

HBUs were intentionally poorly developed (Subotzky, 1997), means that HBUs continue to be disadvantaged in the current system (Moyo, 2018). This system has been criticised for biases and for the perpetuation of apartheid-based differentiation of inequalities and ignoring institutional context (Quinn, 2012; McKenna & Boughey, 2014; CHE, 2016).

1.2.2 Geographical location

As earlier mentioned, except for UWC and UDW, HBUs were established in remote rural areas in the former homelands or in South Africa itself to serve the black population who lived there. This was according to the ideology of apartheid policies. These rural areas are generally underdeveloped, impoverished, and have little economic infrastructure (McKenna & Boughey, 2014). The implication of this is that they are less likely to attract highly qualified academic staff. This geography has also been shown to have an effect on the student body. The Council on Higher Education (2016: 69)) states the following about the impact of the geographical location of HBUs in the rural areas:

> Many universities in largely rural areas that drew students from the immediate surrounds had significant proportions of students who struggled to pay fees, with serious impacts on budgets. This was compounded by the apartheid legacy as many of these rural institutions were also historically disadvantaged. This then led to the circular problem of constrained budgets not allowing for the developments necessary for improved quality of teaching, learning and research, thus compromising universities' ability to attract the most academically prepared students in their regions.

These institutions are rarely students' first choice of university**.** The majority of the students who attend HBUs are from the local area and from poor social backgrounds, although recently students from neighbouring countries have started enrolling in these institutions (Langutani, 2015; Isike, 2018). Another challenge related to their location in deep rural areas is that it is difficult for HBUs to readily forge strong research networks with advantaged institutions in urban areas (Bozalek & Boughey, 2012).

1.2.3 Governance and Management

The governance of the HBUs was generally authoritarian (Bunting, 2002a; Bozalek & Boughey, 2012; Boughey & McKenna, 2011). The state controlled the institutions and ensured that the council and executive management teams supported the apartheid ideology. They did this by ensuring that the administration was mainly staffed by Afrikaners who supported apartheid (Bunting, 2002a; Boughey & McKenna, 2011), especially in the early 1980s. In the late 1990s, the government appointed black vice chancellors to head the institutions, although their power to effect change was constrained by the appointment of the council members being under state control (Bunting, 2002a). Until the end of apartheid, the government was also in control of the appointment of key staff members, admission of students, the choices of courses offered, and even the subject matter. This greatly limited the freedom of academics and the autonomy of the institutions to make decisions concerning what to research or teach. As apartheid came to an end, Bunting (2002a) noted that most of the experienced administrators in HBUs left the institutions and HBUs experienced student protests, management inefficiency, and corruption. This further weakened the management of the institutions, especially in administration of funding (Bunting, 2002a).

As already mentioned, the HBUs were established for a particular race and a particular purpose. The institutions were predominately teaching based and focused more on undergraduate education for black students with very little focus on research production. For example, in 1996 the historically white universities produced 83% of the research output of the entire higher education sector, and 81% of the master's and doctoral graduates (CHE, 2016), while the historically black universities produced only 7% of the research output and 5% of the master's and doctoral graduates (CHE, 2016), with the rest being produced by the distance education institutions and the technikon sector.

Furthermore, the ideology of the apartheid government framed the intellectual agenda of these institutions. Initially, the academic staff of HBUs tended to be comprised of white Afrikaners previously employed at Afrikaans-speaking universities who tended to prize an 'instrumentalist

notion of knowledge' (Bunting, 2002a: 63). The production of research was not a goal for the HBUs and postgraduate programmes were not deemed necessary (Bunting, 2002a; Boughey & McKenna, 2011; Motshoane & McKenna, 2014). Thus, there was a limited number of postgraduate programmes in HBUs. For example, Subotzty (1999) noted that the majority of the HBU students were enrolled at the undergraduate level which gave the historically black universities a distinct undergraduate teaching character. The overall ratio of undergraduate to postgraduate was '90:10 in 1992' compared to that of historically white universities which was '70:30' (Subotzky, 1997: 503).

1.3 The binary divide between university and technikons

In addition to the ten universities that existed at the end of apartheid, seven technikons were established between the late 1970s and 1980s. Five of the technikons were established in the homelands and two in the Republic of South Africa. This institutional type was discouraged from undertaking research regardless of which racial group the institution was serving (Bunting 2002a; McKenna, 2009). Their main function was to provide vocational programmes. Unlike the universities that offered formative and professional degrees, the technikons offered diplomas and focused on technology and the application of knowledge (Bunting, 2002a; Bozalek & Boughey, 2012). This binary divide also reflected the apartheid ideology whereby technikons were designated to be primarily about training for the skills needed for the economy and universities were designated to focus on science and the development of new knowledge, and engage in postgraduate programmes and in education of students in a range of fundamental scientific or scholarly disciplines that would enable them to enter high-level professions (Bunting, 2002a). However, in the case of HBUs, high–level professions were viewed instrumentally in that graduates were primarily intended for the teaching profession and for the civil services of the homelands, although the institutions also contributed to the ranks of other professions such as nursing and social work (Bunting, 2002a; Boughey & McKenna, 2011).

When apartheid ended, and a new higher education landscape was planned, it had to attend not only to the division of institutions by race but also this division of institutions into two distinct types: universities and technikons.

1.4 South African higher education, post-apartheid

Post-apartheid, it can thus be seen that the democratic government inherited a higher education system that was inefficient, fragmented and untransformed (CHE, 2016). Therefore, there was a need for transforming higher education into a united, fair, equal, and efficient system (DoE, 1997; DHET 2013a; DHET, 2016). While this transformation had to attend to a number of competing goals, clearly stated amongst them was the goal to increase postgraduate enrolment to meet the needs of research and knowledge in South Africa (DoE, 2001). There was also policy emphasis on the need for the production of relevant research that would contribute to redress, development, and social justice (DoE, 1997). Despite the establishment of these policies to bring about democracy, equity, and development, HBUs were facing myriad of problems related to the apartheid legacy, such as a decline in financial assistance from the government, chronic student strikes, and poor management and governance (Boughey & McKenna, 2011; Woodrooffe, 2011; Wangenge-Ouma 2012).

At the same time, the policymakers were grappling with what to do with HBUs whose academic and financial viability was at stake (CHE, 2016; Woodrooffe, 2011). After apartheid came to an end, there was a concern over the rationale for their existence. On the one side there were those who supported their existence on the ground that they served the majority of the black students living in the rural areas. Others opposed their existence because they saw them as creatures of the apartheid government that had failed dismally, were wasteful, and deteriorating (Woodrooffe, 2011). While the new black government was committed to keeping them, it was perceived as doing little to improve their conditions. With the opening up of HWUs and technikons to students of all races, many black middle-class students started to move into the previously white institutions taking advantage of the opportunities that had been made available (Boughey & McKenna 2011; Cooper 2015). Thus, the poor black students from disadvantaged backgrounds

continued to be subjected to the education system of the HBUs that were now faced by calls for enormous change in structure and culture, without much by way of resource support to achieve this (Bunting, 2002a; Woodrooffe, 2011).

1.4.1 The mergers and new types of institutions

Clearly, there was a need for change in the higher education sector. The restructuring was stipulated in the 2001 National Plan and the CHE (2004) made a recommendation for the higher education system to be significantly restructured (Hall, Symes & Luescher, 2004), though the precise plan they proposed was not implemented. The final process of restructuring emerged from a series of intense political negotiations and compromises and involved mergers, incorporations, and closure of institutions that had less than 4000 full-time equivalent students. The restructuring led to the reduction of the previous 36 higher education institutions to 23. The mergers were meant to overcome the fragmentation, inequality. and inefficiency of the system that was deemed to have unnecessary duplications.

The mergers also resulted in the creation of three different types of universities according to their Program Qualification Mix (PQM):

- the traditional universities which were tasked with providing formative and professional programmes,
- universities of technology (UoT) (previously technikons) which were tasked with focusing on vocational education, and
- comprehensive universities which were to offer a combination of both traditional and UoT type programmes.

Through this series of state-legislated institutional mergers from 2002, some of the HBUs merged with advantaged institutions and consequently changed their compositions and names. The purpose of the mergers was to attend to some of the challenges in a bid to bring about social equality and cohesion.

Out of the ten HBUs established during apartheid only seven exist today in that identifiable form, namely, the University of Zululand, the University of Venda, the University of Limpopo, the University of Fort Hare, Walter Sisulu University (formerly University of Transkei), Mangosuthu University of Technology, and the University of the Western Cape (see Table 1.1) (DHET, 2013b); these form the site for this study, and each will be discussed in slightly more detail shortly. UWC is located in the urban setting of Cape Town, which is one of the reasons it is better resourced compared to the other six HBUs (Bozalek & Boughey, 2012), which are located in rural/semi-rural areas.

Table 1.1: Overview of restructured HBUs

Institutions	Date when original institutions were established-i.e. before merger	Merger	Type of university after merger	Total Master's and Doctoral Students enrolled in 2016 / total student headcount*
Walter Sisulu University of Science and Technology = Unitra + Border Technikon + Eastern Cape Technikon	**1976** (Unitra); **1980s** (Border Technikon); **1990s** (Eastern Cape Technikon)	Merged – **2005**	Comprehensive	454 / 28 581 (1,6%) **
University of Limpopo = University of the North (UNIN) + MEDUNSA	**1959** (UNIN); **1976** (MEDUNSA)	Merged –**2005**	Traditional	1460 / 19 843 (7, 3%)
University of Fort Hare + Rhodes University East London Campus	**1916**	Incorporated – **2004**	Traditional	1941 / 13 831 (14%)
University of Zululand	**1960**	No merger	Comprehensive	771 /17 662 (4, 3%)
University of Venda for Science and Technology	**1982**	No merger	Comprehensive	983/ 15 237 (6, 4%)
Mangosuthu University of Technology	**1979**	No merger	University of Technology	0 / 11 588 (0%)
University of the Western Cape	**1960**	No merger	Traditional	2706 / 21 796 (12, 4%)

* Source: (DHET, 2018)
** Master's and Doctoral students presented as % of the total student body.

The 1997 White Paper Three on transformation of higher education laid the foundation for change in terms of the way in which the HE system was to be planned, governed, and funded as a single national coordinated system differentiated by institutional type. One of the main purposes of the mergers was to realign an unjust higher education system. However, some of the HBUs, such as University of Fort Hare and University of Zululand[2], and some of the HWUs, such as Stellenbosch University (SU), Pretoria University (UP), University of Cape Town

[2]University of Zululand did not undergo a merger but was expected to move from being a traditional university into becoming a comprehensive university.

(UCT), Rhodes University (RU), and University of Witwatersrand (Wits), were left untouched in the merger process. The unwillingness of the new government to support mergers of these institutions was that these particular HBUs were seen as viable on their own for serving the majority of the black students in the nearby rural areas. In case of the HWUs, it was argued that the country could not afford to destabilise these particular institutions, because they were responsible for the bulk of the postgraduate and research output in the country, a move that was seen to entrench the privilege of the white institutions (Jansen, 2004; Morrow, 2008) and disadvantage the Black universities that had to go through complex, contentious, and often messy mergers.

Apart from re-aligning the higher education system through mergers, the restructuring of the higher education institutions involved categorisation of institutions into the three different types mentioned earlier, namely, traditional universities, universities of technology (UoTs), and comprehensive universities. The purpose of the categorisation was to create a diverse and differentiated higher education system. As noted in the CHE (2016) review, this reconfiguration of the institutions resulted in the application of the name 'university' across these institutions which suggested that the nature of technikons had to change and therefore to some extent they had to produce some form of research. This was reflected in the research targets set for each type of institutions. While universities of technology were given the lowest target of 0.5 research output units per permanent academic staff member compared 1.25 for the traditional and comprehensive, this was a high target for UoTs, especially when their history is considered (CHE, 2016: 203). There seemed to be an understanding that the new type of universities of technology could simply produce research without necessarily having the capacity to do so. Much of the literature on research production has clearly illustrated that for universities to produce research they need to have postgraduate students, sufficient funding for research, and well-resourced libraries and laboratories, along with qualified academics and supervisors (Musiige & Maassen, 2015; Callaghan, 2015; Snowball & Shackleton, 2018).

The 2016 research output figure indicates that the disparity between university types continues. In 2016, the universities of technologies produced 5.6% of research publication, the comprehensives 20.5%, and the traditional universities 73.9% (DHET, 2018; DHET 2016). In terms of publication output per academic staff members, the five HWUs institutions that were

not affected by the merger (i.e. SU, UCT, RU, UP, and Wits) produced the highest output per capita, ranging from 1.53[3] units per capita to 1.61. The lowest per capita 0.08 to 0.48 was produced by UoTs and some historically black universities that had merged (DHET, 2018).

Having provided an overview of the broad category of Historically Black Universities, and the key research questions that the study aims to answer, I now briefly outline the histories of each of the seven institutions which are the focus of this study.

1.5 A brief overview of the seven HBUs

1.5.1 University of Fort Hare (UFH)

The University of Fort Hare (UFH), classified as traditional university, is the oldest historically black university in Southern Africa. It was established in 1916 as a South African Native College (SANC) to train the African Black population group for employment within their education system and religious institutions. In 1951, the government wanted to have more control over black education and therefore SANC was affiliated to Rhodes University and became the University College of Fort Hare (UCFH) (Boughey & McKenna, 2011). In 1958, the Extension of Education Act resulted in the UCFH being transferred from Rhodes University to the control of the apartheid government (Boughey & McKenna, 2011). The shift meant that the university could only enroll isiXhosa-speaking students (Boughey & McKenna, 2011).

University of Fort Hare is located in the rural town of Alice, in the Eastern Cape Province. At the moment UFH has three campuses: the main campus in Alice, northwest of East London; a campus situated in the provincial capital of Bhisho; and the East London campus which was acquired through incorporation from Rhodes University in 2004.

In 2016, UFH had a headcount of 13831 students. 76% of these students were enrolled for undergraduate degrees, 10% for postgraduate below master's degrees (largely at honours level),

[3] Research output per unit capital is a measurement indicator for the number of research output produced in a South African university. It is calculated by measuring total number of all research output (publications and postgraduate graduations) by university then divide that total by the total number of permanent academic staff from the same university (DHET, 2011).

9% for master's degrees, and 5% for doctoral degrees (DHET, 2018;**)**. The enrolment and graduation rates of doctoral students have significantly increased from 2010 to 2016[4]. The doctoral enrolment rates in UFH increased from 2.2% in 2010 to 5% in 2016 and the graduation rate increased from 15% in 2010 to 16 % in 2016 (DHET 2018). The total doctoral graduates produced in this period increased at a remarkable average annual rate of 12%.

In the same year (2016), the number of permanent academic staff in UFH was 371 with only 43% holding doctoral degrees. The number of permanent academic staff with doctorates increased from 93 in 2010 to 161 in 2016, and the publication output from 142.22 units in 2010 to 244.24 in 2016. The research output per permanent academics also improved from 0.49 units in 2010 to 0.66 units in 2016 (DHET, 2011; DHET, 2018). While this is a significant increase it is below the target unit of 1.25 per academic staff at a traditional university**.** The vision and mission of the university declares the commitment of the university to teaching and research excellence (www.ufh.ac.za/mission)

1.5.2 University of Venda (UNIVEN)

The University of Venda (UNIVEN) is a small, rural-based higher education institution located in Limpopo province. It was established as a traditional university in 1982. In 2002, the University of Venda changed its status from a traditional university to a comprehensive university through the restructuring of the higher education system in South Africa.

UNIVEN is primarily an undergraduate university. In 2016, 89% of all the students enrolled were in undergraduate programmes, 4% at postgraduate level below master's, 4% in master's, and 2% in doctoral programmes. The enrolment of doctoral students has grown in the last six years with 2% enrolment in 2010 and 5% enrolment in 2016 (DHET, 2018).

In 2016, UVIVEN had a total population of 434 permanent academic staff with 35% holding doctoral degrees (DHET, 2018**).** Over the last decade, there has been a significant increase in the

[4] My decision to focus on the period 2010-2016 is purely for pragmatic purposes to allow reflection on particular trends in HBUs in the past few years

number of active researchers and research output. For example, from 2012 to 2013 the active researchers increased from 23 to 190 researchers (UNIVEN Annual report, 2014: 51) and the research publication by 16.4% from 127.87 publication units in 2012 to 148 units in 2013 (UNIVEN Annual report, 2014: 89). However, like many of the HBUs in South Africa, UVIVEN has a small number of active academics who generate the bulk of research output in the university.

1.5.3 University of Limpopo (UL)

The University of Limpopo (UL) was established as a comprehensive university in 2005. This was as a result of the merger between the University of the North (UNIN) and the Medical University of Southern Africa (MEDUNSA). In 2015, the two campuses were split following a review of the merger and MEDUNSA campus became Sefako Makgatho Health Science University which is situated in Ga-Rankuwa Township in Gauteng province. The University of Limpopo (previously the University of the North) is located in the rural area of Mankweng Township Turfloop in the Limpopo province.

UL is predominantly an undergraduate institution that offers a range of professional qualifications at the level of diploma. It also offers a range of degree programmes from bachelor to doctoral level in the faculties, of humanities, management and law, science, and agriculture. In 2016, the University of Limpopo had a total of 19843 students with 12% enrolled in postgraduate qualifications (DHET, 2018). The number of doctoral students has increased with 10 graduates in 2010 and 25 in 2016 (DHET, 2011; DHET, 2018).

In 2016, UL employed a total of 563 permanent academic staff members. There are very few permanent staff members at UL with doctoral degree (DHET, 2018). The publication output of research measured by peer reviewed articles and other accredited outputs have increased from 89.07 units in 2010 to 254.93 units in 2016. The total research output publication per permanent academic was 0.48 units in 2016 (DHET, 2018).

1.5.4 The University of Western Cape (UWC)

The University of Western Cape (UWC) is categorised as a traditional higher education institution. It is situated in Bellville in the Western Cape Province. It was established in the 1960s for the population classified as Coloured during the apartheid era. It gained university status in the 1970s and was able to award its own degrees and diploma. UWC has three campuses: the main campus in Bellville, the dentistry facilities at Michelle's Plain and at Tygerberg, and teaching facilities at Groote Schuur Hospital, Red Cross Children's Hospital, and Lentegeur Hospital.

In 2016, UWC had approximately 21796 students enrolled, the majority being undergraduate students making up 79% of the student body with the postgraduates making 21% (DHET, 2018; DHET, 2016). The enrolment of doctoral students steadily increased between 2010 and 2016. However, the growth rate was relatively low. In 2016, the total enrolment number of the doctoral students was 885 and the annual growth rate was 4% for first-time enrolment entrants, while that of the master's students was 12.5% (DHET, 2018; DHET, 2016).

UWC has a staff complement of approximately 678. The total permanent academic with doctorates was 372 in 2016 (55%) (DHET, 2018). This is by far the highest percentage of academics with doctorates across the HBUs. However, the rate of publication output per permanent academic in 2016 was 0.81 units. This is below the required 1.25 research output per capita set by the DHET for a traditional university such as UWC.

1.5.4 The University of Zululand (UNIZULU)

The University of Zululand (UNIZULU) is a rural higher education institution located in KwaZulu Natal, north of the Tugela River. UNIZULU has two campuses: a main campus situated in rural Kwa-Dlangezwa and a new semi-urban campus in Richards Bay, which was opened in 2008 and dedicated to offering vocational programmes. As part of the 2002 government-led restructuring of the higher education system, the institution was designated to become a comprehensive university offering vocational, professional, and general degrees.

However, a decison on whether or not to merge the institutions was not implemented even after long deliberations which concluded that the status of the institution needed to be retained because it was viable for the majority of the Zulu population in the deep rural area where it is located (Morrow, 2008)

In 2016, UNIZULU had a total enrolment of 17 662 students across its four Faculties (namely, Arts, Education, Commerce, Administration and Law, and Science and Agriculture). Approximately 89% of the enrolments were undergraduate students and 11% postgraduate in 2016 (i.e. in honours, master's, and PhD degrees). While the doctoral enrolment increased steadily between 2010 and 2016, the numbers are still relatively low, as the average overall growth rate was 8.1% (DHET, 2018). In terms of doctoral graduates as a percentage of ongoing enrolment there has been a slight increase from 11.7% in 2011 to 24.2 % in 2016. In 2016, UniZulu had 306 permanent staff members of whom 122 (or 40%) had a PhD qualification. (DHET, 2018)

1.5.6 Walter Sisulu University (WSU)

Walter Sisulu University was established in July 2005 through the merger of the Borden technikon, the Eastern Cape technikon, and the University of Transkei. It is a comprehensive university. It offers tuition on four campuses, Mthatha (which is the main campus), Butterworth, East London, and Queenstown which covers a radius of approximately 1000km. This has implication for governance and management. The university straddles the rural and peri–urban divides of Eastern Cape and attracts student from this catchment area.

In 2016, WSU had a student population of approximately 28581. Out of this 454 were masters and doctoral students. There has been a steady but relatively small increase in enrolment and graduation rates of doctoral students between 2010 and 2016 with 0.12% enrolment in 2010 and 0.20% in 2016 (DHET, 2018).

In the same year, WSU had a staff complement of 571 permanent staff and only 82 (or 14%) of the permanent staff had doctoral degrees. Research publication output remained steady between

2010 and 2016, although significantly very low in terms of government target. Between 2010 and 2016, the university produced an annual average of 48 publication units with the total permanent staff producing 0.08 units per academic and 0.63 units per permanent academic with doctorates (DHET, 2011; DHET, 2018).

1.5.7 Mangosuthu University of Technology (MUT)

Mangosuthu University of Technology (MUT) is located in Umlazi Township, the biggest township in KwaZulu Natal province. MUT was established in 1979 as a technikon to serve the 'township' community of Durban. As part of the national goal of transformation of the higher education landscape, the government changed the designation of MUT from a technikon to university of technology in 2007.

In 2016, MUT enrolled a total of 11588 students in a limited range of undergraduate degree and diploma programmes in the fields of science, engineering, technology, and business management (DHET, 2018). The enrolment of postgraduate students has been low with no masters and doctoral students enrolled to date as they do not have these qualifications on their PQM.

The staff complement in the same year was 201 (DHET, 2018). Only 26 (or 13%) of these academic staff had a PhD qualification. There has been an increase, albeit very small, in the number of academics with doctorates and an increase in research output; although MUT is the lowest producer in this regard. While MUT as a university of technology is expected to contribute towards the production of applied research, the university has produced very little peer reviewed research in the last 10 years.

1.6 Outline of the thesis

Chapter One provides an overview and context of the study. In section one, I broadly discuss the context of historically black institutions in terms of their historical establishment during apartheid and the implication in terms of their core function and the development of their context

in relation to research and postgraduate education in both the pre and post-apartheid era. In the second part of the chapter, I narrow down and provide a brief overview of the seven remaining HBUs in the sector which are the main focus of this study. I argue that these institutions are disadvantaged in various ways partly as a result of their historical background and by the current higher education policy frames. I briefly discuss the current context of each institution in terms of student enrolment and graduation throughputs, staff employment, and research output which clearly indicate the unevenness of the higher education sector, even within this category of HBUs.

Chapter Two presents the conceptual framework of the study. By drawing on the literature, I argue that the role of the university in society has shifted over time and that there is little agreement as to its current role, other than that we are living in an era of super complexity where universities are often expected to attend to multiple and even conflicting purposes. I argue that while there is little agreement in the literature about what a university is for, there is general consensus that research is core to what universities and academics do and that there are markedly different forms of research that a university can produce.

Chapter Three introduces the ontological position underpinning this study. The study draws on Bhaskar's Critical Realism that makes explicit the ontological position of the study. The use of Critical Realism ensured that I moved beyond the description of data or the assumption that the experiences and events in that data represented the 'truth'. I used Archer's theory of Social Realism alongside Critical Realism, both as a meta-theory which provided me with a large-scale account of the social world and as a more substantive theory used in the analysis. Archer's Social Realism entails understanding that the social world emerges from a complex interplay of powers in the domains of structure, culture and agency. Identifying the powers in each of these domains to enable or constrain research development meant moving beyond simple causal relationships, but rather ensured that I identify some of the many mechanisms at play.

The chapter also draws the reader to some of the critiques of Archer's position. By drawing on the critiques I have hoped to indicate the limitations to any position the researcher claims in terms of their ontological conceptions of truth and their epistemological conceptions of knowledge creation, but I have nonetheless argued that the lenses of Critical and Social Realism

have strengthened my ability to make claims by making these philosophical deliberations explicit for my reader.

Chapter Four presents the methodology and methods used in this study to answer the main research question. I first provide an explanation of the choice of the sample site for the study; the methods I used to collect data and the reasons for using the methods. This then leads to a discussion on how the data was collected using multiple methods, and the kind of data that was collected. Thereafter I discuss the process of using Archer's analytical frames of retroduction and abduction to analysis the data. In the last part of the chapter, I reflect on my positionality and the limitations thereof.

Chapter Five, Six, and Seven present the main findings of the study data that emerges from the analysis of the data. The findings are in regards the structural, cultural, and agential conditions enabling and constraining research production in HBUs. Each of these constructs are discussed in each of the three core emerging themes - the conception of research; the discourse of research production, human capital development and knowledge economy; and the nexus between research, teaching and community engagement - discussed in each of the three findings chapters.

Chapter Eight is the concluding chapter of this thesis and a summary of the key findings are presented as the main conditions enabling and constraining research production in the seven historically black universities and the higher education sector in general. This study has shown that there are great pressures on universities to produce research, but that in South Africa we work within a very uneven higher education system. In discussing these findings, I offer some suggestions of how the higher education sector, and in particular HBUs, can try to overcome the constraints of the past and forge possibilities in the future by addressing some of the cultural, structural, and agential conditions shaping their current research environments that has some particular strengths and constraints as well.

Chapter Two: Conceptual Framework

Key Debates on the Role of the University

2.1. Introduction

The purpose of this chapter is to examine the key debates and concepts that are relevant to my study. In Chapter One, I mentioned that my study is driven by an interest to understand and explain the phenomenon of research production in universities in terms of enabling and constraining conditions. In this chapter, I review the literature on research production in universities. My main focus is on key debates on the role of university. I begin the chapter by broadly presenting debates on the roles of a university. I argue that the idea of what a university is for has remained highly contested over the years and that the current universities around the world and in South Africa are expected to undertake multiple functions.

The argument I make in the second section of the chapter is that while research is highly valued and seen to take different forms, given the different purpose it serves, it is highly contested particularly in South Africa. These contestations include: Should all universities engage in research? Should research be a minor or major part of a university's profile? How much attention should be on research compared to other core functions? What kind of research should the university foster and reward – blue sky, local-based, industry-based, or community-based? The last section of the chapter attempts to unpack these contestations.

2.2 Roles of a university

There is no agreement about what a university is for in the wide range of literature on the aims of higher education, nor is there consensus within the discourses of stakeholders. The view that teaching, research, and community service are the main functions of universities has been considered to be simplistic and even this simple format is contested (Kerr, 1991).

Some scholars, like Castells (2001), Cloete and Maassen (2015) and Readings (1996), note that universities have a role to play in promulgating the social values or ideas of society. For example, Readings (1996) noted that, historically, universities served to promote a common national culture or values through ideas. This was the founding role of European theological colleges and universities (Cloete & Maassen, 2015; Graham, 2013). Over the years, the role of producing social values of nation states in these institutions has changed to a more universal role of advancing good citizenship and social justice in societies by developing people who are respectful, caring, and responsible (Graham, 2013; Cloete & Maassen, 2015; Harkavy, 2006). But while some note the formation and diffusion of ideas as one of the main functions of the universities (Cloete & Maassen, 2015), others have argued that universities play a role in ensuring an elite society (Shaplin, 2014; Castells, 2009). Historically, and even today, universities select and educate relatively small group of elite people to contribute to the political, economic and social development of this group in society (Castells, 2001; Brezi & Crouzet, 2004). In recent years, there has been more focus on mass education rather than elitism but participation in higher education remains the preserve of the few, especially in a country like South Africa.

Beyond these views on the role of the university as preparing a particular kind of person, is the view that universities function to train a skilled labour force (Graham, 2013; Badat, 2009; Castells, 2001). Professional and vocational training has been one of the basic functions of the university throughout much of its history. With the industrial revolution, there was a need for a trained labour force with particular skills; hence, the proliferation of the professional university, elements of which persist in institutions focusing on particular professions (e.g. medicine, law, accounting, and engineering). In the 21st century, science has been a major driver in economies and universities' roles have expanded to include focus on innovations in science and technology (Cloete & Maassen, 2015).

A central goal of a university around the world is teaching and learning at undergraduate level. In South Africa, even the so-called 'research intensive universities' are predominantly teaching and learning institutions. It is, therefore, understandable that there would be tensions around the different beliefs about the nexus between the university's teaching and research roles**.**

While these briefly-stated views on the multiple roles of the university help to illuminate the evolution over time, there remains little agreement on the specific roles and functions of universities. In today's world, universities are expected to perform multiple functions and roles. The idea of the 'multiversity' was hailed by Clark Kerr (1991) as an important institutional innovation of the twentieth century and speaks to the complexity of the modern university. For Kerr (1991), universities have shifted from their traditional purposes of teaching, research, and service to combining multiple purposes of higher education in new ways.

Despite the multiple functions of universities, it can be argued that governments around the world presume an economic role for the university (King, 2004; Boulton & Lucas, 2008; DHET, 2013a). In many countries, discourses in policy are dominated by analyses of ways in which universities can provide immediate economic benefits (Boulton & Lucas, 2008). South Africa is no exception, as higher education policies are increasingly dominated by discourses around the economic role and function of higher education (Badat, 2009). For example, the Education White Paper 3: *A Programme for the Transformation of Higher Education* (DoE, 1997: 1) states that one of the purposes of higher education is:

> To address the development needs of society and provide the labour market, in a knowledge-driven and knowledge-dependent society, with the ever-changing high-level competencies and expertise necessary for the growth and prosperity of a modern economy. Higher education teaches and trains people to fulfil specialised social functions, enter the learned professions, or pursue vocations in administration, trade, industry, science and technology and the arts.

The economic function of the university has become more critical with the idea of the 'knowledge economy' and the increased recognition that universities play a central role in economic growth and competitiveness through the production of new research and highly educated personnel (DHET, 2013a; Brennan et al., 2004). However, the idea of the university's primary contribution being to the economic development of society through skilled professionals and production of knowledge to address the immediate economic need of society has been challenged by some scholars, such as Collini (2012), Higgins (2014), Allais (2014), and McArthur (2011).

McArthur (2011), for instance, argues that the problem with the conception of the university's role in terms of economic benefits is the narrowness of such a conception which assumes that higher education primarily serves the demands of employment and industry. Such an assumption potentially leads to the university being blamed for the economic failure of nation states (Allais, 2014). While the university can indeed play a significant role in the economic development of a country, Allais (2014) contends that universities form part of multiple complex social structures that support the economy. Furthermore, focusing only on the economic purpose of university undermines the inherent function of the university as an important free space for development of humanity's critical and creative ability (Collini, 2012; Higgins, 2014).

Thus, the development of intellectual critical citizens, production of basic research, provision of commentary on social issues, participation in community engagement, teaching specific vocations and professions to undergraduate students, teaching in formative ways, and so on, are among the many different functions that stakeholders in higher education around the world expect different types of universities to perform. The list of the roles and functions is getting longer in the knowledge economy and in the current super complex world in which we live (Barnett, 2000). While some universities are able to clearly indicate their specialisation, others are unable to draw clear boundaries around their focus areas, especially universities that rely fully on government or industry funding.

In Africa, there are additional complexities where production of knowledge has been underfunded and underprivileged for many years. Additionally, colonialism has left many countries with poor higher educational base for the knowledge economy, and in order to develop the continent, there is a need to focus on higher education and there is an expectation that universities will play these many roles.

In South Africa, given the legacy of the apartheid regime, the White paper 3 of 1997 set a number of national aims that higher education was expected to fulfil, such as its role in the national transformation project in terms of both economic and social redress (DoE, 1997; DHET, 2012; DHET, 2013a). As such, universities are expected to position the country to compete globally through the production of knowledge and knowledge workers for the knowledge-based economy, while at the same time there is the expectation that universities should attend to issues

of social cohesion and injustices of the past. This has been spelt out in the Education White Paper 3 (DoE, 1997: 1): *A Programme for the Transformation of Higher Education in South Africa* as follows:

- To meet the learning needs and aspirations of individuals through the development of their intellectual abilities and aptitudes throughout their lives,
- To address the development needs of society and provide the labour market, in a knowledge-driven and knowledge-dependent society, with the ever-changing high-level competencies and expertise necessary for the growth and prosperity of a modern society,
- To contribute to the socialisation of enlightened, responsible and constructively critical citizens, and
- To contribute to the creation, sharing and evaluation of knowledge.

Nonetheless, despite this lack of consensus as to what a university is for, or the role the university has to play in the national agenda in South Africa, there is general agreement that the research role is a core function. The next section will thus focus solely on this role of the university.

2.3 The research role of the university

Universities produce research as one of their key functions in a complex world (Leathwood & Read, 2013; Imenda, 2006; DoE, 1997; DHET, 2012; Badat, 2009; CHE, 2004, Altbach et al. 2012). The idea of the university playing a key role in research production can be traced back to the earliest universities, many of which foregrounded knowledge production over teaching. For instance, the University of Karueein in Morocco (859), the Al-Azhar University in Egypt (970), and the University of Bologna in Italy (1088), amongst other early institutions, all had a strong commitment to knowledge creation, usually in service of a particular religious position. The vision of Wilhelm von Humboldt which led to the foundation of University of Berlin, Germany, in 1810, was based on the idea of an institution that pursued excellence and was free from government interference in terms of its practices of teaching, leaning, research, and management,

and had strong interest in practical application of knowledge. This vision still persists to date, especially in traditional universities around the world.

In South Africa, the role of the university in terms of knowledge production is a recurrent theme in recent national policy documents on higher education, namely *The 2013 White Paper on Post -School Education*. White Paper 3, for example, states that:

> The production, advancement, and dissemination of knowledge and the development of high-level human resources are core functions of the higher education system. Research plays a key role in both functions. It is the principal tool for creating new knowledge. The dissemination of knowledge through teaching and collaboration in research tasks are the principal tools for developing academic and research staff through postgraduate study and training (DoE, 1997: 31).

Furthermore, university research forms a major component of the national research and development system in most countries, including South Africa, and universities contribute a significant percentage of the national basic and fundamental research (CHE, 2004; Etzkowitz & Leydesdorff, 2000; Godin & Gingras, 2000). Such research is aimed not only at increasing human knowledge and understanding, but also underlies some of the major innovations that have taken place in many parts of the world in the last two centuries (Imenda, 2006; Graham, 2013). Thus, production of basic research in a university has two benefits: (a) it creates the foundation for major advances in areas such as agriculture and mining**,** health and medicine, communication and technology, and state security, and (b) through its research-based teaching and postgraduate programmes, it educates individuals to become scientists and innovators.

Imenda (2006: 258) notes that the dual functions of teaching and research production in the university have not changed 'over the centuries and millennia'; rather what has changed is the way in which these functions have been conceptualised and supported by the dominant funders of university education – state, industry or commerce. While in the past, the functions were generally conceptualised in terms of production of research for its own sake (or basic research), and of development of human knowledge and understanding through teaching, in the current era

of the knowledge economy, the conceptualisation is more focused on production of profitable (or applied) research and the training of a highly skilled labour force.

