UNIVERSITY OF THE WESTERN CAPE

PUBLIC FUNDING OF HIGHER EDUCATION AND STUDENT ACCESS: A COMPARATIVE STUDY OF TWO PUBLIC UNIVERSITIES IN AFRICA

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DECLARATION

I have not formerly presented this thesis in full, or in part, to any institution for the awarding of any other degree or diploma. The work presented in this thesis is original. It has not been carried out before in Ghana or South Africa to the extent that I have done it. It contains no material previously undertaken by others except where I give attribution, citation or quotation, and references.

Fredua Kwasi-Agyeman

June 2020

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DEDICATION

For my mother

Madam Alice Akosua Serwaah

ABSTRACT

This study examines changes in public funding and student access, factors influencing the changes in public funding, and strategic responses towards influencing variations in student access under fluctuations in public funding at two African public universities, the University of the Western Cape in South Africa and the University of Ghana in Ghana. Underpinned by resource dependence theory, the study uses a qualitative methodology via in-depth interviewing of twenty-two respondents and documentary analysis to gather data to explore the study's objective. The public funding of higher education and student access in South Africa and Ghana have been changing over time, where various issues of concern have been raised about the changes. This study explores the relationship between changes in public funding and student access at both universities.

The study finds that the levels of change in public funding have a significant effect on the variations in student access at the University of the Western Cape. In other words, changes in public funding are a major factor in changing student access. The analysis shows that, statistically, approximately 94 percent of the variation in student enrolment between 2007 and 2016 is accounted for by public funding. However, the study finds an insignificant relationship between changes in public funding and student access at the University of Ghana.

The findings reveal that the state of the economy; competing needs of the various sectors; low prioritization of higher education; sectoral planning and budgeting; a shift of focus from education; funding mechanism; and overspending in election years are factors that influence changes in public funding at both institutions. Strategic responses such as government subsidy; low-tuition fee structure; payment arrangement; recruitment strategy; containment strategy; special grants; financial support system; policy for the admission of athlete students; and policy for less-endowed schools have been employed by the two universities to influence variations in student access in the face of fluctuations in public funding.

The study concludes by generating practical and conventional propositions on public funding of higher education and student access. A recommendation for further research into changes in public funding and student access is also suggested. A similar study could thus be undertaken to investigate the relationship between changes in tuition fees and student access.

Key Words-Public funding, student access, factors influencing changes, public universities

LIST OF ABBREVIATIONS AND ACRONYMS

DHET	Department of Higher Education and Training
FTE	Full-Time Equivalent
GDP	Gross Domestic Product
GNPC	Ghana National Petroleum Corporation
IGF	Internally Generated Fund
IMF	International Monetary Fund
NCTE	National Council for Tertiary Education
NGO	Non-Governmental Organizations
NPM	New Public Management
NSFAS	National Student Financial Aid Scheme
SAP	Structural Adjustment Program
SEMU	Student Enrolment Management Unit
SHS	Senior High Schools
SPAC	Sport for Academic Credit
SSS	Senior Secondary School
SSSCE	Senior Secondary School Certificate Examination
UG	University of Ghana
UG-PAAS	University of Ghana Policy on Admission for Athletes Students
UWC	University of the Western Cape
WASSCE	West African Senior School Certificate Examination

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Background of the Study

Historically, higher education was perceived as a public good due to its primary function of training professionals like teachers, lawyers, and doctors who contributed by dispensing knowledge, justice and taking care of the sick (Malechwanzi, Shen, & Mbeke, 2016). Therefore, public investment in higher education is critical for sustained economic growth (Dar, 2015; Mitchell, Leachman, & Masterson, 2017). Thus, the importance of higher education in national development has compelled governments in both developed and developing countries to invest in higher education (Burgess, 2016). For example, in developed countries such the United Kingdom, the expenditure on education out of total government expenditure is 13.83 percent, of which that on higher education is 25.62 percent (Times Higher Education, 2019a). In Germany, the figures show that education spending, as a share of government expenditure, is 10.94 percent, with higher education taking 25.99 percent out of it (Times Higher Education, 2019b). For Australia, the government spends 13.77 percent of total expenditure on education and out of this percentage 26.82 percent is spent on higher education (Times Higher Education, 2019c).

In Africa, governments, in their quest to make their higher education financially sustainable, also allocate part of their national budget to higher education. For example, in Ethiopia, Moges (2013) reports that the government allocated 7.0 percent of Gross Domestic Product (GDP) to the education sector in 2009/10. A report by the University of the Witwatersrand (2016) on funding models shows that, in South Africa, the government allocation to higher education as a percentage of GDP was 0.75 percent in 2016. Toguebaye (2015) reveals that the government of Senegal allocated 1.62 percent of GDP to higher education in 2012. In Ghana, education spending as a share of government expenditure is 21.01 percent; out of this percentage, 18.27 percent is on higher education (Times Higher Education, 2019d). It seems that the underlying aim of these investments is to widen the scope of higher education and make it accessible to facilitate national development. Thus, public higher education institutions traditionally have been receiving financial support from national governments to provide access to higher education for students (Cohen, Manion, & Morrison, 2011).

Notwithstanding, public funding to higher education has been challenged by increasing enrolments, rising costs of higher education and competing needs of various sectors of the economy (security, health, primary and secondary education, infrastructural development) (Altbach, 2013; Dar, 2015; World Bank, 2017a).

Consequently, funds allocated to higher education by governments globally with some exceptions, according to Teferra (2013) and Rohayati, Najdi, and Williamson (2016), have declined in percentage to GDP and in real terms. For example, government funding in the United Kingdom was estimated to have reduced by 2 percent in 2016 compared with 2015 (European University Association, 2016). Similarly, higher education in Italy has experienced a significant reduction in public funding by 17.1 percent from 2008 to 2015 (European University Association, 2016). In Australia, the government's share of the cost of higher education fell from 58 percent in 2017 to 54 percent in 2018 (Karp, 2017). Additionally, Australian Higher Education Grants for teaching and learning and research have declined from 0.7 percent in 1989 to 0.6 percent in 2017 (Universities Australia, 2019). A report by Study International Staff (2019) states that in 2007/08 the gap between university operating expenditures and provincial grants in Canada was CA$6.1 billion. Still, by 2016/17, the gap had nearly doubled to CA$12 billion.

Africa's higher education generally has not been spared from declining public funding. Teferra (2013) reports that public financing of higher education has been declining over the years. For instance, in Nigeria, public resources allocated to the education sector declined from 10.00 percent in 2012 to 8.44 percent of the total government expenditure in 2016 (Ololube, 2016). This decline in public funding is also real in South Africa. For instance, as a proportion of GDP, public expenditure on higher education has declined from 0.82 percent in 1996 (Wangenge-Ouma & Cloete, 2008) to just 0.75 percent in 2016 (Council on Higher Education, 2016a). Zambia's education expenditure as a percentage of total government expenditure decreased from 20.2 percent in 2015 to 15.3 percent in 2019 (United Nations Children's Fund, 2019). Egypt's 2019 national budget allocated EUR 2 483 million to the university sector (Brussels Research Group, 2019). However, the Egyptian Central Agency for Public Mobilization and Statistics (CAPMAS) reports that government spending between 2004 and 2017 declined from 3.5 percent to 2.3 percent of the state budget for higher education institutions (Brussels Research Group, 2019). Similarly, Ghana's education expenditure as a percentage of total government expenditure reduced from 40 percent in 2000 (Ministry of Education, 2012a) to 21.1 percent in 2017 (World Bank, 2020). Government of Côte d'Ivoire

spent 22.77 percent of total government expenditure on higher education in 2010, but this reduced to 18.33 percent in 2018 (UNESCO, 2020a). Lastly, government expenditure on education in Cameroon declined from 18.75 percent in 2010 to 16.88 percent in 2018 (UNESCO, 2020b).

Concerning higher education participation rate, Africa averages 6 percent (Africa-America Institute, 2015) which is the lowest compared to the global average of 26 percent (Africa-America Institute, 2015) though country specifics vary. For example, the enrolment rate of Mozambique is 7.31 percent (Times Higher Education, 2019e). In South Africa, the higher education enrolment rate is 22.37 percent (Times Higher Education, 2019f). Ghana's higher education enrolment rate is 15.69 percent (Times Higher Education, 2019d). In Côte d'Ivoire, the higher education enrolment rate was 9.27 percent in 2017 (UNESCO, 2020a), and the higher education enrolment rate in Cameroon was 13 percent in 2017 (UNESCO, 2020b).

Studies by Johnstone (2004) and Mitchell, Leachman, and Masterson (2016) indicate that the decline in public funding tends to slow down higher education access. Moreover, what seems to have made higher education access in Africa worse is the earlier work of Psacharopoulos (1985), which claimed that the rate of return of investment in basic and secondary education is higher than that in higher education. This assertion appears to have motivated African governments to invest more in pre-tertiary education instead of higher education and has led to stagnation of African higher education systems resulting in limited infrastructure, which has influenced student access negatively. In addition, neoliberal policies by the International Monetary Fund and the World Bank encouraged African governments to reduce public funding to higher education (Atuahene, 2012). Consequently, these reforms and policies produced higher education that was under-recognized, under-produced, and under-funded resulting in significant funding challenges (Marginson, 2016), which seem to have negatively influenced student access, especially students from low economic backgrounds.

From the preceding preview of public funding of higher education and student access, several observations are apparent. There seems to be a clear desire on the part of governments to invest in higher education. Nevertheless, it is evident that government funding in real terms in most African countries is plummeting even though Africa's higher education participation rate, which averages 6 percent, is far less than the global average of 26 percent (Africa-America Institute, 2015). In light of the above, the problem that is the concern of this research is threefold. First, the study seeks to analyse the nature of changes in public funding and student

access to establish a relationship between the two variables. I draw this idea from resource dependence theory's assumption that changes in critical resources affect the existence of organizations (Pfeffer & Salancik, 2003). Given the need for public funding to assist universities in converting their mission and vision into reality, the relationship between changes in financial support from government and student access needs to be explored.

Secondly, the study examines the factors that influence changes in public funding and their implications for student access. It is evident that sufficient financial resources are a necessary underlying condition for providing more opportunities for students from low economic backgrounds to access education (Baker, 2016). There is, therefore, the need to explore factors that shape the changes in the financial resources to understand the reason for the changes and how these factors affect variations in student access. I investigate these factors through the lenses of resource dependence theory's argument that both internal and external factors affect changes in resources of organizations (Pfeffer & Salancik, 2003).

Lastly, the study explores strategic responses of the University of the Western Cape and the University of Ghana towards influencing changes in student access in the face of fluctuations in public funding. The inability of most governments to provide adequate funding to higher education institutions seems to be a global phenomenon, forcing the institutions to respond towards influencing changes in student access for survival. I construct this idea based on the principle of resource dependence theory to which, in times of resource constraints, universities try to respond in order to ensure their continued existence.

Increasingly, there have been the unfounded arguments that financial support from the government does not make a difference in expanding student access, and that downward changes in state funding are unlikely to inhibit student access (Baker, 2016). Such claims have even been used to justify huge cutbacks in public funding over the past few years (Baker, 2016). These arguments, however, have little basis in the literature. Therefore, what I intend with this study is to contribute towards the understanding of this phenomenon in the African context by examining the relationship between changes in public funding and student access.

1.2 Problem Statement

Higher education provides the necessary skills needed for national development (Bloom, Canning, & Chan, 2015). Thus, the important role of higher education compels governments globally to invest in the sector (Ekene & Oluoch-Suleh, 2015; OECD, 2017a). However,

inadequate higher education funding has adversely affected the drive of governments, especially in developing countries, to increase student access (Altbach, 2013; World Bank, 2017a).