2.3.1 The discourse of research production, human capital development, and the knowledge-based economy

In the era of the so-called 'knowledge economy', production and exploitation of knowledge and the development of highly skilled manpower is seen as key to economic and social development. Kaur and Lakhwinder (2016: 205) citing Karahan (2012) define a knowledge-based economy as an economy that is,

> capable of knowledge production, distribution and use, where knowledge is the founding stone for growth, wealth-creation and employment and the human capital as embodied in human beings contributes to creativity, innovation and the generation of new ideas with the help of technologies.

In this knowledge-driven economy, research is highly valued and seen as the driving force for economic productivity and global competitiveness (Chen & Dahlman, 2005; Powell & Snellman 2004; Castells, 1994). Universities are then seen as key players in research production, dissemination, use and the development of human capital. These ideas have dominated policies both at national and institutional levels in emerging economies such as South Africa as well as in developed economies such as those in Europe and the USA. Studies have shown a close link between the levels of knowledge produced in a university and national innovation levels (see for example Karagiannis, 2007; Hwang & Gerami, 2007; Bacovic & Bazovic, 2010). Moreover, Powell and Snellman (2004: 201) point out that a 'key component of a knowledge economy include[s] a greater reliance on intellectual capabilities than on physical inputs or natural resources'. Having a well-educated and skilled labour force that is able to meet both the demand of professional and non-professional careers especially in developing countries is seen as critical for the development of national economies. Furthermore, current demands in the job market are said to be more knowledge intensive and therefore the capacity of humans in knowledge production, and information and technology is highly valued for innovative purposes (Foray,

2006; Stehr, 1994; Leydesdorff, 2006; Conceicao & Heitor, 1998). Conceicao and Heitor (1998) argue that a well-trained workforce is a prerequisite for adopting new technologies as well as ensuring technological development and innovation takes place. The allure of such ideas is persuasive and has led to a strong conceptualisation of universities as key producers of knowledge workers that are able to contribute to a knowledge based-economy.

However, the assumption of a causal link between well-educated, skilled manpower and economic development has been critiqued by Vally and Motala (2014: 30) as a misframing and as shaped by a global discourse that privileges 'education', its commodification, and marketization. The 'idea of knowledge economy' underemphasises the social role of education. Vally and Motala point out that the simplistic equation that skills lead to employment and thereby economic development is clearly flawed. In many cases a rapid increase in postgraduate education and research publication has occurred alongside increasing unemployment. In response, instead of challenging the equation, universities are simply told that they are not providing the 'right' kinds of skills. This logic leads to an increased instrumentalism in understanding of the universities' role in knowledge production and a conceptualisation of the university as being handmaiden to industry.

Instead of taking one sided view of human capital development for economic development, Higgins (2013) calls for holistic education that would include development of aspects of critical reflection and social responsibility among students in the universities. This, he argues, would provide an antidote to the understanding that universities serve the private good through improved employment opportunities for individual graduates and serve private goods through providing commodified knowledge for industry.

Despite such concerns, the dominant discourse is that research produced in universities is central to contributing to the government, industries, and business (World Bank, 2002). This interaction between the institutions, government, and industries, or what is commonly referred to as the triple helix orientation (Etzkowitz & Leydesdorff, 2000), in in terms of the production of useful or relevant knowledge as opposed to focusing on the role of teaching and other core activities. Alexander (2014) has argued that this kind of thinking can be constraining for it supports a small percentage of those able to access higher education and the industry and, therefore, rather than

addressing the challenges of inequality and social injustice in the society, it exacerbates these challenges**.**

The focus on innovation and research primarily for economic growth is also critiqued for positioning the university as being in service of hyper-capitalism in an era of ecological degradation (Giroux, 2002). It can be argued that in a knowledge-based economy, universities are seen as sources of marketable knowledge for their consumers – the students, business, or the state – and that knowledge has become a product that can be repackaged to respond to shifting consumer needs and to provide the immediate gratification demanded by the market place (Boulton & Lucas, 2008; Shore, 2010; Wright & Rabo, 2010). This conception, which arguably underpins the global principle of the market economy, is more focused on meeting the immediate but not necessarily the long-term needs of society and the individual. It is a perception that poses major challenges to traditional conceptions of knowledge and basic research (Giroux, 2002; Salter & Tapper, 1993). This particular way of conceptualising knowledge is arguably increasingly dominant in the South African higher education policy documents (DoE, 1997; DHET, 2012; DHET, 2013a). The idea of developing doctoral students, as the next generation of knowledge producers and innovators, has also been associated with the production of research especially in emerging economies like South Africa where there are very few doctoral graduates. It is people with doctoral qualifications that are seen to be in a better position to produce research (Academy of Science of South Africa [ASSAf], 2010). They are also seen to have a good chance of working effectively and innovatively through acquired competence and knowledge (Wheelahan, 2010; Taskforce, 2000) and, therefore, more likely to contribute towards building a stronger knowledge-based economy.

A generally held view in South Africa is that if the country is to build a knowledge-based economy, there is a need for a drastic increase in the number of doctoral graduates (DHET, 2013a; ASSAf, 2010; DST, 2008). The DST (2008) acknowledges that building a knowledge-based economy will require around a five-fold increase in the current number of PhD graduates (across race and gender) in a period of 10 to 20 years. Such a move is not only viewed by government as an effective way of meeting global economic needs, but also of meeting the local development needs of a transformed democratic South African society (CHE, 2004; DoE, 1997). In South Africa, it is believed that real democracy will be achieved by equipping learners with

skills that will enable them to acquire new knowledge and motivation to learn and continue expanding knowledge through research (CHE, 2004). It is believed that it is at least in part through research that citizens will be able to participate and engage effectively in democratic issues and attend to societal problems (CHE, 2004). However, it could be argued that one of the challenges with the current policy provision in research and postgraduate output in higher education is that it is driven by government's short term goal of meeting the economic needs of the country, rather than advancing the long-term development of a critical and creative citizenry, which is able to serve as an important critic of social structures and be innovative on a long-term basis (Cloete & Bunting, 2012).

The idea of a knowledge economy has also been associated with the emergence of a globalised homogenised standardisation. In particular there has been a standardization aimed at defining academic quality at national and international levels in terms of excellence (Paradiesi & Thoening 2013). The quest for excellence and recognition, evaluated by international standards of performance in research output could have unintended consequences where institutions may skew their activities to join the top league. In the South African context, the drivers of research priority such as government policies on funding and especially criteria set to measure output have a bearing on the knowledge production.

While research holds a high status, and many agree it should be core to universities (Leathwood & Read, 2013; DHET, 2012; Cloete & Maassen, 2015; DoE, 1997), even in this area there are contestations. Should all universities engage in research? Should research be a minor or major part of a university's profile? How much attention should be on research compared to other core functions? What kind of research should the university foster and reward – blue sky, local-based, industry-based, or community-based? These are amongst the many contestations about the form and function of research in the university.

2.3.2 Research as contested

There is an argument by some scholars and stakeholders in higher education that all universities should engage in some form of research (Price, 2014; Castells, 2009; DHET, 2013a). Castells

(2009), for instance, argues that there is a need for all universities to develop some nuclei of research linked to the needs of the society and economy within which they are located, as well as to engage in global networks in production of research and innovation. In South Africa, the White Paper for Post School Education (DHET, 2013a: 30) states that 'in a differentiated university system it is unrealistic for all universities to have similar research goals. However, all universities must be research active'. Similar views are given by Price (2014), who argues that all universities need to engage in some form of research, but that a small number of universities should be supported to become world-class research universities, the kind of universities that undertake multiple functions ranging from teaching, research, and professional training, to pursuing local, national, and international agendas (Chirikov, 2013; Altbach, 2013). This model is already applied in developed countries, such as Germany, and in emerging economies, such as China (Price, 2014; Chen, 2012), and has been advocated for in the African context in a recent higher education summit held in Dakar, Senegal (Cloete, 2015). Price (2014), Cloete and Maassen (2013), and Cloete (2015) argue that, if the African continent is to compete at a global level, there is a need for such strategic moves to be made.

Price (2014) acknowledges that such a move will lead to selected universities being funded at globally competitive levels, which may be at the expense of other universities in a country. In the South African context, such selective funding may lead to tensions as it may inevitably favour Historically White Universities (HWUs) over Historically Black Universities (HBUs) and of traditional universities over other types. The potential for such differentiated research funding to reinforce the racial divides of apartheid have made institutional differentiation along any lines, including those of research, a highly charged issue in South Africa and have made it unlikely to be a strongly enforced policy in the near future (Singh, 2008).

While this study focuses on activities and processes in HBUs related to research, research does not exist separately from the other functions of the university such as teaching and community engagement. These functions have increasingly been associated with particular institutional types in the United Kingdom (UK) and United States of America (USA). In South Africa, there is an understanding that some of the institutional types should only engage in research and postgraduate education in certain key areas rather than a goal at institutional level (DHET, 2014) Such institutions, which largely enroll undergraduates, are expected to focus mainly on teaching

and learning because this is where their strength is and that is what the country needs (DHET, 2014). However, across the sector, universities have been experiencing academic drift (Kraak, 2006), whereby they have similar research goals and increasingly focus on postgraduate education. This is not surprising given that the DHET policies do not spell out what the differentiation of universities into the three types of traditional universities, universities of technology, and comprehensive universities (as discussed in Chapter One) should look like. Furthermore, the 'blunt' funding formula strongly supports research, so it is understandable that all universities are driven to grow their research output.

Despite this growing focus on research activities across all universities, all twenty-six public South African higher education institutions remain mainly teaching and learning institutions (DHET, 2013a**),** in that they have more undergraduate students than postgraduate students and that very few academics are classified as researcher only. Much of the concern in the literature on higher education has been on poor retention and throughput rates at undergraduate level. There are big cohort studies that have been undertaken at undergraduate level (see for example DoE, 2008; Scott et al, 2007) which clearly indicate a concern about teaching and learning. There is thus somewhat of a tension between the focus on teaching and the focus on research across the sector.

Alongside this tension between a focus on teaching and research comes the need for universities to attend to a wide variety of 'new' demands. The inclusion of community engagement as a core function of the university (CHE, 2004) means that institutional policies, funding, and processes have been developed to this end. While some institutions have nurtured the idea of 'engaged research' whereby the research-community engagement nexus is particularly strong, these activities at times seem to be in tension.

Another tension relates to the *kind* of knowledge that universities should foster or reward. In South Africa, production of the different kind of knowledges has to some extent been associated with specific institutional types. There are three types of universities which are expected to serve different purposes, as was discussed in Chapter One. Universities of technology (UoTs) are expected to offer mainly vocationally-focused undergraduate diplomas and a limited number of master's and doctoral programmes; traditional universities are expected to offer various

formative and professional undergraduate degrees, as well as postgraduate honours, master's, and doctoral degrees; and the comprehensive universities are intended to offer a combination of UoT and traditional university programmes (DHET, 2012).

The CHE (2004) notes that the three types of universities presume different kinds of research; for instance, the universities of technology are intended to focus more on applied research which is influenced by their purpose of meeting the practical needs of the society and training highly skilled professionals to apply knowledge specific content. There is a need for applied knowledge in a country with such clear social ills and environmental problems like South Africa, but it is also important to have abstract (or theoretical) knowledge, because it

> allows us to imagine worlds that do not yet exist and to move beyond the contexts we know to those that the powerful knowledge allows us to imagine. It is powerful, abstracted knowledge that allows us to see beyond the problems of our context and to posit other worlds and other ways of being (Boughey & McKenna *forthcoming*).

Additionally, if undergraduate students are never given access to abstract knowledge, then it can be difficult to develop a strong research agenda (Young & Muller, 2013; Boughey & McKenna, *forthcoming*).

The traditional universities are intended to be more research focused universities, as indicated by the number of postgraduates enrolled and the amount of research produced, and they are expected to produce mainly basic (or theoretical) knowledge, while the comprehensive universities are expected to serve a combined research purpose (CHE, 2004). As noted by Barnett (2000), in the super complex world where we are living, it is necessary for the university system to produce both applied and basic research. Production of applied research that is innovative would contribute to the socioeconomic development of a country and its competitiveness in the global economy, while free inquiry in theoretically-based research is essential for human growth and development and the enhancement of democracy (Wheelahan,

2010; Graham, 2013). Therefore, there is a need to ensure that both applied and blue-sky research[5] is enabled. This study is concerned with exactly how such enablement occurs.

Given that the category of 'Historically Black Universities' intersects with the differentiation of type into traditional, comprehensive and technology universities in South Africa, many of the complexities as to which kind of knowledge is to be prominent in an HBU is made more complex. It is also important to note that both the categories of Historically Black University and university of technology were constrained in their development of research productivity by the historical functions and relationship to the State, as discussed in Chapter One.

There are thus a number of ways in which research is a contested activity within the South African University. The uneven histories of our institutions have meant that some universities have a much stronger knowledge base from which to work in terms of physical infrastructure, funding availability and human resources. These histories have also influenced the extent to which research is valued and integral to the institutional culture. The kinds of knowledge different kinds of institutions are expected to produce also vary, though there is little explicit policy guidance in this regard. Furthermore, the range of expectations on our universities has led to tensions arising between research and teaching and learning and community engagement, among other issues.

2.4 Conclusion

This chapter reflected on the key debates round research role of a university. The key argument of the chapter is that there are a number of competing activities that current universities need to juggle; however, research is considered as one of the core functions of the universities.

Chapter three will introduce the theoretical framework that informs the study.

[5] Blue sky research is scientific research that retains a deep coherence to theoretical framework. The research is driven by curiosity to know and understand the social or natural world but not by innovation or need to solve certain problems. The term sky blue research is used interchangeably with the terms such basic research, fundamental research or pure research.

Chapter Three: Theoretical Framework
Critical Realism and Social Realism

3.1 Introduction

Every research project brings assumptions about the nature of truth underpinning. In qualitative research, it is particularly important to spell these out for the reader. Evaluations of trustworthiness of the data analysis and validity of the findings are undertaken at least in part according to the ontological premises of the study. Spelling out the ontological position of the study is also necessary as research design decisions need to be aligned to this position. This chapter, therefore, outlines the larger 'theory of the nature of the world' which underpins this research, which is Critical Realism. The chapter then moves to unpack the 'theory of the nature of society' which underpins this research, which is Social Realism.

3.2 Bhaskar's Critical Realism

Bhaskar's Critical Realism is a metatheory that is useful in understanding the relationship between the real world (roughly put, its ontology) and our knowledge of the world (roughly put, the epistemology) (Bhaskar, 1978). The ontological claim of Critical Realism is that there is a real world that exists independently of our experience or our human knowledge (Sayer, 2000). For Bhaskar (1975, 2008), scientific enquiry is made possible by the existence of this world which he refers to as intransitive object of the world.

Bhaskar (1998) draws a distinction between the intransitive and the transitive objects of knowledge. He defines intransitive object of knowledge as that which is not produced by people, for example, 'gravity of mercury, electrolysis or light propagation' (2008: 10). This real world exists regardless of whether human beings exist to know about it or not (Bhaskar, 2008). In contrast, the transitive refers to knowledge that is produced by people in the form of 'facts, theories, paradigms, models' and so forth (Bhaskar, 2008: 10). To be able to understand phenomena in the social or natural world, Bhaskar (2008) emphasises the need for understanding

the intransitive object (unobservable reality) that is responsible of generating the observable events and the experiences thereof. The generative mechanisms and causal powers or tendencies exist independently of human knowledge (which is transitive). In other words, generative mechanisms are the objects of scientific thought and are not reducible to our experiences, ideas, beliefs, and theories or the events they generate.

Therefore, from a critical realist position, the objective of research is to move beyond the observed and experienced phenomena of study to try and get to the level of that which is unobservable and from which the phenomena emerge. My study is an attempt to identify the mechanisms that enable and constrain research production in universities. Critical Realism argues against conflating what can be observed or our experiences, ideas, and theories with the reality from which they emerge. Critical Realism proposes instead separating them to allow identification of the real mechanisms that enable and constrain what emerges as events and experiences in an object of research being studied.

This kind of understanding of reality is contrary to the empiricist ontological view of the social world. The empiricist assumes that the social world is composed of that which can be observed, predicted, measured, or quantified and therefore research is about discovering, making sense of, and explaining this. The positivist empiricists, who make this claim, assert the independent existence of the world, but reduce it to records of constant conjunctions of observable events (Danermark, Ekstrom, Jakobsen & Karson, 2002). Thus, our understanding of the world is reduced to our own experiences of this world.

A counter viewpoint to the empiricist is that of the constructivist. The constructivist is concerned with the meanings of the world made by people. There is little or no distinction for the constructivist between our multiple accounts of experiences and the causal mechanisms of those experiences. For the constructivist, to speak of a real objective world is naïve and meaningless because all that exists is our constructions from our different perspectives and standpoints.

Bhaskar (1998) argues persuasively against taking either the positivist empirical or the constructivist position. This is because both positions conflate what is (ontology) with what can be known (epistemology). There is thus no difference between knowledge of reality and reality

itself. These positions, therefore, commit what is known in Critical Realism as an error of epistemic fallacy. They limit understanding of reality to our experiences, practices, ideas, and theories (subjective world) or to that which can only be observed through our senses (the objective world). For Bhaskar (1978, 1979, 2008), reality is intransitive; it exists independently of human knowledge, and it is stratified or layered. The idea of a layered reality is a complex one, but it allows us to separate our knowledge of the world from the world beyond our understanding.

3.2.1 Critical Realism: a layered ontology

Bhaskar (1978: 56) argues that reality consist of three distinct layers of the *Empirical*, the *Actual* and the *Real*. The layered critical realist ontology, adopted from Case (2013:35), is illustrated in **Table 2.1** below.

Table 2.1: Critical realist ontology

Level	Referring to
Empirical	Subjective experiences
Actual	Objective observations
Real	Mechanisms that underpin actual observations and empirical experiences

Source: Case J (2013:37)

What is understood as *Real* is constituted by the underlying generative mechanisms (Bhaskar, 2008). These are the inherent properties in an object of study that act as causal forces that produce events and experiences at the levels of the *Actual* and *Empirical*. The mechanisms exist whether we have knowledge of them or not. They are intransitive and relatively enduring (Bhaskar, 2008). It is from the interplay of active mechanisms at the level of the real that the other two layers emerge.

In contrast to the layer of the *Real*, the layer of the *Actual* is transitive and relates to events that occur in the world. These events emerge from the interplay of mechanisms at the level of the *Real*, and they occur regardless of whether they are observed by humans or not (Bhaskar, 2008).

The layer of *Empirical* is transitive as well and comprises experiences of what actually happens or what is understood by people (Bhaskar, 2008). A single event at the level of the *Actual* may be experienced in multiple ways. The primary purpose of research as framed by Critical Realism is to explain the various understandings of the events at the level of the *Actual* and experiences at the level of the *Empirical* by identifying the multiple causal mechanisms at play in the realm of *Real*.

The layers are analytically distinct but subsume each other. The layer of the *Real,* therefore, includes the other two layers. For critical realists, perceptions and events emerge from the interplay of complex underlying mechanisms at the level of *Real* and take place in an open system (Bhaskar, 1975). An open system, as opposed to closed systems, is described by Danermark et al. (2002:206) as one where multiple generative mechanisms operate in combination with each other which makes it difficult to anticipate the outcome that might emerge. Closed systems are created in various disciplines in order to limit the number of variables at play in the measurement of a particular phenomenon. A laboratory, for instance, might be a closed system, where the temperature of a room is carefully monitored along with other identifiable variables. There are debates about the extent to which researchers can ever ensure that the system is entirely closed (Danermark et al., 2002) but certainly in research in the social science such as this study, it would be impossible to even try to list, control, and measure all the mechanisms that might be at play in the events and experiences captured in the data.

In using Bhaskar's layered ontological approach, I seek to move beyond various interpreted experiences of events (at the *Empirical* level) that are presented in the data sets and move beyond the common sense understanding of what enables and constrains research production to identify the underlying mechanisms from which these understandings, experiences, and observable events of research production emerge in the institutions.

Bhaskar further identifies another form of stratification within the realm of objects themselves where causal powers at higher levels are seen to emerge from those at lower levels. The concept of emergence in critical realist ontology is critical to understanding relations of causal mechanisms. The term refers to how the interaction of two or more objects gives rise to new phenomena that cannot be reduced to its constituents or its properties and power (Archer, 1995; Sayer, 2000; Sayer, 2006). Once the new phenomenon emerges, it has a degree of autonomy from the prior objects from which it has emerged and can 'exert independent causal influences in their own right' (Archer, 1995: 14).

To elaborate this argument, Sayer (2006: 119) uses the example of the properties and power of water to extinguish fire. He argues that the power of water to extinguish fire cannot be reduced to its properties of oxygen and hydrogen because both are highly flammable. Similarly, it cannot be assumed that people fight because of their human nature. Such assumptions fail to recognise the complexity that surrounds people fighting or electing not to fight. The implications of the understanding of reality in this study as emergent is that explanations of the social reality of research production in universities, as in the case of this study, can be researched from a wide range of complex underlying intransitive mechanisms.

However, Critical Realists not only recognise and acknowledge the intransitive nature of reality, they also acknowledge the transitive nature of knowledge. Bhaskar (1998: 17) argues that the production of knowledge is a social activity of human beings and 'thus a social product and fallible'. Bhaskar links the transitive and intransitive object of knowledge by making claims about the epistemic relativity of science, the fact that knowledge is always historically and socially located, without losing the ontological dimension. While reality is seen to be realist, searches for reality are subject to epistemic relativism. Our knowledges emerge from the norms, values, biases, and prejudices of society. The ways in which knowledge is produced and legitimated varies extensively in different historical times and geographical spaces. Knowledge is, thus, acknowledged to be partial and fallible and always open to critique and possible change.

The idea of epistemic relativism does not, however, imply that any knowledge views or theories are deemed valid. Critical Realists make reasoned judgement to choose one belief, view, or theory over others (Hartwig, 2007). This process is referred to by Bhaskar as 'judgmental

rationality'. Archer, Collier and Porpara (2004) argue that judgmental rationality allows us to discuss our claim about reality to arrive at a reasoned, though provisional, judgement about what reality is objectively like, and it may be that some judgements may be objectively better than others. This idea of judgmental rationality indicates that we have to think about our judgements and having made a choice we need to be clear why we chose that particular belief and claim about the reality above other beliefs or claims. This protects our research from the impasse of much postmodern research whereby any form of knowledge can potentially be legitimated if it is seen to be worthwhile by any individual. It also avoids the critique of constructivism whereby if all knowledge is simply personal understanding and is subject to constant change, there is no point in anyone undertaking research and attempting to capture it on paper for the reader. But, while judgmental rationality insists on the researcher finding the strongest possible account for the emergence of the phenomenon, it does not do so as if this is a neutral project. The 'critical' in Critical Realism entails an understanding of the social nature of knowledge production and a requirement to constantly consider how positions of power and interest serve to delimit what gets researched and how it is researched.

Further, the use of methodological processes, referred to by Bhaskar as retroduction and abduction, helps in arriving at a more rigorous study. Retroduction is a 'thought operation involving construction of basic condition for anything to be what it is' (Danermark et al., 2002: 206). This is to ask the question: What must the world be like for this phenomenon to have emerged as it has? Abduction refers to 'inference or thought operation, implying that a particular phenomenon or event is interpreted from set of general ideas or concepts' (Danermark et al., 2002: 206). This is to posit explanations for events and experiences and to test them for explanatory value. Both processes seek to identify the mechanisms that are not directly observable, but which give rise to the observable events and experiences. These can then be subjected to judgemental rationality with regard to claims of competing explanations. These two concepts are unpacked more in the analysis Chapter Four (section 4.5).

Bhaskar does not explicitly explain the twin concepts of 'critical' and 'realism' in his context of critical realism theory. While in his book, '*A Realist Theory of Science'* (1975) it can be inferred that he defines realism as the belief that there exists a world that is independent of our knowledge but the notion of critical is barely explained. However from his later book the, '*The*

Possibility of Naturalism: A Philosophical critique of the contemporary human science' (1979), he seemed to have adopted Kant's meaning of critical philosophy which suggests that idea that the notion of critical tend to involve an emancipatory approach in social science. By allowing us to account for multiple experiences of the world, the theory is critical in acknowledging the varied nature of lived experience. By directing us to identify causal mechanisms from which such multiple experiences emerge, Critical Realism provides us with the tools necessary for bringing about social change.

Critical Realism provides us with a broad understanding of the world and is used as an underlabourer in this study because of its role in clearing away certain ontological and epistemological deliberations. By providing clarity as to the nature of truth and the concept of knowledge in the study, Critical Realism ensures that the focus of the study is on moving beyond the experiences and events captured in the data to the identification of causal mechanisms. However, it does not provide much understanding on the ways in which mechanisms interact to produce events and experiences in the social world, nor does it provide clear methods by which to analyse the social world. For this, I turn to Archer's Social Realism.

3.3 Archer's Social Realism: the ontological stratification of the social world

Archer (1995, 1996, 2000, & 2007) is a realist and is thus concerned with explaining social phenomena in terms of their underlying mechanisms. She is particularly concerned with how experiences and events emerge in the social world, which she describes as constituted by structure, culture and agency. She (1995, 1996) argues that social practices (such as research production, in the case of this study) are conditioned by pre-existing structures, cultures, and agency at the level of the real. Structure, culture, and agency each possess their own powers and distinctive properties which are relational to each other (Archer, 1995), that is Structural Emergent Properties (SEPs), Cultural Emergent Properties (CEPs), and People Emergent Properties (PEPs). The relationship between emergent properties of agency with those of structure or culture signifies two aspects of social life according to Archer. Archer (1996) argues that any particular cultural system (ideas, beliefs, intentions, and so on) and social cultural dynamic (or coherence among people) do not function independently of one another; they are

mutually influential but they are required to be distinguished by temporarily separating them in order to identify the emergent powers of each entity which is activated and leads to what can be observed as events and the experiences that form social practices. In other words, the role of SEPs, CEPs, and PEPs in constraining or enabling events and mechanisms from emerging are always simultaneously at play. But the researcher needs to disentangle the various active mechanisms if we are to make sense of the emergence and if we are to be able to consider ways in which change can be brought about.

The identification of the powers and properties of structures, cultures, and agency at play at the level of real is crucial in this study in understanding the generative mechanisms from which the events and experiences of research production emerge in universities. A number of scholars have argued for the need to explore the relationships between people (agents) and parts (structures and cultures) in order to identify the different mechanisms at work that leads to events and experiences in the social world (Archer, 1995; Ashwin, 2008; Case, 2015; Motshoane & McKenna, 2014). Before considering in more detail how I can distinguish between structure, culture, and agency in the analysis through what Archer refers to as 'analytical dualism', I first need to discuss the concepts of structure, culture and agency in terms of how they are conceptualised in the literature.

3.3.1. Structures

Structures refer to material resources, to recurring patterns of social behaviour, or to the interrelationship between different elements of society around the distribution of these (Archer, 1995). At a macro level, this can refer to social stratification (like gender, class, race and so on) or social institutions (like the HBUs and the state); at a micro level, it refers to networks between individuals or organisations (like committees, policies, units, curriculum, and so on) (Archer, 1995).

This kind of understanding of structures is not the same as Giddens' notion of structures as virtual which therefore only become real when instantiated by people or culture. For Archer (1995), structures, such as historically black institutions, pre-exist and are independent from the

current people who operate within them. People enter into pre-structured contexts and confront social structures which are 'not their own making' but products of the doings of previous agents. Thus, the current agents are not responsible for the present social structures although the structures are dependent on their actions to change or to be reproduced (Archer, 1995).

The structures can constrain or enable the actions that the current agents can take. This is because structures possess causal properties and powers which are relatively enduring (Archer, 1995). For example, a lecturer who takes up a lecturing job does so within a university context (HBU in the case of this study) that pre-existed him/her. While s/he may bring her own agency in the form of certain expectations, ideas, and ambitions, s/he will be enabled or constrained in achieving them by the structures, such as the institution's policies and processes. The enablements and constraints of structures will occur alongside those of other agents, such as colleagues s/he is joining and by culture, to which I now turn.

3.3.2. Culture

Culture refers to the values, ideas, theories, beliefs, perceptions, or intentions - all things that the human mind can comprehend (Archer, 1996) and 'are parts of societal propositions that are not easy to change' (Behari-Leak, 2015: 45; Archer, 1995). Cultures are manifested as discourses (Fairclough, Jessop & Sayer, 2002; Archer, 1995). Discourses are understood to be:

> …systematically organised sets of statements which give expression to the meanings and values of an institution. Beyond that, they define, describe and delimit what it is possible to say and not possible to say (and by extension – what it is possible to do or not to do) with respect to the area of concern of that institution, whether marginally or centrally (Kress, 1989: 7).

In this study, I understand discourses to have real effects in the world and thus to function as mechanisms, in the Critical Realist sense of the word, by enabling or constraining the actions of agents. I draw in particular on Fairclough's (2005) conception of discourse which uses a realist ontology (Bhaskar, 1993) to argue that discourses have causal powers to enable and constrain

how we think, talk, or act and which thereby contribute to the emergence of events in the world and to the experiences of such events. I have, therefore, used the approach of critical discourse analysis to establish the discourses of institutions and discourses of academic identity that academics and heads of research in HBUs draw on and the effects they have on what they say and do.

Like structure, culture (ideas, beliefs and discourses) is said to possess properties of anteriority (or pre-existence), and endurance, implying that people or individuals enter into a culturally conditioned environment (Archer, 1995). Archer (2002) argues that culture exists independently of the people who enter into a particular cultural context or situation. This is regardless of whether people are aware of these discourses, ideas, beliefs, or values and regardless of whether anyone activates them through exercise of agency. The cultural system which one enters has powers of enablement and constraint which are mediated through people (Carter & New, 2004). Reproduction, or change in the cultural system, is due to instantiation by the agents who possess power and properties of reflexivity on their own project, concerns, or goals based on the prevailing condition that offers choices which are not their making (Archer, 2007).

The understanding of culture as equally real to structures has important methodological implications. Archer (1996: xi) argues that since structures and cultures parallel one another, use of the same conceptual, theoretical and analytical framework allows a researcher to compare and contrast the effects of each on social life and to explore the interplay between them. While structure and culture can be analysed using the same analytical framework, ideas, beliefs, and values unlike objects like structures are not accessible through direct observation and description but 'through verbal statements about one's beliefs, reasons, intentions, motives and so on' (Maxwell, 2012: 18).

The pre-existing cultures and the pre-existing structures together form what Archer refers to as 'the parts' and these enable or constrain the choices available to people, but they do not determine them, because humans have agency.

3.3.3. Agency

Agency refers to the ability of people to take action based on one's own vested interest, concerns, or project(s) (Archer, 1995). Therefore, as agents belonging to a collective group, individuals are able to make choices because they possess properties, such as reflexivity and intentionality, which are distinct from those of structures and cultures, and they thereby hold the power to maintain or modify structures and cultures (Archer, 1995). The choices one makes are enabled or constrained by structural and cultural conditions, and also by the position or role one finds oneself occupying, either as primary agent, social actor, or corporate agent (Archer, 1995, 1996).

Primary agents are people who are very limited in their ability to articulate or act on their personal project(s) due to the disempowered position they occupy in society. This disempowered position could be due to the position they involuntarily occupy in institutions and therefore they have no materials or resources to change that position. Black women lecturers working in South African universities, for example, might be considered as primary agents because the institutional structures and cultures severely constrain their ability to bring about change (NPC, 2011; Mabokela, 2002). In order to bring about change, such women may need to transform themselves into corporate agents or social actors.

Corporate agents are groups of people who have particular properties and powers as members belonging to a particular group. Students may individually be considered primary agents, for example, but during student protests their collective power to bring about change allows them to shift into being corporate agents. Social actors, on the other hand, are people who take up a role or position which has particular properties and power. They can then draw on their personal agency to enact that position in a particular way. In the case of black women lecturers who might have their agency constrained by institutional structures and cultures, if they are able to become social agents by taking up roles and positions such as DVC /Director Research or other powerful institutional roles, they may then be accorded agency to influence how the identity of academics, department, units, and institutions is constructed.

While Archer provides the lenses for considering the structure, culture, and agency and their interplay, it is the conceptual framework which allows me to discuss these issues in relation to debates about the role of the university, the history of South African higher education and the importance of research production. In this study, therefore, implementing Archer's notions of structure, culture, and agency is undertaken alongside a deep engagement with the literature around research production, not only to verify what the literature says but also to develop a more nuanced, more sophisticated, and fuller understanding of how the structural, cultural, and agential conditions play out to constrain and enable research production in HBUs.

The central concern of this study is the identification of mechanisms enabling and constraining research production in HBUs. The identification of these mechanisms means that as a researcher I need to be careful not to conflate agency with structure or culture but instead separate them when analysing my data in order to identify the particular emergent powers of structure, culture, or agency that are responsible for change or lack of change in the practice of research production in universities and especially in HBUs. Archer (1995, 1996) argues against conflating the emergent properties of parts, which are structures and cultures, and those of people, that is agency, by embracing the idea of analytical dualism.

As noted above, structures, cultures and agency each possess their own power and distinctive properties which are relational to each other (Archer, 1995). For Archer, the relationship between agency with structure or culture signifies two aspects of social life. She argues that particular cultural systems and social-cultural dynamics (or coherence among people) do not function independently of one another; they are mutually influential and therefore the researcher is required to distinguish them by temporarily separating them through analytical dualism. The separation allows for an exploration of their interplay (Archer, 1996).

3.4 Analytical dualism

Archer developed the analytical dualism approach in rejection of all forms of conflation in sociological theories which have the tendency to conflate parts (structures and cultures) and people (agency/ability to act) in what she calls the conflation fallacy (Archer, 1995; Carter &

New, 2004). Archer's idea of analytical dualism embraces the 'independent properties and powers pertain to both the 'parts' of the society and to the 'people' within it' (Archer, 2000: 5). She proposes a methodology of analytical dualism where structures and agency, culture and agency, and culture and structure are linked rather than conflated (Archer, 1995). She argues against three forms of conflation: upward, downwards, and central conflation.

Upward conflation involves the idea that 'man creates society'. According to Archer (2000), this is a view that the properties and powers of 'parts' (structure and cultures) are reduced to properties and powers of people who alone are seen to have causal power to bring about events and experiences in the world. Thus, in the upward fallacy of conflation, the parts are deprived of their emergent autonomy, and causal efficacious properties and powers, and the interplay between parts and people, are also denied (Archer, 2000). This view emerged during the enlightenment period and Archer (2000) associated the idea with the concept of 'modernity man' who was seen as rational and able to exercise the power of reasoning to act. The view was common among individualist and rational theorists like Max Weber, Karl Popper, and Raymond Boudon who conceived structures as aggregates of individual actions (Archer, 2008).

Downwards conflation, on the other hand, involves the idea that man is created by society. This is an idea that is associated with social construction. The social constructionists view human action and thoughts as conditioned by society. While Archer acknowledges that social structures and cultures depend on individuals to make them, she believes that the failure to accord ontological status to structures and culture in upwards conflation deprives their emergent, autonomous, causally efficacious properties and powers, and the consequence of this is that their interplay with agency is denied (Archer, 2000).

In her book *Realist social theory: the morphogenetic approach*, Archer responds to Anthony Giddens' view about the relationship between structure and agency. She, in particular, is opposed to Giddens' argument that structure and agency are conceptually inseparable. Central conflation is evident in Giddens' works (1984) which hold the view that systemic and individual aspects of social life are mutually constitutive. Archer argues against central conflation for the tendencies of sinking the difference between agency and structure instead of linking them (Archer, 2007). According to Archer, this makes it impossible to identify when agents or parts are able to act to

bring about change. If we are unable to distinguish which powers are at play and in which way to bring about the phenomenon under study, we are unable to consider how to bring about change.

In response to these conflations in social science, Archer argues for 'analytical dualism' through a distinction between the emergent properties and powers of structure (SEPs), culture (CEPs) and agency (PEPs) (Archer, 1995). The analytical separation of these entities is temporary and allows for the possibility of determining the interplay between emergent properties and powers of structure and agency and those of culture and agency and the way in which their interactions work to bring about events and experiences of research production, in the case of this study. The identification of these mechanisms requires me to analyse the emergent properties of structures and culture separately from those of agency in order to examine the interplay. Archer (1995) argues that culture, structure, and agency each have emerging properties and powers that enable them to exert causal influences which cannot be reduced to one another.

Bhaskar (1975: 25) argues that 'it is just in virtue of these emergent features of society that social science is possible'. Thus, analytical dualism's usefulness in separating structures or culture from agency and structure from culture is only for analytical purpose. This allows identification and articulation of the objects of social reality, both structures and cultures which present certain conditioning that condition people taking particular courses of action. The idea of conditioning refers to the way in which structures and culture present enablements or constraints for exercise of human agency. This analytical separation of agency from structure and culture depends upon a distinction being made between the logical relations that govern cultures (the world of ideas, theories, and values) and the material relations that govern structures (material resources) (Archer, 1995, 1996). This is because it is these logical relations and material relations that exert influence on the course of action taken by agents (Archer, 1996, 1995; Case, Heydenrych, Marshall, McKenna & Williams, 2017). In the following section, I discuss Archer's idea of situational logics which is a useful methodology for explaining how change or reproduction of structures or culture happens in a context through the interplay of the properties of structure, culture, and agency.

3.5 The situational logics: complementarities and contradictions

Archer (1995, 1996) argues that in a historical context, there are varied ideas, theories, beliefs, or values, and various structures that stand in relationship to each other. It is these logical relations, in the case of cultures, and the material relations, in the case of structures, that work together in a context and predispose agents to take particular actions that may either lead to change or reproduction of the status quo. According to Archer (1995), understanding the relationships between the structures and cultures in a context provides insight into 'situational logics' at play. She (1995: 216) defines four configurations of structure and cultures and suggests the likely situational logics that could arise from them**.** These logics are never deterministic as the number of mechanisms at play is always almost infinite in the social world, but rather these logics are useful in positing how the logic of the situation will constrain or enable the emergence of events and experiences.

Rather than drawing on Archer's table of situational logics, which is complicated by her use of different terminology to describe similar concepts across structures and cultures, I use the simplified version of situational logics offered by Luckett (2012) (See Table 2.2 below). The table presents the various actions that are likely to be taken by agents in response to the structural and cultural properties in a given context.

Table 2.2: Situational logics in the domain of culture or structure

	Contradictions		Complementarities	
	Necessary	Contingent	Necessary	Contingent
Situational logic	correction	elimination	protection	opportunism

Source: Luckett (2012: 341)

Archer argues that the relationships between mechanisms in the realms of structure and culture may be contradictory or complementary (see Table 2.2 above). In complementary relations, structures and culture mutually reinforce each other and the result is reproduction of the status quo – what Archer terms morphostasis (1995:75). In a contradictory situation, the structures and culture conflict with each other and may lead to morphogenesis (or the emergence of change) (1996: xxiv). This is the first step to be considered in the analysis of cultural and structural conditionings that influence the choice of action taken by agents (Archer, 1995). The situational conditioning of complementarity and contradiction are useful in this study in analysing the cultural context of HBUs in terms of research identity that predisposes academics and heads of research to particular beliefs or values of research and actions towards research production and in analysing the structural context of HBUs in terms of the material resources that enable or constrain academics and heads of research to undertake research activities.

Having reflected on whether the identified cultural and/or structural conditioning mechanisms are complementary or contradictory, the second step in the analysis involves a consideration of whether the complementary or contradictory relations are necessary or contingent. They are considered necessary if they are internally related, that is, they need one another for their existence. They are considered contingent if they are externally related, that is, only related because they both exist in this context but could exist separately from one another. It is at this level of logical relation that the structural and cultural system has the ability to enable and constrain actions taken by agents (Archer, 1995). Each of these four configurations (see Table 2.2) is associated with a particular situational logic which predisposes (but does not determine) agents to take a particular course of action that could either lead to morphostasis or morphogenesis.

In a necessary contradiction between mechanisms, there is likely to be correction (Table 2.2), that is, something will have to change to address the condition (Archer, 1995). Where such contradiction is simply contingent then the likely outcome is elimination, where something will need to be removed. In the case of necessary complementarities, this is likely to lead to an environment of mutual support and reinforcement that reproduces status quo. Such congruence and mutual reinforcement between structure and culture create the situational logic of protection

(Archer, 1995). Where the complementarity is contingent then the situational logic is that of opportunism for agents to achieve their project through various means.

As noted above, the emergent properties of structure and culture work together to condition but not to determine the action of agents (Archer, 1995). Agents through their emergent properties of reflexivity can reproduce or transform structures and culture (Danermark et al., 2002). Reflexivity has been defined as an inward talk that one has with oneself in an attempt to define and clarify beliefs, attitudes and goals, evaluate social circumstances and define projects based on personal concerns (Archer, 2003; Behari-Leak, 2015). As an emergent personal property, reflexivity mediates between the parts and agency by activating the causal powers of structure or culture and allowing the individual to project their action based on the articulation between personal intentions or concern and the conditions that make it possible to accomplish them. Archer (2007) argues that when agents are confronted with structural or cultural constraints, they deliberately reflect through internal conversation and decided on how to respond and react to the circumstances that are not of their own making. However, this understanding of reflexivity has been criticised. I now hone into some of these criticism and others related to Archer's Social Realism theory more broadly.

3.6 Critique of Archer's Social Realism

My choice of using Archer's Social Realism theory which is aligned to Critical Realism meta-theory is not because it is the only and 'correct' philosophical stance for a qualitative research but because her positions of ontology and epistemology are valuable to the discussion of the kind of claim and understanding that qualitative research can produce. As with any philosophical position, there have been criticisms towards Archer's understanding of what the truth (ontology) is and how it can be known (epistemology). I discuss some of these criticisms which have a bearing on my study.

One of the critiques is that Archer puts more emphasis on agential properties of internal dialogues (or internal conversation) with oneself, than on external dialogue with others (Benton, 2007; Caetano, 2014; Behari-Leak, 2015). That is, in her explanation of human actions, Archer

tends to privilege inner conversations that people have with themselves at the expense of the external conversations they have with others in a specific context (Behari-Leak, 2015). Behari-Leak (2015) and Benton (2007) maintain that people are able to define and negotiate their personal concerns and projects by engaging either in internal or external conversations.

Another critique on Archer's theory of reflectivity is that her theorization of agency is problematic because she privileges agential reflexivity over the properties and powers of structures and cultures (Akram 2013). This for some of her critics (see for example King 1999; Stone 2001; Hay 2002) is seen as a return to individualist approach where agency is seen to determine the structural and cultural system of the society. My reading of Archer's theory of structure, culture and agency is that Archer's critics fail to consider her explanatory framework of analytical dualism which allows separation of structure, culture and agency in order to understand what entities (structure, culture or agency) is activated or not and therefore has effect on emergent experiences and events at the level of empirical.

Besides the criticisms on Archer's reflexivity theory, Cruickshank (2010) makes a number of other critiques and it is to this that I now turn. As already mentioned, Archer argues that the social world is constituted by structure, culture and agency in the domain of real and it is these entities that interplay and lead to emergency of actual events and experiences. Therefore research has to move beyond the transitive experiences and events to the intransitive realm of reality at the level of structure, culture and agency that influences the experiences and events. Cruickshank (2010: 580) critiques this claim by arguing that 'the concepts of 'structure' and 'agency' cannot add anything because any events can have the labels structure and agency applied to it, given that concepts are elastic enough to be applied to anything'.

While I partially agree with Cruickshank that indeed what constitute structure, culture and agency is complex and partial, and that Critical Realism acknowledges the epistemological relativism involved in fallible humans attempting to define and identify structure, culture and agency and the emergent properties of each, this is not to say that such concepts are without usefulness. We can use our judgmental rationality to do our best to identify these entities in the data. As already mentioned, judgmental rationality allows research to draw on the best explanation of the context analysed at a particular time.

Another critique by Cruickshank (2010) relates to the Critical Realist approach to the epistemic fallacy. Critical Realists such as Archer critique philosophies such as positivists or the constructionists for transposing the question about what is the truth with the question about how people understand the truth - what Critical realist refers to as an act of epistemic fallacy. Cruickshark (2010:584) argues that 'the problem with this approach to the epistemic fallacy is that the fallacy is defined so broadly that the only way to avoid it is to engage in some form of absolutist metaphysics. That is, the only way to avoid it would be to step outside the transitive domain of knowledge claims, and use metaphysics to define the essential properties of intransitive domain. When Bhaskar defines metaphysics as a conceptual science he clearly eschews this approach to metaphysics and instead draws out ontological assumption from within transitive domain. Thus Cruickshank argues that the Critical Realism requirement that the researchers move beyond describing data in the empirical and actual domains to identifying the mechanisms at play in the intransitive domain is flawed because a researcher inhabits the transitive domains and she has no supernatural access to intransitive. But the Critical Realism methodologies are designed to assist in this regard (for example retroduction and abduction) rather than guarantee access to these domains.

Alongside these critiques, Cruickshank (2010:590) argues that 'agents may not be dope who are determined by structures, but nor are they able to change structures by changing their actions or conceptions of structures in here and now, because structures are emergent properties. Agents may change structures but this will take time, and learning about this is a matter of empirical investigation rather than priori theorising'. In this regard Cruickshank supports Archer's overall explanation of the people-parts relationship. However he goes on to state that 'the issue of concern for us through is not the resolution of the structure-agency problem, but the way that agent knowledge is conceptualizes by critical realist…what it does commit the Critical Realist to, though is the view that the ontological assumption about reality being constituted by constraining social factors of some kind and agents with free will are correct (but vague)' (590-591). Agents can be correct to think in terms of constraint and freedom characterizing the social world but completely wrong when applying this to substantive social, political, and economic matters. In short Critical Realists can bring in an epistemological break between lay assumption about what social reality is and substantive lay beliefs about social political issues. Archer develops Bhaskar's qualifications to his naturalism, but she does so by holding that structures, as emergent

properties , do not depend on agents' (true or false) conceptions of them to exist. Cruikshank is cautious of the Social Realism notion that structures cannot be reduced to the actions and projects of individual agency given that it is only through the action of agency that change can manifest.

It was with such critiques and concerns in mind that I cautiously applied the ontological and epistemological notions of Critical and Social Realism to my study.

3.7 Conclusion

This chapter provided an overview of the ontological position underpinning this study. The realist position requires that I see the empirical data collected as representative of multiple events and experiences and not as explanatory in their own right. The onus on the researcher to identify causal mechanisms is with an understanding that such identification is fallible and partial, though a careful and explicit articulation of my analysis strengthens the reader's opportunity to use judgmental rationality to judge the merits of the conclusions I draw. Archer's Social Realism augments this depth ontology and argues that an explanation of the social world requires that the emergent properties of structures and cultures need to be analytically separated from those of agency, though they work in a complex interplay in the messy social world. By drawing the reader's attention to some of the critiques of Archer's position, I have hoped to indicate the limitations to any position the researcher in terms of their ontological conceptions of truth and their epistemological conceptions of knowledge creation, but I have nonetheless argued that the lenses of Critical and Social Realism have strengthened my ability to make claims by making these philosophical deliberations explicit for my reader. In the following Chapter, I discuss how I used Archer's Social Realism theory and in particular her analytical frameworks of analytical dualism, retroduction, and abduction to identify the mechanisms at play.

Chapter Four: Methodology

4.1 Introduction

Every research project requires a clear design, but these are not settled; instead, they are based on a series of careful decision making. In qualitative research, it is especially important to make such decisions explicit for the reader as it is on the basis of this design that much of the authenticity and trustworthiness of the thesis rests. It is important, in articulating the design decisions, to justify them and to indicate the ways in which they address the research question and are coherent with the ontological and epistemological premises underpinning the study. In this chapter, I provide the details of the steps taken in the data collection and analysis in an attempt to make such decisions overt for my reader.

4.2 Restating the research question

As argued in Chapter One, the history of universities under apartheid has had an enormous effect on their current forms and functions. This goes way beyond issues of infrastructure and includes their geographical position, their staffing, their student body, their institutional culture, and so on. With the great demand for increased research across the sector, as outlined in Chapter Two, these institutions have expended much energy in growing their productivity in this regard. But, as Archer argues and as discussed in Chapter Three, change in the social world emerges out of the interplay between structural, cultural, and agential mechanisms. In order to make sense of how such change emerges or fails to emerge, we need to identify the ways in which such mechanisms condition the events and experiences in such institutions.

The key question that this study, therefore, aimed to answer was:

> What conditions enable and constrain production of research in Historically Black Universities (HBUs) in South Africa?

In keeping with the research question above, the study aimed to unpack the emergent structural, cultural, and agential conditions at different levels – institutional, national, and international – that enabled and constrained the production of research in HBUs, and to investigate the interplay between such structures and agency and cultures and agency.

Thus, the focus of the study was on the role that structures and cultures played in the emergence of events and experiences of research production in HBUs. This can be understood from analysing data from the empirical and actual domain then digging deeper in order to identify the mechanisms that are activated at the level of *Real*. The first step involves analysis of experiences of participants at the *Empirical* level and at the level of *Actual*. At the empirical level for example, I analysed interview data for the research experiences of academics in their institutions while at the *Actual* level, I had access to statistical data and reports on research events. As a critical realist, I attempted to analyse from these down to the real so that I moved from the contextual data to a (partial and fallible) identification of the mechanisms at play at the level of real. This analytical movement involved asking a transcendental question 'what could have been the case for such research experiences and events to emerge?

4.3 Study sample

As mentioned in Chapters One and Three, I collected data from the seven historically black universities in South Africa, namely the University of Zululand, the University of Venda, the University of Limpopo, the University of Fort Hare, Walter Sisulu University, and Mangosuthu University of Technology. This is, therefore, a broad study of the South African higher education sector with a particular focus on HBUs. I decided to take a broad scale study rather than a small and in-depth study partly due to the need for such studies to be undertaken in education research in South Africa (Deacon, Osman & Buchler, 2009) given the dominance of small-scale studies in the sector. While small-scale studies are rich and important, the lack of wide scale research studies reduces our understanding of system-level issues (Deacon et al., 2009). Thus, a research study on knowledge production (such as this one) that only considers one or two institutions

would not be able to take sufficiently into consideration holistic and complex factors that enable and constrain research production across the higher education sector.

The approach was also motivated by a lack of research that looks at research production within the South African higher education sector in general. As discussed in Chapter Two, there is a demand for research in the current knowledge-based economy and universities are pushed to increase their research production, which is understood in terms of publication and development of researchers in South Africa (NPC, 2011; DHET, 2013a). Consequently, there is a need for a study to be undertaken in order to understand the effect of the knowledge economy discourse on identity formation of higher education institutions and academics, and the implications thereof on the academic project. While this is not the primary focus for the current study it contributes in part towards this broad question or goal.

The other motivation for a broad-scale research project is the lack of research focused on HBUs (Ashwin & Case, 2018). Very few studies have been undertaken in South Africa that focus on historically black universities, with almost all research on institutional practices related to teaching and learning, research, and community engagement taking place in HWUs (Hlengwa, McKenna & Njovane, 2018). There is also a disparity in representation of research studies across institutional type with most of the research being undertaken in traditional universities and very little research done in comprehensive universities and universities of technology (Ashwin & Case, 2018).

This study forms part of larger research project funded by NRF (grant number 87646) which investigates the ways in which differentiation of various kinds (historical differentiation and differentiation of type) have impacted the higher education sector in South Africa. The main objective of the project is to provide a large-scale understanding of the ways in which the core functions of universities, such as teaching and learning, emerge in part from the various forms of institutional differentiation. Drawing on this broad concern of institutional differentiation and by using multiple sites and methods, and the same theoretical lens of Critical Realism, the larger project brings together seven PhD studies that consider the implications of institutional differentiation on a particular core function of universities. My study focuses on the core function of research across the seven HBUs; these are an institutional type with a particular

historical background, as discussed in Chapters One. Therefore, this study contributes to the broader project aim of making sense of differentiation in the sector.

4.4 Data collection

I used multiple data sources for my research: semi–structured interviews, documentation, and a survey questionnaire. My decision to use multiple ways of collecting data was in order to generate rich data (Maxwell, 2004, 2005), because rich data allows researchers to gain a more revealing picture of events and the meaning that participants attach to them in terms of their experiences thereof. Maxwell (2004:425 citing Becker 1970) further argues that when there is rich data, there is less danger of researchers being confused by participants' misrepresentations (as may happen in interviews or may be evident in documents) or for the researcher's bias to influence description and explanation.

Multiple data sources also ensure that the complexity of the case is examined fully, and depth is established. Gillham (2000) further notes that no one data source is likely to be sufficient or valid on its own. Because of the depth ontology approach in this study, it was necessary to obtain a range of data in order to collect a broad spectrum of experiences and events from which to attempt to identify the underlying mechanisms.

Before data was collected, approval to conduct the study was obtained from Rhodes University (see Appendix A) where the study was lodged. Only one out of the seven sampled institutions accepted the Rhodes' ethics letter as sufficient to conduct my study in the institution. For the other six institutions, I had to apply for ethical clearance through each of their internal ethical clearance systems. This took much longer than anticipated. The amount of time taken from submission of the application to obtaining an approval letter from the relevant institution was three months to a year.

Additionally, queries sent by email were often not answered. In many cases, it was not clear what the institutional processes were for applying for ethical clearance to conduct research in the university or who was responsible for the decision. The requirements on the forms were not

always self-evident (with many of the items pertaining only to natural scientific research) and it was not always clear how long I should wait to hear back from the relevant committee.

The difficulties pertaining to getting ethical clearance point perhaps to a concern about institutional reputation. I was not interested in evaluating specific institutions as individual cases and this was explained at the time of applying for ethical clearance and at the beginning of every data collection process. I was very much trying to identify the mechanisms across the sector level that enabled and constrained research production. But perhaps, given the complexities of differentiation in South Africa, it is not surprising that there were some problems and concerns that I had to be persistent in overcoming.

In the following section, I discuss how I proceeded in gaining access to and collecting data using a survey questionnaire, interviews, and documentation after such institutional ethical clearances had been provided by the universities.

4.4.1 Survey questionnaire

I first conducted a survey using an online questionnaire (see Appendix B)**.** My decision to conduct a survey at the beginning of the data collection process was to get a broader view of how the role of the university in terms of research production was perceived by academics in different disciplines and different types of HBUs (i.e. the UoTs, traditional and comprehensive universities). The questionnaire was also used to tentatively identify structures in the universities that may create constraining and enabling conditions for research production, which I could then interrogate further through additional data collection methods. The other reason for administering the questionnaire first was to make contact with academics and heads of research and to raise awareness of this study in the hope that some would then volunteer to participate in the interviews. The last item in the questionnaire requested that those respondents willing to be interviewed submit their contact details.

The survey was administered by sending out a link to an online questionnaire to academic staff members and heads of research (DVC research, Director Research, and other research managers)

at all the seven HBUs. A cover letter (see Appendix C) was also sent together with the link to the survey questionnaire outlining the purpose of the research project, requesting participation in the completion of the questionnaire, and assuring the respondents of confidentiality and anonymity.

All academics were eligible for participation in the survey, as well as heads of research, because they are all involved in research practices and processes in the universities. It was necessary to gain insights into these participants' experiences of research and their perceptions of what constrains and enables research production in the institutions. Maxwell (2005 citing Huber and Miller 1985) argue that the meanings, beliefs, values, and perceptions held by people in a situation are an essential part of the causal mechanisms operating in that setting. Archer (1995) would categorise the identification of such beliefs, values, and perceptions as being within the domain of culture. In sharing their experiences, participants would also signal the existence of constraining or enabling structures and agents, which I would be able to interrogate further through additional data collection.

Instead of sending the online link to the questionnaire directly to the respondents, I opted to email it to the heads of research and asked them to complete the survey and to administer it to academics in their institution. This was in part because I did not have access to institutional mailing lists or noticeboards but also my assumption was that the academics would be more likely to respond to a request from their heads of research than from a stranger. This turned out not to be the case, as even after sending several reminders to the various research offices, only a hundred and fourteen respondents completed the questionnaire which is a very small percentage of the total number of academics in the seven HBUs. However, for the purposes of this study, the sample size was large enough in that it was representative in some ways of the population: responses were received from all seven HBUs and different faculties and departments across the institutions were represented which is important in getting rich data. General limitations in data collection are discussed more fully later in section 4.7.

I developed the survey instrument to comprise two sections that emerged from my undertaking of a comprehensive review of literature. The first section had ranking questions (or closed questions), while the second section had open-ended questions to allow for short answers. This

was in order to make sure that participants could complete the survey fairly quickly as I was concerned about a low participation that might emerge from a lengthy questionnaire.

I also tried to ensure that the wording of the questions was simple and clear. Therefore, the questionnaire was piloted with five academics and two heads of research. Four of the academics and one head of research were from the institution where I had previously worked and the other two were from the institution where the study is registered. Neither of these institutions were part of the study population. These colleagues are active researchers mainly in the field of higher education and, therefore, I felt they were best positioned to give constructive and informed feedback as to the suitability of the survey. I asked them to review each individual question as they responded to it and to make comments on what they thought it was asking and the clarity of the wording. They responded immediately and all responses and feedback from the pilot testing were reviewed and the questions modified to incorporate feedback and ensure clarity.

Example of some of the suggestions offered were, ‘Q15: I would delete 'on' - it's more accurate to just say researching XYZ rather than researching on XYZ’; ‘Q19: change outcomes to outputs to echo Q18’; ‘Q16: I don't quite get this question. Do you want to know whether they are doing more or less or the same amount of research now? If yes, then perhaps 'extent' is the wrong word. I would perhaps change it to something like this: 'Can you comment on the amount of research you are currently engaged in compared to what you were doing five years ago’ and so on’. These suggestions improved the phrasing of the question and removed any potential ambiguity.

4.4.2 Interviews

I conducted interviews face to face and, via telephone and Skype with both individual academics and heads of research. Participation in the interviews depended on survey participants volunteering to be interviewed rather than on random or purposeful selection. A total of thirty-five academics indicated willingness to be interviewed in the survey questionnaire but in the end, it was only possible to interview twenty-six of them due to the busy schedules of some of them. I then opted to use the snowball approach to extend the number of interviews whereby I requested some of the interviewees to give me contact details of their colleagues that they believed might

be willing and able to participate in the study. This led to fourteen more interviews. I was aware that those who are actively doing research were more likely to volunteer to participate in a study about research and I hoped that this method might slightly counter this shortcoming. I, therefore, tried to track publication outputs as a proxy for active research engagement and to thereby also include researchers who are less active than others.

In total I conducted forty interviews, thirty-three with academic staff and seven with heads of research (See Table 4.1 below for the list of interview participants). Four out of the forty interviews I conducted were face to face because of the proximity of the interviewees, five were conducted by telephone, and the remaining thirty-one were conducted through Skype**.** The forty interview participants represented all seven institutions and comprised both thirty-three academics from different faculties, some of whom were also heads of department, and seven senior managers responsible for research: that is, DVCs Research, Directors of Research, and Senior Research Managers. In only one institution I was unable to interview any research managers, but I was nonetheless able to interview four academics. I was able to interview at least three academics and one head of research from each of the other six institutions. The interviews lasted between 45minutes to one hour.

Table 4.1: List of interview participants

Roles	Number of individuals interviewed
DVC or Directors of Research	5
Senior Research Managers	2
Academic Staff	27
Academic staff who are also Heads of Departments	6
Total	**40**

I used an interview guide with a list of questions and issues to be explored in the course of the interview with each participant (Appendix D). Following the discussion and obtaining of informed consent, I began each interview by requesting permission to record the conversation. This was followed by a general introduction question which was open ended where I asked each

of the participants to describe how they came to hold their current positions either as academics, heads of department, or research managers. The use of an open-ended question at the beginning of each conversation with interviewees was mainly to establish rapport for the purpose of building trust and in order to get the interviewee to talk freely (Mellon, 1990). It also allowed me to understand their trajectory.

This then was followed by the use of a semi-structured approach to asking questions which led to deeper discussions on whether academics considered research to be their core role, the extent to which they thought research production was central to their university, what they thought was enabling and constraining research production in their specific institutions, and finally I asked for their insights into what they thought could enable their institutions to better produce research and develop postgraduates. My decision to use semi-structured interviews was to access a wider range of perspectives on the institutional environment (the structures and cultures) that condition how academics operated than might have been possible through a more structured approach. I wanted to identify the ideas, beliefs, and values (which manifest themselves in discourses) concerning research production and academic identity that would shed light on some of the constraining and enabling conditions for research production. According to Arksey and Knight (1999), interviews that are semi-structured are useful for such depth data because they can be adapted according to the input of the participants to allow in-depth explorations and because they more authentically foreground what matters to participants.

4.4.3 Documentary data

A range of institutional documents were also used as sources of data in this study. These documents were gathered from the public domain and were, therefore, easily accessible, though this meant I often obtained slightly different documents from each university. I could have requested other documents from the research centres in the institutions such as minutes of research committees, but after reviewing the wide range of documents found on the institutional websites, I decided that I had enough documents to complement the interview and survey data.

May (2001: 176) describes documents as

> ...sedimentation of social practices, have the potential to inform and structure the decisions which people make on a daily and longer-term basis; they also constitute particular readings of social events. They tell us about the aspiration and intentions of the periods to which they refer.

With reference to the above quotation, I used the documents to understand the structural and cultural context within which academics and heads of research operated. As a source of data about the cultural realm that may structure social practices (such as research production), documents provide insights into the way such events are constructed and the way in which people perceive them. As a source of data about the structural realm, documents often record significant events and how resources are allocated. As a source of data about the agential realm, documents are often the record of decision-makers and those responsible for various events. As such I used the documents to find evidence of discourses used to construct and express the ideas, beliefs and values that currently underpin research production in higher education institutions, and to identify the role of structures and agents.

Table 4.2 below presents the documents examined in this study. These include:

(i) The annual research report: These reports contain universities' research output and activities for the previous year from each faculty or department.

(ii) The institutional research policies: The policies contain information regarding research practice such research output, recruitment of academics, proposal writing, plagiarism, postgraduate admission, research funding, supervision guidelines, assessment of postgraduates, and so on. Thus, as structural systems, policies themselves in part govern and manage research production through the guiding principles contained in them.

(iii) University strategic plans: These are long- or short-term university plans that guide development. The plan captures the common vision and understanding of the University's role and identity in the context of multiple and changing demands — nationally, regionally, and internationally in an increasingly interconnected global world. The plan also focuses on support services and key resources required for achieving the university's academic mission and vision.

(iv) Documents containing the mission and vision statements: The documents contain mainly the vision and mission statement of a university's purpose goals and values, and these were often found as part of the institutional website.

(v) The university annual reports: The Higher Education Act requires University Councils to provide the Minister of Higher Education and Training annually with a report on the overall governance of the institution together with annual financial statements. The financial information given should reflect the current financial state of affairs at the end of the financial year.

Table 4.2: Documentary data

Documents	Institution/year
Annual research report	University of Limpopo – 2012
Research policies	Mangosuthu University of Technology – no date University of Venda - 2011 University of Fort Hare - 2011 University of Western Cape -2009 Walter Sisulu University – no date
University Strategic plans	University of Venda – 2012 - 2016 Mangosuthu University of Technology 2016 - 2021 University of Zululand 2010 - 2013 University of Fort Hare 2009 - 2016 University of Limpopo 2014 – 2016
Mission and vision documents	University of Fort Hare University of Zululand University of Venda University of Limpopo Walter Sisulu University Mangosuthu University of Technology
University annual reports	University of Western Cape - 2012 University of Fort Hare - 2013 University of Zululand - 2014 University of Venda - 2014 University of Limpopo – 2014
Council on Higher Education (CHE) audit reports	University of Western Cape - 2008 University of Fort Hare - 2009 University of Zululand - 2010 University of Venda - 2011

	University of Limpopo - 2011 Walter Sisulu University - 2011 Mangosuthu University of Technology - 2012
National research documents	Policy and Procedure for Measurement of Research Output of Public Higher education institutions - 2003 Funding framework - 2004 The Ministerial Statement on Higher Education - 2015 The Ministerial Statement on Higher Education Funding - 2017 Criteria for use and management of the research development grants to universities - 2014/15 – 2016/17
National higher education policy documents	The 1997 White Paper on Higher education The 2013 White Paper for Post School Education and Training The 2015 research output policy
Total	**36**

In addition to institutional documents, I examined national documents such as Council for Higher Education (CHE) audit reports for each of the seven universities, and the recent national policies for higher education and reports on funding strategies (see table 4.2 above). The CHE audit reports are prepared by the Higher Education Quality Committee (HEQC), which is responsible for conducting institutional audits on the progress of university in the core areas, including research. The purpose of the audit report is to provide the institution with the findings of the audit panel on the core areas, such as research, as well as the panel's assessment of the effectiveness of the institution's arrangements for quality. The report is, therefore, organised around commendations and recommendations related to the areas audited.

My concern in this study is on constraints and enablement on research production in HBUs at a sector level. I have opted not to evaluate such constraints and enablement within particular universities with the aim of comparing them. For this reason, all data quotes are anonymized. However, where data quotes from any documents are used in the findings chapters that follow (Chapter five, six and seven), they are referenced to the specific institution because they are all in the public domain. Anonymising them would be disingenuous because a simple Google search would identify the institution.

4.5 Data Analysis

Flick (2013: 5) describes data analysis as "classification and interpretation of linguistic (or visual) material to make statements about implicit and explicit dimensions and structures of meaning-making in the material and what is represented in it". In alignment with the Critical and Social Realism theories which underpin this study, the following section discusses the analytical procedures and strategies followed in meaning-making of the data materials collected to answer the research question. This included transcribing, coding, interpretation, and theorisation by using retroduction and abduction techniques in order to identify causally efficacious mechanisms at the level of the *Real*.

4.5.1. Transcribing data

I started the analysis of data right from the preliminary stages of data collection. But as more data become available with subsequent interviews, documents and survey, I needed to engage in an intensive analysis by first consolidating all the data in text form. This required all the interview recordings to be transcribed. I transcribed some of the interviews myself and the remaining interviews were transcribed by a professional transcriber. I ensured that the interviews were accurately transcribed by going through the recordings with the transcription. The next stage was to analyse the data and I used the initial approach of category construction.

Categorising data or category construction (Merriam & Tidsell, 2016) is simply the process of coding the data. Merriam and Tidsell (2016: 199) refer to coding as '… nothing more than assigning some sort of short-hand designation to various aspects of your data so that you can easily retrieve specific pieces of the data'. Given that my study is underpinned by Critical Realism, I engaged first with the content of my data (i.e. interview, survey, and documents) at the level of *Empirical* and *Actual* events. This involved reducing the data from the overwhelming information collected to the selection of relevant data for the understanding of the phenomena of enablements and constraints of research production. At this initial stage of categorising data, I focused on literal content and the form of text that was of interest to me in answering the research question. This is also referred to as the use of 'soft eyes' to identify any themes or

patterns that emerge from the text without explicit use of theoretical or analytical framework (Maton & Chen, 2015). I tried to be as open to any relevant issues that emerged from my data as possible. This kind of coding is also often referred to as *open coding* (Merriam & Tidsell, 2016; Flick, 2002).

To assist in coding the vast amount of data I had collected, I used NVivo, computer software that has capacity to organise and manage massive amounts of data by supporting coding, sorting, and storing. NVivo software uses a tool referred to as a node for coding and storing different themes that a researcher interprets from the data. However, Durrheim and Kelly (2006: 325) note that 'as useful as the computer software can be during the process of data analysis only humans ultimately can make creative association between the data aspects of account or relate to what people say to the context in which they operate'.

I first coded similar views, concepts, and idea that emerged from the interviews, documents and survey data. Then I grouped together similar issues. This was not a linear process but rather involved moving back and forth to see whether there were differences and similarities which allowed development of codes that accommodated new ideas.

As earlier discussed in Chapter Three section 3.4, this is a social realist study and uses analytical dualism as its mode of analysis. Archer (1995), who developed the analytical dualism approach, argues that the social world emerges from the interplay of structure, culture, and agency and for analytical purposes this interplay is separated in order to identify the mechanisms at play in each realm that enables or constrains events and experiences from emerging over time. In the case of this study, it was very important in analysing the data to look separately within each coded event at the structure and cultures that were at play across time from the formation and existence of HBUs during apartheid to the current research production in HBUs. I, therefore, moved from the data of experiences and events at the levels of *Empirical* and *Actual* to establish those structural, cultural, and agential mechanisms at play. In doing this, I used abduction and retroduction. These concepts were briefly introduced in Chapter Three (section 3.2.1), and I now discuss them in more detail.

4.5.2 Abduction and retroduction

Abduction is

> …a move from a conception of something to a different, possibly more developed or deeper conception of it. This happens through our placing and interpreting the original ideas about the phenomenon in the frame of a new set of ideas. (Danermark et al., 2002: 91)

Thus, abduction is a way of creating links that enable the researcher to understand relations and connections that are not always evident or obvious. This allows the researcher to come up with new ideas, think of something in a different context, and 'to see something as something else' (Danermark et al., 2002: 94). Therefore, the focus in the analysis using abductive reasoning involved identifying data that is beyond the initial theoretical premises. In terms of Critical Realism, the process of abduction involves acquiring knowledge of the phenomena by digging deeper into mechanisms that are unobservable. I, therefore, I used abductive reasoning to interpret data in terms of structures, cultures, and agential conditions that might have enabled or constrained research production in HBUs. This allowed me to move beyond the interpretation of actual events and experiences of research production identified in the data to develop a new understanding of constraints and enablements of research production.

Unlike abductive inferences, with retroductive reasoning researchers have to employ an assumption when they engage with the data. Retroduction is a means of knowing the conditions fundamental to the existence of phenomena. Danermark et al. (2002: 96**)** defines retroduction as

> a mode of inference from observation to what must have been the case in order to bring about the observed events; it is about moving from one thing (empirical observation of events) and arriving at something different (what conditions and properties must exist for the events to be possible.

Retroduction reasoning is thus based on the idea of an existing social reality of structures and internally related objects that can only be known by moving beyond what is empirically

observable and this entails asking questions such as "How is X possible? What properties must exist for X to be what X is?" and so on (Danermark et al., 2002: 110).