The discussion below focuses on the two countries of South Africa and Ghana. As already established above, diminishing financial support for the higher education sector is a global trend, and South Africa and Ghana are no exceptions. Modes of higher education funding in South Africa and Ghana are not significantly different from the overriding approach evident from the rest of the world. Public universities in South Africa have historically depended on the government for financial support for their recurrent and capital expenditure (Wangenge-Ouma & Cloete, 2008). However, allocation per Full-Time Equivalent (FTE) in South African higher education is in decline. The average growth rates show that, in real terms, government funding per FTE enrolled student fell by 1.1 percent annually between 2000 and 2010, while student tuition fees per FTE increased by 2.5 percent per year (Government of South Africa, 2014).

Additionally, the funding gap of the public higher education institutions increased from ZAR 19 657 789 000 in 2010 to ZAR 37 964 590 000 in 2016 (Centre for Higher Education Transformation, 2016; Department of Higher Education and Training, 2019). As public funding of public higher education institutions experiences downward changes, student enrolment seems to be going upward in nominal terms. For instance, student enrolment in public higher education institutions increased from 761 087 in 2007 (Department of Higher Education and Training, 2009) to 975 837 in 2016 (Department of Higher Education and Training, 2018a). Consequently, the South African higher education landscape experiences low state investment and high private cost and it was the latter that triggered the 2015 national #FeesMustFall demonstration, which is a symptom of a more significant funding conundrum (Cloete, 2016).

Higher education system in Ghana faces funding challenges. Ghana's government share of higher education funding was about 70 percent in 2000 but continued to shrink (Atuahene, 2014). In percentage terms, the analysis of Newman and Duwiejua (2015) shows that the higher education funding gap in Ghana ranges from 37.9 percent to 41 percent. As changes in public funding keep fluctuating, student access has also seen dramatic changes over the years in nominal terms. For instance, student enrolment in public higher education rose from 139 158 in 2008 (National Council for Tertiary Education, 2011) to 333 817 in 2015 (National Council

for Tertiary Education, 2016). Universities in Ghana are all confronted with inadequate funds, which have brought about deteriorating infrastructure and facilities, falling standards, questionable relevance and quality of academic programmes, and a general lack of enthusiasm of faculties, all of which generally affect student access (Atuahene, 2008).

Logical anticipation for resource provision is that as the demand increases so should the supply of the materials of production. In higher education, however, an intriguing puzzle has emerged. The more student enrolment seems to be increasing, the more the downward changes in public funding. The main research problem, therefore, revolves around the question of how the two African public universities behave towards influencing changes in student access in the face of fluctuations in public funding.

1.2.1 Formulating and Justifying Theoretical Choice

The literature offered some grounds as to how I could formulate the research problem. In this study, three theories have been identified in which the research problem and questions have been formulated. Within higher education funding, many theories explain changes in resources, but those that are close to this research are structural contingency theory, institutional theory and resource dependence theory.

The structural contingency theory offers a framework for the study of organizational changes, which hold that individual organizations adapt to changes in their environment (Donaldson, 2001). This approach focuses mostly on internal changes and requirements for innovation, which the organization must meet to survive and prosper (Hage & Aiken, 1970). This, in turn, leads the organization's leadership to implement strategies for the organization, which in part mirror the environment (Andrews, Christensen, & Bower, 1978). For example, the University of the Western Cape and the University of Ghana have employed some strategies like a low tuition fee structure to influence upward changes in student access and to generate revenue when faced with public funding constraints. A challenge is that the organizational structures contained in contingency theory are obsolete and are being supplanted by new organizational forms (Donaldson, 2006). This argument is in line with assertions that some modern developments, often technology, are making existing arrangements ineffective to explain external factors that cause internal changes (Donaldson, 2006). Therefore, the theory does not have the explanatory power to deal with all the aspects of this research, especially external factors that shape changes in public funding at the University of the Western Cape and the University of Ghana, hence the discontinuous use of the theory for this study.

Another contending approach for this research was the institutional theory. The core idea of institutional theory is that the institutional environment that surrounds institutions shapes the actions of organizations (Donaldson, 1995). This holds that organizations adapt to their institutional environment by building structures that are legitimate in the broader institutional environment, thereby gaining support (DiMaggio & Powell, 1991). This process may be without instituting structures that produce higher operational effectiveness (DiMaggio & Powell, 1991). Thus, the theory fails to provide ample strength to the argument that many organizations are under competitive pressure to enhance their operational effectiveness (Donaldson, 2006). Even though the University of the Western Cape and the University of Ghana are operating in competitive environments, they must act effectively to justify resources allocated to them by the government. For the University of the Western Cape, the number of graduates attracts some funding allocations from the government. Therefore, the failure of the theory to capture the argument for operational effectiveness justifies the discontinuous use of the theory for this study.

Moreover, the most persuasive argument of institutional theory is that the theory highlights institutional isomorphism, that is, organizations becoming more like their peers (DiMaggio & Powell, 1983). For example, some of the strategic responses of the University of the Western Cape and the University of Ghana towards influencing changes in student access appear to be the same. However, the theory fails to provide sufficient strength to the argument that, over time, organizations become more unalike (Meyer, Scott, Strang, & Creighton, 1988). Structural contingency theory brings to light considerable differences across organizations in structures and forms, even for organizations in the same industry (Blau & Schoenherr, 1971), which contradicts the institutional theory of isomorphism to a common norm in an organizational terrain (Donaldson, 2006). Therefore, whereas the University of the Western Cape and the University of Ghana share some similarities, they also share some differences which the institutional theory does not capture.

The most important criterion used to select a theory for this study was that the theory must explain the relationship between changes in resource acquisition and student access, which the structural contingency and institutional theories fail to capture, hence, the discontinuous use of the two theories for this research.

The last theory considered for this study was the resource dependence theory. The key argument of the theory is that when organizations face critical resource scarcity, their survival

is endangered. Organizations, therefore, have to respond to the changes in resources to guarantee a consistent flow of resources in order to survive. The theory assumes that organizations are elastic and that they will adapt if a change in the environment endangers critical resource relationships (Pfeffer & Salancik, 2003). Resource dependence theory's emphasis "on responding to some discontinuity or lack of fit that arises between the organization and its environment" (Cameron, 1984:123) made it necessary that this "environment" be explored to enable the University of the Western Cape and the University of Ghana to overcome the problems arising from the downward changes in public funding. The theory further deals with internal and external factors that shape changes in the resources of organizations (Pfeffer & Salancik, 2003). Considering that financial resources are crucial to universities' existence, and yet budgetary support from the government to the University of the Western Cape and the University of Ghana is steadily declining, a theory that explains the changes and factors that shape the variations are necessary. Resource dependence theory's emphasis on the behaviour of organizations during resource constraints was especially useful to my analysis as it allowed me to think through how the University of the Western Cape and the University of Ghana have strategically behaved towards influencing changes in student access in the face of fluctuations in public funding. More importantly, the propositions of the resource dependency theory have direct implications for the understanding of the relationship between changes in public funding and student access as resource availability determines the survival of the organization by way of sustaining student access (Pfeffer & Salancik, 1978). Hence, the adoption of resource dependence theory for this study. Chapter Three discusses, in detail, the theoretical framework for this research.

1.2.1.1 Research Questions

Arising out of the main question already mentioned above are the following research questions:

1. What was the nature of the changes in public funding and student access at the University of the Western Cape and the University of Ghana from 2007 to 2016?

2. What factors influence the changes in public funding, and what are their implications for student access at the University of the Western Cape and the University of Ghana?

3. What are the strategic responses towards influencing changes in student access by the University of the Western Cape and the University of Ghana in the face of the fluctuations in public funding?

With these questions, I investigated whether changes in public funding at two African public universities relate with variations in student access and how the two institutions have behaved towards influencing changes in student access in the face of fluctuations in public funding.

1.3 Rationale of the Study

Following the critical nature of funding and student access and the fact that a sustainable funding mechanism seems to be missing globally, there is the growing need for more detailed empirical research into how institutions behave in the context of inadequate funding concerning student access in different countries. Although public funding of higher education and student access has received more studies, perhaps the most apparent under-researched aspect in South Africa and Ghana is the question of the behaviour of public universities towards changes in student access in the face of resource scarcity. The point of departure from other studies, however, is that the current study offers an alternative approach to investigate the problem over public funding of higher education in relation to student access. It is, therefore, envisaged that the research would not only help to deepen the understanding of funding and student access in South African and Ghanaian higher education but also contribute to the existing body of knowledge in the field of higher education economics and finance. The study would particularly unearth some of the strategies employed by public universities in developing countries like South Africa and Ghana with low participation rates in higher education to improve student access with limited financial resources at their disposal.

Experiences and lessons gained from this study could be of great importance to policymakers in countries that bear a resemblance to South Africa and Ghana as well as for the future development of the South African and Ghanaian higher education systems. Globally, the issues of public funding of higher education and student access keep on gaining prominence because the role of education in general and higher education in particular is now more influential than ever in the production of knowledge economies and democratic societies (World Bank, 2000). In this regard, this study is significant in that it increases the understanding of systems with low participation rates since the African higher education participation rate average of 6 percent lags behind the rest of the world, which averages 26 percent (Africa-America Institute, 2015).

Donors like World Bank and the International Monetary Fund, whose policies to a large extent impact higher education policy decisions in developing countries like Ghana, will find this research valuable and it will assist them in realising the need for context-specific policies in their conditionality. More importantly, all stakeholders in South African and Ghanaian higher

education systems, notably the Department of Higher Education and Training, Ministries of Education, Ghana Education Service, National Council for Tertiary Education, universities, and students, will also find this study useful.

The current study has both theoretical and empirical significance. At the conceptual level, an ongoing debate in the literature has often been about how institutions adapt to resource scarcity in different national contexts through the lens of resource dependence theory. What seems missing is how organizations behave towards influencing student access in the face of limited resources through the explanatory power of resource dependence theory, which this study seeks to fill. In addition, many theoretical assumptions about the adaptation of institutions towards student access in different countries have remained unresolved. This study contributes to these debates by examining the strategic responses of two African public universities concerning student access in a comparative context. Furthermore, the study is significant in the sense that it generates empirical knowledge and understanding of higher education funding and student access in both countries. As such, it supports and enriches the resource dependence theory in higher education; provides practical insights that might be useful for national higher education funding and access policies in South Africa and Ghana; and provides lessons from the experience that might be valuable to other higher education systems that face a similar challenge of resource scarcity.

Another rationale is to analyse these developments in cross-national contexts. Systematic analysis of public funding of higher education and student access in cross-national comparative studies of Ghana and South Africa seems to be missing from the literature; hence, the need to contribute towards filling this gap. The idea is to examine changes in public funding and student access and factors driving those changes in two public universities in the two African countries. The rationale is to come out with new knowledge and advance the understanding of how the institutions have behaved under resource scarcity towards variations in student access in two country contexts.

Since the study fits into international comparative work, its central theoretical framework based on resource dependence theory's ideas is partly expected to provide an insight into how internationally accepted responses towards changes in student access are transformed when applied to a specific national context. The conclusions drawn from the study reveal how the general approach of higher education funding is adopted into the local context. The findings may be useful for more senior education practitioners since there is the need to explore and

understand the local meaning in which the policies are implemented when devising funding and access strategies.

1.4 Operationalization of the Study's Concepts

Student access in higher education is an important concept, which deserves a standardised and precise definition. The ability to provide such an explanation is not an easy one because student access remains a packed and disputed concept, which has different meanings depending on who is using it (Thiede, Akweongo, & McIntyre, 2007). Student access, however, has not been clearly defined in the existing literature. As Halsey (1993) warns, existing comparative studies have depended on different assumptions of what student access means. When stakeholders understand key concepts differently, it can hinder communication, particularly in interdisciplinary fields such as higher education (Halsey, 1993). A detailed analysis of student access, therefore, requires a wide-ranging definition to serve as a reference point from which to build the analytical framework.

Access to university education is an "important means to individual and collective social mobility" (Sichone, 2006:35). Kaiser and O'Heron (2005) explain that access to higher education may refer to the people who enter higher education or the flow into the higher education system. Access may be used to refer to the number of people who have the opportunity to use higher education facilities. The authors refer to the first interpretation of access as entry, while the second is called participation. Accordingly, Thiede et al. (2007), therefore, describe access under three broad dimensions - availability, affordability, and acceptability. Availability refers to physical access. It is defined as "the correlation between the quantity and kind of resources, which exist and matching them with the quantity and kind of needs of the users" (Penchansky & Thomas, 1981:128). This dimension mainly captures supply-side aspects of higher education like infrastructure and facilities and educational inputs. Accessibility, according to Thiede et al. (2007) is the place of supply to the location of the user, including issues of user transportation resources, distance and travel time to education facilities, and transport costs. Affordability is also referred to as financial access, encompassing tuition fees and the income of students and parents (Penchansky & Thomas, 1981). It includes students' perception of value-for-money and their understanding of the total costs of higher education. A relational aspect of the affordability dimension, therefore, links higher education costs or tuition fees and the students' or parents' ability to pay (Penchansky & Thomas, 1981). Student access is elaborated in the work of Trow (2007), who developed a framework to

understand stages of development of student access in higher education, including the elite, mass, and universal. Trow (2007) used enrolment rates as a measure to conceptualise access to higher education. The three stages of higher education access include 0-15 percent as the elite stage; 16 percent to 50 percent as the mass stage; and 50 percent and above as the universal stage. This framework is used to ascertain whether a country has been able to increase student access or not and at what level or stage.

To provide a comprehensive overview of student access from 2007 to 2016 at the University of the Western Cape and University of Ghana, this study draws on the access framework of Anisef, Bertrand, Hortian, and James (1985) due to the rigour with which they conducted their research. The framework discusses two types of student access to higher education: Type I measures student access by enrolment and completion of higher education, while Type II measures student access by social background and composition of participants. For this study, Type I (excluding completion) was used to measure student access to higher education in the two universities from 2007 to 2016. Higher education institutions, in this study, include universities.

"Funding is taken to mean the act of providing a primary stream of money to offset the cost of delivering higher education" (Okebukola, 2015:46). Public funding/Government funding/State funding in this study is a direct transfer of money from the government to the universities. In some jurisdictions they call it government appropriation. In South Africa, they call it government subsidy. In Ghana, they call it government subvention. Wangenge-Ouma (2007:116) also argues that:

> *Allocations to the higher education sub-sector are usually discussed in terms of total public expenditure on higher education, per-student expenditures, public higher education expenditure's share in relation to total government budget expenditure, public higher education expenditure's share of the overall education budget, and public higher education expenditure as a percentage of Gross Domestic Product (GDP).*

Therefore, any of the indicators above can be used to explain the changes in public funding.

1.5 Scope and Limitation of the Study

The area of this study is vast and extensive. Exploring all areas of the field from a comparative angle was clearly beyond the limits of this research. Based on the main research question of this work, the study limits itself to only two public universities' public funding and student access. The study did not empirically pursue other significant funding and access issues such as funding and success in higher education, financing and quality in higher education, finance and inequality of access in higher education. This is because it would have been impossible to analyse those issues within the limited time and resources of this study.

The study has some methodological limitations. It examines the trends in enrolments of the selected public universities in South Africa and Ghana, starting from 2007 to 2016 (Comparing enrolment rates of the two universities presents some difficulties in terms of access to information and the size of the two universities). Moreover, it is not always clear how enrolment rates were arrived at in the documents selected. Authenticating sources of funding for public universities in Ghana was a challenge because, during interviews with the leadership of the University of Ghana, it emerged that the university has three sources of funding, namely government subsidy, tuition fees, and internally generated funds/third-stream income. Nevertheless, at the National Council for Tertiary Education, it was revealed that the public universities in Ghana have four primary sources of funding, namely government subsidy, internally generated funds, Ghana Education Trust Fund, and donor funding. Data on donor funding and the Ghana Education Trust Fund at the University of Ghana was unavailable.

The qualitative nature of this research limits the ability to explain in detail the extent to which funds allocated to public universities have been spent over the years. The quantitative aspect could have explained the spending trends of the universities in a more detailed and accurate manner. Moreover, this study was conducted in only one public university from each country with a tiny sample, making generalisation of the study impossible. Lastly, I was unable to conduct more interviews that could have assisted in piecing together more information or data. Nevertheless, the study provides some baseline information that may be useful for other researchers and further studies as it highlights significant funding and student access issues within the selected countries in general and the universities in particular.

1.6 Organization of the Study

This thesis is organized into seven chapters.

Chapter One introduces the study. It provides the background, the research problem, the research questions, and the scope and limitations of the study. It concludes by examining the rationale for the research and the operationalisation of the study's concepts.

Chapter Two sets out the study's literature review. The main themes under the literature review include a historical overview of higher education funding in Africa; public funding versus private financing of higher education; analysis of the changes in public funding in Africa; higher education funding challenges; implications of funding challenges for student access; and national and institutional responses towards influencing changes in student access.

Chapter Three discusses the theoretical and conceptual framework of the study. This section presents the main principles, assumptions, and criticisms of the theory.

Chapter Four is concerned with the study's methodology. It presents a justification for selecting South Africa and Ghana, and a rationale for choosing the two public universities. Examined in this chapter are data collection methods, data collection procedures, ethical considerations, and data analysis. The conclusion of the chapter analyses the trustworthiness of the study.

Chapter Five presents empirical research data. This chapter constitutes the core of the thesis. The chapter details an elaborate analysis of the themes that emerged from the data.

Chapter Six discusses the results while attempting to compare the results from the two institutions.

Chapter Seven concludes the research, provides some reflections and implications of the study and summarises the findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter sets out to locate the research problem in the literature on the changes in higher education funding and student access. The first section provides a historical overview of higher education funding in Africa. To situate this study in a proper context, it is crucial to provide a historical background to higher education funding, especially in Africa, where the challenge of funding higher education has been unprecedented. Section two discusses public funding versus private financing of higher education. It teases out significant debate on the reasons for public funding of higher education as against private financing. The third section reviews changes in public funding of higher education in Africa and addresses factors driving the changes. Section four examines higher education funding challenges in Africa. The fifth section reviews the implications of funding challenges for student access. The last section examines national and institutional responses towards influencing changes in student access in the face of public funding constraints. I close the chapter by providing a summary of the main arguments.

2.2 Historical Overview of Higher Education Funding in Africa

The growing demand for higher education as a result of globalisation and the desire to create a knowledge economy has given birth to enrolment increases, especially in sub-Saharan Africa (Wangenge-Ouma, 2010). At the same time, higher education systems are moving from pure elitist systems to universal access resulting in the implementation of different higher education funding models (Motala, 2017). This has resulted in numerous policy shifts in higher education funding strategies.

A chronological analysis of higher education funding in Africa can be categorised into three main policy shifts or epochs. The first is the postcolonial/nationalist epoch, which was characterised by increased government funding to higher education. At independence, colonial governments mostly adopted higher education funding frameworks (Masaiti, 2018). The nationalist epoch saw massive efforts by independent national governments to finance higher education. The strategy used was direct financial support from national governments to the higher education sector because higher education was regarded as an essential tool for economic growth (Omari, 1991). As Mamdani (2006) points out, the university at the

independent period was a “developmental university.” For this reason, many African leaders saw that the economic development of Africa was to be spearheaded by the universities and, therefore, the need for some investments (Mamdani, 2006). As a result, African governments then prioritised higher education and made it a convenient tool for national development and as a means of eradicating poverty (Aina, 1994) and, as such, governments gladly and willingly invested massively in higher education (Omari, 1991). It was, then, assumed that governments through high productivity of the labour force and payment of taxes as well as efficient utilisation of national resources could recover investments made in higher education (OECD, 2012; Tilak, 2004). Consequently, students and parents were not called upon to contribute to recoup the investment made in higher education (Tilak, 2004). This suggests that national governments exclusively financed higher education in the nationalist era.

Another critical historical account of higher education funding in the nationalist epoch was that, after independence, African governments were challenged by the shortage of skilled labour force following the departure of the colonial masters (Wangenge-Ouma, 2008). An essential impediment to the socio-economic development of African countries was the inadequately trained workforce (Mamdani, 2007). On his part, Yesufu (1973) stresses that national development required a skilled working class to make the African institutions function well - meaning African countries needed people with requisite knowledge and skills to manage the different sectors of the economy. Governments naturally turned to higher education institutions to fill the gap by training the required skilled workforce. In this regard, universities were mandated to train and create a sizeable skilled working-class, including accountants, teachers, doctors, technicians, and engineers (Yesufu, 1973). Therefore, public funding was deemed a useful policy to accelerate the realisation of Africa’s development agenda. This compelled not only African governments to take full responsibility in financing higher education (Mamdani, 2007; Omari, 1991), but also the international financing agencies like the World Bank (WB) and the International Monetary Fund (IMF) (Banya & Elu, 2001).

These international agencies financially supported African governments to invest substantially in higher education through loans and grants with the hope that, with the exit of the colonial masters, higher education could still play a significant role in producing a skilled labour force for socio-economic development (Banya & Elu, 2001). This shows the recognition of international agencies’ financial contribution to the development of higher education in Africa. With that support, African governments decided to use higher education institutions to intensively train the required labour for the economy (Wangenge-Ouma, 2008). In most

countries, as observed by Johnstone (2004), governments paid the full costs of higher education to train the labour force. Even in countries where the government did not entirely finance higher education, it was highly subsidised (Asian Development Bank, 2009; World Bank, 2010). Against this backdrop, higher education institutions would receive substantial government funds to support capital investments, recurrent expenditure, operational costs, and funding for research (Banya & Elu, 2001). The spending on higher education by African governments was enormous, as evidenced by the increases from the 1970s and 1990s. For example, a study conducted in 39 African countries in the 1990s indicated a double increase of 21.2 percent as compared to the 1970s (Woldegiorgis & Doevenspeck, 2013). On average, sub-Saharan African countries expended 18.2 percent of government expenditure on education, of which 20 percent went to higher education in 2000 (World Bank, 2009).

In summary, many countries in Africa in the nationalist epoch have a record of governments solely financing higher education with public funds going into tuition fees, student living expenses, teaching, building, and salaries of staff (Wangenge-Ouma, 2012). For example, Wangenge-Ouma (2012) reveals that African countries such as Kenya, Zambia, Mozambique, Nigeria, Burkina Faso, and Ghana have the history of their governments solely financing higher education. In some cases, governments even offered a host of other allowances that included clothing, bedding, food, and transport to students (Mamdani, 2007; Omari, 1991), implying that higher education was made virtually free, allowing more students especially those from low economic backgrounds to have access to higher education. For instance, in terms of enrolments, whereas there were less than 250 000 students in tertiary education in Africa in 1970 (Africa Capacity Report, 2017), by 1995 university enrolment had shot up to 1 750 000 (World Bank, 2004), affirming the significant contribution of state funding of higher education.

It can be inferred from the literature that the postcolonial/nationalist funding epoch was merely based on aspirations and not data to decide the public funding allocation because the higher education systems were still small and developing. Most of these studies mentioned are historical, but the current study expands the literature by examining the relationship between changes in public funding and student access in the era of resource diversification.

The second policy shift or epoch saw the introduction of cost-sharing. This was the period where parents and students participated in higher education funding. Johnstone (2003:351) defines cost-sharing in higher education as "the assumption by parents and students of a portion of the costs of higher education–costs that, in many nations, at least until recently, have been

borne predominantly or even exclusively by governments, or taxpayers." Central to this approach is the combination of private and public funding with its over emphasis on individual students and families' responsibility to pay for some of the services they benefit from in higher education institutions. Key strategies used in this approach to funding are the issuance of scholarships, students' loans, charging of tuition fees, and the release of government subvention to the higher education sector. The mixture of these funding strategies created a conducive higher education funding environment that resulted in high demand for higher education with university enrolment growth escalating substantially, but the state funding of higher education started to experience a fall (Woldegiorgis & Doevenspeck, 2013).