In analysing the data in the case of this study, the question I asked was 'What must the world be like for participants' experience of and observations of research events to emerge as they do?' This required me to move beyond the events and experiences of research production in HBUs to an in-depth understanding of the structural, cultural, and agential conditions which contributed (or did not contribute) to the occurrence of the research events and experiences. I also needed to identify how these conditioning structures, cultures, and agents interplayed with each other in creating an enabling or constraining environment for research production. Both abduction and retroduction are therefore used as means of interpretation of data that often lead to the development of new theory (Danermark et al., 2002).

4.6 Ethical considerations

Issues of ethical consideration are concerned with right/wrong conduct in the whole process of undertaking research and especially in the processes of generating knowledge, obtaining informed consent, and interpreting data (Bryman, 2004). In this section, I discuss some of the ethical issues that I engaged with in this study.

As described earlier, I obtained ethical clearance seven times – once at the institution where I am registered and at six out of the seven institutions where data was collected. These processes required that I share the research proposal and then answer a range of questions about consent, anonymity and so on. In all cases, the data collection processes were implemented as indicated in such ethical clearance processes and no deviations were necessary.

Before any interview conversation, I spent time explaining the purpose of my study and how anonymity and confidentiality was to be maintained. I also provided this information in the introduction of the online survey questionnaire. This served the ethical purpose of obtaining informed consent, in particular for the online survey questionnaire. In addition, all interview

participants completed and signed a letter of informed consent indicating that they understood all the processes and their rights (Appendix E).

I used a transcriber to type some of the recorded interviews and I explained to the transcriber the need for maintaining the confidentiality of participants' identities and she signed a letter (Appendix F) in this regard to indicate that she understood this.

I used a coding system for all the data that I have included in the analysis presented in Chapters Six, Seven, and Eight. The data quotes used from the interviews reveal neither the individual participant's identity nor their employing institution and they are coded as AC for academics, HoR for Heads of Research, or QN for both academics and HoR (in the survey questionnaire) followed by a randomly allocated number.

Thirty-six documents were analysed, including documentation containing the mission and vision statement, research policies, annual strategic reports, university audit reports and annual research reports. As mentioned earlier, where data quotes from such documents are used, they are referenced to the specific institution as they are all in the public domain and readily searchable. The approach of sampling the seven HBUs was not for comparative purpose but for the purpose of understanding how the context of HBUs enabled and constrained research production. For this reason, there was no need to specify from which institution the data came, except for where the data is in the public domain and it seemed unethical to introduce what would be an inauthentic anonymising process.

4.7 Research limitations

One of the limitations in this study related to my positionality as an insider-outsider. Chavez (2008) describes the insider-outsider positionality as a depiction of methodological advantages and complications of insider status. As earlier discussed, this study is part of a larger project that includes seven PhD studies that extend across the range of institutional types and histories and that engaged with different aspects of each. As an academic and therefore an insider, I have a deep interest in understanding research in higher education and I am committed to the idea of a

more just and equitable higher education sector. This led to my interest on the topic. But, having worked in a historically white institution this positioned me as an outsider in the sense that I was not a staff member in an HBU and therefore I needed to immerse myself in the literature around HBUs and engage carefully on the experiences of HBUs in order to avoid any biases in the interpretation of the data.

Another limitation of the study related to the sample size of the study. As earlier discussed, this was a broad study investigating seven institutions. While I argued for and justified the decision for undertaking a broad study such studies pose a risk of losing the depth (Boughey, 2018**).**

The other constraint relates to the limitations of Critical Realism. Although I have argued that Critical Realism adds to the qualitative study and scientific enquiry processes as discussed in Chapter Three section 3.2.1, Critical Realism is open to weaknesses in relation to judgemental rationality in that there is no absolute account of reality in the investigation. The account of reality adopted remains the best explanation of the phenomenon at a particular time and space and it is subject to change over time and that is why it is fallible knowledge and relative (Bhaskar, 2008**).**

4.8 Conclusion

This chapter has outlined the methods and analytical framework used in the study to identify the conditions that have enabled and constrained research production in HBUs in South Africa. I have attempted to make explicit the decisions I have taken and to show the ways in which I have attempted to ensure congruence between the research question, the theoretical framing, and such methodological decisions. The following Chapters, Five, Six and Seven, look at the research findings of the study from the analysis and interpretation of the data.

The chapters present three core findings that emerged from the data. Chapter Five discusses the various conceptions of research; Chapter Six looks at the discourses of research production, human capital development and knowledge economy and Chapter Seven considers the relationship between research, teaching and community engagement and management. In each of

the chapters, the domains of structure, culture and agency are discussed in terms of how they interplayed and led to emergent events and experiences of research.

Chapter Five: The Conceptions of Research[6]

5.1 Introduction

People use language as a form of communication to make meaning of their social world (Elder-Vass, 2013; Christie, 1985). As already discussed in Chapter Three, discourses have effects in the world (Archer, 1995) and it is thus important to identify them and to consider what effects they might have in enabling or constraining any particular phenomenon, such as research production in the case of this study.

As earlier discussed, in this study I draw in particular on Fairclough's (2005) conception of discourse which uses a realist ontology (Bhaskar, 1993) to argue that discourse are mechanisms that have causal powers to enable and constrain how we think, talk, or act and which thereby contribute to the emergence of events in the world and to the experiences of such events. In realist terms, mechanisms are defined as causal explanations or internal dynamics (Archer, 1996, 2015). Events and experiences, such as the production of research in HBUs, emerge from multiple mechanisms, which include but are not limited to, discourses.

In any social context there will inevitably be multiple discourses interacting with each other in complementary or contradictory ways (Archer, 1995), and these in turn will interact with mechanisms of other orders, such as social structures and the agency of individuals. For example, the discourses identified in this study and discussed in this chapter may have effects on how research is valued and undertaken in HBUs, but these will intersect with issues such as institutional policies and leadership, the national funding formula and so on**.** Thus, an analysis of discourses alone cannot fully explain the events and experiences that are observed, but attaining an understanding of the effects of discourses is central to social change (Archer, 1995). It is with this understanding that discourses have real effects in the world that I sought to identify the discourses by which those working in HBUs construct the concept of research.

[6] An earlier version of this chapter has been published in article form:
Muthama, E and McKenna, S. (2018). The contradictory conceptions of research in historically black universities, *Perspective in Education,* 35 (1): 129-142.

There were a number of discourses on conceptions of research that emerged in the interview conversations, but I focused on four that were dominant across all the interviews. These were: research as integral to academic identity, research as a means of social justice, research as an economic driver, and research as an instrumentalist requirement. Each one will now be discussed individually.

5.2 Research as integral to academic identity

The discursive understanding that undertaking research is central to being an academic is dominant in the literature (for example Henkel, 2000, 2005; Becher & Trowler, 2001). This discourse understands research as being fundamentally entwined with and as driving the practices of academic staff. This understanding was evident in some of the data, for example, one academic said: 'I am very much involved in research and I want to believe that as an academic staff you *must* be engaged in research' (AC 5). Henkel (2005) argues that in traditional universities, an academic's identity emerges from his or her affiliation to a disciplinary home and commitment to knowledge production, more than it does from the particular institution in which he or she works. This was echoed in some of the data:

> What is an academic or who is an academic? The definition of academic: you try to produce research, disseminate knowledge and also question knowledge that is in existence and you cannot do all these things without doing research. Teaching is there to disseminate knowledge, but you also have to produce new knowledge which you are disseminating. So, you cannot disseminate something that you are not producing. You cannot be a kind of consumer if I may use that word. You also have to take part in development of new knowledge and disseminating it. (AC 4)

> I always believe, and I do see that research is where you generate new ideas and again you cannot actually impart knowledge to students if you tell them things that you actually do not investigate. So, it forms a fundamental framework of developing new ideas and passing those new ideas and knowledge to students. (AC 6)

A similar discourse about academic identity in research can be seen in the way the following academic expresses concern about not embodying a research identity:

> There is very little time left for me to do individual research. So, as an academic and a researcher at the same time, there is need to create time, and also to find resources to do the research. This is where we have some challenges and …this is the dilemma that I have. (AC 16)

For these academics, research is seen as significant to their identity. The value of being an active researcher was not just about disseminating knowledge, but also about participating in the production of new knowledge. There was also an understanding among some of these academics that those who do not do research are not 'proper' academics.

Thus, in describing how they embody a research identity or in expressing guilt for not embodying a research identity, it can be seen that the academics above are using their agency to draw on the discourse that to be academic you have to do research and that research is key to academic identity. Moreover, 78% of the questionnaire respondents indicated that they are regularly involved in undergraduate teaching, 72% indicated they participate in community engagement initiatives, while 87% indicated that they undertake research as a regular activity. This is slightly at odds with the research output figures (see table 5). However, the skewed nature of the data cautions us against reaching any quantitative conclusions because those who are actively doing research are presumably more likely to participate voluntarily in an interview or complete a questionnaire about research.

Furthermore, the literature on research identities suggests that this would be the dominant discourse evidenced across *all* the data (Henkel, 2005; Becher & Trowler, 2001; Waitere et al., 2011), but this was not the case in this study. It would seem that the discursive construction of research as integral to academic identity, while drawn upon frequently in the data, was not as overwhelmingly dominant as it is in HWUs (McKenna & Boughey, 2014). The history and nature of the HBUs seem to be constraining some academics and heads of research from drawing on this discourse.

Alongside evidence of this discourse that research was central to academic identity and many of the academics interviewed used their agency to situate themselves as being 'proper' academics because they do research, there was also frequent mention of the ways in which various structures pertaining to the institutional context constrain their ability to take up this identity. For example, some participants explained that although they saw research as central to their identity, they felt they were constrained by heavy teaching loads, insufficient funding and 'poor quality students'.

> Many of us feel that our teaching load is too heavy to allow us to do research (AC 2)

> When I got here I realised that, for example, time allocations and teaching allocations… all have hugely explicit teaching requirements, and they are largely non-negotiable... I think we are employed primarily as educators rather than as researchers (AC 7)

> …the challenge is the huge teaching work load, we have to do research, but we also have huge classes with over 200 students sometimes, so you are marking, and the administration and we have to do community work engagement… (AC 9)

> In terms of funding… sometimes you won't attract very good students because the issue is that you don't have competitive bursaries… So, there can be a lot of dropouts, not being able to conduct research just because there is not enough funding. (HoR-1)

It should also be noted that in contrast to this discursive construction of research as integral to the identity of an academic, there was also ample evidence that for some it was not a major aspect of their work or university. For example, some of the academics remarked:

> Not everyone appears to understand the value of research, so if someone doesn't understand the value of research, they probably won't take part in the research (AC 14).

> [Research] it's central but they try to make sure that at least teaching is done thoroughly. No dodgy things that are done, so that it becomes a standard thing. They don't want to leave teaching behind at all. They want to have good teaching, people who respect classes, and do their teaching duties. Just like how they would want to perform in

> research. You will know that some people would value research because they just enjoy doing that, but the university is pulling all these things together (AC 19).

Boughey and McKenna's (2011) study of how HBUs represented themselves in audit documentation found that academics in these institutions often suffered from low morale and they raised concerns about weak academic identities. This was echoed in some of the data in this study, which suggested that in a few cases there was apathy and a sense of compliance:

> So, you find some of our academics are doing very well and are going ahead. But if you are not really interested in research or you are not interested in academia, you will find that some who, and I am not saying they are lazy, please do not misunderstand me, I am saying there are some with passion to lecture and are happy to interact. So, you have that kind of some have gone more to research and some on into re-curriculation. [But others] are happy to just be told: 'This is the new curriculum, this is what you have to do'. (AC 9)

A number of the academics mentioned that research was not central to their work and that they tied their identities more to teaching than research.

> I think first and foremost I am a teacher and then a researcher. (AC 2)

> You have to be a lecturer because that is the first and the foremost reason you are an academic. (AC 23)

Similarly, 68% of the questionnaire respondents indicated that they believed the university where they work understands provision of undergraduate programmes to be the main concern, 15% ranked undertaking of research to improve society as the main function, 9% saw development of critical citizens as being the universities main function, and 4% saw development of skilled labour for economy as the main function.

It would thus seem that there is a strong sense that HBUs are primarily teaching institutions. In response to another questionnaire item, 55% of the respondents indicated that research

production and postgraduate education are central to their university, though interestingly 32% thought it was not and a further 12, 5% were unsure (see Figure 5.1 below).

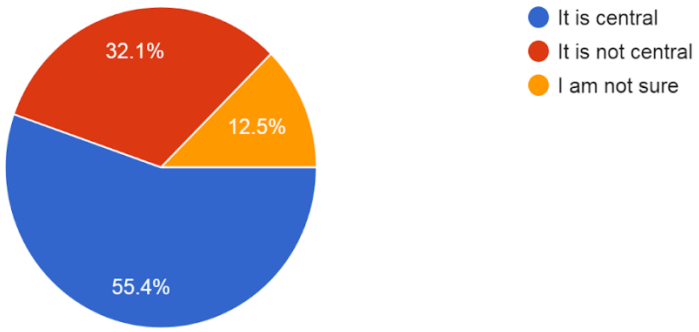

Figure 5.1: Centrality of research production and postgraduate education

Lack of interest in research among academics was more prominent as an issue in the data from some of institutions than others, for example a Head of Research in one institution said: 'Very few in general academics have been really engaging in research' (HoR 1). Another Head of Research in a different institution commented:

> I could also say that some academics are not really, really committed. And that's a constraint. It's difficult to work on people's mind-set, because even this constraint of big numbers, one has to find ways of conducting research. But now someone will tell herself or himself that I'm teaching plus/minus eight hundred students, I don't care about research. (HoR 4)

There was, thus, evidence of a discourse of research as being fundamental to academic identity across much of the data, though perhaps not as much as the literature would suggest. Furthermore, there was evidence that for some academics, there was resistance or indifference to the idea that their identities as academics emerged in part from their role as researchers.

5.3 Research for social justice

The second discursive construction of research in the data was as a public service or public good. Research as a public good is conceptualised broadly in the higher education literature from either an economic or a social justice understanding. Economists conceptualise research as public good on the basis of its characteristics as non-rivalrous and non-excludable. By non-rivalrous, it means that research can be consumed by many people without being depleted, while a non-excludable good means that its benefits cannot be confined to particular users (Calhoun, 2006; O'Donoghue, 2014). From a social justice perspective, research is understood as public good in that it contributes directly to addressing the existing problems of society and ultimately contributes to the betterment of society (O'Donoghue, 2014). It was largely in this latter sense that research was conceptualised as a public good in the study data.

Research in this construction was understood in terms of producing useful and relevant knowledge to address the problems of local and broader communities as opposed to producing blue sky knowledge or more theoretically-focused research. For example, the 2014 Annual Research Report from the University of Limpopo states:

> Research plays a pivotal role in developing communities and finding solutions for various challenges. It is important that we encourage our academics to undertake research continuously to address challenges faced by our country.

Some of the interview participants drew on this discourse, that research entails having an impact on society:

> It is of no use doing research for the sake of doing research. It must impact the teaching; it must impact on society. (AC 9)

Many of the participants in this study are involved in community-based research projects that are aimed at increasing social justice through improved access to basic services, better access to water, more equitable legal representation, and so on. Academics listed many examples of such research projects in the survey data**,** citing the rural positioning of the university within specific communities as important**.**

> So, for instance, we're looking at sustainable livelihoods and the role of entrepreneurship, assisting particularly women and youths. So that's the kind of research that where we know that it's a challenge that is happening in the community, and if we find a solution to that, we're not only making theoretical contributions but also finding practical lived solutions to challenges that are in our context. (Q14)

> Through research output, we advance knowledge production with the aim of improving the lives of people and our environment. (Q 3)

This tying of research to social responsibility seemed at least in part to relate to the geographical positioning of these universities.

> …we've got a lot of rural areas surrounding our university, and the question is, the ground through which these rural communities can benefit and find solutions to their problems, happens is the universities that are located near them. So that's the kind of stuff I would advocate. (Q14)

The discourse of research as a public good was not only understood in terms of providing a direct contribution to community solutions, but also as the community being the central context for studies. This was understood by the participants to bring with it certain research implementation challenges and requirements, such as the need for university–community partnerships.

Linked to this discourse that research should serve the public was the issue of knowledge dissemination. There was an understanding in the data that it is through research communication that the benefits of research are felt and implemented**.** In some institutions, this was understood as going beyond communicating research within the discipline and to include producing knowledge that informs the public sphere. Giroux (2006) similarly argues that academics must ensure that their research is communicated in meaningful ways to broader society.

The Mangosuthu University of Technology's research policy (2008) states that:

> Academics have a responsibility to announce research results by way of presentations at national and international conferences and/or by way of publication in journals as well as in popular publications.

Other institutions had various forms of structural systems for disseminating research knowledge, especially to wider communities, that is, collaborations with local and government departments, community partnership agreements, and so on. This includes research centres and units that take a leading role in mediating public access to knowledge. For example, UWC has a Community Engagement Unit, which was reported (Annual Report, 2014) to have achieved a milestone in providing public access to knowledge:

> A key achievement was the launch of the UWC Community Engagement Database, which provides information about UWC's range of community engagement projects. The CEU also launched its first Community Engagement @ UWC publication, in which more than 30 community engagement projects are showcased.

Given the extent to which the rural positioning of HBUs had been acknowledged to constrain research engagement (Cooper, 2015; Bozalek & Boughey, 2012), this discourse suggests that community engaged research is of great significance to the research identities of those working in HBUs. Furthermore, such research has the potential to have a major impact on social development in the country. It was also evident that there is scope for better national support for this research and for it to be more carefully conceptualised and celebrated at a system level, as many participants commented on the ad hoc nature of such initiatives.

5.4 Research as an economic driver

Alongside these discourses of research as central to the academic identity and research as a social justice imperative, there was a discourse in the data that the purpose of research is tied to economic imperatives. This is perhaps unsurprising given that this discourse permeates national policy documents (DoE, 1997; DHET, 2013a; DST, 2008). Such documents make it clear that universities are expected to produce knowledge and develop graduates to contribute to the

growth of the country's economy. Some of the interview participants in the research drew on this discourse when they conceptualised research:

> We as academics assist and contribute to the economy of our societies through knowledge production building, through capacity and skill building. That for me is very important. How we do that is through our research. (AC 9)

> Fully cognisant of the strategic role that it is playing in the environment that it finds itself in, the University of Venda has fully accepted its role to deliver high level professional and occupational skills, research and innovation required for economic growth and development in the region (2012-2016 University of Venda strategic Plan).

This understanding of research as an economic driver was related to a discourse of research as developing a highly skilled labour force. As discussed in Chapter Two, higher education literature argues broadly that the global knowledge economy requires a strong university sector to produce highly skilled and knowledgeable workers, especially at doctoral level, who can produce globally competitive knowledge for innovation **(**Castells, 1994; Powell & Snellman, 2004; Sorlini & Vessuri, 2007).

The number of doctorates per hundred thousand people of a country's population is used as one indicator of a country's economic development as it is noted that countries with stronger economies have more PhDs per hundred thousand in the population and a greater research output (O'Rourke & Williamson, 2000; Carnoy, 2000**)**. In South Africa, the National Development Plan (2011) and the Department of Science and Technology (2008) set ambitious targets for numbers of doctorates and our higher education sector has put in place various drivers in the form of funding mechanisms and enrolment targets to achieve this. From a baseline of about 30 Doctoral graduates per 100 000, the National Development Plan calls for 100 by 2030. This would require approximately 5000 graduates per year, a doubling of the current 2500 (CHE, 2016). Additionally, the Academy of Science of South Africa consensus report on doctoral education concludes that the future development of the country depends on the production of more high-quality PhDs (ASSAf, 2010).

In the following extract, a study participant can be seen to draw on this discourse of research as an economic driver:

> …I think there is now a slow kind of inclination towards what I can term as an innovative way of doing research, rather than just to say, okay, we want to just prove this is related to this, this is whatever, then you're confirming what another country, can confirm it to South Africa, but there is like…people are now aspiring to be quite innovative. (HoR 1)

Similarly, the Vice Chancellor of University of Venda, Professor Mbati, draws on the same discourse of research as an economic driver when he makes the following comment in the foreword of 2012-2016 Institutional Strategic Plan:

> The quality and profile of our graduates must be continuously monitored to be in sync with the national skills development plan and with the realities of a developmental state that has taken a conscious decision to move from a resource-based economy to a knowledge-based economy.

In 2007, the government launched a ten-year innovation plan to help South Africa's transformation towards a knowledge-based economy. Part of this plan involved highlighting the role played by science and technology in driving growth and development of the country. This discourse was strongly evident in the data:

> I think what we need more is more work on developing emerging researchers, particularly in key clusters of the economy: science, engineering and technology. (AC 14)

While many of the academics drew on the discourse of research as an economic driver to articulate their understanding of research, they also saw economic drivers as potentially constraining research:

> It is good because more output is like more knowledge is being produced. And more innovation, like new ideas are coming to the market, the solutions to the problems that

> we are facing, you know, social economy problems that the country is facing, the world is facing, they can be resolved ... But the bad part is that, for instance, so if it is not really monitored very well, sometimes you'll find that just the same output might not be sufficient because the quality might end up being compromised. Because people are competing for more and because of the incentives that you find that HBIs like they offer like researchers, that can encourage, but that is where you see a tradeoff… some of academics when they are starting they start off by publishing in… predatory journals that are just like after money, they are not really following the peer review processes…. So, in the way that kind of competition, that kind of pressure could also put like academics in a tight fit where it compromises the quality now also of the output… (HoR 1)

Such concerns are evident in the literature too (for example Frick, McKenna & Muthama, 2017). What is apparent in this case is that the discourse of research as an economic driver contradicts some of the other discursive framings in ways that can be difficult for the academics to untangle. While this discourse is not of necessity in contradiction to discourses of research as being a valued aspect of an academic's identity or as being in service of social justice, there were some tensions between such discourses. There was, however, strong complementarity between this discourse of research as an economic driver and another discursive construction of research as being for instrumentalist reasons, a discourse to which I now turn.

5.5 Research as an instrumentalist requirement

The fourth discursive conceptualisation of research that I identified in the data was an instrumentalist one where participants understood research to be an activity undertaken primarily for individual benefit:

> In our institution and in the outside world any academic is judged by research. For instance, if as an academic you're applying for a promotion, you have to show evidence of having conducted research. If you apply for a position elsewhere, you have to show that you have conducted research in another higher education institution… You may be

> teaching, having hundred percent and all that, but you cannot be promoted only based on that, you must show evidence of research. And also, research is very crucial because academics have to attract funds that bring income, and the way to get that income for academics is research, getting grants from NRF, NRC, and other external bodies. (HoR 4)

> And, also because promotion and also the issue of having like a career advancement moving to other institutions and so forth, is also linked to the kind of research output that like quite a distinctive factor now between like one academic to the next. 'How many articles have you published? How many students have you actually supervised?' So, more people now are pushing towards that, so it's no longer at all, 'I'm more of actually teaching than combining with the research'. So, academics are starting to actually recognise that also you have to contribute towards the research. (HoR 1)

> Well, as I said, academics, you don't get promotion unless you have produced a certain number of papers. And in fact, we have a quota system for the number of papers that you have to produce each year. (AC 13)

The references to research as instrumentalist were replete in the interview data and this discourse that undertaking research is primarily about 'outputs' in order to achieve 'promotion' or to ensure job security was the most dominant construction. While for some the understanding that undertaking research was required for career advancement was seen to be something imposed on staff by the institutions, others saw it as something one could elect to do:

> The only way to survive in this academia is by doing research. There is no any other better way of saying it. That is why even though it is optional in my institution on my own because as I said it all starts with career growth. I wouldn't like to be the same person in the next five to seven years. You need to put your foot on the next step. (AC 10)

> For us to further your career you need some research progress, in terms of research output and publications. (AC 18)

> …promotions from lecturer to senior lecturer, let me say from junior lecturers to lecturer they don't consider much research, but from lecturer onwards, one of the criteria that is used is supervision of postgraduate students, publications in accredited journals, and research funding or practice. So, all these count towards your promotion. Of course there are other criteria like teaching, but research is a major component, particularly now from senior lecturer upwards. Now the research component bears more weight than the teaching component. (AC 27)

This discourse was not only evident in the interviews, but in some of the institutional documents as well. For instance, in some of the institutional documents, research is defined in terms of accredited outputs that accrue funding, and not, as in the earlier examples, as including benefits for society broadly, ensuring community engagement, or being disseminated in alternative platforms. Some of the Research Policies, for example, explicitly foregrounded the production of accredited research outputs as the core objective for doing research and all mention to research in some of the annual research reports is in terms of numbers of publications and reference to such publications, with no engagement at all with the content of such research, what its contribution to the relevant field is, and so on. The institutional level discourse in such documents, thus, seems very much within this idea of research as being about measurable outputs that are subsidy accruing. Given that the institutional level documents provide strong evidence of this instrumentalist discourse and little evidence of valuing research as a key purpose in the academic identity or as attending to social justice concerns, there is a certain contradiction in such documents then bemoaning academics taking this position. For example:

> Research is one of the key functions of a university without which a university cannot generate and disseminate knowledge effectively. The Faculty of Arts is one of the two leading research faculties at the UNIZULU in terms of research publications, throughput rate and graduation of masters and doctoral students and in terms of income generation for the University through research subsidy. Research in the Faculty is largely done in order to find solutions to challenges or problems affecting humanity confirm or contest or refute theories or hypotheses, develop scientific and professional practices, and develop creative, analytical and rational thinking for informed decision making. On a more practical basis, research is done to fulfil learning and career needs;

> to satisfy curiosity; for egoistic reasons, such as recognition and visibility; for career-related rewards, such as promotion for self-development or growth. (2014 Unizulu Annual Report)

Arguably, the instrumentalist discourse constructs research as constituting research only if it brings money into the university. One of the academics stated this bluntly:

> …if we are looking at it [research] from the university perspective in terms of where the emphasis is this university…okay, remember that money is an issue, right? The university generating some money, obviously you're going to get that through publication, right? So that means they would want people to publish a lot. But their focus is publishing on those subsidised journals…journals that when you publish in, then the Department of Higher Education and Training would give the university money... Whether you are publishing in a journal that has high impact factors or low, you see. Here we don't care about that. What we care is whether that journal gives the university money. (AC 19)

Similarly, the 2013 University of Venda annual report stated the following:

> The university continued to focus on human capacity development. Workshops on postgraduate supervision, journal article writing, and grants proposal writing were hosted to equip researchers in effective and efficient supervision, submitting quality manuscripts for publications and proposals that attract good funding.

While there is nothing inherently wrong with the text in the quote above, it should be noted that a pragmatic understanding that developing research capacity was geared towards increasing production in terms of publication counts and postgraduate numbers was pervasive in the data.

Moreover, most of HBUs had incentive structures for academics undertaking research. These included reference to research outputs in job descriptions and in promotion requirements, but they also included the payment of rewards to researchers who published in accredited journals. Such funds were paid into research codes, for the funding of research-related expenses, such as conference attendance, and in some cases, the academics could elect to be paid part or all of such

incentives into their salaries. While the issue of incentives is discussed in more detail in the following chapter, I unpack it briefly here because of its complementarity to the instrumentalist conception of research. In all cases where the individual incentives were referred to, research was discursively conceptualised as countable outputs.

The Department of Higher Education and Training repeatedly cautions institutions that the payment of incentives to individual researchers promotes 'perverse behaviour' (for example Government Gazette 38552, 2015). The idea behind incentives is that they will increase research productivity, but it has been found to also have the effect of lowering the quality of research, of leading to 'salami slicing'[7] of research, and of rewarding individualistic behaviour that works against collaborations and mentoring of junior researchers, and so on. In this study, there were participants who spoke in favour of such reward systems as encouraging output and those who indicated that these systems either had little effect or had bad effects:

> Then because also of the incentives that are provided by the institution, the previously historically disadvantaged institutions you find that they provide incentives for research publications and for the supervision of students, then that … like adds more output. So, the incentive is also working to increase the output. (HoR1)

> Then if we can have good incentives, it's like taking the horse to the river but you can't make that horse to drink. Because we say here, some people say themselves that 'I don't care about incentives, I'm teaching, and I don't have time'. (HoR 4)

> There are lots of attractive incentives behind research which started as a good thing anyway because it encourages the academics to do research, to have a love for research. But I think that is now coming at a cost. It's costing teaching and learning because now every academic is more interested or more concerned about publishing, and then they know that if they publish at least one point two five units per annum there are going to be very good incentives. You are entitled to an international conference, fifty thousand

[7] Salami slicing is a term used pejoratively to refer to a practice of dividing a large research that could be published as a single research article into small published articles. In most cases the reason for such practice is to increase publication output for financial gain, status, promotion, probation and so on. The practice is considered unethical and illegal in many countries around the world including South Africa (Elliot 2013).

> rand for anywhere you want to go in the world to attend an international conference. (AC 15)
>
> There are institutional incentives, which include assisting in promotions, Vice Chancellor's Award for research excellence. Funding is promoted via outside sources like for example NRF, companies, Governmental agencies and so on. These have positively impacted on my research when still a junior researcher. However, as part of the senior research corps, this has not impacted on my research output. (AC 20)

There was, thus, little agreement about the effects of institutions paying funding incentives to individual researchers, but it did seem evident across the data that participants tied this structure to an instrumentalist discursive construction of research in which research is understood as a vehicle for reward, rather than a discursive construction of research as being a contribution at the boundaries of a field. In an institutional context where a strong commitment to research as integral to the academic's identity has not been nurtured historically, it seemed that this discourse was able to flourish.

5.6 Conclusion

The key finding presented in this chapter is the unevenness of discursive conceptions of research. There were at least four dominant discourses on what research and universities are for, namely that

i) research as central to what academics and universities do,
ii) research as important in attending to issue of social justice,
iii) research as driving the knowledge economy, and
iv) research as necessary to get publication and ensure promotion (drawing on an instrumentalist understanding of research).

Archer (1995, 1996) indicates that this likely leads to opportunism. There is a need to develop a strong culture of research where the academic identity of doing research as a central self-value is

supported by a culture of research as being closely tied to the social justice agenda. However, the latter two discourses identified in the data, those of research as an economic driver and as instrumentalist, are complementary to each other but contradictory to the first two. The contingent contradiction between these discourses would likely lead to what Archer (1995, 1996) terms as 'elimination'. Depending on the interplay between these contradictory discourses and other structural, cultural, and agential mechanisms, it would seem likely that some of these discourses will be so constrained as to be eliminated.

Having looked at the discourses that the participants and documents drew on across the data, I now turn to look at large level structures that emerged as mechanisms in the data.

Chapter Six: Funding, Incentives and Management

6.1 Introduction

As discussed in Chapter Two (section 2.3.1), we live in the so-called era of 'knowledge economy' which affects national and university policies. In this knowledge-based economy, knowledge is often understood as a commodity that can be marketed for social and economic benefits (Slaughter & Rhoades, 2004; Shore, 2010). This conception of knowledge then leads to the understanding that knowledge production is important for driving economic growth and competitiveness. Universities are then perceived as key players in economic development, knowledge production, and dissemination of knowledge, and through development of highly skilled human capital to sustain productivity (Bloom et al., 2006; Castells, 1994). This particular way of conceptualising knowledge is arguably dominant in the South African higher education policy documents (DoE, 1997; DHET, 2012; DHET, 2013a; NPC, 2011).

The discourse of the knowledge economy has, in turn, led to particular ways of funding universities and incentivising research. In this chapter, I analyse the data that referred to such drivers and consider the ways in which they played out as structures in the HBUs and the effects these drivers had on institutional culture.

6.2 National funding as driver of research

The Department of Higher Education and Training (DHET) in South Africa uses funding as a lever to drive research output. The funding formula that was introduced in 2004, which is still in use, albeit with minor revisions over the years, is based to some extent on performance and has a strong emphasis on research output.

This funding model has been used by the government to push universities to increase knowledge production in forms that are perceived to enhance the economy of South Africa. The funding formula is made up of two kinds of grants of funding: block grants and earmarked grants. The

earmarked grants are specified for particular projects. The block grants are allocated to each university annually for operations and maintenance of institutions. The grants are calculated through complex formulas which include student enrolments, graduations, and research output units among other factors. The inputs and outputs are weighted by disciplinary categories, known as the Classification of Educational Subject Matter (CESM).

There was a general consensus in the data that funding was insufficient in the system to drive research growth. The effect of macro-level funding constraints was seen to play out at institutional level. Participant*s* in the study had this to say about funding as it impacts on their context:

> Funding is the biggest challenge, and attracting grants is very competitive. (HoR 5)

> There is the CSIR [Council for Scientific and Industrial Research] funding that comes but it is not really enough for us to develop tools and for us to do enough conferencing which is a major part of research. (HoR 7)

Research output funding is on the basis of postgraduate graduations and 'accredited' outputs. Accredited outputs are any journal articles that appear in those publications found on certain approved lists. Thus, article publications are used as a proxy for research dissemination and so researchers are rushing to get publications in a journal on these lists because that is what is valued and not a contribution to an intellectual conversation via such publication or a solution to a social ill in the form of a journal article or book. What gets measured and rewarded is what gets done. The quality of such dissemination is left to those responsible for managing these lists. When the funding formula was introduced in 2004, there were three such lists: ISI [Institute for Scientific Information], IBSS [International Bibliography of Social Sciences], and the so-called SAPSE list, which was produced by then Department of Education. In 2016, three more lists were added, which were Norwegian list, ScieLO South Africa, and Scopus (DHET, 2015c).

There are a number of concerns about the use of such proxies. Firstly, some high-quality journals might not be included because they fail to meet criteria such as having a sufficiently long history or a sufficiently high rejection rate. Conversely, there is a concern that some journals on these lists are not of consistent quality. This was particularly the case with the 'SAPSE' list, which

Mouton and Valentine (2017) pointed out included a number of predatory journals. ASSAf was tasked with 'cleaning up' this list and a number of journals were removed, including the notorious *Mediterranean Journal of Social Sciences* in which 72 articles were published between 2005 and 2014 (Mouton & Valentine, 2017). Not only does this indicate some of the unintended consequences of the driver of research in the form of funding for accredited articles, it also indicates that millions in subsidies have been allocated to universities on the basis of dubious quality research. This funding formula structure is then complementary to a more managerialist culture with strong instrumentalist discourses. This complementarity allows for the opportunity for such approaches to emerge and take hold.

The bulk of the funding formula is a blunt instrument, meaning that the same formula is used for all universities regardless of their history or their focus in terms of institutional type. This disadvantages HBUs with their particular histories of a lack of research culture and the ongoing uneven spread of productive researchers (See Table 5.1 in section 6.3 below).

There have been a number of attempts to address the bluntness to allow for differences of institutions. These are:

- taking into account the size of the institutions where the grant is determined by number of students enrolled;
- taking into account the cost implication of greater numbers of disadvantage students, with the grant taking into account the percentage of black and coloured (defined as disadvantaged) students enrolled;
- taking into account the multi-campus institutions with grant meant to help institutions that have more than one campus that focus on teaching;
- taking into account the financial development and sustainability of the historically disadvantaged institutions; and
- more recently, taking into account students from families with income less than R600,000 per year, referred to as the poor and missing middle (DHET, 2017).

These attempts to remedy the blunt nature of the funding in all cases are a line item amendment rather than a change to funding formula itself. Thus, the basis of the funding has remained the same, which is a one-size fit for all model.

Furthermore, funding from the government is limited and universities are under serious financial crisis. In the last two decades, the state funding of higher education has significantly decreased (CHE, 2016). Government investment in higher education as a ratio of GDP is less than half that of Cuba, China, Finland, Iceland, Malaysia, and Ghana and also significantly less than Senegal, Chile, Brazil and India (University South Africa, 2016). For example, in the 2014/2015 financial year, the government spent R24.2 billion on higher education (DHET, 2014). While this is a relatively large amount, it forms a ratio of 0.64 of the total amount of money spent on education, which decreases in the period between 2012 and 2014.

Limited funding for research was frequently noted in the institutional documents. For example, in the 2013-2014 annual report of University of Fort Hare reported on the isiXhosa Lexicography project, and a shortfall in the funding grants is reported.

> Once again, the annual grant received from PanSALB [Pan South African Language Board] fell short of the XNLU [IsiXhosa National Lexicography Unit] budget requirements. This seems to be the case for all the NLUs [National Lexicography Units]. The funding allocated for 2013/14 amounted to R1 438, 097.65, which is not enough to cover the budget for salaries. The Unit had to prioritise in order to save money for other operational and office running expenses.

Reference to the impact of funding constraints on various research-related projects was frequent. In the 2012-2016 Strategic Plan of the University of Venda, lack of funding for research is listed as one of the contributing factors to low research output in the institution.

> There are a number of factors which contribute to the low output. These include: …lack of and/or insufficient access to research funding.

Some academics talked of how limited research funding from the institution fails to meet most of their research needs:

> The University here is trying but [funding] is not enough especially funding researchers for conferences and giving them something that they need when they need it. (AC 4)

> Earlier on I mentioned seed funding, and we are only limited to fifty thousand per annum. And yes, fifty thousand goes a long way in meeting some of the expenses that are in research. But honestly, if you have maybe three or four Master's Students, and then maybe one or two PhD students, and at the same time you have two or three Honour students, this level of funding is not adequate because apart from doing supervision of students, you are also expected to do individual research. [24:04][8] when you stay, for example, a week off campus, usually you spend more than [fifteen?] thousand, and there's very little that you can do within a week. So the support is not adequate (AC 16).

> You can apply for funding, which was R30000 and now down to R25000 because the university is suffering. Initially it was R30000. So, every year you can put down your project, what you have done and achieved, and they can decide to give you R30000 again. But with that amount you can't do much. You can pay research assistance, buy books and you can buy papers -you can see I bought quite a lot of paper, but you can't go for conference and things like that. (AC 1)

It is not only the academics who experience lack of adequate funding for research but also postgraduate students:

> So, in terms of funding…it's not always enough for the number of postgraduate students that you'll be having. (HoR 1)

Over and above the inclusion of research output funding as part of the block grant, the DHET introduced an earmarked grant, the Research Development Grant (RDG)[9], to try to build research

[8] This indicate that the content transcribed was entirely unclear.

[9] As of 2018, the Teaching Development Grant (TDG) and the Research Development Grant (RDG) have been collapsed into the University Capacity Development Grant (UCDG). This is still calculated on the basis of enrolment, throughput, and publications with those institutions performing more poorly being awarded larger sums of money. This may seem like a perverse incentive to perform badly and thereby increase the UCDG allocation, but the amount allocated in this way is much less than would be allocated in the block grant through enhanced enrolment, throughput, and publications.

output especially in HBUs and UoTs in ways that might attend to the bluntness of the funding formula, which rewards output without taking capacity into account (2004). All universities in South Africa are eligible for the RDG grants but those with lowest research output get the most funding. Most of the HBUs have hugely benefited from the grant because they have low research production levels, but this does not necessarily equate to such funds bringing about the systemic change in their institutions (Moyo, 2018).

Moyo's (2018) PhD on the Teaching Development Grant (TDG), which is similarly calculated and aimed at developing teaching, found that the distribution of expertise at management level was uneven in the sector, with some universities especially the HBUs having low capacity in comparison to their counterparts. Institutions that were well-resourced, mostly the historically white universities, were in a much better position to effectively use the grant funding for the improvement of their academic project (see also Ntshoe & De Villiers, 2008).

A central operational cost is staffing, and years of uneven funding had huge effects on the sector in this regard. Moyo's (2018) study found that, in particular, HBUs lacked expertise in fields such as financial management, institutional planning, and human resource management. This shortage of expertise in key professions was found to be a major constraint in the ability of universities to spend the TDG**.** For example, in the 2014/15 financial year a total amount of R76 365 875 was returned to the DHET as unspent funds. R32 115 077 of these returned funds were from HBUs which had been allocated a total of R62 015 in 2014/15 (Moyo, 2018). It is assumed that the institutional constraints on utilising the TDG for the development of teaching would equally plague the use of the RDG.

At an institutional level, the acting dean of the Faculty of Humanities at University of Limpopo reported a similar case of unspent RDG at the faculty level in the previous financial year, 2013/2014, and indicated that 'very little of the research development grants were utilised by all the schools in the faculty' (2012 University of Limpopo Annual research).

As discussed in Chapter Three, the problem of research management capacity in HBUs is partly due to the history of the institutions. Under the apartheid era, HBUs received limited funding and the requirement that such funding had to be entirely spent within each financial year on

nationally approved budgets, which greatly limited the possibility of developing such capacity. In their current state (or as currently constituted), many of HBUs are not able to attract highly qualified and experienced managers for these positions due to a lack of sufficient funding, the geographical location in poor rural areas, and the complexity of working in institutions that do not have strong administrative systems (Moyo, 2018). Thus, the funding crisis affects universities unevenly and HBUs are less able to maximize the potential benefits of the RDG due to a lack of qualified personnel to manage the grants.

The block grant greatly rewards postgraduate enrolment (DHET, 2010). That is, the number of postgraduates enrolled in a university forms a fairly lucrative aspect of the teaching input part of the grant. Many of the HBUs are less able to attract postgraduate scholars because of less supervisory capacity and because such institutions are generally less likely to be institutions of choice. This was noted by some of the interview participants:

> We are understaffed in the academic development unit, and since we are understaffed you have to go beyond the call of duty. And at the end of the day you find yourself overwhelmed with your departmental responsibilities and supervision… (AC 15)

> We have challenges in terms of staff qualification. We have just about 38% of our staff with PhDs. You know and quite a chunk of our staff only has 4 year qualification (HoR7)

> The second challenge is that for my department, I'm the only professor and the other colleague is a senior lecturer. So, you can see there are only two, and if I have to supervise… Like now I can tell you that I have been supervising about nine fourth year projects, I have eight MSc [Masters of Science] students and I have one PhD. It is [word unclear 11:51]. So, you find it's also a strain on me and also, it's not fair for the students, so even if you give me something to read it will take time. (AC 29)

> And also, the issue of taking on post-doctoral fellows, and say, okay, they can also come in and [word unclear 20:22] assist in terms of research output, in terms of supervision; it's a challenge. (HoR 6)

The institutions not only attract fewer postgraduate students but also have fewer postgraduate programmes on the Programme Qualification Mix (PQM). One of the respondents noted that 'Unfortunately in our program we do not have postgraduate'. (AC10). This is especially in the comprehensive universities and universities of technology. The universities of technologies in their previous form of technikons were mainly teaching institutions and, therefore, have fewer postgraduate programmes, while in the comprehensive universities, some of the postgraduate programmes were phased out following the mergers from 2002 onwards. This was to allow for the inclusion of vocational programmes at the undergraduate and diploma levels as part of mandated goal of the institutions.

HBUs are also not able to charge large fees for postgraduate scholars because many of them come from working class families found within their localities:

> So, if we look at where University of [XYZ] is, this sort of former disadvantaged background students, you cannot have [postgraduate] students, they just withdraw because there's no money for food. (AC 19)

These institutions are also less able to get third stream income from research consultancy, projects, and patents because of their geographical location in rural areas where there are fewer such opportunities (Bozalek & Boughey, 2012; Ntshoe & De Villiers, 2013; DHET, 2016). The apartheid architecture of higher education, therefore, remains a very strong constraint on the current landscape.

These institutional challenges of HBUs also impact on the extent to which other funding mechanisms from affiliated government departments, such as the National Research Foundation (NRF), the Department of Science and Technology (DST), and the Council for Scientific and Industrial Research (CSIR), are available to them. For example, the Department of Science and Technology through the NRF introduced the NRF Thuthuka grants and the South African Research Chairs Initiative (SARChI) as part of strategies to increase funding for research in higher education institutions in South Africa. The Thuthuka grants were introduced mainly to support emerging researchers and academics in permanent or full-time contract positions in public institutions like universities. SARChI was developed as a strategic intervention to attract

and retain excellence in research and innovation in South African universities (NRF, 2012). However, HBUs have not benefited equally from this initiative due to lack of capacity to sustain the chairs.

For example, in 2018 out of 255 research chairs allocated to all twenty-six universities in South Africa, only nineteen were allocated to HBUs collectively (http://www.nrf.ac.za/document/2018-list-operating-research-chairs). The latest call for applicants has specified that preference will be given to applications from HBUs, but this still raises the question of institutional capacity to host the chairs. A recent evaluation research on the impact of the SARChI funding in South Africa indicates that the funding is more effective in terms of raising research output when the recipient of the funding is highly ranked (A or B rated) (Fedderke & Goldschmidt, 2015), which is not the case in many of the HBUs. They have the lowest number of rated researchers compared to the historically white universities.

The rating of researchers in South Africa is a peer reviewed ranking system that was introduced in 1984 by the NRF as a benchmark for the quality of research (Holness, 2015). The benchmarking is associated with two national imperatives: the development of local research capacity and the funding of research (Holness, 2015: 33). Individual researchers are funded based on the quality and impact of their research output over a period of eight years. The allocation of funding varies across different categories and the highly-rated (A) is allocated large amounts. The categories are:

A - the leading international researcher

B - the internationally acclaimed researchers,

C - the established researchers,

P - the prestigious Awards, and

Y - the promising young researchers (http://www.nrf.ac.za/rating).

The demographic of the undergraduate student body at HBUs is a further structural constraint on research production. The idea that HBUs have remained demographically static with an almost exclusively black student body has been challenged by Cooper (2015), who has shown that while

change in demographics of race have stalled, there has been significant change in demographics of class. One proxy for class is indicated by the number of students in an institution who receive the NSFAS[10] funds. For example, the 2014 UNIVEN Annual report noted that in the year under review 'almost 70% of the university's students were depended on the National Student Financial Aid Scheme' which was the case in most HBUs. The increase in the number of working-class students in these institutions is in part due to the flight of middle-class black student to HWUs universities because they can afford to pay the fees. Thus, the effect of this has been that HBUs attract students from poorer social economic backgrounds who are unable to pay the fees, which therefore leads to an accumulation of debts which in turn leads to financial instability, low throughput and retention rates, and the inability to retain students into postgraduate studies.

Despite various shifts in the national funding framework and the inclusion of a RDG, the ability to use national funding as a lever to increase research output is thus fairly limited. It is constrained by the blunt nature of much of the funding formula which provides rich rewards for postgraduate enrolment and graduation but fails to take into account the constraints experienced by HBUs in doing so. While the RDG, a ring-fenced grant specifically designed to drive research output, is differentiated in the amounts allocated, as it is calculated on the basis of postgraduate education and research publications, it does not take into account institutional constraints on utilising the funding efficiently towards system-level change.

6.3 Institutional incentives as drivers for research

As indicated in the previous chapter, in response to the need to increase income, and the ways in which the research output portion of the block grant privileges academic publications, many universities have introduced drivers at the level of the individual academic. There are three main

[10] The National Student Financial Aid Scheme is government student bursary and loan scheme that receive funding budgets and reports to the Department of Higher Education and Training. The scheme was established to provide financial assistance in the form of loans and bursaries to eligible student at public universities, and Technical and Vocational Education and Training Colleges (TVET) in South Africa. The loans are recovered from students once they graduate and are employed.

ways in which universities try to drive research publication output: they recognise it in probation and promotion processes, they include it in performance management requirements, where these are in place, and, in some institutions, they incentivise individual academics through various direct financial benefits. As some of the respondents pointed out:

> We have a very strong incentive to doing research. We get research funding from any accredited papers that we publish... Then obviously there is promotion, which is always tied to research… we are incentivised to supervise postgraduates; it is included as part of your promotion criteria. If you want to be promoted to an associate professor and above, there is a strong expectation that you are coordinating small research teams of postgraduate students. (AC 3)

> We do have awards; we have two types of rewards systems, the senior research awards and the emerging research awards. This is Vice Chancellors award for excellence. In other words within the faculty if you are nominated for such award which will recognise you at the faculty and then the faculty will present you at institutional level to compete with colleagues from other faculties for the VC award. That is another incentive. Further to that we have the promotions, our promotions from lecturer, to senior lecturer, to assist professor and full professor are based partly on your output of research (AC 9)

> The publication record at [University of XYZ] has completely shifted, if you look at the ten year (strength?15:48), all of a sudden it is very high. So definitely there are incentives which are put in place to make this possible (AC 29).

The 2014 UNIZULU policy on administration and management of research funds also suggests that

> Special recognition should be given to researchers who have a record of producing subsidy-generating outputs and who have clear research plans for generating further subsidy-generating outputs. They should accordingly have an advantage when research funds are allocated in certain categories…

Financial incentives to researchers are provided to academics who publish in accredited journals in most of the HBUs. The funding is allocated to academics in two different forms, into their research code or into their salary. This differs from university to university and the amount differs too. For example, at the University of Fort Hare, the 2008 research policy states that:

- The University will pay an incentive amount of R20 000 for each research accredited unit (publication and postgraduate output) that is approved by the Department of Education on the Research Output component of the University subsidy.
- The incentive will be paid once the Department of Education approves the audited number of units.
- The person receiving the incentive will have the choice of taking the full amount as cash (which will be put on the person's salary and taxed) or have all or a portion of the amount placed in a research account in their name.
- The GMRDC [Govan Mbeki Research and Development Centre] will open an account for each person/department earning an incentive award should this be the chosen option. The researcher/ department will be able to claim for research expenses against this account in line with normal university accounting policy. Should the account be held in the name of a department, the Department Head will be able to claim for research expenses for the department.
- The GMRDC will maintain these accounts so that staff will be able to accumulate their incentives.
- The University will ensure that the liabilities against the Incentive fund will be placed on the annual balance sheet so as to ensure that the fund remains fully funded. (2008 UFH research policy)

Similarly, the 2010 university research policy for University of Venda states the following concerning the amount and the way in which it is distributed to academics:

- A subsidy from publication output, an amount determined annually is received for publication output by University of Venda staff.
- 50% of the subsidy received from the Department of Higher Education and Training will go to the University's Research and Publications Committee account.

- A researcher is entitled to 35%[11] which goes to his/her account to be used for research purposes after approval by the Director of Research and Innovation or the Research and Publications Committee and 15% will be paid to a researcher as an honorarium.

The subsidy amount differs from year to year and has reduced as the number of publications in the sector has increased. In 2017, the amount per accredited journal article was R108, 000 In many of the institutions, even supervising postgraduate students to graduation accrues financial incentives. For example. two of the academics said:

> There are cash incentives, for postgraduate supervision; there is a cash incentive for the supervisor depending on the level of the student and whether co-supervision was used. (HoD 5)

> We are incentivized to supervise postgraduates; it is included as part of your promotion criteria. (AC 3)

For many of the interview participants incentives were seen to have been successful in driving outputs.

> Look, if there were no incentives, I think a lot of people wouldn't take part in research. **(**AC 14)

> Once you get recognition, and you tie that with finances in difficult economic times, you can just do more. Because you feel motivated, you can even take students with you to conferences, you can also open up worlds for them, and you publish of course with them so that they also be mentored and follow that path. So, everything around incentive, it's like when you have a snowball effect, they say you also need something in order to make something and that's also true at the university. The more you put into people you will definitely see the rewards. (AC 21)

[11] In 2017, this would amount to R37000 going into the author's research account, in the case of a single authored accredited article, and R 16,200 being paid as an 'honorarium'.

> Here we have some incentives for each and every publication that you get, your researcher gets some proportion… in my opinion, this can actually motivate some researchers. (AC-16)

> [XYZ] University is ranked one of the top universities for research output since we brought in these incentives. So absolutely if you have to look at it from how you measure it, we are sitting among the top seven universities in the country in terms of research output and we are improving and increasing number of the graduates and in publication and so I do see tangible impact of these incentives. (AC 9)

Across the higher education sector research has increased over the last five years (see Table 5.1 below). But what is notable is that the increase has taken place across all university types. In the research-intensive universities, such as Rhodes University and University of Cape Town, the graduation and publication output has increased too, despite these universities do not have an individual reward type incentive system. This raises the question about the effectiveness of incentives noted by the academics above on research productivity.

Table 5.1: Research output 2012- 2016 – not adjusted for institutional size

University	2012	2013	2014	2015	2016
University of Pretoria	1424.11	1615.34	1677.59	1837	2040.88
University of Kwa-Zulu Natal	1424.22	1627.21	1708.61	1763.25	2004.67
University of Cape Town	1390.89	1549.12	1623.61	1663.45	1847.87
University of Witwatersrand	1114.46	1300.29	1481.68	1554.64	1821.39
Stellenbosch University	1323.3	1477.01	1554.34	1416.64	1773.13
North West University	790.6	1169.54	1126.95	1250.25	1356.47
University of South Africa	892.52	1030.04	1172.84	1328.6	1374.13
University of Johannesburg	873.91	897.42	1074.91	1279.8	1556.54
University of Free state	643.93	668.63	759.88	711.24	927.29
HBU: University of Western Cape	**366.88**	**406.37**	**481.3**	**497.21**	**552.08**
Rhodes University	409.93	454.35	491.6	487.21	497.47
Nelson Mandela University	311.53	342.09	366.02	398.5	429.17
Tshwane University of Technology	229.89	278.21	281.34	301.86	342.75

HBU: University of Limpopo	**219.23**	**170.02**	**243.7**	**276.48**	**271.92**
HBU: University of Fort Hare	**208.57**	**234.93**	**280.23**	**336.56**	**244.24**
Durban University of Technology	80.44	128.15	152.13	235.62	209.12
Cape Peninsula University of Technology	167.51	147.31	171.71	212.57	215.97
HBU: University of Venda	**127.85**	**148.77**	**225.16**	**271.63**	**188.87**
Sefako Makgatho Medical Science university	-	57	92.73	110.39	121.06
HBU: University of Zululand	**72.91**	**89.08**	**110.74**	**130.40**	**122.89**
Vaal University of Technology	75.3	82.89	109.94	76.16	101.95
Central University of Technology	58.93	68.48	87.17	106.48	117.09
HBU: Walter Sisulu University	**60.62**	**48.41**	**27.07**	**49.41**	**50.41**
University of Mpumalanga	-	-	0.50	16.77	28.87
HBU: Mangosuthu University of Technology	**17.69**	**18.01**	**15.64**	**18.64**	**16.29**

Source: DHET (2018)

There were a few academics who indicated that individual incentives are not particularly effective in driving research output:

> I sense that those that are very active in terms of research are doing it in order to be rewarded at the end of the day. I think to them [unclear 27:46]. Because what we get as an incentive, it's not much. And we can't claim that this can serve as motivation for researchers writing scientific articles, or for researchers to supervise Master's Students and so on. (AC 16)

> According to my view they [the incentives] are very minimal because you are expected to produce one paper in five years and I am saying that cannot be expected to be incentive or something that can drive research. (AC 10)

> There are institutional incentives, which include assisting in promotions, Vice Chancellors Award for research excellence. Funding is promoted via outside sources (e.g. NRF, companies, Governmental agencies etc.). These have positively impacted on my research when still a junior researcher. However, as part of the senior research corps, this has not impacted on my research output. *(*AC 20)

For the above academics, incentives received from the government funding organisations or from their institutions are not credited with motivating them to do research. There was no evidence in the data of the use of incentives being critiqued for undermining the understanding that research is about contributions to knowledge in the field, rather than attaining financial reward. Nor was there evidence of s critique of the ways in which such incentive systems work on the basis of measurements of only specific forms of knowledge dissemination.

The DHET warns institutions against the use of individual incentives to drive research productivity stating that this can have 'unintended consequences' (DHET, 2015a). However, the DHET can only warn in this regard rather than dictate as by and large institutions have autonomy in how they use their block grant and how they determine their internal processes. In attaching funding to accredited publications as a proxy for research productivity, the DHET has implemented at national level what they are cautioning universities not to do at an individual level.

Clearly, managing productivity through incentive levers is a key facet of managerialism and incentive processes, at both national and institutional level, can be understood as structures that emerge from this particular ideology. Habib (2013) argues that we cannot avoid the current system of managerialism in our institutions and so we are better off working within the system in ways that protect the academic project. To this end, he argues that incentive reward systems form an important means of ensuring power (money and status) is placed in the hands of academics. Similar ideas are also expressed by Wangenge-Ouma, Lutomiah & Langa (2015) however there is need for clarity on what is rewarded and how it is rewarded and especially in the interest of protecting the academic project.

The use of incentives has a number of possible unintended consequences. For example, it reduces incentives for collaboration for academics because they have to share funds when they co-author. Teamwork is what allows people to work together to achieve a common goal in research. The current problems facing the world and our societies are extremely complex and so cannot be addressed from one perspective. Such 'wicked problems' require people from different disciplines and contexts, and with different expertise to come together to provide insights to particular issues. The incentives undermine this collaborative approach by rewarding individuals,

as opposed to rewarding all academics within an institution (Harley, Huysamen, Hlungwani & Douglas, 2016*)*

As noted earlier, only individual academics in HBUs that produce publications or complete postgraduate student supervision are eligible for personal incentives. This may lead to reduced motivation for the experienced researchers to co-author with junior academics or PhD students because it often takes more time to publish with such novices and the incentive would then be shared. Besides, in a South African context those who collaborate nationally and internationally have to share the amount accrued for generating a journal article (Woodiwiss 2012:424-425). The subsidy is split as follows:

- 2 authors all affiliated to one of the South African higher education institutions: 2×0.5=1 unit (a paper)
- 4 authors all affiliated to one of the South African higher education institutions: 4×0.25= 1 unit
- 2 authors affiliated to one South African higher educational institution and two authors affiliated to another (or non) South African higher educational institution: 2× 0.25=0.5 unit to each South African higher education institution.

Many of the HBUs in this study have replicated the above DHET criteria of sharing the subsidy between institutions in their incentives to individuals. For example, at the University of Fort Hare the money is shared as follows:

- Where a publication has multiple authors, the incentive will be shared by the authors on an equal basis as a ratio of the approved unit value.
- The incentive money will not be paid to authors who have left the employment of the university. The incentive generated by such people will be shared as follows: 50% will accrue to the Department/Unit in which the staff member was employed to be used for research activities approved by the Head of the Department/Unit; 50% will accrue to the GMRDC [Govan Mbeki Research and Development Centre] to be distributed as general research funds (2011 UFH research policy: 4-5**)**

The tying of incentives as a structure to drive research output needs to be considered alongside

the discourse of research as instrumental in the cultural domain. It could be argued, however, that the complement of the incentives in the domain of structure and the discourse of instrumentalist in the domain of culture would work against collaboration.

Furthermore, the pressure to publish combined with incentives for publication can drive a focus on quantity and not quality (CHE, 2016). This emerged a few times in the data:

> A lot of academics that I know go churn the papers out, but then they've got to find a journal for it to go to. And it's very difficult to get into South African journals. So normally what they do is they send it to journals that will take anything…and the university lost a huge amount of revenue because … staff had published in this journal. And then of course it was taken off the credited list, so we lost a huge amount of revenue there. (AC 13)

> The employment of Prof S Lubbe ae Research Professor has brought to the Business Management Department a prolific research as evidenced by his prolific publication record for 2014. (2014 UNIZULU annual report)

The DHET urges universities to focus on the quality and not quantity only (DHET, 2015a). The research output policy specifies that it aims to support and encourage scholarship, and institutions are cautioned to remember the importance of research integrity when submitting their claims and are argued to focus on maintaining quality of research and not simply try and increase the number of publication (DHET, 2015a: 6). Another caution is that the integrity of the scholarship should be taken into consideration so that institutions and academics are not simply recycling published work in slightly different ways and dividing research output between articles (DHET, 2015a: 7). The institutions are also warned to safeguard against predatory journals whose main purpose is financial gain and not quality of research**.**

But, as noted by the above participant, many of academics in their institution focus mainly on increasing the number of publications and not in maintaining the quality of research, that is, they do not pay attention to where they publish. The complementarity between the instrumentalist discourses and the various incentive structures seems to have led to a logic of opportunism where a number of fairly dubious research projects and publications have occurred. Without a

commitment to research as a contribution to the field, there is little concern about where the publications occur or what they are about as long as they 'count':

> …you wonder how a person does it, how people make it they are able to publish ten or some up to twenty papers per year, or…and an inexperienced researcher you find that you are able to see your name in four or five publications, you wonder how much impact you've made, or your contribution, how much quality did you bring to that publication? (AC15)

This was a concern for one of the participants who was drawing on the discourse of research as being central to academic purpose and identity:

> But then of course there is a point of quality that is also important, because it's where you are publishing, and this is something I have taken seriously. I just don't publish anywhere. I categorize where I want to publish because it leads to that other incentive of, I want my work to follow me, I don't want to be known as the guy who just published in the journals that were easy, you know, those types of journals that are relevant and impactful in terms of the discipline I'm in. (AC14)

The instrumentalist discourse and the complementary focus on research as measurable counts attached to incentives arguably is what make such institutions particularly vulnerable to predatory publications. Jager, De Kock and Spuy (2017: 35) define predatory publishing as the 'publishing of academics paper without necessary controls, such as appropriate peer review and professional copy editing to ensure high-quality research.'

The pressure from governments for universities and academics to increase publication in order to contribute to the economy of the country has created a context that has allowed predatory journals to flourish in South Africa. Not every university in South Africa has fallen for the scam of predatory publications. In the period between 2005 and 2014, research shows that research intensive universities had less than 1% of their publication in journals that showed strong evidence of being predatory, while in the same period, the HBUs that form the sample site for this study had between 1% to 16% of their publication in such journals (Mouton & Valentine,

2017), which suggest that having a strong research culture is key to reducing this problem (see Table 5.2 below).

The problem with predatory publications is that they do not get read or cited, and so they fail to contribute to knowledge dissemination**.** It can be argued that it is the instrumentalist drive to produce research that makes it possible for such publications to flourish and, therefore, there is a need to nurture an institutional research culture focused on knowledge and not output (McKenna, 2017). It is also possible to argue that the use of incentives is anti-transformation as they privilege the established and experienced academics, who, given the country's history, are not likely to be young and, black academics but rather older, white academics. In institutions that do not offer incentives or where incentives are nominal, the portion of the block grants accrued from research output is simply used in the general university budget and more can be allocated to research development untied to output metrics.

Table 5.2: Predatory Publishing by Universities (2005-2014)

University	Predatory strong evidence	Share of total papers
Cape Peninsula University of Technology	107	7.9%
Central University of Technology	71	13.4%
Durban University of Technology	86	10.5%
Mangosuthu University of Technology	22	16.3%
Nelson Mandela Municipality University	41	1.8%
North West University	357	4.7%
Rhodes University	11	0.3%
Stellenbosch University	126	0.9%
Tshwane University of Technology	93	4.5%
University of Cape Town	40	0.3%
University of Fort Hare	220	14.7%
University of Free State	115	1.9%
University of Johannesburg	224	4.3%
University of KwaZulu-Natal	269	1.9%
University of Limpopo	151	7.7%
University of Southern Africa	546	6.9%
University of Venda	164	14.9%
University of Pretoria	108	0.7%
University of Western Cape	50	1.3%
University of Zululand	33	3.7%
Vaal University of Technology	42	7.3%
University of Witwatersrand	63	0.5%
Walter Sisulu University	76	16.0%

Source: Mouton and Valentine (2017:7)

The data indicated another problem with the use of incentives in that they can lead to resentment as established academics who get the incentives are often not expected to participate in teaching and other responsibilities to the same degree as others because the university needs them to be earning money from research:

> We've actually got two research Profs who don't do any teaching whatsoever. We're not quite sure what they do, they just get paid a heck of a lot more than we do. (AC 13)

Thus, the funding and incentive mechanisms are national levers used to build research output because of notions that this will drive the knowledge economy. But the levers are often blunt, for example, the undifferentiated formula of the block grant which fails to take institutional positions and histories into account, or are not able to be maximized for systematic improvements, such as in the case of the RDG and TDG which are not always used in ways that could increase productivity at an institutional level (Moyo, 2018). Universities have also reframed the national drivers into incentives at institutional level. While much of the data indicated that the participants were in favour of this, there was also evidence of some problems that emerged from the use of the incentives as a mechanism especially of driving academics into predatory publication for quantity as opposed to quality research**.**

Although it is clearly evident from my data that participants talk of the link between funding incentives and research output, it is well known that events and experiences emerge from multiple mechanisms (Archer, 1995). Some of the participants also talked of a number of other mechanisms at the institutions that could have led to growth of research or constrained it such as teaching load, administrative duties, resource and infrastructure, research mentorship and so on. Furthermore, production of research does not occur in isolation of other structural and cultural enablements and constraints and in part the emergent powers and properties of these structures and cultures depend on the agency of those who draw on them. This means that the link between incentives and research cannot be understood in a causal way. It is important to understand that research production happens in a context where multiple other mechanisms are at play. Some of the participants drew on some of these factors in the online questionnaire, including personal factors, institutional factors, as well as funding factors.

6.4 Management of research

As mentioned in the beginning of this chapter, the discourse of knowledge economy that constructs universities as providers of knowledge products and knowledge workers has led to particular ways of funding universities and incentivizing research. Closely related is the discourse of ‘new managerialism’ which presumes that for universities to contribute to the

efficient development of a knowledge-based economy, as well as deal with the multiple challenges they are facing currently of decline in state funding, rapid growth of student numbers and societal demands, they have to be *managed* using business ideas and strategies. Deem et al. (2007: 6) define new managerialism as 'a general ideology or belief system that regard managing and management as being functionally and technically indispensable to the achievement of economic progress, technological development and social order within any modern political economy'. Central to achieving these developments the public organisations like universities are called upon to change and become more accountable, effective, and efficient (Nickson, 2014) in their pursuit of delivering their services such as research production.

Some of the changes brought about by the demand for efficiency and effectiveness of higher education institutions include increases in the number of executive administrative positions (Boughey & McKenna, *forthcoming*, Maistry, 2012). This was evident in HBUs with most of these institutions focusing on increasing their administrative positions such as director of student affairs, director of finance and services, director of institutional planning and quality assurance, director of international relations, and so on:

> In terms of staffing levels, we minimise the extent of vacancies at senior and executive management levels to maintain reasonable levels of operations efficiency. In the year under review, these senior and executive managers were appointed: DVC academics, Director Legal service; Director internal audit, Deans, Director of schools. (2014 UNIVEN Annual report: 39)

> At University of [XYZ], now that research has continuously grown, we're now expanding even the research office. Now we are getting new managers for looking just at international grants, [ethics? 6:36] is expanded, you know, so the administration is very important, the research management expertise is very important, and that has been an enabler [of research production]. (HoR 3)

> In our 2013 Report, we indicated that the University had taken strides to ensure that it attracts and appoints senior executives to fill all vacancies at that level… The new Executive Director: Human Resources, was appointed … The University also appointed

> senior managers, including two deputy registrars and 2 deans for each of the four faculties for teaching and learning and research and internationalisation. (2014 UNIZULU Annual report: 58)

These executives, who formed part of the senior management body, were frequently appointed from outside the institutions. Their appointment was based on their qualifications, management experiences, and skills. There was evidence in the data of a concern not only with the increase in number of such positions, but also that they were not perceived to require university expertise and experience as such, nor necessarily much by way of academic qualifications.

> The IF [institutional Forum] made an observation that the requirements for the position of Executive Director: Human Resources as stipulated in the advertisement were that the candidate should possess a Master's degree or a diploma in Human Resources with a minimum ten years' experience. The IF viewed the diploma as a requirement for an executive position as an anomaly as it was inconsistent with the high-performance standard expected of a person occupying such a position. (2014 UNZULU Annual report: 58)

The HBUs were not only focusing on increasing administrative positions but also on creating new positions of executive management (vice chancellor, deputy vice chancellor, and registrar) and the senior management (deans and directors):

> The Panel was pleased to learn that posts of DVC: Management and Administration, and Executive Deans for the portfolios of Research and Student Affairs, have been created (CHE, 2009 UFH report)

> The appointment of Deputy Deans, Research and Internationalization for each Faculty marks a turning point for research administration within the University (2014 UNIZULU Annual report: 36).

As can be seen from the above quotations, the incumbents of these positions were appointed rather than elected and the appointments were in most cases on contract basis and based on management skills. The shift from election to appointment of university managers is

international in nature and has been described in the literature as being a central process in the managerialism process (Maistry, 2012)

The structure of governance in the institutions was perceived by the participants to be fairly 'top down' and the appointed executives were expected to implement set performance targets within the institutions. This hierarchical system was complemented by a strong culture of compliance to decisions made from above. For example, there was evidence in the data of the allocation of postgraduate supervision where supervisors were instructed to work with specific students rather than having a choice in such matters. One of the heads of departments had this to say about allocation of postgraduate students to specific supervisor:

> …He has not been allocated any students…. For his supervision he finished actually with the students of last year. These are students who are now starting their projects for the year, and we have to allocate them… (AC 29)

The aspect of top down governance and management can be seen also to complement the initial governance and management of HBUs in the apartheid era (Bozalek & Boughey) and thus, the situational logic of protecting the status quo was seen to prevail. As discussed earlier, during apartheid HBUs were governed and managed very differently to those institutions designated for the white population. They were far more closely controlled by the state in terms of administration, and appointment of executive managers and senior academic staff (Bunting, 2002a). This constrained and continues to constrain the extent to which these institutions are able to develop and cultures and structures to support research production, which requires a culture of academic autonomy, significantly developed academic identities, and space for creativity and risk taking (Brodin & Frick, 2011).

Archer (1995) argues that culture is responsible for bringing together structures and agency since it is ideas, beliefs, and values that influence people's dispositions towards the structure which constitute society. Thus, the discursive construction of managerialism that has influenced the structure of research management in these institutions is not surprising given that research was not a core function of the institutions historically which might have resulted in the lack of such structures. Many of the participants interviewed pointed out that establishment of research

executive positions, research centres or units, research incentives and postgraduate programmes was a clear indication that research was now a central core to these universities.