Moreover, after receiving praise in the 1960s for serving as agents of knowledge production, social mobilisation, and national development, most African universities were affected by the economic crisis of the 1980s and began to plummet financially (Woldegiorgis & Doevenspeck, 2013). The financial crisis came about because the continent failed to take advantage of the positives emanating from the global market because of weak bargaining power in international trade (Ravenhill, 1986). Weak international trade resulted in decreased foreign currency reserves and reduction of public revenue, culminating in the economic crisis in Africa (Ravenhill, 1986). While the degree of the financial crisis was different across countries, generally, public sector expenditure was widely believed to be the main reason for the global financial crisis of the 1970s (Walsh, 1994). Radical critics argued that the expansion of the public sector led to inflationary rates skyrocketing and a decline in economic activities by distorting the market disciplines (Walsh, 1994), and that it was at this period that public funding to the higher education sector started declining and that led to the introduction of cost-sharing (Woldegiorgis & Doevenspeck, 2013). The fall in state subsidy and challenges associated with cost-sharing have necessitated the need for higher education institutions to search for other alternative funding strategies towards increasing student access.

The last epoch of higher education funding is the epoch of revenue diversification. The enrolment growth, weak economies, financial crisis, competing demands from other sectors of the economy, and the changing role of the state and public sector have contributed in no small way to a decline in public funding (Koryakina, 2018). The situation has resulted in many countries and institutions resorting to diversified sources of funding. Thus, revenue diversification has been used as one of the funding solutions to the funding gap and to supplement state funding of higher education to sustain student access (Koryakina, 2018).

Revenue diversification is the generation of income away from public funding through technology transfer, consulting, commercialisation of research, lifelong learning, customised courses, and generating funds from assets as well as other activities (Ziderman & Albrecht, 1995). Revenue diversification is underpinned by three broad principles of neoliberalism. For instance, the free-market economy reduced state intervention, and the individual as a rational economic actor (Harvey, 2005; Turner, 2008) and, as such, higher education is more considered to be a private good and less seen as a public good (Wellen, 2005). Thus, the principles of neoliberalism led to the marketization of higher education, whereby higher education institutions employ income-earning stratagems to fill the funding gap created by the declining state financial support (Wangenge-Ouma, 2008). The underlying thinking of the higher education marketization reform policies was to introduce revenue diversification into higher education funding.

In Australia, a study by De Zilwa (2005) examined strategies of revenue diversification by higher education institutions. He established that most of the higher education institutions tried to reduce resource dependence on the government when faced with declining state support between 1995 and 2001. The institutions engaged in trademarks, royalties, licences, domestic undergraduate student fees, consultancy, contract research, investments, continuing education fees, overseas students' fees, local postgraduate student fees, and other fees to generate revenue to promote student access. Moreover, the analysis of the revenue diversification strategy of higher education institutions in the Gulf Corporation Council (GCC) by Shariff and Kronenberg (2018) reveals that the public universities in Gulf Cooperation Council (GCC) nations are not immune to declining state funding as the institutions are suffering from a significant reduction in state support. On this basis, public universities have undertaken revenue diversification activities to generate income to manage and sustain student access. Table 1 below summarises the revenue diversification strategy of public universities in the Gulf Cooperation Council (GCC) nations

Table 1: Revenue Diversification

Tuition Fees (Academics)	**Funding (Grants, donations, sponsorships, endowment and investment)**	**Diversified Revenue Streams**				
		Continued education	**Research and innovation**	**Services**	**Asset utilization**	**Partners**
Academic programs (undergrad, postgrad, combined)	Grants	Executive education programs (e.g., MBA)	Research (e.g., the commercialisation of IP/patents)	Medical and health services (e.g., university hospitals)	Renting premises (e.g., sports facilities)	Financial services partnerships (e.g., cobranded credit cards)
Alternate academic graduate programs (e.g., scholars programs)	Alumni engagement	Non-degree executive education (e.g., CXO programs)			Memberships (e.g., library)	
Non-tuition student fees (e.g., penalty fees)	Scholarships	Corporate executive education (e.g., tailored online programs)	Entrepreneurship (e.g., start-up accelerators)	Dining and other lifestyle services (e.g., restaurants)	Advertising and data (e.g., on-campus advertising)	Telecom/tech partnerships (e.g., tower leasing)
Geographic expansion (e.g., satellite campuses)	Specific purpose donations	Professional development (e.g., language courses)			Utilities (e.g., district cooling)	
	Endowment and investments	Vocational education	Publication partnership	Preschool and K–12	Faculty utilization (e.g., consulting)	Other potential partnerships (e.g., utility companies)
		Summer school				

Source: Shariff & Kronenberg, 2018

Table 1 indicates that the primary funding sources are tuition fees, which is made up of undergraduate and postgraduate fees, scholars' programmes, penalty fees, and the establishment of satellite campuses. The rest are grants, alumni engagement, scholarships, specific purpose donations, and endowment and investments. The revenue diversification strategies include continued education, services, research and innovation, asset utilisation, and partnerships with most financial institutions.

These strategies of Gulf Cooperation Council (GCC) nations seem to have been the strategies of other countries too. For example, in Zambia, when faced with declining government support, public higher education institutions devised revenue diversification strategies to generate income. These included the introduction of parallel programmes; commercialisation of physical university assets including agricultural land, halls of residence, cafeterias, or even the limited sports facilities; technology transfer through patenting and licencing fees; consultancies and introduction of continuing education (Masaiti, 2013). However, as much as the revenue diversification seems reasonable, there are problems associated with this strategy.

Globally, there are some studies on revenue diversification stratagems of higher education institutions (Johnstone, 2002; Wangenge-Ouma, 2007). These studies have established that, while revenue diversification plays an essential role in times of declining public funding, this strategy poses a danger to higher education institutions (De Zilwa, 2005). For instance, revenue diversification seems to place the core institutional missions of public higher education institutions in jeopardy. This is because it does not form part of the core mission and traditional values of research, which are the main traits of these institutions (De Zilwa, 2005), and that the faculty attention usually is diverted from the traditional functions of the institution to issues that have to do with revenue generation (Johnstone, 2002).

In summary, the literature on revenue diversification has been able to explain various mechanisms for higher education funding. However, what the research has not shown - at least qualitatively - is what kind of relationship that exists between these strategies and student access. What is the level of change in student access as the funding strategies change? The current study aims at trying to investigate this relationship to be able to understand the various factors causing the changes in student access by two public universities in African. The next section considers the higher education funding debate at a theoretical level. In doing so, the guiding question is, what are the theoretical foundations of higher education funding?

2.3 Public Funding Versus Private Financing of Higher Education

The literature on higher education funding has several vital scholars in this field (Barr, 2017; Johnstone, 2014; Marginson, 2018; Mariaye & Samuel, 2018). While all these scholars agree on the importance of higher education to national development, they have divergent views on the strategies for funding higher education. While many scholars vouch for government funding (DeAngelis, 2018; Hull, 2015; McCowan, 2016; Shireman, 2017), an equally increasing number of higher education funding scholars favour private funding (Anomaly, 2018; Barr, 2003; Cloete, 2016; Tian & Liu, 2018). This analysis shows the contentious and complicated nature of the terrain of higher education funding, which is often confused and divided into these dualistic terms of public and private funding. A critical examination of the literature shows that the boundaries of the contemporary higher education funding frameworks are not as clear as they are often conceptualised and presented. The importance of higher education is not in doubt, but responses and reactions to funding vary based upon who is speaking - students, parents, employers, the media, or politicians - as well social class (Hazelkorn & Gibson, 2018). Issues about costs of higher education; student access and participation; employability and graduate skills; relevance, social and economic impact; and affordability and debt have heightened the debate as to who should pay for higher education (Hazelkorn & Gibson, 2018). Should the costs of higher education be borne by the government using taxpayers' money or individuals? In this section, I examine two main arguments (public good, and equity and equality considerations) for state funding and their countering case for private financing.

First, those in support of public funding argue based on the public good nature of higher education. A study by Williams (2016) reveals that the principle of public good essentially means that there are goods that can be used by everybody and that somebody's ability to use those goods is not diminished by the number of people who use them. He explains that private goods are excludable, meaning those who are the owners of such products can exercise property rights to prohibit those who have not paid for such products from enjoying it. He further expounds that private goods are also rivalrous, which means usage by one consumer stops simultaneous usage by other users. In contrast, free product or service is neither rivalrous in usage, nor excludable in ownership, and is accessible to all members of society (Dill, 2015). This assertion is important because it means individual consumers can experience the benefits of goods without directly paying for them. Consequently, the market may underprovided the

product or even fail to provide it at all. In that situation, a possible policy solution is to offer and produce the product publicly (DeAngelis, 2018). In addition, if a good or service can be reasonably defined as public, then everybody has the right to consume it, and nobody is prohibited from using it through a lack of financial resources (Williams, 2016). In short, non-rivalrous and non-excludable public good is knowledge produced through research and scholarship; for example, it is not possible to exclude specific individuals from the benefit of literature even though this knowledge may have been generated by a particular institution or individual (Unterhalter et al., 2018). A good is public when its benefits go beyond the boundaries of an individual and have something to do with a broader population and the public good nature of higher education is debated within the analytical questions of how the goods are produced, and what makes up their public (Unterhalter et al., 2018). An important implication of public goods is that the provision of public goods has to be funded by the government out of taxpayers' money without necessarily depending on prices or any user charges like student fees and markets as individuals are not ready to bear the full costs (Tilak, 2008).

In arguing in favour of public good nature of higher education, Shireman (2017) asserts that the increased worker productivity and societal, economic benefits of a labour force can be attributed to high educational achievement and skills. Reflecting on the matter, Macerinskiene and Vaiksnoraite (2006) state that increased productivity produces outcomes that lead to economic growth, in the sense that a nation's literacy level in general and higher education attainment in particular show the knowledge, skills, and the stage of economic growth and development (Bloom, Canning, Chan, & Luca, 2014). Using the rate of return analysis, Psacharopoulos and Patrinos (2018) explain that the notion of the rate of return on investment in education is very similar to that for any other investment. It recapitulates the costs and benefits of the investment experienced at different periods. As a result, the public good nature of higher education is borne out of the belief that the societal, economic returns of higher education are more than private returns (Montenegro & Patrinos, 2014) and investments in education increase productivity, which leads to economic growth that benefits the whole population of a country (Psacharopoulos & Patrinos, 2018). For example, in the 2015 State of Education in Africa report, it is indicated that a one-year rise in average higher education levels would, in the long run, yield up to a 12 percent increase in the gross domestic product (Africa-America Institute, 2015). Similarly, Universities UK indicated that universities contributed 2.3 percent of the UK GDP in 2008 and that the contribution of the higher education sector to the

economy is relatively high compared to other areas of the economy (Pouris & Inglesi-Lotz, 2014). Therefore, the argument is that the government has a responsibility to provide a labour force that is skilled and capable of meeting economic needs. Consequently, it is the responsibility of the government to pay for it (Minsky, 2016).

Studies by Shireman (2017), Barr (2017), OECD (2017a), and World Bank (2018) using countries as units of analysis examine the impact of higher education. These studies, though conducted in different countries and at different times, present two critical points in arguing for higher education as a public good. The first argument is that higher education contributes to artistic, cultural, and research findings that generally benefit the whole population. The benefits of culture include better parenting and enhanced community engagement and, through research findings, new knowledge is generated to solve societal challenges. The second argument is that higher education trains people to be able to involve themselves in a democratic process that is educative and constructive, and trains citizens for leadership positions for the family, community, business, or for government roles. A similar argument is made by DeAngelis (2018) to the effect that an educated population is more likely to obey the laws and more likely to vote on election day, contributing to the political and democratic process of the country. In the same vein, educated citizens are expected to produce high-quality services that are of benefit to the whole population. For example, when an individual finishes medical school and becomes a medical doctor, he or she is likely to provide medical services to the rest of the people in the society and, therefore, it is not out of the normal for the state to provide financial support (DeAngelis, 2018). Fundamentally, higher education is likely to help graduates to come out with necessary social outcomes including good health, participate in volunteer activities, develop trust for others, and can contribute to political discourse; have life satisfaction; have fewer criminality; and have higher tendency to tolerate others (OECD, 2017a; Willetts, 2015).

Finally, Marginson (2018) explains that higher education contributes to productivity and prosperity by training graduates for employment; generating and dispensing knowledge and ideas, and promoting free expression; encouraging scientific literacy, and supporting intellectual conversations and artistic work; advancing formulation and implementation of policies; and preparing citizens to participate in democratic decision-making. Such arguments, combined with that of Willetts (2015), justify the assertion that the overall societal benefits of higher education are more than the number of benefits individuals get from higher education. Thus, the public good nature of higher education presents a good argument for state intervention in higher education funding. If higher education benefits society, then the state

should pay for such benefits through public financing, which in turn increases access for the financially disadvantaged students (Dunga & Mncayi, 2016; Oketch, McCowan, & Schendel, 2014).

A contrasting argument concerning higher education funding is that higher education benefits individuals more than society. In contrast to public goods are private goods. A private good is one that is excludable and rival like a car in one's garage or the sofa in one's living room (Anomaly, 2018). The meaning of the analogy is that the private person benefits from it alone, and those individuals who benefit more should pay for it. Additionally, in recent years, the growth of marketization and privatisation in higher education resulting from declines in state funding in many countries has led to scholars questioning the public good nature of higher education and advocating for the sale and purchase of higher education (Tian & Liu, 2018). It is in light of this that some scholars have put forward arguments for the exclusion of the state from higher education funding and argue for private participation.

The paradigm shift from state funding to private sector participation that began in the 1980s was to have serious policy implications for higher education funding (Haynes, 2008). Privatisation or movement towards privatisation of higher education became the most critical policy initiative of the World Bank in the 1980s (Richardson & Haralz, 1995). The reduction of the role of government in higher education funding led to the adoption of an alternative market approach that advocated for private sector participation in higher education funding (Haynes, 2008). The underlying thinking of the higher education reform policies was to introduce diversification into higher education funding in the form of tuition fees, sale of services, and establishment of higher education institutions by private individuals (World Bank, 1994). The target for every higher education institution was 30 per cent of its cost funded with its revenue (World Bank, 1994). In this regard, a higher education institution is deemed engaging in funding through market mechanisms (World Bank, 1994).

To start with, it is argued that individuals who have attained higher education have a competitive advantage over those who have not had the opportunity to attend higher education as it can open the way to high prestige, high earning prospects and better employment opportunities (Africa-America Institute, 2015; Burgess, 2016; Hull, 2015). A similar observation is adduced by Anomaly (2018) to the effect that higher education helps individuals develop their intellectual and creative capacities and assists them in earning a decent living by gaining employment through the skills acquired. Therefore, individuals who benefit from

higher education must pay. A study by Minsky (2016) reveals that higher education has benefits that are seen as inherent. That is, the value of being an educated person in itself; of having advanced knowledge about the world; being able to participate in rational debates with other people; being an expert in your right or having the know-how to perform complicated tasks to the benefit of the individual.

Higher education also helps individuals to improve their personalities by taking good care of themselves, especially living a healthy life (McCowan, 2016; Oreopoulos & Petronijevic, 2013). In his all-embracing analysis of the importance of higher education, Weber (2005) contends that benefits accrued to individuals from higher education are more than the benefits higher education offers to society and that the global economy demands that labour is free to work anywhere. The educated individual can end up in another country; hence, there is no justification whatsoever for the state to invest in higher education.

Finally, it has been revealed that participants who took part in the British higher education funding debate conducted by the Browne Review Committee virtually concluded that higher education must be treated as a private good. For instance, while Browne (2010) recognises that higher education benefits individuals as well as society through high productivity, he strongly argues that its private benefits surpass societal benefits. None of the recommendations made by the Browne Review Committee of higher education funding takes into consideration the benefits higher education offers to society. The Browne Review Committee recommends the elimination of all government subsidies for some subjects that are considered not to be a priority. Only science, technology, engineering, mathematics, health-related, and modern languages are regarded as subjects of priority (Browne, 2010). The Browne Review Committee made sure that higher education is paid for by those the Committee considers to be the most important beneficiaries of higher education. Hence, for the Browne Review Committee, the argument that higher education is a private good is held high as evidenced by steep increases in tuition fees to the extent that in 2004 the tuition fee was £3,000 but shot up to £9,000 in 2012 for domestic students (Marginson, 2018), which shifts the cost of higher education to students.

It is true that the public also gets benefits from higher education, but from the literature it is evidenced that the benefits accrued to private individuals outweigh that obtained by the public. For instance, the OECD study reveals that in the United Kingdom the benefits of higher education to private individuals are over 50 percent more than the public benefits (Browne, 2010). A 2007 US Census Bureau report discloses differences in average annual incomes that

higher education can generate for graduates at different levels. For example, high school graduates earn 29 448 dollars; bachelor's degree holders earn 54 689 dollars; master's degree holders 67 898 dollars; and doctorate holders 92 863 dollars (U.S. Census Bureau, 2007). Given this, it is neither irrational nor unjustifiable that students should contribute financially towards higher education (Badat, 2011). However, the contention has always been that the absence of public funding denies students from low-income families the opportunity to access higher education. Private funding creates the possible existence of financial barriers to higher educational opportunities, especially for students who come from the low economic backgrounds.

The second argument in favour of public funding of higher education are the equity and equality considerations. The concept of equity is a complex one, especially in low-income countries of sub-Saharan Africa, where the majority of people face practical challenges in primary and secondary education (Oketch, 2016). McCowan (2012) emphasises that the attempt to make sure that there is equitable access in higher education institutions is very daunting in modern societies, given that there are already inequalities in pre-tertiary education. Equal access to higher education appears to be based on two primary conditions. The first condition is that there must be adequate or enough places available for those in the population who are willing and have the necessary qualifications and mental capability to enrol in higher education; and people must have an equal opportunity of getting an admission to any higher education institution of their choice regardless of the background (McCowan, 2012). There should be no exclusion of any applicant if he or she is eligible in terms of admission criteria (Motala, 2017). According to Barr (2004), the equity notion is not free higher education, but a system whereby the brilliant student is not denied access to higher education because he or she comes from a disadvantaged economic background. In the same vein, a study by Tilak (2004) explains that, when market forces dictate to the higher education system, higher education becomes the preserve of people from affluent families because they can pay. In a related argument, some studies argue that education is a service that should be above market forces and, therefore, should receive government intervention (Akinsanya, 2009), implying that the cost of knowledge should be borne by the state so that the students from low-economic families can be supported financially. As such, proponents of equity in higher education stress that it is essential and necessary for governments to finance higher education to ensure equal educational opportunities for all (Atchison, Diffey, Rafa, & Sarubbi, 2017; Goksu & Goksu, 2015; Nixon, 2015).

Nixon (2015), in an all-embracing analysis of the literature, asserts that higher education should be used to support the public equity agenda by promoting equality in society in general. To that end, students from the low-income family backgrounds who are pursuing a dignified life that happens to mean requirement of higher education as a necessity should not be denied access to higher education because he or she cannot afford to pay for it (Martin, 2017). Martin (2017) further argues that the state must be fair to all citizens irrespective of their socio-economic background, race, and gender by contributing to public funding of higher education. He concludes that public financing is inevitable because an absence of state financing would promote socio-economic inequality. Subsequently, equality in accessing higher education means eliminating all financial barriers to higher education access, especially tuition fees, which discriminate against students who cannot afford to pay (McCowan, 2015).

In a related argument, in the context of the prevailing financial barriers to student access to higher education, support from the state is the solution to higher education funding. The understanding is that government intervention in financing higher education will create opportunities for more people to access higher education and that, in theory, public funding goes to support less well-off students to have access to higher education (Wangenge-Ouma & Cloete, 2008). There is unequal access to higher education opportunities across countries in Africa, and the areas where inequality of higher education is dominant are gender, origin and economic status (Teferra, 2014). For example, it has been revealed that, in 3/4th of the African countries, students from the wealthiest households occupy over 50 percent of spaces in higher education, and students from the top two wealth quintiles occupy nearly 80 percent of higher education spaces (Teferra, 2014). People from low socio-economic families are five times less likely to have access to higher education than those from the upper socio-economic backgrounds (Teferra, 2014). As pleaded by Martin (2017), it is only fair and just for the state to intervene in higher education funding; otherwise, many students from low-income families will be denied access to higher education.

Scholars who stand in the middle of the argument underscore the need for both state intervention and private contribution to higher education funding. For example, Karasiotou (2004) shows empirical evidence to indicate that there are individual benefits from attending higher education, which includes higher wages, lower risk of unemployment, as well as public benefits of the positive impact on the rate of scientific innovation and, therefore, the cost of higher education must be shared. In the same vein, some scholars argue that the returns of higher education to the individual student are understood to be real as graduates occupy more

top positions in society and enjoy higher social status. Nevertheless, society is not denied the benefits accrued from higher education, such as high productivity from skilled employees resulting in high economic growth. It has become difficult to prevent individuals and society from benefiting from higher education. Therefore, a shift of some of the costs from the public purse to parents and students does not stop the benefits society derives from higher education. To that end, Johnstone (2014) argues for cost-sharing. He argues that to be fair and just to the system of public funding and private funding of higher education, governments should pass a percentage of the costs of higher education to parents and students that is affordable.

It is also essential to state that the argument for cost-sharing takes different forms. To some, transferring some of the costs of higher education to students who can pay and, at the same time, having a financial plan to support those who cannot afford to pay would enhance access and equity (Johnstone, 2004). The contribution of both the government and the private individuals in financing higher education is imperative for the simple reason of increasing student access and creating equal educational opportunities for all groups of people (Asharaf & Mustafa, 2016). Students from high socio-economic backgrounds continue to dominate higher education; thus, relying on government funding only has regressive tendencies. Hence, contributions from both the government and students support the notion of social justice (Barr, 2017).

Related to a cost-sharing argument is the one propagated by Dearden, Fitzsimons, and Wyness (2014) who, for example, argue that, in the developed countries such as the UK, the argument for higher education funding centres around value for money and increasing student access. The funding discourse has been intense in the UK due to a reduction in public funding to universities with government subsidies no longer available for some courses. Again, the funding discourse in the UK has been triggered by high tuition fees being charged by universities as students are struggling to pay £9000 per year, which the government argues is value for money and a way of increasing student access (Dearden et al., 2014). However, critics of cost-sharing say that if governments were diligent and effective in taxing the rich and corporations or not spending much on defence, emoluments, and needless public spending, governments would have sufficient financial resources without implementing cost-sharing mechanisms as the only means to sustain student access (Johnstone, 2014).

In summary, in the context of Africa with low participation in higher education, averaging about 6 percent as compared to a global average of 26 percent (Africa-America Institute, 2015),

it cannot be said that public funding of higher education is not suitable for student access; neither can the same be said of contributions from students. It is, therefore, essential to engage in debates focusing on the role of government and students in higher education funding to create equal educational opportunities for all students. The recent demonstrations by university students in South Africa over fee increases show the discontent over the rising cost of higher education and who should pay for it. Overall, higher education must not be seen as a pure public good even though higher education creates social benefits. Individual benefits are also enormous and, therefore, the state intervention in higher education funding is not out of order, but a combination of private financing and public funding may be the best solution for higher education funding challenges.

These studies have been able to justify the need for public funding, private funding, and cost-sharing mechanisms to support higher education institutions and systems financially. What is not known yet is the justification or otherwise of financial support coming from institutions to increase student access. The current study contributes to extend the literature by showing whether it is justified for institutions to adopt different funding strategies towards increasing student access. Methodologically, these researched works analyse the funding issues at the national level, making it difficult to understand what is happening at the institutional levels, especially funding strategies that increase student access. The current research contributes in this direction.