Apart from increasing the number of administrative positions, including those related to research, the HBUs put in place control approaches and measurement structures for managing research such as performance indicators, workload management plans, institutional annual reports and strategic plans, various committees, university quality assurance units, and transfer offices. These structural systems were underpinned by a cultural belief system that efficiency would emerge from closer management and monitoring:

> The second thing is administration. As I said to you in the introduction that I've seen what's happening at institutions, and including University of [XYZ] broadly speaking, administration has caused many failures for research productivity at universities in terms of research management. I'm talking about research management, I'm leaving other things. Research management has been an enabler for research productivity. If there's no support for early career people at their different stages, for established people at different stages, for infrastructure support, for grants… national and international grants, then you're not going to get productivity. If there's no support for students, for postgraduate students, and no appreciation, you're not going to get it. (HoR 3)

As discussed in section 6.2, the South African government regulated the performance of public HEIs by subjecting the institutions to competitive funding incentives. Thus, the production of research in terms of publication of new knowledge and completion rate of postgraduate graduates can be said to be controlled and managed by government through incentivised funding systems derived from corporate world. Fanghanel (2012) argues that these kinds of performance-based structures and mechanisms not only steer, measure, and monitor efficiency of universities as organisational entities, but also have effects on what academics do and on how they identify themselves. As one of the respondents pointed out:

> You have to publish at least two papers in a single year, because you are a senior. If you are not, if you are just a lecturer or an educational developer, you have to at least have

> one publication from an accredited journal at least once a year. So that pressure is too much. (AC 15)
>
> Research productivity will be the primary driver for determining the nature and extent of support. In allocating funds, the Research Committee will consider a person's recent research history, usually during the three-year period immediately prior to the application, and particular the person's subsidy-earning research outputs. Consideration will also be given to the number of research Master's and PhD graduates supervised or co-supervised. Researchers with strong track records of accredited outputs may receive additional support, while those with a low research output track record may receive reduced allocations. (Univen Research Policy)

But one of the major consequences of heeding to the managerialist ideas and strategies is arguably the undermining of the core purpose of institutions of pursuing knowledge and development of knowledge knowers (Maistry, 2012). Maistry (2012:523) argues that 'accountability regimes have the seed of their own destruction and may degenerate into a 'work to rule' ethos, a kind of situation where people do the bare minimum in response to a surveillance regime as opposed to developing an intrinsically motivated ethics that value academic work in qualitative ways'.

While there has been a tremendous growth of administrative positions in HBUs, it can be argued that these positions have emerged as a result of government's demand for more accountability and information on university performance on key areas such as research. Such roles have what Archer (1996) calls 'corporate agency' which means they have significant PEPs, or personal emergent properties, and can significantly condition the institutional culture and structure. Thus, these positions can hold significant sway over the form of the academic project and the ways in which 'research' is discursively constructed and engaged with in the university.

It was also evident in the data that academics in these institutions are increasingly being employed on a contract basis. For example, the University of Venda, as seen in the following data quote, created contract positions to hire emeritus professors and experienced researchers for

the purpose of mentoring young and upcoming academic researchers and contributing to the institution's output.

> A major intervention during the review year, aimed at improving supervisory research capacity in schools, was the appointment of 48 special category professors. These are non-permanent, ad-hoc appointments of experienced academics from industry, professional bodies, national research institutions and from South African and international universities. They are encouraged to mentor junior academics and co-supervise postgraduate students, while also participating in collaborative research with UNIVEN colleagues. (2013 UNIVEN annual report)

Over 50 adjunct professors were recruited in 2013 (2013 UNIVEN annual report)

The use of external people as structures to boost research capacity can be a meaningful way of nurturing research-rich environments that has been constrained by its history. But if the people hired on contract are not suitably invested in the institutional development, they might simply be seen to be producers of 'outputs' and might even foster problems of unequal power relations as these outsiders are not seen to be part of the institutional community.

> The university has also created positions of research professors. … So, this school has two positions of research professors to help at least with research work…Their role is purely research. (AC 34)

In addition, the casualisation of academic staff is a real structural issue in South Africa. Currently, 56% of academics are now hired on contract basis (CHE, 2016) and this is a significant constraint on the nurturing of an academic identity, the extent of commitment to the university and its particular academic project. This casualisation is matched with a lack of supervision capacity (with only 8608 out of 15425 permanent academic staff in 2016 having PhD qualification which is necessary for supervision (DHET, 2018); an increase in student numbers at both undergraduate and postgraduate levels from under 500 000 at 1994 to a million in 2018 has not been matched with concomitant increase in staffing. The lack of supervisory capacity was experienced in HBUs. For example, some of the participants said the following:

> The second challenge is that for my department I'm the only professor and the other colleague is a senior lecturer. So, you can see there are only two. And if I have to supervise…like now I can tell you that I have been supervising about nine fourth year projects, I have eight MSc students and I have one PhD. It is (?11:51). So you find it's also a strain on me and also it's not fair for the students, so even if you give me something to read it will take time. So that is a challenge, and to make it work for this year, my colleague has gone for sabbatical, so I'm the only one. Students have been coming to me that in fact when I go back, I'm meeting them, the final year students, they want to be allocated supervisors. And you can see that I'm the only one in the department, so I have maybe also to talk to colleagues who are in related departments to see if they can absorb some of them (AC 29)

> Actually, as an academic developer, I think in my institution we are understaffed in the academic development unit, and since we are understaffed you have to go beyond the call of duty. And at the end of the day you find yourself overwhelmed with your departmental responsibilities; and supervision, which is binding, you have to supervise; you find yourself overwhelmed with research work, you have to publish (AC 15).

6.5 Conclusion

In this chapter, I have attempted to identify the structural systems that enable and constrain research production in HBUs. The national research funding formula, the use of institutional incentives, and the managerialism discourses are the generative mechanisms at the level of the *Real* that influence the emergent experiences and events of research production in HBUs.

As indicated in a number of places in the thesis thus far, research is but one activity in the university and it takes place in the context of multiple other demands. In the next chapter, I look at how research intersects with the other two 'pillars' of higher education: teaching and learning, and community engagement.

Chapter Seven: The Relationship between Teaching, Research, and Community Engagement

7.1 Introduction

Teaching, research, and community engagement are often cited in the literature as the three 'pillars of higher education' (Badat, 2009; NPC, 2011; Holness, 2015). Thus, it is necessary for a thesis interrogating research production in HBUs to consider how research intersects with the other two core pillars. Definitions of each of the three pillars, teaching, research and community engagement, are contested in the broader literature on higher education but the most prominent perspectives seems to be those that view research as knowledge production, teaching as the dissemination or transfer of knowledge, and community engagement as forms of activities through which universities use their staff and student expertise to respond to the needs of the surrounding communities and society at large (CHE, 2016; Holland & Ramaley, 2008; Starke, Shenouda & Smith-Howell, 2017).

As discussed in Chapter Three, Archer (1995) provides us with an understanding of how social activities, such as research, teaching, and community engagement, never exist in isolation and how their intersection entails each having an effect on the other. She argues that social practices are constituted by pre-existing structural and cultural emergent properties at the level of the *Real* and, therefore, understanding the relationship between structures and cultures provides us with insights into situational logics of complementarity or contradiction at play in any given context, and how such logics condition the actions of agents. In the case of this study, the nexus can be understood to ideally be a positive one where the structures and cultures related to any one of the pillars is complemented rather than contradicted by the structures and cultures related to another. Where the culture of teaching, for example, contradicts the culture of community engagement in the university or department, the situational logic may well result in elimination where one activity is side-lined or undermined or a situational logic of correction, when one of the activity is adjusted to take a form more aligned to the dominant activity (see Chapter Three, section 3.5 for a discussion of situational logics**)**.

In this chapter, I consider the ways in which the relationship between research and teaching was evident in the data. Thereafter, I look at the nexus between research and community engagement.

7.2 Teaching-research nexus

7.2.1 Tensions between research and teaching

While undertaking research was described by many participants as bringing benefits to the undergraduate curriculum and to teaching, the dominant understanding was that these activities are in tension. Most participants indicated that research constrains good teaching because the academics feel the tension of wanting to focus on the higher status and better rewarded activity of research rather than focus on teaching:

> I would like to do research but also even if I do research, yes, maybe I would like to do more of research and less of teaching at this level. (AC 29)

> I appreciate teaching, you know, because when you teach you get to know the students and you also get a pool of students that you move along with as they get into postgrad. So, in other words, your research line is also going to get fulfilled by working with these postgrads, you know. But all in all, from my side of things, I just like going to the class and doing research. (AC 19)

> Well, if I had a choice, I would make it [research] my only role, because I think I'm more of a researcher. I do enjoy teaching, but over the years I've realised due to large class sizes we've got, it can be burdensome, and it takes a lot of your effort to teach two hundred students in a room that only sits one hundred and twenty, and the marking, and stuff like that. So, for me, if I had a choice, I would make research my only role because that's where I'm most strong. (AC 14*)*

> If I won the lottery and could do whatever I wanted for the rest of my life, I would start a research programme that was self-funded, and I would be able to perform research unhindered by things like administrative duties. I enjoy teaching but teaching also has enormous time constraints associated with it. If I could do anything it would just be

> research. Even if I never had to work another day in my life again, I would choose to do research. (AC 7)

Also evident in the data was an emphasis on academic performance, where allocation of internal funding and promotion are based primarily on research output:

> Research productivity will be the primary driver for determining the nature and extent of support. In allocating funds, the Research Committee will consider a person's recent research history, usually during the three-year period immediately prior to the application, and particular the person's subsidy-earning research outputs. Consideration will also be given to the number of research Master's and PhD graduates supervised or co-supervised. Researchers with strong track records of accredited outputs may receive additional support, while those with a low research output track record may receive reduced allocations. (UNIVEN research policy)

> The proposal is that the distribution of funding and resource allocation be matched according to individual research capacity (where, for example, an established researcher reaches into a new knowledge area) as well as meet the development (capacity-building) needs of 'young' researchers. The implication here is that funding for the diverse categories (that fall within the full suite of research activity) will be differentially distributed, taking as its cue the University's long-term strategic research plans. (UWC research policy).

There was also ample evidence of challenges related to workload in many of these institutions, with specific hours allocated to different teaching, research, and other tasks. The structural mechanism of the workload model was seen to constrain a positive teaching-research nexus:

> It is not necessarily that I deem [teaching] my role but the university deems that my core role…the university deems me to be a teacher first before anything else but the time that I spend teaching and research is very different. The time teaching is much less in comparison with research…. So, a lot of chunk of it has to do with lecturing but your eyes are always on the ball of research. (AC 23)

> We have to do research, but we also have huge classes with over 200 students sometimes, so you are making, and the administration and we have to do community work engagement. So, the pressure of academic to balance all these balls in the air, teaching and learning, academic research and community engagement and in many cases also management of faculty. These challenges, the pressure of balancing your work load as well as trying to balance life in general because life in general cannot be separated from your academic like and from your holist … you need to have healthy lifestyle. (AC 9)

> You can't say I am going to do research and not worry about lecturing or mentoring students because you really are not an academic. So, you have to give all of them some attention. So, the big focus would be research because obviously when you are busy with postgraduates then you are busy with the research aspect the undergraduate is not necessarily tied to research. So, you need to focus on that as well. (A1)

Henkel (2000) talks of institutions' workloads as one of the places in which tension between teaching and research is set up in terms of what gets rewarded and given more time. It is through such structures that the culture is reinforced, and in particular a culture whereby research is understood not just as being privileged over teaching but as something that is measurable. For some of the academics, like the ones quoted above, the allocation of more time to research than teaching is seen as appropriate to their understanding of their academic roles, and it is the extent of teaching requirement which is a problem. For others, the emphasis on research was seen to have a negative effect on their teaching:

> A lot of my colleagues, they don't care about their teaching, which really upsets me because that's one of our core businesses, is to prepare teachers. And so, they don't put the effort into it because to them that's not where the financial gain is. The financial gain is in getting the PhD, Master's Students through. (AC 13)

> The academics who want to do research should be encouraged to do research. Outside the country in some universities in Europe you can choose to be a researcher or teaching. But in South Africa you have to teach and do research. If we really need

> research output let us just focus some of the academics on research by giving them little teaching load. Those who want to focus on teaching focus them on teaching and then publish one article in 5 years... There is always this bracket that everyone should do the same thing which I do think should not be the case. (AC 28)

> The main challenge is to get the right recognition/reward balance in teaching and research. Simply put, there seem to be more opportunities for reward and recognition (in the form of cash incentives and career progression) in research than in pursuing teaching excellence. (2014 MUT staff development policy)

That research and teaching are seen as two separate activities that are not connected is an idea that is also found in literature on higher education (see for example, Jenkins, 2004; Marsh & Hattie, 2002) and contradicts the notion that there is a mutually beneficial relationship between them.

Yet, there has been a wealth of literature regarding what is known as the teaching-research nexus that argues that there should be a synergistic relationship between these two endeavours (see**,** for example, Brew, 2003, 2006, 2010; Griffiths, 2004; Jenkins & Healey, 2005; Robertson & Bond, 2001; Robertson, 2007; Spronken-Smith & Walker, 2010). I now hone into the data on this nexus to consider the different explanations that emerged as to such possible synergies.

7.2.2 Active researchers make better teachers

There were different understandings of the relationship between research and teaching across the seven HBUs and between recipients within each institution. One way in which the nexus was constructed by some interview participants was that being an active researcher improves the teaching and learning culture in the institution. Closely related to these were a few references to the idea that academics become 'great' teachers by doing research in their own disciplines that informs what or how they teach.

> I want to believe that as an academic staff you must be engaged in research. Why? Because your research has to inform your teaching… (A 5)

> It is of no use doing research for the sake of doing research. It must impact the teaching. (A 9)

> You cannot do anything without knowing new knowledge or…it's all about production of new knowledge to inform your practice… your teaching practice, and as a scholar so it's also proper that as a scholar you get involved in the production of that particular knowledge. (AC 17)

> The research I would like to do is the research that I would like my students to know, keeping up to date with what I think early childhood education or foundation phase teachers should know… I think I should put it on top of the things so that I can be a good teacher. (AC 2)

A similar understanding of the nexus by other participants was that courses taught by those at the forefront of research are more likely to impact on quality teaching because such academics are able to bring their research findings to students. For example, one academic said:

> My philosophy is let the specialist in the specialist fields teach because he or she is able to bring the cutting edge knowledge to the students so that they are having an advantage over others and then this advantage they actually, they impact on qualification and more chance on the labour market because at the end the question for the students is to get a job. If I teach at the highest level possible, the new knowledge the research-oriented knowledge aspects then I give them this advantage, then I prepare them for the labour market and that labour market is competitive. (AC 8)

There is a lot of literature that indicates the benefits of having research-active academics teaching undergraduates (see for example, Lindsay, Breen & Jenkins, 2002; Healey, Jordan, Pell & Short, 2010; Durning & Jenkins, 2005). For Healey et al. (2010), academics who are actively involved in research generate great learning experiences. Durning and Jenkins (2005) argue that having academic staff involved in cutting edge research is important because they are able to teach the current knowledge. But Boughey (2012) and Jenkins (2004) argue that the notion that research easily translates into better teaching needs interrogation, especially as most research

will not be readily translated from the field of knowledge production into the undergraduate curriculum, or what Bernstein (2000) calls the field of reproduction.

Bernstein (2000) explains that the knowledge taught in the undergraduate curriculum does not take the exact form and function as knowledge produced by experts of the disciplines. He divides knowledge processes into three fields:

- the field of production - where knowledge is constructed by experts in the disciplines (and disseminated in the form, for example, of journal articles or books),
- the field of recontextualisation - where knowledge from the field of production is selected to become part of official curriculum and where it changes its form and function to fit the whole programme's curriculum (and is typically evidenced in the syllabus or study guide and other such documents), and
- the field of reproduction - where curriculum gets enacted in pedagogic and assessment practice (and usually takes the form of lectures, textbooks, notes and PowerPoint presentations) (Bernstein, 2000).

There is a significant difference in both the form and the function of knowledge in the field of production and the field of reproduction. This is why the field of recontextualisation acts as a kind of translational field where choices have to be made about the selection of knowledge and the means of making it accessible to learners. This process of translation makes it difficult for academics' research to be easily integrated into the undergraduate curriculum. Furthermore, because of timeframes and regulations around modules and structures, there is often little flexibility for academics to readily adapt the curriculum to include the new knowledge produced in the disciplines. The benefit of having research-active teachers is not to be underestimated but it is worth reflecting on the complexities of using cutting edge research in the curriculum.

Another related understanding of a symbiotic nexus between teaching and research is that a research-active teacher may be limited in their ability to integrate new knowledge directly into the curriculum, but they nonetheless have a strong concept of how knowledge is produced in the field. They are thus able to model the disciplinary knowledge making processes (Boughey, 2012). If academics are meant to provide epistemological access to their disciplines (Morrow,

2009), then they need to be in touch with the norms and values of that field. Wheelahan (2009), Young and Muller (2013), and Shay all argue that a core function of the university is to ensure access to powerful knowledge. This is not the knowledge of the everyday world but rather comprises 'specialised symbolic structures of explicit knowledge' (Bernstein, 2000: 160). It is only through access to such specialised knowledge that students can apply it to a wide variety of contexts, but if the teachers do not themselves have an understanding of the principles underpinning the knowledge (by being active knowledge-makers, i.e. researchers), then they will be unlikely to be able to teach in ways that make the epistemologies of the field explicit (Wheelahan, 2009). Brew (2010) calls for a reconceptualising of academia as communities of practice where research-active academics can engage with their students in a culture of enquiry. Boughey (2012) suggests that such an approach should not be dismissed but it depends on such research-active academics being able to move beyond common sense understandings of teaching so that they can model what it is to be a researcher. Sadly, Moyo's study (2018) on the TDG suggests that most approaches to teaching and learning are a-theoretical and based on common-sense approaches. This suggests that even if academics are experts as knowledge-making, this does not automatically mean they will be experts as making the knowledge-making processes explicit to their students.

7.2.3 Research into teaching

While most academics in this study referred to the teaching-research nexus in relation to their disciplinary research, there were also a number of references to doing research on their actual teaching. This is what Boyer (1990) refers to as the Scholarship of Teaching and Learning (SoTL):

> Some of us do research in the area of teaching and learning and so it forms an important part of what we do. (AC 3)

> So, I try to, also, do research that helps with regard to how I teach. So, I'm into this…the role of ICTs in teaching practice. So, whenever I use new technology or interfaces and stuff like that, I try to get more research on that area. Because the two

> actually link in terms of…you're a great teacher if you constantly know through research of ways of improving your teaching practice. (AC 14)
>
> UWC is making good progress in implementing its teaching and learning plan and continues to enhance the status of teaching and learning practices, student engagement and success, and deepened research into the scholarship of teaching and learning. (UWC 2012 University annual report)
>
> There is a need to review workloads for lecturers and lecturer/student ratios in order to create more time for lecturers to engage in research into teaching and learning practices. Hopefully the workload model, once implemented, will address some of these concerns… Lecturers should be encouraged to become more involved in research in teaching and learning. (2014 MUT staff development policy)

A few participants also listed examples of research projects in the survey data which provided a clear indication that SoTL is valued in HBUs and across different disciplinary fields:

> I'm in the Arts/Humanities. I'm involved in several research projects that explore the possibilities of transformatory pedagogies. (QN 36)
>
> Student learning in the chemistry laboratory; looking both at the undergraduate students who are following a structured curriculum, and the postgraduates who facilitate their learning as teaching assistants. (QN 51)
>
> The use of technology to mediate teaching and learning relationships in clinical education. (QN 3)
>
> My other research focuses on Library and Information Science education and training. (QN 5)
>
> Peer-assisted learning activity as an approach to enhance training of undergraduate physiotherapy students in the clinical setting. (QN 77)
>
> Academic literacies of students in the health sciences faculty. (QN 12)

> I am trying to evaluate the tools that you use for teaching and learning. (QN 105)
>
> The other [research project} reflects on high school learners' writing skills. (AC 15)
>
> Exploring ways of assisting students at-risk, many students are from poor or economically challenged backgrounds and need assistance to adjust in university environment. Further, some lack confidence because of a number of reasons and their learning is hampered. Exploring the difficulties teachers have with teaching 'controversial topics' which border on culture/religion and sometimes feel that the topics are in conflict with their beliefs. (QN 113)

Undertaking SoTL, where the research is about teaching and learning, and therefore the two are tightly intertwined, has enormous potential for the nexus as it can lead to well-theorized teaching approaches (Haggis, 2009; Shay, 2012; Clegg, 2012). This is much needed research in the South African higher education institutions, especially in HBUs (Hlengwa, McKenna & Njovane, 2018) if the sector is to respond to poor throughput and retention, the current call for recurriculation for decolonised education, and the need for a coherent, high quality higher education sector in an uneven landscape (CHE, 2016; Wangenge-Ouma 2012). An additional benefit of SoTL is the opportunity for faculty to work together towards formulating a common approach to teaching and learning (Chick & Poole, 2013), as opposed to the individualistic and competition driven approach commonly applied in research. It has also been suggested that positive impacts on learning outcomes, with more engaged approaches to learning, are likely to be achieved in environments where SoTL approaches are utilized (Trigwell, 2013). Further, Bernstein (2013: 35) suggests that those who participate in SoTL are seen as an ‘asset’ to their institutions because they ‘generate visible analyses of student learning taking place in their institutions, provide excellent models of practice for local colleagues, generate high quality evidence for internal and external assessment, and offer accessible example of quality education to prospective students’.

There is, thus, much in the literature to commend the focus on SoTL emerging in the data from this study; however, within the context of us needing SoTL in our universities, there have also been numerous concerns about the a-theoretical and common sense approaches in much of the

SoTL research work both internationally and in South Africa (see for example Tight, 2014; Harland, 2009; Shay, 2012; Clegg, 2009). Tight (2004, 2014) argues that much SoTL research lack critical and in-depth engagement with theory and functions as a series overlapping communities of practice without a clear boundary. Harland (2009) also raises concern about the broad nature of the field which makes it simultaneously inclusive and less conceptually deep. While it is clear that there is need for more SoTL research, we need to be careful about the quality of this work if it is to drive the much-needed change. Moyo (2018) argues that most South African universities lack a strong culture on academic development that could equip academics to research their own teaching practice in a strongly theorised manner.

This study's data suggests that in some instances, the drive towards SoTL is being motivated largely by the problematic call for more publication outputs rather than the need to improve teaching and learning. It would also seem that at times those who are having difficulties in producing disciplinary research, which the statistical data would suggest is a common issue in HBUs, are urged to publish about their teaching. There was a problematic notion in the data that doing SoTL was an 'easier option' to increase research output - as if SoTL was simply a case of writing up one's teaching practice.

> I was dominantly looking at my discipline, but I could see that also, if I consider advance in scholarship of teaching and learning, could assist me to be productive when it comes to the research. So, I'm looking now into the scholarship of teaching and learning. (AC 17)

The idea of the 'knowledge economy' and the push for universities to contribute to knowledge creation through patents, postgraduate development, and academic publications is driving the incentive system as discussed in Chapter 6 section 6.3 and thus there was seen to be a demand for academics to publish more on the area of teaching and learning. Reference in the data to building research output in the field of SoTL was in terms of such mechanisms rather than this emerging from a desire to contribute to knowledge in the field of SoTL.

It is thus of concern that many of the ways in which SoTL is being encouraged and rewarded in HBUs are perhaps not leading to the kind of academically rigorous work that is required for

building a close connection between research and teaching. The a-theoretical SoTL research at least in part emerges from mechanisms of incentives which as shown in Chapter Six section 6.3 emerge from the culture of 'knowledge' as a commodity and the structure of the funding formula. While we clearly need high quality SoTL to enhance teaching in a sector riddled with low throughput and poor retention, it can be problematic if undertaking SoTL is understood simply as a relatively easy means of increasing publication outputs. Leibowitz and Bozalek (2018) argue the 'rush' to produce outputs is having serious consequences for the academic project. While efficient productivity is the war cry of the neoliberal university, the quality of SoTL will be seriously undermined by such processes (Leibowitz & Bozalek 2018).

Having looked at the ways in which the teaching-research nexus emerged in the data, I now move to consider the relationship between research and community engagement.

7.3 Research-community engagement nexus

As indicated at the beginning of this chapter, teaching, research, and community engagement are widely seen as core roles of universities and there is need to examine how they intersect. In this section I look at the data related to the nexus between research and community engagement.

Community engagement has been conceptualised differently by different scholars but has taken a significantly strong hold in the South African higher education context (CHE, 2016). Benders (2008:86) argues that 'different theorists and practitioners of community engagement propose different definitions and interpretation of their frameworks and strategies – many of them permissible but none fully definitive'. For some, community engagement is understood as an 'add on' volunteer activity where universities offer services to various communities (Weerts & Sandmann, 2008). This kind of understanding sees community as passive recipients of services from universities. Others propose a more theorised understanding where volunteerism is understood as a process whereby communities and the university partner with each other. In such cases, the community selects its own project in deliberation with the university, identifies their own needs, and have the power in deciding how the project is run (Holland & Ramaley, 2008; Reynolds, 2009). Along the spectrum of community engagement activities, community

engagement is also conceptualised as service-learning where the initiatives are curriculated as part of the student's course and linked to their learning outcomes and assessments, and which has to be mutually beneficial to community and students (Bringle & Hatcher, 1995; Jacoby, 1996).

Across much of the data, community engagement was understood to be a core focus for HBU research:

> Community engagement is firmly entrenched in the university's core business. Work-integrated learning is an essential aspect of many programmes, and community-engaged research is conducted across academic fields. (UNIVEN 2014 annual report)

> The role of a university is to advance the knowledge of the community and to encourage and develop scholarship and learning… A successful university model is one in which the academic programmes and research activities are largely in harmony with the developmental needs of the community. (2012-2016 UNIVEN university strategic plan)

> We are no longer just keeping everything for ourselves, but that we communicate it and take it back to communities, and that is a huge drive in research at our institution at the moment. (AC 21)

> We also have to do research about development activities that we're doing around campus. (AC 15)

> UWC's community engagement role involves academic work of the highest order that addresses community concerns and is, in turn, informed and enhanced by them. Institutional engagement with local and broader communities occurs through a range of activities and in a variety of forms, often combining teaching, research, advocacy and service. (UWC 2012 Annual report)

> The University is on course to realise its vision to become a leading rural-based, comprehensive university... The commitment to the vision is driven by a need to produce graduates who can perform and function in a rapidly changing and technologically-oriented world (2014 Unizulu Annual report).

7.3.1 Engaged research

In many institutions, the nexus between research and community engagement is conceptualised as 'engaged research'. Engaged scholarship is a particular conception of the intersection of research and community engagement and, therefore, it also falls along this continuum of community engagement. The idea of engaged research is reliant on a strong sense of mutuality where the community and the university benefit from each other by co-creating and disseminating knowledge together **(**Reynolds, 2009; Paphitis, 2018**).** However, 'engaged research' is a complex term that has sometimes been used interchangeably with terms such as community-based research, community participatory research and action research, all of which refer to different forms and modes of engaged research which vary in degree of collaboration or the extent to which research is conducted with, in, for, or on community.

The concept of community is central to engaged research. It is recognised as a unity of identity of a group of individuals linked by geographical or political boundaries and share common interest, value, needs and so on (Israel et al., 1998). Israel et al. (1998: 178) argue that 'communities of identity may be centred on geographical neighbourhood or geographical dispersed ethic group with a sense of common identity and shared fate'. There was a very strong emphasis on community and the context of the HBUs across all the data in the sense of these institutions being located in rural areas and being tightly connected to the community in which they are physically positioned:

> Community engagement at UNIVEN entails goal-oriented reciprocal interaction, collaboration and partnerships between the university and rural communities…It is therefore, incumbent on us as a rural-based university to ensure a quality symbiotic and reciprocal relationship with our community, specifically through our research and innovation and community engagement programmes. (2012-2016 UNIVEN Strategic Plan)

> MUT has its roots firmly grounded in the community it serves. In this way, the University has a unique role and focus. The location, on the rolling hills of Umlazi, emphasizes a call to serve students with a genuine historically disadvantaged

> background. A significant fraction of its students are eligible for government bursaries. The University will serve Umlazi, KwaZulu-Natal, South Africa and the Southern African Development Community (SADC) region. (MUT Vision & Mission statement document)
>
> The university does not see its locality in one of the most rural parts of South Africa as a burden but rather as an asset, being able to contribute significantly to one of the most culture-rich areas of the country. (2012-2016 Univen strategic plan).
>
> It is important to note that community engagement is not exclusively a rural issue, but the Fort Hare context compels it to take special interest in its immediate and historic surrounds. (2009-2016 UFH strategic plan)
>
> It is therefore incumbent on us, as a rural-based university, to ensure a quality symbiotic and reciprocal relationship with our community, specifically through our research and innovation and community engagement programmes. (2012-2016 UNIVEN strategic plan)
>
> You don't really live in a vacuum. There are communities around, there are businesses, there are households, there are a number of other stakeholders that are around the university, that interact with the university. They also need the kind of knowledge that academics have, researchers have, so we also need to get into the communities with the idea of sharing, the idea of hearing their views, because you also research in the community. (HoR 4)

All universities around the world are under pressure to demonstrate a connection to community and to demonstrate the real-world significance of their research (Wright & Rabo, 2010) but this study's data suggest a very strong and particular conceptualisation of the relationship between university and the community. There was repeated reference both to the rural nature of the institutions, where local communities face a number of social ills, and to the idea that HBUs have a particular responsibility to address these problems. Thus, the identity of HBUs as rural universities with a responsibility to serve the local communities through research and knowledge production has the potential to allow for a very strong research-community engagement nexus.

Within these potentially very positive findings, there was, however, not much evidence of this nexus being well theorized and coherently managed in the data I analysed. The focus of my study was not on community engagement and, therefore, I did not explicitly look at community engagement policies and structures in these institutions. But there was enough evidence to allow for the argument that this potential area of strength for the HBUs is not yet as coherently developed as it could be.

There are many community engagement initiatives in HBUs which allow for disciplinary research projects. The initiatives are said to involve a collaborative approach to research, but there was no clarity on how this was enacted at the level of actual events, particularly in relation to equal participation of community members, organisational groups, and academic staff members in all stages of the research process. What can be seen, however, is a particular way in which engaged research was constructed as an 'add on' volunteer service where universities conduct research on a community partner or in a community with the intention to integrate the research result to solve societal needs:

> Fourth year Consumer Science Extension and Rural Development students participated in the Wellness Task Team of the Community-University Partnership Programme (CUPP) where they visited various locations in Mbonambi area. Their involvement entailed providing a nutrition education and food processing service to the community. They also conducted research on household food production and food security in Ulundi. (2014 UNIZULU Annual report)

> [The purpose of] launching the Vhembe District Research Forum [in the review year was] to initiate and promote research collaboration between the Vhembe District and local research institutions that will generate research outputs to solve societal needs. Stakeholders from various departments including the Provincial Treasury, Economic and Development Agriculture, Water Affairs, Health, Road and Transport, the Business Forum, farmers' unions, Statistics SA, further Education and training colleges, local municipalities, the Department of Economic Development, Environment and Tourism and the Office of the Limpopo Premier were invited. (2014 UNIVEN annual report)

> [In Faculty of Science and Agriculture – name of the lecturer] took part in the Custodians of Rare and Endangered Wildflowers expedition to the Nonoti Community Conservation Project as part of the KZN Biodiversity Stewardship Programme in order to the evaluate conservation value of the land with regards to it contribution to protecting rare and endangered plants a Zululand. (2014 UNIZULU Annual report)

> We have reconstituted and repositioned our community engagement portfolio with the view of not only enhancing the experiential learning environment but also to really improve (4:00) research on the quality of life issue that communities are experiencing. So it's quite a broad portfolio then also the (4:10) component attached to me so certainly again we are premising on the basis on it being a scholarly driven approach (HoR 7).

Apart from the disciplinary-research based projects, there was ample evidence of service-learning projects that are being researched as part of SoTL. However, there was no evidence in most of the documents analysed on how these projects were enacted as research projects at the level of actual events particularly in the context of the reported problem of poor research output and attracting and retaining academics:

> The completion of two research projects focusing on: Communities' views, attitudes and recommendations on community-based education of undergraduate health students, a collaborative study between the universities of Limpopo, KwaZulu Natal and UWC, and the impact of collaborative inter-professional education and practice on developing socially responsible graduates who are well equipped to practice in rural and underserved areas. (2012 UWC annual report)

The description of research values and attitudes of the institution, such as the ethos of supporting research quality and quantity that addresses the social ills and well-being of the society, could be an important driver of the community engagement-research approach in the institutions, but this was not explicitly referred to in the documents analysed. The low numbers of postgraduates and supervisors suggest that this kind of narrative does not manifest across the culture of the institutions.

What was also apparent in the data was that the type of institution and the culture this engenders promotes an approach to community engagement with a strong link to social concern. In this regard, the structure and culture of institutional type has the potential to enable integration of CE initiatives in some types of institutions more than others. The universities of technology and comprehensive universities, as explained in the data below, seem more likely, in the South African context, to develop and implement community engagement initiatives. This is possibly because the institutional culture and structure of these types of institutions privileges applied research:

> One of the strategic goals of UNIZULU is to 'conduct research that is appropriate to a comprehensive university and the community it serves which is interpreted at business and technological community; develop a system of ongoing research aligned to technological developments and business best practices; to be a recognised leading institution in Applied Research. (2011- 2013 UNIZULU strategic plan)

> In 2014 the University revitalised its focus on promoting research by extending its focus to community involvement. Presently, the University has 10 rated researchers and 10 Research Fellows in the following fields – Agriculture; Biochemistry; Botany; Chemistry; Hydrology; Law; Mathematics; Physics and Engineering; and Zoology. Some of the projects are conducted in partnership with staff from Owen Sithole Agricultural College and other institutions. Initiatives like these highlight the flexibility provided by the nature of the University as a comprehensive institution. The advancement and increased research awareness are contributing positively to the increase in the number of students receiving post-graduate qualifications. (2014 Unizulu annual report)

> Mangosuthu University of Technology believes that the needs of the country and its various communities necessitate a strong focus towards the applied and strategic aspects of research, including product development and process related work. For a University of Technology, research and development should lead to implementable results and products. The transfer of expertise, the transfer and diffusion of technology and the successful demonstration and implementation of results form an integral part of this

approach. (2008 MUT Research Policy)

> We are a comprehensive institution but still in that particular context there is still a lot of work to be done to actually position ourselves strategically, the whole gambit of academic program and activities. We position ourselves obviously from a purely quality or a production perspective, we have sorts of qualification ranging from basic certificate right through to PhD. But also in terms of your culture that you need to develop around this things, if you don't base it on particular values such as for arguments sake there should be a strong sense of knowledge production being an inclusive activity it's not the preserve of institutions only but because you are anchored within society. These knowledge fields permeate society so it actually originates from societal interactions between you being the academic or the institution for that matter and the various actors. So it is that premise that we would like to promote where we say you know that obviously you get a multiple profiling issue in systems of knowledge fields which are intersecting in terms of (7:40) but it is a system that is incorporated in terms of how we manage it from an institutional perspective. So we need to in a way react to what is out there but also we need to take the lead in terms of knowledge production in a partnership context….for us there is no doubt the whole matter of positioning also means developing a particular identity around yourself and your program, your research efforts which is anchored within the context of where we are placed geographically but also in terms of the larger framework that we need to respond to (HoR 7)

While the discourse of institutional type seemed to a large extent to shape the ideas, values, and beliefs that comprehensive universities and UoTs have a responsibility to produce relevant and useful knowledge to address issues affecting local rural communities, there seemed to be tension on the kinds of research that the institutions should foster and reward. The mission of the institutions provided an indication of how the institutions conceptualised their core function of research. For example, the University of Venda states that:

> Our mission is to be the engine that drives critical, innovative and relevant research for the pursuit of knowledge and for development of local, national and regional communities (UNIVEN Mission statement)

Similarly,

> Mangosuthu University of Technology (MUT) plans to undertake innovative multi-disciplinary research initiatives in order to strengthen its contributions to…community service throughout the province (MUT research strategic plan 2013-2017)

It is, therefore, possible to understand research production as being critical, innovative and relevant in pursuit for development of local, national, and international community. This kind of understanding as discussed earlier is driven by the knowledge economy discourse which argues for more focus on production of useful or relevant knowledge.