The next section discusses a review of the changes in public funding of higher education in Africa. It is intended to show the significant policy changes in higher education funding implemented by both international financial institutions like the World Bank and IMF and the African national governments that resulted in the declining public funding for Africa's higher education sector and institutions.

2.4 Review of Changes in Public Funding of Higher Education in Africa

In the 1980s, most higher education systems in Africa were financially challenged by deteriorating socio-political and economic conditions (Woldegiorgis & Doevenspeck, 2013). With the weak bargaining power in international trade, it became difficult for the continent to benefit fully from the global market (Ravenhill, 1986). The inability to benefit from the global market resulted in depleted foreign reserves and a decline in government revenue, and this led to an economic crisis in Africa (Woldegiorgis & Doevenspeck, 2013). The political system immediately after independence in most countries in Africa was very fragile to deal with such

a level of economic crisis as most of the state administrations experienced increased corruption, and administrative and technical ineptitudes (Woldegiorgis & Doevenspeck, 2013). By the end of the 1980s, African countries were challenged by population increases, high reduction in investment and saving, misapplication of resources, weak institutions and human capacity, decrease in personal income and living standards and Africa generally came under a sustained decline in economic growth (Heidhues & Obare, 2011). For example, Teal (2011) has revealed that after reaching a high level of about 380 dollars in GDP growth in 1976, the growth of African economies continuously declined, reaching a low rate of slightly more than 300 dollars in GDP growth in 1995.

The second issue that accounted for the crisis as argued by Heidhues and Obare (2011) was high government subsidies on goods and services, massive government intervention especially the protection of unproductive producers, charging of high rent from rural producers, reduced exchange rate policies and high-level corruption. All these were given as the leading causes for economic stagnation. In their efforts to provide commercial solutions and to bring economic relief to their people, African governments resorted to borrowing money from the international financial agencies to inject financial life into their public sectors, which culminated in the high debt crisis in the 1980s (Ravenhill, 1986). As a result, Africa became one of the most indebted continents in the world. For instance, a report of the World Bank (1998) indicates that the total debt of Africa as a whole was about 300 billion dollars, with 45 percent going into debt servicing in the 1980s. Against this backdrop, African governments began to receive loans from external financial sources, which forced most of them to implement public policies, including higher education policies that were not in the interests of their countries (Woldegiorgis & Doevenspeck, 2013). The conditions attached to these international loans allowed international loan agencies such as the International Monetary Fund (IMF) and World Bank (WB) to interfere, especially in the economic affairs of the recipient countries (Woldegiorgis & Doevenspeck, 2013). With the economic challenges facing African governments, the World Bank (WB) and the International Monetary Fund (IMF) encouraged the implementation of the Structural Adjustment Programs (SAPs) and New Public Management (NPM) (Atuahene, 2012). What came out from these policies was the introduction of economic liberalization culminating in the acceptance of market forces and a reduction of dependence on the government to allocate resources, fix market prices, and set wages (Johnstone, 2009).

As explained further by Barzelay (2001), the economic liberalization comes with the downsizing of the public sector; the decentralisation of public institutions; the privatisation of government agencies; and the encouragement of the private sector to play a part in the ownership of all public means of production. Furthermore, the main principles of SAP promoted inflationary stabilisation policies, controlling budget deficits, disbanding parastatals, eliminating subsidies, and cutting down public financial support for social services (Haynes, 2008). Moreover, they decreased the government's economic and developmental role as a prerequisite condition for the receipt of external commercial support in the form of SAP loans (Haynes, 2008; Wangenge-Ouma, 2008). The argument was that market forces were the mechanisms, not government support, which could turn the weak economies around (Haynes, 2008). As a result, the drive to resort to the commercialisation, corporatisation, and privatisation of many states' public sectors heightened (Crowther, Strydom, & Dzansi, 2018). Under the inspiration of NPM, the governance approach focused on top-governance control, using funding allocations as drivers and emphasising the judicious use of resources (Crowther et al., 2018).

The effects of economic liberalization for higher education are as follows: to recuperate the public cost of higher education and reallocating government revenue to pre-tertiary education; to encourage educational loans through the establishment of a credit market with selective scholarships, especially in higher education; and to decentralise the administration of public higher education and advocate for the development of community-supported schools (Chattopadhyay, 2007). These effects have changed the management of higher education from public organisations into government corporations with business-like management boards, coupled with accountability mechanisms (Altbach, Reisberg, & Rumbley, 2010). These changes have brought substantial managerial autonomy to the higher education sector gearing towards private enterprise and full commercialisation intended to increase non-governmental revenue but steering by the government from a distance (Altbach et al., 2010; Mccollow, 2016).

A significant development in this direction was the removal of government subsidies and encouragement of private participation in higher education funding (Crowther et al., 2018). Students were gradually considered as clients; corporate and professional groups as financial resource providers; education and research programmes as products; and the external environment as the market place (Parker, 2012). In a related development, the global move towards mass higher education instigated by the need to cater to a decline in public funding compelled both developed and developing countries to implement privatization policies

(Sawyerr, 2004). The observation was that governments gradually reduced financial support for higher education and encouraged public universities to seek non-governmental sources of funding, which opened up the higher education marketplace to private investors while selling specific services to people who were ready to buy them (Parker, 2012; Roger & Carosso, 2013). The reform policies involved a drastic decline in public expenditure across the board, including higher education, necessitating the implementation of alternative higher education funding mechanisms resulting in a significant increase in the number of private higher education institutions in Africa for the last two decades (Tilak, 2015). As a result of the public funding cut, government support for social services, research and extension, infrastructure, and higher education deteriorated (Heidhues & Obare, 2011).

The global economic crisis has further put a strain on state expenditure to the level that fewer state resources have been allocated to higher education (Ndaruhutse & Thompson, 2016). For instance, government-spending patterns declined significantly between 2005 and 2012 in most countries of the world, and the reason for the decrease was the global financial crisis, which consequently has hurt many states' financial resources (OECD, 2015; Tilak, 2015). The implication of the declining public funding for higher education is that the sector may remain publicly owned and controlled but is on the path of privatisation in their attempt to seek non-governmental revenues, responding to market forces and adoption of managerial principles of private enterprise (Johnstone, 2009). With limited financial resources, African countries failed to mobilise resources internally to make up for these changes, resulting in allocating scarce resources to the higher education sector (Ndaruhutse & Thompson, 2016).

Consequently, the policy of cost-sharing has been the driver of higher education funding in many African countries (Johnstone, 2005). With the administration of cost-sharing, Johnstone (2005) postulates that four groups have emerged to participate in higher education funding, namely the governments, which use public money such as taxes to finance higher education; the second group is parents who save or borrow money to finance their children's higher education; the third group consists of students who save or borrow money as parents do; and the last group is the donor community that supports students, parents, or higher education institutions. These developments made policymakers not to consider higher education as a public good, which provides externalities, but a private good underpinned by the contribution made by students to finance their education (Carpentier, 2015).

Privatisation of higher education can be discussed as the devolution of state control, the reduction in state funding and the growth of entrepreneurial activities within institutions, and high-level dependence on market forces to steer higher education or competition for students and financial resources (Eckel & Morphew, 2009; Kaplan, 2009; McLendon & Mokher, 2009). In addition, the global constraint on public funding has brought the need for non-public revenues from less developed systems (Carpentier, Chatopadhyay, & Pathak, 2011; Carpentier & Unterhalter, 2011). Thus, developing countries are deprived of public funding to develop their higher education systems. When neoliberal ideology is in full force, higher education is regarded as a commodity consumed by individuals, which resonates with the principles of the World Bank as well as Jones (1997). Indeed, the mobilisation of non-governmental revenue by higher education institutions, especially from the students, is a recommendation from the World Bank, which is a mechanism to solve the underfunded higher education sector (Johnstone, 2014). Forced by economic reform policies or satisfied by the argument for the reduced role of the government in funding higher education, most African countries have inflicted severe cutbacks in public funding for higher education (Tilak, 2015). This development has happened in many African countries, in some or all of the following areas: total public expenditure on higher education; per-student investments; public higher education expenditure's share in relation to a particular country's national income or total government budget expenditure; and allocations in absolute and relative terms to essential programmes that include research, scholarships, and access (Tilak, 2015).

The decline in state support for higher education was made worse by research findings of Psacharopoulos (1985), who asserted that the rate of returns in pre-tertiary education was higher than that of higher education, arguing in favour of a reduction in public funding to higher education. Recounting the above argument, Mgaiwa (2018) opines that the higher education budget cutbacks are also influenced by a belief that primary and secondary schools have higher economic returns than higher education, especially in terms of its contribution to poverty reduction. The implementation of the policy shift by the World Bank and the International Monetary Fund towards universal student access to pre-tertiary education in African countries has put an enormous burden on the public higher education sector as more revenues are directed towards pre-tertiary education at the expense of higher education (Parker, 2010).

It was this observation that made Leslie (1990) conclude that over the past 30 years research done on rates of return on the higher education argument has impacted higher education funding more than any other type of study undertaken by scholars. For example, Africa is the

only continent in the world with a considerable decline of about 30 percent in public funding towards higher education (World Bank, 2010). The World Bank study had three immediate impacts on higher education funding on the continent: Firstly, the policy immediately affected other lending institutions directly; secondly, it restrained other (bilateral) development partners; and, lastly, it prevented individual countries from supporting their institutions and systems financially (Teferra, 2013). In a similar vein, Vaira (2004) and Tilak (2015) argue that the International Monetary Fund and the World Bank were successful in persuading African governments to implement policies that tended to reduce public funding and policies that moved universities towards more entrepreneurial patterns and that higher education institutions have become entrepreneurial institutions both locally and globally. Thus, in the post-1990s, many African countries reorganised the curricula of their higher education institutions and training programmes to respond to market requirements and implement entrepreneurial principles (World Bank, 2009). Following the global trend of higher education funding as observed by Crowther et al. (2018), African higher education institutions have been coerced to decrease their dependence on government and diversify their income sources due to declining public funding.

In conclusion, all these reforms were implemented in many African countries (Parker, 2012). They sought to decrease the role of the state in social and economic issues (Franklin, 2014), which has made many higher education institutions move away from their traditional functions in higher education development to become prestigious institutions within the structure and functioning as state economic drivers (Crowther et al., 2018). This is evidenced in many public higher education institutions generating non-governmental revenue, and many of them becoming for-profit institutions (Crowther et al., 2018). Consequently, these reforms and policies produced higher education that was under-recognized, under-produced, and under-funded resulting in significant funding challenges (Marginson, 2016), which seem to have negatively affected student access, especially students from low economic backgrounds. The next discussion focuses on funding challenges facing higher education institutions and systems.

2.5 Higher Education Funding Challenges

Higher education worldwide is facing funding challenges. The world has not found a sustainable mechanism to finance higher education, and, at the same time, the funding allocations to the higher education sector are inadequate. Therefore, the higher education funding climate globally has been in a conundrum for many years (Mgaiwa, 2018). Although

this study is primarily concerned with the relationship between changes in public funding and student access, it is necessary to place the ongoing funding debate within the larger picture of financial difficulties being experienced by higher education institutions globally. The assumption is that a clear understanding of the funding challenges facing public universities will open up a more holistic analysis of the objective of this study.

To illustrate the funding challenges, Wangenge-Ouma (2011) opines that funding challenges of higher education institutions are a combination of many factors. Firstly, there are funding allocation formulas that do not consider the cost of higher education provision. For example, in Egypt, Kenya, Uganda, Mozambique, and Nigeria, mainly an ad hoc funding mechanism (or incremental budgeting) is used. Although higher education institutions present their budgets with the full costs to government, allocations are not based on the budgets presented. Appropriations to the individual universities are given using the previous year allocations and do not take into consideration the current year costs of higher education provision. Moreover, Johnstone (2004) is of the view that the primary funding challenges facing higher education institutions come from two forces. The first of these is the high and rising unit cost or per-student cost of higher education without a corresponding increase in public funding. He further explains that when these higher education cost build-ups are not offset with an equal measure of revenue from the state, the resultant effect in some cases is an increase in tuition fees culminating in less efficiency, low productivity, and students from poorer economic backgrounds unable to enrol in higher education institutions. As if to add to the above points, Fussy (2017) argues that, due to the unreliable nature of sources of funding and weak economies, funds less than the costs of higher education provision are allocated to higher education institutions by governments. Even in higher education systems like South Africa that have a well-functioning funding allocation formula, the distribution formula is only used to allocate funds made to higher education institutions from the national budget, but the national budget does not take into consideration the actual costs of running higher education (Friedman, 2018).

The next funding challenge facing higher education institutions is the non-disbursement of all approved funds. The state most often than not refuses to disburse fully all agreed funds, which are already inadequate to higher education institutions. In order words, governments do not pay all the funds approved in the budget of higher education institutions (Wangenge-Ouma, 2011). For instance, in the 2009 financial year, the University of Botswana's requested funding was reduced by 7.0 percent by the government of Botswana (Wangenge-Ouma, 2011). In Tanzania,

higher education institutions usually obtain about 20 percent to 30 percent of their annual approved budget requests (Fussy, 2017; Kossey & Ishengoma, 2017). As a consequence, this non-disbursement of all approved funds to higher education institutions has created an opportunity for some institutions to over budget with the hope that even if the government reviews the budget downwards, they would not be affected much (Mgaiwa, 2018). Closely related to the non-disbursement of all approved funding by the government is the late release of the public funds to the higher education institutions. For example, in Kenya, the agreed funds are released one month in arrears, culminating in delay in cash flow leading to the maladministration of finance and less efficiency in administering the academic programmes (Wangenge-Ouma, 2011).

Another funding challenge worth mentioning is state control of tuition fees. In many African higher education systems, tuition fees are free or highly subsidised fees are charged, and in these systems public higher education institutions are not given the autonomous power to decide tuition fees, especially concerning regular students in commensuration with the rising costs of higher education provision (Wangenge-Ouma, 2011). Many higher education institutions, therefore, have expressed concerns that the state is not prepared to allow the institutions to charge realistic fees; neither is it ready to meet the total costs of higher education (Wangenge-Ouma, 2011). The "FeesMustFall" student protests in South Africa led to no tuition fee increases for 2016, culminating in a significant higher education funding gap between the costs of higher education provision and the financial resources available (Moolman & Jacobs, 2018). For example, it is evidenced that the government released some funds to offset the shortfall, but this was not enough as some institutions had to account for up to 30 percent of it (Moolman & Jacobs, 2018). The limited funds resulted in cross-subsidization by the institutions making it difficult for them to meet their obligations, causing the universities to voice their financial concerns of having zero tuition fees for 2016 (Moolman & Jacobs, 2018).

Another funding challenge that cannot escape the lens of scholars is student debt. Increasing student debt has generated a lot of debate within the circles of scholars, policymakers, and the public (Houle & Addo, 2018). In the current state of affairs, much of the scholarly debate on student debt has been discussing whether the increasing student debt could be described as a crisis (Akers & Chingos, 2016). The conundrum of student debt weakens student fees as a reliable source of income for universities (Wangenge-Ouma, 2011). In the United States of America, the average student in the Class of 2016 leaves with 37,172 dollars in student debt

(Friedman, 2018), denying the institutions substantial revenue, which could have been used for infrastructure to increase student access and the cause of this in most cases is the increasing costs of higher education, declining public funding, and uncertainty around financial aid. Again, in the United States of America, more than 44 million Americans have student debt to settle (Scott, Kelton, Ruetschlin, & Steinbaum, 2018). Scott et al. (2018) report that together they owe nearly 1.4 trillion dollars on outstanding student debt. It is evidenced that this level of debt undermines public investment in higher education (Scott et al., 2018) with the overall resultant effect going against student access. The next section deals with the implications of funding challenges for student access.

2.6 Implications of Funding Challenges for Student Access

Concerning funding challenges, it has been argued that a prerequisite of providing access to higher education is funding (Omwami & Keller, 2010). Research on student access reveals barriers that hinder access to higher education both at the time of entering higher education from secondary school and throughout their studies (Finnie, Sweetman, & Usher, 2008). In this context, the term 'barrier' is defined as the students' inability to afford their tuition fees, and those affected the most are students from low economic backgrounds (Finnie et al., 2008). In practice, barriers are not only limited to students' inability to pay the costs of higher education or funding. Obstacles such as unpreparedness of students to pursue higher education; students inadequately informed of the benefits of higher education; low educational expectations and ambitions; no support for higher education planning; competing family interests and personal uncertainties are just some of the barriers preventing students from accessing higher education (Eggins, 2010).

The important point about the above discussion is that all the issues are linked to the socio-economic background of the students (Rodriguez & Wan, 2010), in that, lack of financial resources affects both preparations for, the information regarding the application procedure and enrolment requirements (Rodriguez & Wan, 2010). In a related argument, defining student access in terms of financial trends also tends to lean towards inequalities in higher education, especially for students from low socio-economic backgrounds (Jacob & Gokbel, 2018). According to Vukasovic and Sarrico (2010), what can financially hinder student access includes entrance examinations. Entrance examinations are usually organised and managed at the faculties of the universities, which come with extra costs for transportation and accommodation for students living in the rural areas and who are not close to the universities,

and it is always a burden for the poor (Pierce, 2016). Moreover, if student access to higher education is analysed in terms of student retention, then students can experience drop out because of financial difficulties such as the introduction or increase in tuition fees (Terriquez & Gurantz, 2015; Ziderman, 2013), but when it comes to financial barriers, students from the high socio-economic backgrounds are best positioned to compete for limited spaces (Triventi, 2013b).

Using the analysis of the financial barriers in another dimension, Johnstone (2009) argues that the most challenging obstacle to student access, especially in low-income countries, is the limited space of public universities and increases in costs of instruction. To overcome this limited space and cost of instruction, Johnstone (2009) explains that adequate financial resources are needed. The crucial financial challenge facing higher education globally and the reason that even the flagship universities suffer financially is that the higher education sector faces yearly increases in the costs (Johnstone, 2014). These increases come about because of improvements in the wages and salaries of the academic staff (cost of instruction) (Johnstone, 2014). Thus, to sustain student access would mean to increase the costs and annual budget of the higher education sector; the latter is usually not met or not forthcoming (Johnstone, 2009). Moreover, universities usually take management measures to sustain student access in times of decrease in access, for example, measures such as staff downsizing and capping of access, which generally affects students from low-income families (Johnstone, 2009). Johnstone (2014) further argues that students who are the victims of exclusion include those living in rural areas, the ethnically marginalised, and always the poor (Johnstone, 2014).

Globally, it has been documented that prospective students who are likely to have access to higher education, and those who have access to the best opportunities for higher education and are expected to complete are determined by socio-economic status, gender, ethnicity and race (Reisberg & Watson, 2011). Even before the introduction of tuition fees, students from low-income families struggle more to pay for living expenses and the ancillary costs of study (books, materials) than students from higher-income families (Reisberg & Watson, 2011). All other things being equal, students from elite families are better positioned to use higher education structures to advance their education, even getting access to the flagship and prestigious universities (Jerrim, Chmielewski, & Parker, 2015; Marginson, 2016). Altbach, Reisberg, and Rumbley (2009) conclude that after studying fifteen countries, individuals from affluent families are more advantaged than individuals from poor economic backgrounds to access higher education in some countries. In addition to Altbach et al.'s (2009) conclusion,

Marginson (2016) postulates that the inequality in socio-economic status reflects in tuition increases and that funding is a strategic opportunity for elite families. It has been revealed that people from the highest income levels have a higher chance of gaining access to higher education. For example, in Egypt, 76 percent of students who have earned access to higher education came from a higher than median income level, compared to only 9 percent of the population from the most deprived quintile (Jaramillo, 2011). Additionally, Soares (2007) finds that in 1988–2000, 64 percent of the students of Tier 1 institutions were from the top 10 percent of American families with higher income levels. Altbach et al. (2009) further argue that challenges like inadequate accommodation, unequal distribution of resources, and distribution of resources along racial lines disadvantage a particular group of people.

In a related argument, Norton (2016) postulates that limited spaces at higher education institutions hinder students' access. He further explains that decline in public funding may lead to overcrowding in lecture halls; restless academic staff; inadequate or outdated library assets; computing capability challenges; internet connectivity problems; and a deterioration of infrastructure resulting in student demonstrations that terminate the completion of the academic year (World Bank, 2010). Therefore, to overcome these challenges, financial resources, which are not forthcoming, are needed to build the lecture halls, laboratory spaces, and residential halls to accommodate the increasing number of higher education candidates from a poor economic background, rural areas and ethnic minority groups (Johnstone, 2009). National and local institutional behaviour comes out as a critical influence in sustaining student access in the face of declining public funding. The next section is a review of various studies on the behaviour of national systems and higher education institutions towards shaping changes in student access in the context of inadequate government funding from a global perspective.

2.7 National and Institutional Responses towards Influencing Changes in Access

In this section, several research works related to the present study are reviewed. The focus is on various higher education institutions' behaviour towards influencing changes in student access. This review helps to link the current research to existing research on the measures to boost student access.

The concept of access to higher education has been addressed from four perspectives. These include expansion of access (growth of the number of potential students entering higher education), the deepening of access (ensuring a significant percentage of students from non-traditional social classes - the working class, ethnic minorities), retention and graduation or

successful completion of the studies (Prodan, Maxim, Manolescu, Arustei, & Guta, 2015). According to Clancy and Goastellec (2007), historically, higher education access has gone through three stages: initially, higher education was the preserve of the elite excluding mostly individuals who came from poor economic background whether relating to gender, religion or racial origin (Malechwanzi et al., 2016). In the 20th century, higher education being exclusive to elites gave way to equality of right, by which no one, irrespective of one's background, would be denied access (McCowan, 2016). However, despite efforts to remove barriers, student access was still a challenge for the working class and ethnic minorities (McCowan, 2016). As a result, equity approaches by which equal opportunity was given to everybody have been adopted to tackle the more subtle barriers that do not allow students from disadvantaged families to access higher education (McCowan, 2016).

Equity approaches have led to an unprecedented increase in student enrolment globally. For instance, Zeleza (2016) reports that the number of universities in the world grew from 6 931 in 1 970 to 18 808 in 2015. He contends that the fastest growth was registered in Africa, Asia, and Latin America and the Caribbean. For instance, universities grew from 170 to 1 639 over the same years in Africa. He explains that during the last two decades the higher education sector globally has also seen rapid growth in student numbers. For example, higher education enrolment in the world has grown from 32.6 million in 1970 to 198.6 million in 2013 (Zeleza, 2016). For Africa, higher education enrolment grew from 0.74 million to 12.2 million, Asia 7.3 million to 108.2 million, and South America 1.2 million to 18.0 million, while for Europe it was from 13.3 million to 31.5 million and North America 9.8 million to 27.0 million and enrolment ratios in Africa rose to 12.08 percent compared to the world average of 32.88 percent over the same years (Zeleza, 2016).