Thus, engaged research is seen as viable approach to the development of disciplinary knowledge and actions in HBUs. In most cases, this was tied to the social responsibility of the institutions and explicitly stated in reference to their geographical positioning. Whilst most of the HBUs affirmed their rural identity and their responsibility to contribute to rural development to some extent, this discourse seemed to exist in a situational logic of constraining contradiction with discourse that asserted their historical disadvantage accrued from their geographical location and their historical/apartheid past. This logical relations or cultural emergent properties influence the choice of actions that are taken by agents.

7.4 Conclusion

The main finding in this chapter was the lack of well theorized and coherently expressed nexus between teaching, research and community engagement in these institutions. Research and teaching were often seen to be competing activities with demand for more time to undertake research.

Chapter Eight: Conclusion

The study context was premised on the understanding that South Africa has an uneven higher education system emerging from its apartheid past. During apartheid, separate higher education institutions were established for black and for white population groups. The differentiation was also according to a binary divide between technikons and universities. Following the demise of apartheid, there was a need for a unified higher education system that would undo this racial division across the institutions for a fair, just, and socially coherent system that was more efficient and effective. This led to mergers and differentiation of higher education into three institutional types. This study considered a particular sub-set of this complex set of differentiations, namely the Historically Black Universities. Within the HBUs, which comprise the sites of this study, there are two traditional universities, four comprehensive universities, and one university of technology.

The study was part of a bigger project that looks at the impact of institutional differentiation on various aspects of higher education, such as supervision development, implementation of teaching development grants, emergence of comprehensive universities, and so on. This study focused on research production within the HBUs. The study was motivated by issues of social justice in higher education in research production and quality education in these HBUs.

The study aimed at identifying the conditions enabling and constraining research production in HBUs specifically, but also in the South African higher education system in general. Given the demand for universities to produce research for social and economic development of the country, the effects of the history of HBUs and the restructuring of the higher education landscape into different types of universities in the post-apartheid era, the study aimed at examining how these aspects and others intersected and led to the emergence of practices of research production and the development of researchers.

The theoretical contribution of the study has been its realist nature. By drawing on Critical Realism, I have argued that considering events and experiences is insufficient to explain the ways in which these emerge. The use of Critical Realism was as the ‘underlabourer’ in that it made explicit the ontological position of the study and forced me to go beyond description of

data or the assumption that the experiences and events in that data represent 'truth'. I used Archer's theory of Social Realism alongside Critical Realism, both as a meta-theory providing me with a large-scale account of the social world and as a more substantive theory used in the analysis. Archer's Social Realism entails understanding that the social world emerges in complex interplay of powers in the domains of structure, culture and agency. Identifying the powers in each of these domains that enable or constrain research development meant moving beyond simple causal relationships, and rather ensured that I identify some of the many mechanisms at play.

The methodological contribution of this study has been largely in terms of the scope of the study. As indicated in Chapter Four, much educational research in South Africa consists of small-scale studies which are valuable in the depiction of richly characterized contexts, but do not necessarily allow for system-level understandings. The problems bedeviling the higher education sector require such macro-level studies (Deacon, et al. 2009). The focus on HBUs is particularly needed given how little qualitative research has been undertaken in this grouping of universities (Ashwin & Case, 2018); most of our rich understanding of institutional contexts comes only from a very narrow section of the sector.

The main research question the study sought to answer was:

> What conditions enable and constrain research production in Historically Black Universities (HBUs)?

To answer this question, I collected data on participants' experiences of research production in these institutions. The mass of data across all seven HBUs consisted of surveys, interviews, and documentation in the form of research reports, and national and institutional policies. By applying Social Realism, I was able to identify some of the constraining and enabling mechanisms and have details of these in Chapters Five, Six, and Seven.

There are no simple solutions to the dilemma of uneven research production, but this study does provide a useful contribution by highlighting some of the key areas to which HBUs need to attend if they are to significantly grow their research output. The key findings of this study suggest that there are a number of areas of strength in research in the HBUs and there has been a

significant increase in output over the last decade. However, the study has also identified a number of mechanisms that constrain any increase in research productivity.

As discussed in Chapter Two, there are contradictory views as to where and how research should be developed in the South Africa higher education sector. On the one hand, we have the view that human, financial, and infrastructural resources are severely limited and so the bulk of the funding and development work should focus on those institutions that provide the bulk of the research output. These universities should be flagship research institutions and funding for research should be allocated to other institutions only where they have a particular strength or where there is a particular need. This pragmatic view is contested as being politically naïve because such a strategic allocation of research funds would serve to reinforce the lines of institutional and geographical advantages and disadvantages put in place during apartheid. On the other hand, we have those who argue that we need funding for research to be directed to those institutions, that is, the HBUs and UoTs, which have been historically straitjacketed in this regard and which now need significant support.

Interestingly, both sides of these arguments would require a more nuanced funding formula than the blunt instrument currently being applied. For those arguing for a differentiated development of research, funding for postgraduate studies and research output would be directed only at those institutions that are contributing in this regard, apart from a few designated areas of research to be undertaken beyond the 'research intensive' category. For those arguing for widespread research development and output across the sector, the consequences of apartheid history in the current uneven output patterns would need to be redressed through additional funds being allocated to those institutions with poor output emerging from their histories. This study has thus highlighted the need to revisit the current funding formula.

As discussed in Chapter Six, the Department of Higher Education and Training in South Africa uses the same funding formula for all universities to drive research output. This one-size-fits-all approach fails to take institutional contexts and histories sufficiently into account. It also flattens possibilities for differentiation, as all institutions focus on those activities that accrue the greatest funds. There is a lack of political will to discuss major changes to the funding formula or to really engage with the differentiation of the sector into the three types because of the

complexities of our history. But until this is done, the formula functions as a driver of a number of unintended consequences highlighted in this thesis.

Various initiatives have recently been put in place by the DHET to ensure quality growth across the sector. Amongst these is the University Capacity Development Grant (UCDG), which replaced the Teaching Development Grant (TDG) and Research Development Grant (RDG) and which is increasingly developing into a clearly-articulated initiative that could drive meaningful growth. Concerns about the lack of clarity as to how it should be utilized and its poor implementation in various institutions continue (Moyo, 2018), but it nonetheless has had positive effects on the sector. Additionally, the Staffing South Africa's University Framework (SSAUF) funding provides a range of initiatives designed to attract young, mainly black South Africans to work in the higher education sector and this too promises to act as an important mechanism in the future, although already we have seen how HBUs in particular have battled to fill such posts. Another recent initiative is the Historically Disadvantaged Institutions Grant (HDIG) with the first round implemented between 2017 and 2021. Although this was allocated on the basis of proposals submitted by the eight universities[12], to date it has little by way of criteria to ensure it is effective. This will hopefully change with the recent employment of a project manager in DHET tasked with developing strong criteria and evaluation processes. All of these funding mechanisms have the potential to enhance research production in HBUs going forwards, though a key lesson from this study is that such structures can have unintended consequences if not enacted within complementary cultures.

It emerged in this study that dominant notions of historical advantage or disadvantage of institutions homed in on issues of differences in physical and human resources and neglected a focus on the historical purposes of different kinds of institutions. In this way, there is far less consideration of how the legacies of institutions continue in the current hierarchical institutional cultures and practices. This study has shown that research production is constrained by aspects of HBUs poor human and physical resourcing. But these cannot be attended to simply through

[12] The eight universities designated in DHET policy as Historically Disadvantaged Institutions are the seven in this study along with Sefako Makgatho University, which was delinked from the University of Limpopo (but which was not included in this study).

funding, infrastructural needs in particular are crucial. In the period since apartheid, these constraints may well have been increased by globalisation forces in the so-called knowledge economy. At times, a complementarity emerged between institutional cultures and managerialist approaches as both rely on systems of monitoring and metrics.

The history and current context of HBUs were found to be significant mechanisms that constrained research production. The study showed that the context of HBUs in terms of geographical location, student body, academic staff, infrastructure, and funding strategies constrained the extent to which the universities were able to produce research. However, not all about the context of HBUs is negative, as annual increases in research production and the development (albeit uneven) of a strong sense of academic identity and a commitment to knowledge creation and dissemination were also evident.

There was, though, a lack of coherently expressed conception of research or its relationship to institutional and academic identity. The implication of this is that culture (i.e. discourses in Archer's terms) can work against the effectiveness of various interventions in the structural domain intended to foster increased research output. Unless there are explicit discussions about how and why research is valuable to the institution and the country, there is unlikely to be sustained growth in output. In particular, the data analysis raises a concern about an instrumentalist understanding of research output in the domain of culture. This in part emerged from the lack of historical culture of research and, in turn, had effects on the adopted conception of research. There was very little consistency in understanding of the purpose of research as especially key to what universities do.

There were discourses of research as being fundamental to being an academic which would suggest that research activities would be seen to be integral to the personal projects (Archer, 1995) of these academics. Similarly, there was an ideological position that the purpose of research is to attend to issues of social justice. Additionally, there was an understanding of research as serving the purpose of driving the economy, as well as evidence of participants drawing on an instrumentalist discursive construction of the purpose of research where the purpose of research was to get publications and ensure promotion. These different discourses in the domain of culture were found to be contradictory. While there was a potential complementarity between the instrumentalist understanding and the conception of research as

being for economic growth, this was in stark contradiction to it being about academic identity and social justice. Therefore, there a is need for some work to be done on building a meaningful and shared research culture in HBUs if research production is going to be strengthened.

Another key constraining mechanism to research production was the mixed views by participants about structural incentives to increase research. This initiative seemed to be complementary to a more instrumentalist understanding and thereby to potentially constrain the likelihood of sustained research growth in ways that make a meaningful contribution to research production. It was evident that many of the participants were in favour of the use of research incentives as a driver of research and in many of institutions they used various incentive systems such as financial rewards to drive research output. Edwards and Roy (2016) highlight some of the unintended consequences of using incentives to reward research output to include the influx of publications that are substandard and of poor quality, use of poor research methods, and practices that may comprise the scientific inquiry. It was clearly evident in the data that use of these incentive approaches was problematic because these steered academics towards salami slicing, predatory publication, and other practices that focus on quantity as opposed to quality research**.** The problem with predatory publications is that such research does not get read or cited and so it fails to contribute to knowledge dissemination**.** While it is the instrumentalist drive to produce research that makes it possible for such publications to flourish, there is a need for nurturing an institutional research culture focused on knowledge and not output (McKenna, 2017) if these institutions are to build their research capacity.

There was a nascent discourse of social justice that focused on research as being a core driver of knowledge production in some of the HBUs. Such areas of strength should be nurtured, if research production is to be developed in less instrumentalist ways. This complementarity between the institutional identity, its rural position, and its potential to contribute to research provides a situational logic of opportunism, but it was constrained by the lack of a well-theorized and coherently expressed nexus between teaching, research, and community engagement. This is potentially an area of strength for the HBUs especially emerging from their rural position as this seemed to emerge as a complementary culture of social concerns. But unless the nexus is clearly articulated, a systematic process of support is unlikely to emerge**.** Given the extent to which the rural positioning of HBUs has been acknowledged to constrain research engagement (Cooper,

2015; Bozalek & Boughey, 2012), this is an important discourse with which to engage. This discourse suggests that engaged research is significant to the research identities of those working in the HBU, many of whom felt that this made their work meaningful to themselves and to the broader context in which they were working. Furthermore, there was evidence that such research has the potential to have a major impact on social development in the country. It was also evident that there is scope for better national support for this particular focus of research, and for it to be more carefully conceptualised and celebrated at a system level, as many participants commented on the ad hoc nature of such initiatives**.**

Making more of the nexus between research, community engagement, and teaching as an enablement for research productivity relies on strong management and leadership by social actors (for example VCs, DVCs and Directors of Research). These social actors would need to draw on discourses of research as knowledge creation and dissemination, rather than instrumentalist understandings of research as funded outputs. The analysis suggests that such discourses are not well developed in many contexts and that social actors at times draw on instrumentalist discourses themselves, reinforcing these understandings amongst researchers.

This study suggests that this sector would benefit from further development of the focus on local relevance in research in HBUs, given their strengths in this area and the passion for such research evidenced across the data. This seems to be a key area for growth and will require systematic leadership and strong management. However, there is an important caution that such engaged research be strongly theorised and constitute powerful knowledge or it could easily be relegated as a less legitimate form of research - such that we have certain (advantaged) universities focusing on universal, abstracted knowledge and other (disadvantaged) universities being perceived as 'only' locally relevant. Following Fongwa (2013), there is a real concern that if engaged research is not properly institutionalised, then it could end up not being the basis for a strong research agenda. Furthermore, the development of a strong regional role will require sophisticated structures for active engagement with multiple stakeholders. This will not be a simple process of expanding the existing initiatives (Fongwa 2013); instead, engagement will need to be reconceptualised with it moving from a 'philanthropic ethos' to one that is explicitly embedded in the nexus with both teaching and learning and research

The literature on the development of a strong research culture suggests that key characteristics are those of trust, creativity, and risk-taking (Brodin & Frick, 2011). One needs to be able to fail in order to develop new knowledge and to be creative (Brodin & Frick, 2011)**.** Unfortunately, the literature also suggests that as universities enter a risk-averse era where they are increasingly positioned as competitors (Barnett, 2000; Marginson, 2006), they are likely to put in place structures that reduce opportunities for creativity and risk. The more hierarchical the institution is, the less likely that academics will have the freedom to develop their own research identities and undertake research for the sake of building the field or attending to social and natural problems (Bozalek & Boughey, 2012). Instead, in hierarchical institutions, there is likely to be a strong culture of compliance to decisions made from above. One example of this from the data was around the allocation of postgraduate supervision where supervisors were instructed to work with specific students rather than having a say in such matters.

Increasingly, managerialism was evident across the sites and can be seen to complement the initial governance and management of HBUs in the apartheid era (Bozalek & Boughey, 2012; Boughey & McKenna, 2011) and the situational logic of protecting the status quo, was seen to prevail in these institutions. As discussed earlier, during apartheid, HBUs were governed and managed very differently to those institutions designated for the white population. They were far more closely controlled by the state in terms of administration and the appointment of executive managers and senior academic staff (Bunting, 2002b). This constrained and continues to constrain the extent to which these institutions can develop cultures and structures to support research production, which requires a culture of academic autonomy, significantly developed academic identities and space for creativity and risk taking (Brodin & Frick, 2011).

The challenge is that very cash-strapped institutions are forced by their financial contexts and the flat nature of the funding formula, which greatly rewards research, to focus on immediate outputs and to focus on issues of efficiency. Yet, the process of changing cultures, of nurturing academic identities, and building an institutional research agenda is a slow process. Archer (1995) argues that it is much harder to change culture than structures. The development of key management posts for research, such as DVC/ Director/Manager Research, and the use of research incentives were put in place without the same amount of time, money and reflection being paid to the nurturing of a research-rich environment of creativity, risk taking, and trust.

At present, there is evidence of a complementarity between many of the structures and cultures and it could be argued that this has been central to the growth in research productivity. However, this study has identified some aspects of the structures (e.g. incentives, executive management positions) and culture (e.g. instrumentalist understandings, risk-aversion and compliance) which may be problematic in the long run.

While much of the data focused on issues of poor infrastructure and the need for more funding for research and postgraduate education, there were also indications that money alone will not be able to attend to some of the constraining mechanisms at play. The Research Development Grant (RDG) (which now forms part of the University Capacity Development Grant (UCDG)) has led to millions of Rands being allocated to the HBUs in order to enhance their research outputs. In line with Moyo's study on the TDG (2018), there was evidence in the data in this study that the funds were not always well utilized. The need for systemic plans around the use of the funds, the need for strong leadership in how such funds should be used, and the need for strong financial management systems in the university constrained the effectiveness of these grants in some of the universities. Furthermore, the lack of capacity to implement RDG activities and spend the funds led to millions of Rands being reclaimed by the DHET. The low capacity for management of research within the HBUs had a situational logic of complementarity with the use of performance criteria in the national funding formula. This led to what Archer (1995) refers to as opportunism whereby increased managerialism was enabled.

Another constraint to research production was related to the increased casualisation of academic staff, which has made it difficult to attract and retain staff, especially in rural areas. As earlier mentioned, 56% of academics in South African universities are now being hired on contract basis (CHE, 2016), which constrains the nurturing of an academic identity and the extent of commitment to the university and its particular academic project. Furthermore, these employment conditions were exacerbated by increased teaching loads as a result of increased number students (undergraduates and postgraduates) that have not been matched with similar increases in academic staff. This had placed a particular burden on the supervision of postgraduates, with some data to suggest that this has affected not only the quantity but also the quality of especially the PhDs. An issue which was raised in the literature and mentioned briefly in Chapter Six was that increasingly the HBUs are relying on foreign nationals, largely from the

rest of Africa, to fill posts. There is a lack of coherence in national policy, in this regard, with some references to South Africa becoming a continental hub for higher education and others raising concerns about immigrants. Challenges in obtaining work visas would seem to indicate that there is not national consensus in this regard. At the time of writing, there is evidence of both a strong discourse of internationalisation and a contradictory discourse of xenophobia in South African higher education (Langutani, 2015).

There is, therefore, a need for ideological work to clarify what constitutes an academic project and development of a research culture. This can be difficult to even draw attention to issues of culture because we are able to hold or live with multiple contradicting ideologies, belief systems, and values, and often we are not even aware of our own ideological positions and we can sometimes be unaware that we are drawing on particular discourses (Archer, 1995). People often get defensive when discussing issues of culture or may feel this is a waste of time and that more practical consideration is needed. Additionally, it takes time to change any form of culture (Archer 1995). Therefore, people tend to focus on structure to try and bring changes in a context; though, of course, structures are key and easier to change than culture (Archer 1995). Throughout this thesis, I have pointed at the ways in which various structures have constrained or enabled particular research events. But the same structure can be taken up in different ways within different cultures and so we need to spend time thinking through cultural aspects of identity, institutional ethos, and purpose, among others.

Both structure and culture depend on agents to enact and reinforce them in a process of morphogenesis or to challenge and change them in a process of morphogenesis. Thus, concern for how cultures and structures combine to constrain or enable research events is an insufficient deliberation if we do not also consider the role of agency in bringing about change, which, in the case of this study, would be about consistent growth of meaningful research production.

In relation to agency, that is, academics as primary agents without much power to change the structural and cultural conditions, their positioning as primary agents is particularly significant in HBUs because of the hierarchical structures emerging from their histories and increasingly managerial culture developing in their present context. However, this is not to say that academics are without power, enslaved by structures and cultures (downwards conflation); they still have autonomy within a number of spaces in the institution and they could still muster corporate

agency within institutional structures, such as the university senate. Other actors in the institution have the power of social actors by virtue of their positions, such as, for example, DVC, Directors of Research and so on. While these roles provide institutional power to influence structures and cultures, the extent to which individuals within these posts would use these emergent powers to bring about change depends largely on their own personal projects. Where such social actors are themselves drawing on instrumentalist understandings of research production in the domain of culture, they would be likely to assert support for more instrumentalist responses to the problem of low research output.

The significance of these universities within the sector and the need to ensure continued growth to meet the need for research in an era of the knowledge economy is key to this study. The geographical position, the kind of students in terms of social economic status that enrol in the institutions, and the opportunity for specific niche research need policies and systematic planning in this regard that must build the HBUs' capacity for research and acknowledge the increases in research to date.

This thesis did not set out to resolve the problems of the uneven research production in the South African higher education sector. It, therefore, does not offer a set of recommendations for immediate implementation or a model for future growth of research output in HBUs. Instead, as the study question states, it has been an attempt to provide a nuanced realist account of the enablements and constraints on research production in this particular institutional context. Furthermore, the realist account of the social world which underpins this study insists that seeking straightforward causal accounts that lead to simple recommendations is generally less helpful because of the complexities of the social world. Instead what this study offers is a deliberation of some of the mechanisms at play and it is shown that it is through their contextualised interplay that the events and experiences emerge. Thus, some of the issues discussed may be more pertinent at one particular university or another in this study and may indeed be relevant (or not) to universities of other types or in other places.

The thesis should also not be read as a case of 'blaming the institution'. There has been a lot of literature in South Africa criticising the ways in which poor student retention and success has been explained, mainly in terms of student deficits (see for example Scott et al., 2007, Boughey & McKenna, 2016). It would be a serious problem if this 'blaming the student' for poor

undergraduate throughput was extended to ‘blaming the university’ for poor research production. Bozalek and Boughey (2012: 698) warn that it is a problem of ‘mis-framing’ when institutions are ‘held accountable for success in higher education endeavours, rather than the entire education sector, which is inequitable’.

As already mentioned, rather, using the framework of Social Realism, the study identified some of the multiple mechanisms from which research productivity emerges. Identifying these mechanisms is essential for understanding how research production is conditioned and thereby has the potential to bring about change. However, a study such as this can always only identify some of the myriad mechanisms at play and so leaps to the idea of causal relationships need to be tempered by the understanding of the complexity of emergence.

Reflecting on these significant limitations, that mechanisms are not directly causal and that it is only through their interplay that events and experiences emerge, is not to diminish the value of the study, but rather to remind myself and to caution my reader against reaching any simplistic causality from the findings or to assume broad generalisations within or beyond the institutions in this study. Nonetheless, this study provides us with the identification of a number of key mechanisms that can be shown to be causally efficacious in enabling or constraining research production.

References

Academy of Science of South Africa [ASSAf], (2010). The PhD Study: An evidence-based study on how to meet the demands for high-level skills in an emerging economy. Academy of Science in South Africa Consensus report.

Akram, S. (2013). Fully Unconscious and prone to habit: The characteristics of agency in the structure and agency dialectic. *Journal for the Theory of Social Behaviour*, 41(1):45-65.

Alexander, N. (2014). Universities and the 'knowledge economy', in S. Vally and E. Motala (Eds.). *Education, Economy & Society*. Pretoria: Unisa press, pp. 48-56.

Allais, S. (2014). *Selling out education: National qualification framework and the neglect of knowledge*. Rotterdam: Sense Publishers.

Altbach P.G., Reinberg L. & Yudkerich, M. (Eds) (2012). Paying the professoriate: A global comparison of compensation and contracts. London: Routledge.

Altbach, P. G. (2013). Advancing the national and global knowledge: The role of research universities in developing countries. *Studies in Higher Education*, 38(3): 316-330.

Archer, M. S. (1995). *Realist Social Theory: The morphogenetic approach*. Cambridge: Cambridge University Press.

Archer, M. S. (1996). *Culture and Agency. The place of culture in Social theory*. Cambridge: Cambridge University Press.

Archer, M. S. (2000). *Being Human: The problem of agency.* New York: Cambridge University Press.

Archer, M. S. (2002). Realism and the problem of agency. *Journal of Critical Realism* (incorporating Alethia), 5(1): 11-20.

Archer, M. S. (2003). *Structure, agency, and the internal conversation*. Cambridge: Cambridge University Press.

Archer, M. S. (2007). The trajectory of the morphogenetic approach: an account in the first-person. *Sociologia, problemas e práticas*, (54): 35-47.

Archer, M. S. (2012). *The Reflexive Imperative in Late Modernity*. Cambridge: Cambridge University Press.

Archer, M. S. (2015). *Generative Mechanisms Transforming the social order*. Cham: Springer.

Archer, M. S., Collier, A. and Porpora, D. (2004). *Transcendence: Critical Realism and God*. London: Routledge.

Arksey, H. and Knight, P. T. (1999). *Interviewing for social scientists: An introductory resource with examples*. London: Sage.

Ashwin, P. (2008). Accounting for structure and agency in 'close-up' research on teaching, learning and assessment in higher education. *International Journal of Educational Research*. 47(3): 151-158.

Ashwin, P. and Case, J. (2018). Pathways to the Public Good: Access, Experiences and Outcomes of South African Undergraduate Education (Forthcoming).

Bacovic, M. and Lipovina-Bazovic, M. (2010). 'Knowledge accumulation and economic growth' ASECU, Podgorica, 37-60 http://www.ekonomija.ac.me/sites/ekonomija.

Badat, S. (2009). Valuing the role of higher education in a society: An address at the HER-SA Academy to 80 women from universities throughout Africa, 1-3.

Barnett, R. (2000). University in an age of super complexity. *Higher Education*, 40: 409-422.

Becher, T. and Trowler, P. (2001). *Academic tribes and territories: Intellectual enquiry and the cultures of disciplines* (2nd Ed.). Buckingham: Open University Press.

Behari- Leak, K. (2015). Conditions enabling and constraining the exercise of agency among new academics in higher education conducive to the social inclusion of students. Unpublished PhD Thesis, Rhodes University.

Benton, T. (2007). A stratified ontology of selfhood: review of Being Human: the problem of agency by Margaret S. Archer. *Journal of Critical Realism,* (4): 2.

Bernstein, B. (2000). *Pedagogy, symbolic control and identity*. Oxford: Rowan and Littlefield.

Bernstein, D. (2013). How SoTL-active faculty members can be cosmopolitan assets to an institution. *Teaching & Learning Inquiry*, 1(1): 35-40.

Bhaskar, R. (1975). *A realist theory of* science (2nd ed.). London: Verso.

Bhaskar, R. (1978). *A realist theory of science*. Hassocks: Harvester Press.

Bhaskar, R. (1979). *The possibility of naturalism: A philosophical critique of the contemporary human sciences.* Hassocks: Harvester Press.

Bhaskar, R. (1993). *Dialectic: the Pulse of Freedom.* London: Verso.

Bhaskar, R. (1998). *The Possibility of Naturalism*. (3rd Ed.). London: Routledge.

Bhaskar, R. (2008). *A Realist Theory of Science*. London & New York: Routledge.

Bloom, D.E., Canning, D. and Chan, K. (2006). Higher education and economic development in Africa*. Human development sector, African region*. Harvard university. [Online] Available at: http://ent.arp.harvard.edu/AfricaHigherEducation/Reports/BloomAndCanning.pdf [Accessed: February 2018]

Boughey, C. (2012). Linking teaching and research: an alternative perspective' *Teaching in Higher Education,* 17(5): 629-635.

Boughey, C. (2018). What kind of people have we formed in our university graduates? Going to university: The influence of higher education on the lives of young South Africans, J.M Case, D M, Marshall S McKenna & D Mogashana (book Review). *South African Journal of Scienc*e, 117: 9-10.

Boughey, C. and McKenna, S. (2011). A meta-analysis of teaching and learning at five historically disadvantaged universities. *Pretoria: Council on Higher Education*.

Boughey, C. and McKenna, S. (2016). Academic Literacy and the decontextualized learner. *Critical Studies in Teaching and Learning*, 4(2): 1-9.

Boughey, C. and McKenna, S. (forthcoming) *Calling for Change* Durban: University of KwaZulu-Natal Press

Boulton, G. and Lucas, C. (2008). *What are university for?* Leuven. League of European Research Universities. [Online] Available at: https://globalhighered.files.wordpress.com/2009/09/paper_2008-07_1_final_version.pdf [Accessed: 30 November 2019].

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Bozalek, V. and Boughey, C. (2012). (Mis)framing higher education in South Africa. *Social Policy & Administration,* 46(6): 688-703.

Brennan, J., King, R. and Lebeau, Y. (2004). *The roles of universities in the transformation of societies: Synthesis report*. London: Association of Commonwealth Universities and the Open University. [Online] Available at: https://pdfs.semanticscholar.org/e42f/ab64590cb909b3112696f1b98c0c36bb2028.pdf [Accessed: 30 November 2018]

Brew, A. (2003). Teaching and Research: New relationships and their implications for inquiry-based teaching and learning in higher education *Higher Education Research & Development*, 22(1): 3-18.

Brew, A. (2006). *Research and Teaching: Beyond the Divide*. New York: Palgrave Macmillan International Higher Education.

Brew, A. (2010). Imperatives and challenges in integrating teaching and research. *Higher Education Research and Development,* 46(2): 139-150.

Brezi, E. S. and Crouzet, F. (2004). The higher education institutions: Recruitment of elites and economic growth. *CESifo Working Paper Series No. 1360.* [Online] Available at: http://ssrn.com/abstract=641302 [Accessed: 12 May 2015]

Bringle, R. G., Julie A. and Hatcher, A. J. (1995). A service-learning curriculum for faculty. *Michigan Journal of Community Service Learning* 2(1): 112–22.

Brodin, E.M. and Frick, L. (2011). Conceptualizing and encouraging critical creativity in doctoral education. *International Journal for Researcher Development*, 2(2): 133-151.

Bryman, A. (2004). *Social Research Methods*, 4th Ed. New York: Oxford University Press.

Bunting, I. (2002a). The higher education landscape under apartheid, in N. Cloete, R. Fehnel, P. Maassen, T. Moja, H. Perold and T. Gibbon(Eds.). *Transformations in higher education: Global pressures and local realities in South Africa,* Cape Town: Juta, pp. 35-52.

Bunting, I. (2002b). Funding, in N. Cloete, R. Fehnel, P. Maassen, T. Moja, H. Peroldand T. Gibbon (Eds.). *Transformation in Higher Education: Global Pressures and Local Realities in South Africa,* Cape Town: Juta, pp. 73-94.

Caetano, A. (2014). Defining personal reflexivity: A critical reading of Archer's approach. *European Journal of Social Theory,* 18(1): 1-16.

Calhoun, C. (2006). The university and the public good. *Thesis Eleven*, 84(1): 7-43.

Callaghan, C.W. (2015). Higher education research productivity: The influences of different forms of human capital. *South African Journal of Higher Education*, 29(5): 85-105.

Carnoy, M. (2000). *Sustaining the New Economy.* New York: Russell Sage Foundation.

Carter, B. and New, C. (2004). *Making realism work: A realist social theory and empirical research*. London: Routledge.

Case, J. (2013). *Researching student learning in higher education: A social realist approach.* London: Routledge.

Case, J. M. (2015). A social realist perspective on student learning in higher education: The morphogenesis of agency. *Higher Education Research & Development*, 34(5): 841-852.

Case, J.M., Heydenrych, H., Kotta, L., Marshall, D., McKenna, S. & Williams, K. (2017). From contradictions to complementaries: a social realist analysis of the evolution of academic development within a department. *Studies in Higher Education*, 42(2): 278-291.

Castells, M. (1994). The university system: Engine of development in the new world economy, in J. Salmi and A. Verspoor (Eds.). *Revitalizing Higher Education*. Oxford: Pergamon, pp. 14-40.

Castells, M. (2001). Universities as dynamic systems of contradictory functions, in J. Muller, N. Cloete & S. Badat (Eds.). *Challenges of Globalisation: South African Debates with Manuel Castells* Cape Town: Maskew Miller Longman, pp. 206-223.

Castells, M. (2009). The Role of Universities in Development, the Economy and Society. Transcript of a lecture given by Manuel Castells at the University of the Western Cape, August 2009.

Chavez, C. (2008). Conceptualising from the inside: Advantages, complications, and demands on insider positionality. *The Qualitative Report* 13(3): 474-494.

Chen, D. H. & Dahlman, C. J. (2005). The knowledge economy, the KAM methodology and World Bank operations. *World Bank Institute Working Paper*. [Online] Available at: http://siteresources.worldbank.org/WBI/Resources/The_Knowledge_Economy-FINAL.pdf [Accessed: 30 November 2018]

Chen, S. (2012). Contributing knowledge and knowledge workers: The role of Chinese universities in the knowledge economy. *London Review of Education* 10(1): 101-112.

Chick, N. & Poole, G. (2013). Launching TLI:SoTL's purposes, processes, and people. *Teaching & Learning Inquiry: The ISSOTL Journal* 1(1): 1-4.

Chirikov, I. (2013). Research Universities as Knowledge networks: The role of institutional research. *Studies in Higher education*, 38(3): 456-469.

Christie, F. (1985). *Language education.* Victoria: Deakin University Press.

Clegg, S. (2009). Forms of knowing and academic development practice. *Studies in Higher Education,* 34(4): 403-416.

Clegg, S. (2012). Conceptualising higher education research and/or academic. *Higher Education Research & Development,* 31(5): 667-678.

Cloete, N. (2015). Africa needs research universities: Knowledge production in eight African flagship universities. Presentation at Darkar Senegal, 11 March 2015.

Cloete, N. and Bunting, I. (2012). Challenges and opportunities for African Universities to increase knowledge production. Report for OCED Director for Science Technology and Industry's Programme on Innovation, Research and Higher Education Development (IHERD). Centre for Higher Education and Training.

Cloete, N. and Maassen, P. (2013). African needs research universities. Presentation at Stockholm Sweden, 10 December 2013.

Cloete, N. and Maassen, P. (2015). Roles of universities and the African context, in N. Cloete, P. Maassen and T. Bailey (Eds.). *Knowledge production and contradictory functions in African higher education*. Cape Town: African Minds, pp. 1-18.

Cloete, N. Maassen, P., Fehnel, R., Moja, T. and Perold, H eds. (2006). *Transformation in Higher Education: Global Pressures and Local Realities*. Cape Town: Juta.

Cloete, N., Maassen, P. and Bailey, T. (2015). (Eds.). *Knowledge production and contradictory function in African higher education*. Cape Town: African Minds.

Collini, S. (2012). *What are universities for?* London: Penguin.

Conceição, P., Heitor, M.V. and Oliveira, P.M. (1998). Expectations for the university in the knowledge-based economy. *Technological Forecasting and Social Change,* 58(3): 203-14.

Cooper, D. (2015). Social justice and South African university student enrolment data by 'race' 1998-2012: From 'skewed revolution' to 'stalled revolution' *Higher Education Quarterly*, 69(3): 237-263.

Cooper, D. and Subotzky, G. (2001). *The skewed revolution: Trends in South African higher education: 1988–1998.* Bellville: Education Policy Unit, University of the Western Cape.

Council on Higher Education. (2004). South African higher education in the first decade of democracy, Pretoria: Council for Higher Education.

Council on Higher Education. (2016). *South African higher education reviewed - Two Decades of Democracy.* Pretoria. Council on Higher Education.

Cruickshank, J. (2010). Knowing social reality: A critique of Bhaskar and Archer's attempt to derive a social ontology from lay knowledge. *Philosophy of Social Science* 40(4): 579-602.

Danermark, B., Ekstrom, M., Jakobsen, L. and Karson J. (2002). *Explaining society: Critical realism in the Social Sciences.* London: Routledge.

De Jager, P., de Kock, F. and Van der Spuy, P. (2017). Do not feed the predators. *South African Journal of Business Management*, 48(3): 35-45.

Deacon, R., Osman, R. and Buchler, M. (2009). *Audit and interpretative analysis of education research in South African: what have we learnt?* Research report submitted to the National Research Foundation.

Deem, R., Hillyard, S., Reed, M. and Reed, M. (2007). *Knowledge, higher education, and the new managerialism: The changing management of UK universities*. Oxford: Oxford University Press.

Department of Education. (1997). *Education white paper 3: A programme for the transformation of higher education.* Pretoria: Department of Education.

Department of Education. (2001). *National plan for higher education In South Africa.* Pretoria. Department of Education.

Department of Education. (2008). *Report of the task team on higher education teaching development grants.* Pretoria. Department of Education.

Department of Higher Education and Training. (2010). *External report: Information on the state budget for universities.* Pretoria. Department of Higher Education and Training.

Department of Higher Education and Training. (2011). *Ministerial report on evaluation of the 2010 institutional research publication output*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2012). *Green paper for post-school education and training*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2013a). *White paper on post-school education and training: Building an expanded effective and integrated post-school system*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2014). *Ministerial statement on higher education funding.* Pretoria. Department of Higher Education and Training.

Department of Higher Education and Training. (2014). *Policy framework on differentiation in the South African post-school system*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2015a). *Research output policy*. Pretoria: Department of Higher Education and Training. (Government Gazette 38552, 2015).

Department of Higher Education and Training. (2015c). *Communique 2 of (2015): Research output policy (2015)*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2016). *Higher education management information system (HEMIS) Data.* Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2017). *Ministerial statement on higher education funding.* Pretoria. Department of Higher Education and Training

Department of Higher Education and Training. (2018). *Report on the evaluation of the 2016 universities' research output*. Pretoria: Department of Higher Education and Training.

Department of Higher of Education and Training. (2013b). *Report of the ministerial committees for the review of the funding of the university*. Pretoria: Department of Higher Education and Training.

Department of Higher of Education and Training. (2015b). *Higher education management information system (HEMIS) Data*. Pretoria: Department of Higher Education and Training.

Department of Science and Technology. (2008). *Innovation towards a knowledge-based economy. Ten-year innovation plan 2008–2018*. Pretoria: Department of Science & Technology.

Der Hyede, T. A. (2015). PhDs hold key to South Africa development. *Maid and Guardian* 9 February. [Online] Available at: http://mg.co.za/article/2015-02-09-phds-hold-key-to-sas-development [Accessed: 30 November 2018]

Durning, B. and Jenkins A. (2005). Teaching/research relations in departments: The perspectives of built environment academics. *Studies in Higher Education,* 30(4): 407-426.

Durrheim, K. and Kelly, K. (2006). Research design, in M. Terre Blance, K. Durrheim & D. Painter (Eds.). *Research in practice: Applied methods for social sciences*. 2nd ed. Cape Town: University of Cape Town Press, pp. 34-59.

Education Policy Unit. (1997). The enhancement of Graduate Programme and Research capacity at the Historically Black Universities. Final research report. Bellville: Education Policy Unit, University of the Western Cape.

Edwards, M. A. and Roy, S. (2017). Academic Research in the 21st Century: Maintaining scientific integrity in a climate of perverse incentives and hyper competition. *Environmental Engineering Science*, 34(1): 51-61.

Elder-Vass, D. (2007). Re-examining Bhaskar's three ontological domains: The lessons from emergence, in C. Lawson, J. Latsis and N. Martins (Eds.). *Contributions to Social Ontology*. London: Routledge, pp. 160-177.

Elliott, D.B. (2013). Salami slicing and the SPU: Publish or Perish? *Ophthalmic and Physiological Optics*, 33(6): 625-626.

Etzkowitz, H. and Leydesdorff, L. (2000). The dynamics of innovation: From national systems and 'mode 2' to a triple helix of university–industry–government relations. *Research Policy,* 29(2): 109-23.

Fairclough, N. (2000). Discourse, social theory. and social research: The discourse of welfare reform. *Journal of Sociolinguistics,* 4(2): 163-195.

Fairclough, N. (2005). Peripheral vision: Discourse analysis in organisation studies: The case for critical realism. *Organisation studies*, 26(6): 915-939.

Fairclough, N., Jessop, B. and Sayer, A. (2002). Critical realism and semiosis. *Journal of Critical Realism,* (Incorporating Alethia) 5(1): 2-10.

Fanghanel, J. (2012). *Being an Academic.* New York & London: Routledge.

Fedderke, J. W. and M. Goldschmidt. (2015). Does massive funding support of researchers work?: Evaluating the impact of the South African Research Chair Funding Initiative. *Research Policy*, 44(2): 467-482.

Flick, U. (2002). Qualitative research - State of the art.' *Social Sciences Information. Information Sur Les Sciences Sociales,* 41(1): 5-24.

Flick, U. (Ed.). (2013). *The SAGE handbook of qualitative data analysis.* Los Angeles: Sage Publications Ltd.

Fongwa S. N. (2013). Universities in Regional development: Knowledge transfer in a less favoured region. Unpublished PhD Thesis, University of Free State.

Foray, D. (2006). Optimizing the use of knowledge, in B. Kahin and D. Foray (Eds.), *Advancing knowledge and the knowledge economy*. Cambridge: MIT Press, pp. 9-16.

Frick, L., McKenna, S. & Muthama, E. (2017). Death of the PhD: when industry partners determine doctoral outcomes. *Higher Education Research & Development*, 36(2): 444-447.

Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Cambridge: Polity Press.

Gillham, B. (2000). *Case study research methods*. London: Bloomsbury Publishing.

Giroux, H A. (2006). Academic freedom under fire: The case for critical pedagogy. *College Literature,* 33(4): 1-42.

Giroux, H. A. (2002). The corporate war against higher education. *Workplace,* 9(1): 103-117.

Godin, B. & Gingras, Y. (2000). The place of universities in the system of knowledge production. *Research Policy,* 29: 273-278.

Graham, G. (2013). The university: A critical comparison of three ideal types. *The Aims of Higher Education* (*Kagisano no 9)*. Pretoria: Council for Higher Education, pp. 5-22

Griffiths, R. (2004). Knowledge production and the research–teaching nexus: the case of the built environment disciplines. *Studies in Higher Education,* 29(6): 709-725.

Habib, A. (2013). Reflections of a university bureaucrat interested in advancing a progressive social agenda. *The aims of higher education (Kagisano no 9).* Pretoria: Council on Higher Education, pp. 63-74.

Haggis, T. (2009) Students learning research: A broader view, in M. Tight, K.H. Mok, J. Huisman and C. Morphew (Eds.). *The Routledge international handbook of higher education*. New York: Routledge.

Hall, M., Symes, A. and Luescher, T. (2004). *The governance of merger in South African Higher Education.* Pretoria: Council on Higher Education.

Harkavy, I. (2006). The role of universities in advancing citizenship and social justice in the 21st century. *Education, Citizenship and Social Justice*, 1(1): 5-37.

Harland, T. (2009). The people who study higher education. *Teaching in Higher Education,* 14(5): 579-582.

Harley, Y. X., Husamen, E., Hlungwani, C. and Douglas T. (2016). Does the DHET research output subsidy model penalise high-citation publication? A case study. *South African Journal of Science*, 112(5-6): 1-3.

Hartwig, M. (2007). Review of 'Critical Realism today: New formations. *Journal of Critical Realism,* 6(1): 148-157.

Hay, C. (2002). *Political Analysis: A critical Introduction*. London: Macmillan.

Healey, M., Jordan, F., Pell, B. and Short, C. (2010). The research–teaching nexus: a case study of students' awareness, experiences and perceptions of research. *Innovations in Education and Teaching International*, 47(2): 235-246.

Henkel, M. (2000). *Academic identities and policy change*. London: Jessica Kingsley.

Henkel, M. (2005). Academic identity and autonomy in a changing policy environment. *Higher Education*, 49, (1/2): 155-176.

Higgins, J. (2014). Academic freedom and the Humanities: Some current challenges. *Critical Studies in Teaching & Learning,* 2(2): 68-84.

Higher Education South Africa, (2014). *South African Higher Education in the 20th Year of Democracy: Context, Achievement and Key Challenges*, Cape Town: HESA. [Online] Available at: http://pmg-assets.s3-website-eu-west-1.amazonaws.com/140305hesa.pdf [Accessed: 30 November 2018]

Hlengwa, A., McKenna, S. and Njovane, T. (2018) The lenses we use to research student experiences, In *Pathways to the Public Good: Access, Experiences and Outcomes of South African Undergraduate Education.* Cape Town: African Minds

Holland, B. & and. Ramaley. (2008). Creating a supportive environment for community-university engagement: Conceptual frameworks. In *HERDSA Annual Conference on 'Engaging Communities' Rotorua, New Zealand*, 1-4.

Holness, L. (2015*). Growing the next generation of researchers: A handbook for emerging researchers and their mentors*. Cape Town. UCT Press.

Hwang, J. and Gerami, M. (2007). Analysis of investment in knowledge inside OECD countries. *Proceedings of World Academy of Science, Engineering and Technology*, 25: 7-12.

Imenda, S. N. (2006). Knowledge production as a function of the individual institution's idea of a university. *South African Journal of Higher Educati*on, 20(2): 245-260.

Isike, C. (2018). The impact of University of Zululand structural and cultural contexts on postgraduate supervision practice (2011–2016). *Africa Education Review,* 15(2): 112-130.

Israel, B. A., Schulz A. J., Parker E. A. and Becker, A. B. (1998). Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health,* 19: 173-202.

Jacoby, B. (1996). Service-learning in today's higher education. *Service-Learning in Higher Education:* 3-25.

Jansen, J. (2004). Changes and continuities in South Africa's higher education system, 1994 to 2004, in L. Chisholm (Ed.). *Changing class: Education and social change in post-apartheid South Africa*. Cape Town: HSRC Press, pp. 293-314.

Jenkins, A. (2004). A guide to the research evidence on teaching-research relations. York: The Higher Education Academy.[Online] Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.703.734&rep=rep1&type=pdf [Accessed: 30 November 2018]

Jenkins, A., and Healey, M. (2005). *Institutional strategies to link teaching and research*. York: Higher Education Academy. [Online] Available at: https://www.heacademy.ac.uk/system/files/resources/id585_institutional_strategies_to_link_teaching_and_research_2.pdf [Accessed: 30 November 2018]

Karagiannis, S. (2007). The Knowledge based economy, convergence and evidence from European Union' Working Paper No 91, Center of Planning and Economic Research Athens, Greece: 1-40.

Kaur, M. and Lakhwinder, S. (2016). Knowledge in the economic growth of developing economies. *African Journal of Science, Technology, Innovation and Development,*8(2): 205-212.

Kerr, C. (1991). *The Great Transformation in Higher Education, 1960–1980*. Albany: State University of New York Press.

King A. (1999). Against structure: A critique of morphogenetic social theory. *The Sociological Review,* 47(2): 199-227.

King, D. A. (2004). The scientific impact of nations. *Nature*, 430: 311-316.

Kraak, A. (2006). 'Academic drift' in South African Universities of Technology: Beneficial or detrimental? Conversations. *Perspectives in Education,* 24(3): 135-52.

Kress, G. (1989). *Linguistic Processes in Sociocultural Practice*. Oxford: Oxford University Press.

Langutani, M. M. (2015). An exploration into the conditions enabling and constraining the implementation of quality assurance in higher education: The case of a small comprehensive university in South Africa. Unpublished PhD Thesis, Rhodes University.

Leathwood, C. and Read, B. (2013) Research policy and academic performativity: compliance, contestation and complicity. *Studies in Higher Education,* 38(8): 1162-1174.

Leibowitz, B. and Bozalek, V. (2018). Towards a Slow scholarship of teaching and learning in the South. *Teaching in Higher Education*.1-14.

Leydesdorff, L. (2006). *The Knowledge-Based Economy: Modeled, Measured, Simulated*. Boca Raton: Universal-Publishers.

Lindsay, R., Breen, R. and Jenkins, A. (2002). Academic research and teaching quality: The Views of undergraduate and postgraduate students. *Studies in Higher Education,* 27(3): 309-27.

Luckett, K. (2012). Working with 'necessary contradictions': A social realist meta-analysis of an academic development programme review. *Higher Education Research and Development,* 31(3): 339-352.

Mabokela, R.O. (2000). 'We cannot find qualified Blacks': Faculty diversification programmes at South African universities. *Comparative Education Review*, 36(1): 95-112.

Mabokela, R.O. (2002). Reflections of Black women faculty in South African Universities. *The Review of Higher Education*, 25(2): 185-205.

Mägi, E, and Beerkens, M. (2016). Linking research and teaching: Are research-active staff members different teachers? *Higher Education,* 72 (2): 241–258.

Maistry, S.M. (2012). Confronting the neo-liberal brute: Reflections of a higher education middle-level manager. *South African Journal of Higher Education*, 26(3): 515-528.

Marginson, S. (2006). Dynamics of national and global competition in higher education. *Higher Education*, 52(1): 1-39.

Marsh, H. W. and Hattie, J. (2002). The relation between research productivity and teaching effectiveness: Complementary, antagonistic, or independent constructs? *The Journal of Higher Education*, 73(5): 603-641.

Maton, K. and Chen, R. T. (2015). LCT and qualitative research: Creating a translation device for studying constructivist pedagogy, in K. Maton, S. Hood, S. and S. Shay . (Eds.). *Knowledge-building: Educational studies in Legitimation Code Theory*. London: Routledg, pp. 27-48.

Maxwell, J. A. (2004). Using qualitative methods for causal explanation. *Field Methods*, 16(3): 243-264.

Maxwell, J. A. (2005). *Qualitative research design. An interactive approach*. Thousand Oaks, Sage.

Maxwell, J. A. (2012). *A realist approach for qualitative research*. Thousand Oaks, CA: Sage.

May, T. (2001). *Social research. Issues, methods and process*. Buckingham, Open University Press.

McArthur, J. (2011). Reconsidering the social and economic purposes of Higher Education. *Higher Education Research & Developm*ent, 30(6): 737-249.

McKenna, S. (2009). 'Only a name change': The move from Technikon to University of Technology. *The Journal of Independent Teaching and Learning*, 4(1): 37-48.

McKenna, S. (2017). Crossing conceptual thresholds in doctoral communities. *Innovations in Education and Teaching International*, 54(5): 458-466.

McKenna, S. and Boughey, C. (2014). Argumentative and trustworthy scholars: The construction of academic staff at research-intensive universities. *Teaching in Higher Education*, 19 (7).

Mda, T. (2013). Growing researchers from the historically disadvantaged groups through internship. *Perspectives in Education,* 31(2): 92-101.

Mellon, C.A. (1990). *Naturalistic inquiry for library science*. New York: Greenwood Press.

Merriam, B. S. and Tidsell J. E. (2016). *Qualitative research: A guide to design and implementation*. 4th ed. Jossy-Bass: San Franscisco.

Moleke, P. (2005). Inequalities in higher education and the structure of the Labour Market. *Employment and Economic Policy Research Programme,* Occasional Paper 1. Cape Town: Human Sciences Research Council.

Morrow, S. (2008). *Racial Redress and Citizenship in South Africa*. Cape Town: Human Sciences Research Council Press.

Morrow, W. E. (2009) *Bounds of democracy: epistemological access in higher education*. Cape Town: Human Sciences Research Council Press.

Motshoane, P. and McKenna, S. (2014). More than agency: The multiple mechanisms affecting postgraduate education, in E. Britzer, R. Alberttn, L. Frick, B. Grant and F. Kelly (Eds.). *Pushing Boundaries in Postgraduate Supervision.* Stellenbosch: SUN MeDIA, pp. 185-202.

Mouton, J. (2015). The doctorate in SA: Trends challenges and constraints. A Seminar at the University of KwaZulu Natal. 18 June 2015.

Mouton, J. and Valentine, A. (2017). The extent of South African authored articles in predatory journals. *South African Journal of Science*, 113(7-8): 1-9.

Moyo, T. (2018). An Analysis of the Implementation of the Teaching Development Grant in the South African Higher Education Sector. Unpublished PhD Thesis, Rhodes University.

Musiige, G. and Maassen, P. (2015). Faculty perceptions of the factors that influence research productivity at Makerere University, in N. Cloete, P. Maassen and T. Bailey (Eds.) *Knowledge Production and Contradictory Functions in African Higher Education*, Cape Town: African Minds, pp. 109-127.

National Planning Committee, (2011). National development plan 2030: Our future-make it work. South African Government.

Nickson, A. (2014). A qualitative case study exploring the nature of new managerialism in uk higher education and its impact on individual academics' experience of doing research. *Journal of Research Administration*, 45(1): 47-80.

Ntshoe, I. and De Villiers, P. (2008). Steering the South African higher education sector towards transformation. *Perspectives in Education*, 26(4): 17-27.

Ntshoe, I. and De Villiers, P. (2013). Funding sources for public higher education in South Africa: Institutional responses. *Perspectives in Education*, 31(4): 71–84.

O'Donoghue, D. (2014). Doing art-based educational research for the public good: An impossible possibility? *International Journal of Education & the Arts*, 15. (SI 2.3).

O'Rourke, K. E. and Williamson, J K. (2000). *Globalisation history; the evolution of nineteenth century history*. Cambridge: MIT Press.

Paphitis, S.A. (2018). The possibility of addressing epistemic injustice through engaged research practice: reflections on a menstruation related critical health education project in South Africa. *Critical Public Health*, 28(3): 363-372.

Powell, W.W. and Snellman, K. (2004). The knowledge economy. *Annual Review of Sociology,* 30: 199-220.

Price, M. (2014). The future of the university: Elite strengths. *Financial Times* 7 October. [Online] Available at: http://www.ft.com/reports/future-of-university [Accessed: 8 October 2014].

Quinn, L. (2012). *Re-imagining Academic Staff Development: Spaces for Disruption* Stellenbosch: African Sun Media.

Readings, B. (1996). *The University in Ruins*. Cambridge, MA: Harvard University Press.

Reynolds, P. (2009). Community engagement: What's the difference between service learning, community service, and community-based research? *Journal of Physical Therapy Education*, 23(2): 3-9.

Robertson, J. (2007). Beyond the 'research/teaching Nexus': Exploring the Complexity of Academic Experience'. *Studies in Higher Education,* 32(5): 541-56

Robertson, J. and Bond, H. C. (2001). Experiences of the relation between teaching and research: What do academics value? *Higher Education Research & Development,* 20(1): 5-19.

Salter, B. and Tapper, T. (1993). *The State and Higher Education*. London: Woburn Press.

Sayer, A. (2006). Realism as basis for knowing the world. *In Philosophy, people and practice*, London: Sage.

Sayer, R. A. (2000). *Realism and social science*. London: Sage.

Scott, I., Yeld, N. and Hendry, J. (2007). *Higher education monitor no. 6: A case for improving teaching and learning in South African higher education*. Pretoria: Council on Higher Education.

Shaplin, J. (2014). University Endowments, Education and Social Mobility by Thomas Piketty. *John Shaplin*. [Online] Available at: http://johnshaplin.blogspot.com/2014/05/university-endowments-education-and.html [Accessed: 30 November 2018]

Shay, S. (2012). Educational development as a field: Are we there yet? *Higher Education Research & Development,* 31(3): 311-323.

Shore, C. (2010). Beyond the multiversity: neoliberalism and the rise of the schizophrenic university. *Social Anthropology/ Anthropologie Sociale,* 18(1): 15-29.

Singh, M. (2008). Valuing differentiation as a qualified good: The case of South African higher education. *Higher Education Policy,* 21: 245-263.

Singh, M. (2011). The place of social justice in higher education and social change discourses. *Compare: A Journal of Comparative and International Education* 41(4): 481-494.

Slamat, J. (2014). Inside view IV. 2.1. Community University Engagement in South Africa. *Report: Higher Education in the World 2014*.

Slaughter, S. and Rhoades, G. (2004). *Academic Capitalism and the New Economy: Markets, State, and Higher Education*. Maryland: Johns Hopkins University Press.

Snowball, J.D. and Shackleton, C.M. (2018). Factors enabling and constraining research in a small, research-intensive South African University. *Research Evaluation*, 27(2): 119-131.

Sorlini, S. and Vessuri, H. (Eds.). (2007). *Knowledge society vs knowledge economy: Knowledge, power and politics*. New York: Palgrave Macmillan.

Spronken-Smith, R. and Walker, R. (2010). Can inquiry-based learning strengthen the links between teaching and disciplinary research? *Studies in Higher Education,* 35(6): 723-40.

Starke, A.M., Shenouda, K. and Smith-Howell, D. (2017). Conceptualizing community engagement: Starting a campus-wide dialogue. *Metropolitan Universities*, 28(2): 72–89.

Stehr, N. (1994). *Knowledge societies: The transformation of labour, property and knowledge in contemporary society*. London: Sage.

Stone, R. (2001). Refusing the realism- structuration divide. *European Journal of Social Theory*, 4(2): 177-197.

Subotzky, G. (1997). Redefining equity: Challenges and opportunities facing South Africa's Historically Black Universities relative to global and national changes. *Journal of Negro Education,* 66 (4): 496-521.

Task Force on Higher Education, (2000). Higher education in developing countries: Peril and promise. Washington D.C. World Bank.

Tight, M. (2004). Research into higher education: An a-theoretical community of practice? *Higher Education Research & Development,* 23(4): 395-411.

Tight, M. (2014). Discipline and theory in higher education research. *Research Papers in Education*, 29(1): 93-110.

Trigwell, K. (2013). Evidence of the impact of scholarship of teaching and learning purposes. *Teaching and Learning Inquiry: The ISSOTL Journal,* 1(1): 95-105.

Vally, S and Motala E. (2014). Education and economy: demystifying the skills discourse, in S. Vally and E. Motala (Eds) Education Economy & Society. Unisa Press: Pretoria.

Waitere, H. J., Wright, J., Tremaine, M., Brown, S. and Pausé, C. T. (2011). Choosing whether to resist or reinforce the new managerialism: the impact of performance-based research funding on academic identity. *Higher Education Research & Development*, 30(2): 205-217.

Wangenge-Ouma, G. (2012). Tuition fees and the challenge of making higher education a popular commodity in South Africa. *Higher Education*, *64*(6), pp.831-844.

Wangenge-Ouma, G., Lutomiah, A. and Langa, P. (2015). Academic incentives for knowledge production in Africa. Case studies of Mozambique and Kenya. *Knowledge production and contradictory functions in African higher education*, pp.128-147.

Weerts, D.J. and Sandmann, L.R. (2008). Building a two-way street: Challenges and opportunities for community engagement at research universities. *The Review of Higher Education*, 32(1): 73-106.

Wheelahan, L. (2009). The problem with CBT (and why Constructivism makes things worse). *Journal of Education and Work* 22(3): 227-242.

Wheelahan, L. (2010). *Why knowledge matters in education: A Social Realist argument*. Abingdon: Routledge.

Woodiwiss, A.J., 2012. Publication subsidies: Challenges and dilemmas facing South African researchers. *Cardiovascular Journal of Africa*, *23*(8), p.421.

Woodrooffe, D.D. (2011). When visions of the rainbow nation are not enough: effect of post-apartheid higher education reform on social cohesion in South Africa. *Peabody Journal of Education*, 86(2): 171-182.

World Bank, (2002). Constructing Knowledge Societies: New Challenges for Tertiary Education. Washington DC. The World Bank

Wright, S. and Rabo, A. (2010) Introduction: Anthropologies of University reform. *Social Anthropology/Anthropologie Sociale*, 18(1): 1-14.

Young, M. and Muller, J. (2013). On the Powers of Powerful Knowledge. *Review of Educational Research*, 1(3); 229-250.

Appendix A: Letter of Approval to conduct research from Rhodes University

RHODES UNIVERSITY
Grahamstown • 6140 • South Africa

EDUCATION FACULTY • PO Box 94, Grahamstown, 6140
Tel: (046) 603 8385 / (046) 603 8393 • Fax: (046) 622 8028 • e-mail: d.wilmot@ru.ac.za

11 February 2016

To Whom It May Concern

Re: Proposal and Ethics approval for Evelyn Loko Muthama (15M6440)

The minutes of the EHDC meeting of 17 September 2015 reflect the following:

CLASS A RESTRICTED MATTERS

DOCTORAL RESEARCH PROPOSALS

> ***Evelyn L Muthama 15M6440***
> *Topic: Research production in Historically Black Universities: Constraints and enablements*
> *Appointment of Professor Sioux McKenna as supervisor*
> *Decision: Approved*

This letter confirms the approval of the above proposal at a meeting of the Faculty of Education Higher Degrees' Committee on 17 September 2015.

In the event that the proposal demonstrates an awareness of ethical responsibilities and a commitment to ethical research processes, the approval of the proposal by the committee constitutes ethical clearance. This was the case with this proposal and the committee thus approved ethical clearance.

Yours truly

Prof. Mellony Graven
Chair of the EHDC, Rhodes University

1

Appendix B: The online survey questionnaire for academics and DVC/Dean/Director research

Research in Universities questionnaire

Thank you so much for agreeing to fill in this questionnaire. It is part of data collection for a PhD study. It should only take about ten minutes of your time and will help me to understand your views on research output in South African universities.

Participation in this research is voluntary and your identity will be kept anonymous.

Participation in the survey indicates your agreement for the data to be used for research purposes. The study has been given ethical clearance by Rhodes University Faculty of Education.

Yours Sincerely,

Evelyn Muthama.

Email address: g15m6440@campus.ru.ac.za

Please feel free to contact me with any concerns or further questions. You can also contact my supervisor Professor Sioux McKenna on s.mckenna@ru.ac.za or 046 6038171.

Factors impacting on research production

1) Where you are currently employed?
   - In a University of Technology (UoT)
   - In a Comprehensive University
   - In a Traditional University

2) Please select what best describes your role in the university
   - I am an academic staff member
   - I am a DVC/Dean/Director research

3) Please tick the activities that you regularly do. If you tick 'other', please provide details.
   - Teach undergraduates
   - Supervise and co- teach postgraduates
   - Participate in community engagement activities
   - Undertake research
   - Participate in institutional committees or panels
   - Other

4) Rank what you believe your university sees as its main function from 1-5. 1 as the highest and main function and 5 as the lowest.
   - Providing undergraduate programmes
   - Developing skilled labour for the economy

- Developing critical citizen for the country
- Undertaking research for industry
- Undertaking research to improve the world
- Others (Pease specify)

5) To what extend do you think research production and postgraduate education is central to your university. Please tick one
   - It is central
   - It is not central
   - I am not sure

6) Why do you say so? Please briefly explain.

7) Are you currently studying for a formal research qualification?
   - Yes
   - No

8) If so, which qualification? If you tick 'other' please provide details.
   - masters,
   - PhD,
   - Other

9) Are you undertaking research which is not for the purpose of a formal qualification?
   - Yes
   - No

10) If so, please briefly describe your research projects. What is the research topic and context? Briefly explain.

11) Are you undertaking research involving any kind of collaboration and networking?
   - Yes
   - No

12) If so, what kind of collaboration or networking? Please tick one or more.
   - Across departments within the institution
   - Across faculties within the institution
   - Across Institutions within South Africa
   - Across countries

13) How has the extent of your collaboration changed in the last 5 years?
   - Increased
   - Decreased
   - No change

14) If there was change (increase or decrease), what would you ascribe the change to? Please tick one or more. If you select 'other' please provide details.
- Personal preference
- Change in university policy
- Change in government policy
- Change in funding requirements
- Change in funding opportunities
- Other

15) Are you undertaking research in a single discipline, across disciplines or in both?
- Single discipline (please move to question 19)
- Across disciplines
- Single and across disciplines
- Other

16) If you are undertaking research across disciplines, what kind of research? Please tick one or more. If you select 'other' please provide details.
- Multidisciplinary- research involving several disciplines researching one theme or problem
- Transdisciplinary-Research involving academics from unrelated disciplines and non-academic participants like policy makers, industry, community, and so on
- Interdisciplinary- Research involving several unrelated academic disciplines (particularly in research paradigms) researching common theme or goal
- Other

17) Please comment on the amount of research you are currently engaged in compared to what you were doing five years ago.
- My research output/activity is decreasing
- My research output/activity is the same at it was five years ago (please move to question 19)
- My research output/activity is increasing

18) If there have been changes (increase or decrease), what would you ascribe this change to? If you select 'other' please provide details.
- Personal preference and development
- Change in university policy
- Change in government policy
- Change in funding requirements
- Change in funding opportunities
- Other

Structural support for research production

19) Have you had research outputs in the last five years?
- Yes
- No

20) If so, what research outputs? Please tick one or more. If you select 'other' please specify.
- Journal articles
- Chapters in books
- Research reports
- Papers in conference proceedings
- Other

21) Have you managed to get internal university funding for your research?
- Yes
- No

22) If so, please briefly describe what kind of funding.

23) Have you managed to get external funding for your research?
- Yes
- No

24) If so, please briefly describe the kind of funding you have received.

25) If you have had research output in the last 5 years, please briefly describe factors that you believe have enabled these output.

26) If you have not had research output or have not had as many as you would have liked to have, please briefly describe factors that you believe has constrained your output?

27) How do you believe your university can support an increase in research output?

28) Would you say your institutional or departmental policy with regard supervision of postgraduate students has changed in the past five years?
- Yes
- No
- I do not know

29) If YES briefly describe the changes and what you believe are the reasons for the changes.

Further participation

30) Are you willing to participate in a follow up interview?
- Yes
- No

31) If YES please provide me with your name, email address or telephone number and I will make arrangement to undertake a Skype interview with you at a time that suits you. The interview is voluntarily and I assure you that your responses will remain anonymous.

Appendix C: Cover letter

Evelyn Muthama
Centre for Higher Education, Research, Teaching and Learning (CHERTL),
Rhodes University,
Po Box 94,
Grahamstown, 6140
Phone (Cell No. 0837159138)
Email: (g15m6440@campus.ru.za)

Dear Prof/Dr/Mr/Mrs/ Ms,

I am a PhD student at Rhodes University investigating the constraints and enablements on research production in South Africa, and in particular in historically black universities. Universities are under enormous pressure to increase research output but are expected to do so with limited resources.

The main purpose of this study is to look holistically at the complex conditions (at institutional, national and international levels) that have enabled (and constrained) production of research in HBUs since 2004. These universities have increased research production over the last twenty years, though not evenly, and various initiatives have been put in place to achieve this.

Your institution has been selected to participate in the study because it fits the category of historically black university. It is hoped that the study will generate knowledge that will clearly demonstrate what is enabling research production and development of researchers.

I would like to conduct a survey using an online questionnaire to help to understand the views of academics about research production in South African Universities. The questionnaire is anonymous and participants do not indicate which university they are from and so institutional identity is also anonymous. The questionnaire will take about ten minutes to complete and I am hoping to get a wide range of inputs from as many academics as possible and those responsible for managing and leading research.

I would also like to conduct semi-structured interviews and analyse some relevant documents from the institutions. I request for assistance in getting the following documents; documentation

containing the mission and vision statement; administrative and academic review reports; university audit reports; research reports; evaluation reports by departments and research units/centres, and minutes of research committee meetings). In analysing these documents, formal ethical protocol of the university will be adhered to. All quotations from the documents will be cited and referenced throughout the text and the references used will be listed at the end.

Interviews will be conducted with at least four academic staff members and DVC/Dean/ Director Research for deeper discussions of their experiences of research. Participation in the interviews is voluntarily and responses will remain anonymous.

The study has been given ethical clearance by Rhodes University Faculty of Education. Please find attached a copy of the ethical clearance letter, full proposal, questionnaire and information letter/ informed consent. You are welcome to contact me or my supervisor, Professor Sioux McKenna (s.mckenna@ru.ac.za) with any concerns or questions.

Yours Sincerely,

Evelyn Muthama

083 7159138 or g15m6440@campus.ru.za

Appendix D: Interview Schedule for Academics/ Heads of Research

1. Tell me your story of how you became an academic staff member?
2. What does your current job entail?
3. What do you see as your core role as academic staff members?
4. Do you consider doing research one of your core roles as an academic staff?
5. What has been some of the changes in your research over the past years? What would you ascribe (attribute) these changes to? How do you feel about the changes?
6. Do you supervise postgraduate students in your department/or university? (prompt - do you enjoy it?)
7. Do you think research production and postgraduate education is central to your university? How much attention is given to research and postgraduate education compared to other core functions of the university?
8. What kind of research is promoted /or supported in your institution /and your department and in which ways is it supported/ or encouraged? What do you see as enabling research production in the institution?
9. What do you see as enabling research production in your institution?
10. Are there research methods courses offered by the University? Are such courses helpful if you do have them?
11. Are there any research incentives in the institutions? Do you they have any impact/ effect or research production?
12. What do you see as constraining research production and development of researchers?
13. Do you do research alone or do you do other people/colleagues?
14. In your opinion is collaboration and networking in research important? How has the collaboration affected your research?
15. With the current debates on fee must fall, Rhodes must fall middle man, do you think they will have effect on research production in your institutions?

Appendix E: Consent letter for those participating in interviews

Evelyn Muthama
Centre for Higher Education, Research, Teaching and Learning (CHERTL),
Rhodes University,
Po Box 94,
Grahamstown, 6140
Phone (Cell No. 0837159138)
Email: (g15m6440@campus.ru.za)
12-05-2017

Dear Mr/Ms/Mrs/Dr/Prof,

Thank you for agreeing to participate in this study.

The purpose of the study is to examine conditions enabling and constraining production of research in the higher education system in South Africa and in particular in the historically black universities.

I would like to explore and gain insight into your ideas and beliefs concerning your role as an academic staff member and the extent to which research production is central to your university. I am also interested in exploring the kinds of structures available in your institution to support research production.

I am contacting you because you kindly indicated on the online questionnaire that you will be available to be interviewed. I plan to conduct interviews with you, other academics and heads of research. You and other people participating in this study have been selected on basis of being academic staff members or DVC/Dean/Director research. I would like to tape record these interviews (with your permission) and transcribe them.

You are encouraged to ask any question at any time about the nature of the study and methods that I am using. Your suggestions and concern are important to me: please free to contact me or my supervisor Professor Sioux McKenna (s.mckenna@ru.ac.za or 046 6038171) at any time.

I will use the information from the study to write my PhD thesis and to publish articles therefrom.

I assure you that I will ensure,

- Your identity will be kept anonymous and no data quotes will be ascribed to any particular university. You and any other person and place involved in the study will be given pseudonyms (where necessary) that will be used in all verbal and written records and reports.
- If you grant permission for tape recording, no recording will be used for any purpose other than to do this study. At your discretion, these tapes will either be destroyed or returned to you when the study has been completed.
- Participation in this research is voluntary and you have the right to withdraw at any time.
- You will receive an electronic copy of my final thesis.

INFORMED CONSENT

I have read and understood the information provided in the information sheet above. I do give permission to be interviewed and for the data to be used for the purpose of this research project (**Please write your name and sign in the space provided below).**

I (research participant) do grant permission to be interviewed via Skype.

I also agree to the terms herewith mentioned above:

Sign _____ Date _____.

I Evelyn Muthama (researcher) agree to the terms.

Sign_____Date_____

Appendix F: Transcription confidentially declaration

Transcription confidentially declaration

The respondents took part in the research on condition that their responses would be kept confidential and that the researcher will not publish their responses together with their names or names of their institutions.

Keeping the responses confidential involves ensuring that you do not discuss nor share the information from the audio with anyone other than the researcher. The materials received (for example audio files) and generated (for example text files) will also be kept confidential and on completion will be deleted or disposed, in line with the disposal of confidential materials i.e. such that they cannot be retrieved or reconstituted after disposal.

I (full names) _Carol-Anne (Cané) Lake__ understand the above and agree to treat the work confidentially and to keep the information and identities of the respondents confidential.

_____ __28/09/16_____

Transcriber Signature Date