Several funding challenges facing higher education have undoubtedly threatened the ability of the sector to sustain student access. Inadequate funding would create financial pressures for higher education institutions, and that would mean capping the enrolment numbers, impeding student access directly because higher education institutions lack financial resources to help students from low socio-economic backgrounds who move from secondary education to higher education (Barr, 2017). In a bid to respond to especially declining public funding, some higher education institutions and national governments have adopted the following monetary and non-monetary measures to sustain student access. First and foremost, Johnstone (2009) opines that the most effective response to the public funding cuts that some countries have adopted to increase student access is cost-sharing, which is a policy that requires parents and students to

bear part of the costs of higher education. Cost-sharing comes in the form of charging or increasing tuition fees to an appreciable level (Barr, 2017). Without tuition fees, student access to higher education can be impeded because that would create supply-side constraints (Barr, 2017). Relatedly, the argument for the introduction of tuition fees stems from the fact that complete reliance on government subvention would mean higher education institutions would come under pressure to reduce enrolments and decrease per-student expenditure, usually with the more prestigious universities and students from more top socio-economic families being excluded from these consequences (Murphy, Scott-Clayton, & Wyness, 2017a). Lastly, higher education costs, which include but are not limited to expenses for food, accommodation, books and transportation, would remain a barrier for students coming from less privileged homes even if no tuition is charged (Murphy, Scott-Clayton, & Wyness, 2017b).

In addition to the above argument, higher education institutions in many countries have used cost-sharing to achieve their goals by helping to strengthen the knowledge economy through sustaining and even increasing student access and enhancing completion rates (OECD, 2017a). At the same time, cost-sharing has been used by universities to ensure financial sustainability. For example, in Kenya and Uganda, the policy of tuition fees has added additional revenue to the higher education sector and has proven to be successful (Marcucci, Johnstone, & Ngolovoi, 2008). As asserted by Oketch (2016), all public universities in Kenya and Uganda, particularly Makerere in Uganda and Nairobi University and Kenyatta University in Kenya, have adopted a policy called a "dual-track model" where some students are admitted on government funding and another set of students are enrolled to pay the full cost of their education. The dual-track model has become successful partly because universities use the same facilities for both groups of students (Oketch, 2016). According to Court (1999), Makerere University has been able to change tuition-free to about 70 percent of students paying tuition fees. Nairobi University and Kenyatta University in Kenya have implemented a policy known as a self-sponsored programme, which is similar to the dual-track model (Oketch, 2016). The self-sponsored programme has become successful, even though, it does not favour access for rural dwellers and people from low-income families (Loise, 2015). For example, Otieno's (2007) dual-track study on admission to the higher education revealed that 78.3 percent were from top income/top middle-income families, while only 21.7 percent were from low-income families.

Besides tuition, another aspect of cost-sharing is loan schemes. Student loan schemes have been set up in some countries to help students defray the costs of higher education (Addo, Houle, & Simon, 2016), and that student loan is now one of the essential models for financing

higher education globally (Boatman & Evans, 2017). In the United States, federal student loans are the primary tool for funding higher education (College Board, 2016). For example, the percentage of undergraduate students who took federal loans increased from 26 percent in 1995–1996 to 42 percent in 2011–2012, indicating the growing importance of student loans for increasing student access (Kelchen & Li, 2017). In addition, in 2015/2016, 50 percent of the 119 billion dollars in federal financial aid and 33 percent of the 184 billion dollars in all aid (including federal education tax credits and deductions and grants from federal and state governments, institutions, and other sources) was in the form of federal loans to students (College Board, 2016). Di and Edmiston (2017) extol the importance of loans by arguing that, for many less privileged families, student loans, grants and scholarships are the only financial means through which higher education costs can be paid. Student loans are seen as an appropriate tool for funding higher education because they serve as a means of bringing future fortune to the present (Akers & Chingos, 2016). The main aim of giving loans to students by governments is to address financial barriers that prevent students from accessing higher education and acknowledge the many benefits that higher education provides for society (Avery & Turner, 2012). Avery and Turner (2012) argue that average returns far outweigh student loan debt and that students must be willing to take a loan to prevent any financial barriers to pursue their higher education. According to Kasozi (2009), to increase access to higher education for students from low socio-economic backgrounds, a loan scheme is one of the solutions to their financial challenges of rising tuition. He argues that eligible students must be identified and given loans for them to be able to pursue their education while, at the same time, the poor and needy students are targeted.

However, there are criticisms against these forms of cost-sharing. For instance, cost-sharing mechanisms are inequitable because cost-sharing allows students from affluent families to attend university on government budget (Oketch, 2003), while no tuition can boost student access and equity in higher education, especially for students from low-income families, who may feel the pinch of an upfront payment of tuition (OECD, 2017a). Tuition fees can even cause suffering for enrolled students and are likely to hinder access to higher education and even completion (Ziderman, 2013). Furthermore, Ziderman (2013) argues that the recovery rate of student loan schemes is resulting in the collapse of some of the loan schemes. For example, at the end of the first quarter of 2016, the U.S. Department of Education revealed that 3.7 million Federal Direct Loan (FDL) and 4.3 million Federal Family Education Loan (FFEL) borrowers were in default, accounting for a cumulated 124.8 billion dollars of distressed

student loan debt (Di & Edmiston, 2017). Additionally, about 41.5 million Americans owe more than 1.2 trillion dollars in outstanding federal student loan debt (U.S. Department of Education, 2016), and that student loan debt has risen significantly increasing from about 346 billion dollars in the fourth quarter of 2004 to 1.26 trillion dollars at the end of the first quarter of 2016 (Di & Edmiston, 2017). All these criticisms have compelled higher education institutions to roll out other solutions to the higher education funding problem.

Johnstone (2009) argues that students are finding it challenging to pay rising tuition fees and escalating student loan debt. Therefore, in response to these financial pressures and the need to widen student access, higher education institutions and national systems have devised solutions on both the cost and revenue side (Johnstone, 2009). The answers on the cost side include expanding class sizes and teaching loads, rescheduling of maintenance, replacing lower-cost part-time faculty for higher cost full-time faculty, and cancelling low priority programmes (Johnstone, 2009). In a related development, while there has been an improvement in recent years to locate higher education institutions closer to the population globally, there are still many areas of the world without access to higher education opportunities (Jacob & Gokbel, 2018). It has, therefore, become a dilemma for countries like Brazil, China, Indonesia, Nepal, and Zambia, which have many rural and remote areas to widen higher education access for rural dwellers (Jacob & Gokbel, 2018).

The rural dwellers are disadvantaged compared to urban dwellers considering the cost of travelling to school (Jacob & Gokbel, 2018). To address this financial challenge, Jacob and Gokbel (2018) argue that the financial needs of students must be met in terms of delivery. As a result, many higher education institutions and national systems have employed measures to support students from low-income families and underrepresented groups to enrol by giving these students priority through affirmative action programmes, quota , and special financing programmes (Reisberg & Watson, 2011). For example, in Brazil, over 45 percent of the total population is of African origin (Kapur & Crowley, 2008). The average black person is two and a half times poorer than is the average white person (Davies, 2003). As such, all public universities charge no tuition, and admittance is through a competitive national entrance examination (Kapur & Crowley, 2008).

To address the inequalities, public universities have employed several measures such as the implementation of quota systems to decrease economic status and race discrimination in student access, especially to the prestigious public universities, in support of equity in higher

education (Kapur & Crowley, 2008; McCowan, 2015). For instance, in 2003, public universities in the state of Rio de Janeiro implemented preferential admissions policies for black and poor students, reserving 40 percent of enrolment for them (Kapur & Crowley, 2008). Similarly, the University of Brasilia gave them 20 percent (Kapur & Crowley, 2008). Furthermore, the Brazilian president, Lula da Silva in 2004, came out with a presidential decree compelling all private universities (which has 70 percent of total student enrolment) to reserve some spots for black and needy students to receive tax breaks (Lloyd, 2004). A similar programme is being done in Venezuela. For instance, McCowan (2015) reports that inequality is found in entry examinations that favour student who can pay for expensive private secondary education and preparatory classes. To overcome this, public universities allocate 50 percent of spots to students coming from low socio-economic backgrounds (McCowan, 2015). Additionally, in Ireland, the funding formula that distributes the government subsidy to higher education institutions based on enrolment numbers and cost of disciplines offers a 30 percent premium for each student enrolled from any of the marginalised groups defined by the government (Salmi, 2018).

Moreover, as part of special financing programmes to increase student access, the Coventry University in the UK has created "Coventry College" whereby students who wish to attend are offered the same programme the parent university provides but without extra-curricular activities, sports and students unions (Bekhradnia, 2015). In "Coventry College" the same qualification is awarded but with a reduced cost (Bekhradnia, 2015). The disadvantage is that students admitted to "Coventry College" get substandard experience than students admitted to the parent university, and the students from less privileged families are the most affected (Bekhradnia, 2015).

In a nutshell, the correlation between higher education funding and student access is fundamentally globular (Johnstone, 2009). This means that increasing the cost of higher education leads to capacity challenges and charging or rising tuition fees, which limit higher education access, especially to those who are financially disadvantaged (Johnstone, 2009). At the same time, the decline in public funding means tuition fees have to be charged or increased by public universities, which results in a participation rate that tends to be below the national average for people living in rural areas as well as for indigenous groups (Altbach et al., 2009). Therefore, the search for an ideal funding regime is imperative. The next section compiles the summary and conclusion of the literature review.

2.8 Summary and Conclusion of the Literature Review

A literature review gave me a more comprehensive overview of higher education systems when I decided to review the published research works on higher education funding and student access as part of my preparation to undertake my fieldwork activities. A careful look at the literature portrays that higher education funding is far researched, indicating the importance of the subject as observed by scholars such as Johnstone (2014) and Teferra (2013). These research works are studies of how higher education institutions are funded and the criteria for allocating financial resources. The other significant contribution of these studies towards higher education funding and student access has been their effort to go beyond rhetorical studies of higher education funding and emphasising the need for empirical research as an essential part of methodological questions in exploring the subject. The move from studying higher education funding and student access as rhetoric to treating them as crucial tools for national development has been emphasised in some of the published works. Of the studies alluded to so far, those of Wangenge-Ouma (2007), Cele (2014) and Dunga (2013) pertain specifically to South Africa and Kenya, that of Atuahene (2006) and Kwasi-Agyeman (2015) relate to Ghana, and the studies of Johnstone (2014) and Barr (2017) are global.

Concerns raised by scholars like Altbach et al. (2009) about the low participation rate for people living in rural areas as well as for indigenous groups with little economic background as a result of declining public funding and tuition fees increases drew my attention to higher education funding. Empirical studies on higher education funding either focused on specific issues like inadequate state funding, tuition fees, diversification of sources of funding, or system failure. When attention is given to such critical matters, it highlights in the tension between students and governments, culminating in the scholars questioning the role of government in higher education funding. The studies of Cloete (2016) and Hull (2015) are also in line with such research works and suggest that the demand of students in South African universities of tuition-free higher education is not feasible. The conclusions drawn by these scholars in respect of their data analysis had to do with what they were probably studying, for example, the level of tuition fees being paid by students and the inability of the government to shoulder the total costs of higher education. Furthermore, the funding issues being raised by scholars in the field of higher learning like Wangenge-Ouma and Cloete (2008) and Hull (2015) lead to conclusions that free higher education in South Africa is untenable. The viewpoints of these scholars on higher education funding heightened my interest to investigate changes in public funding and

student access and how the universities are behaving towards influencing student access in the face of fluctuations in public funding.

Wangenge-Ouma's (2007) doctoral study is, by far, the closest study to my research, which is how public universities seek to reduce resource dependence on the public purse. His focus is, however, on income-generating activities from non-governmental sources by public universities in South Africa and Kenya with no emphasis on student access. Unfortunately, his study is limited to what the participants of the present study call "third stream income and tuition fees". A significant weakness of Wangenge-Ouma's (2007) study is that the voices of students whom the institutions' policies and programmes affect are completely missing. Several claims are made based on interviews with Executive Directors of Finance, Deputy Finance Officers of the public universities in South Africa and Kenya, and extensive document reviews. No interviews were conducted with students or student leadership at the universities in the two countries. This study adds the voices and experiences of student leaders, which are rarely captured in the research of this nature. In respect of these studies, this research addresses an empirical gap of how two African public universities behave towards influencing student access in the face of fluctuations in public funding. The next chapter discusses the theoretical framework for this study.

CHAPTER THREE

THEORETICAL AND CONCEPTUAL FRAMEWORK

3.1 Introduction

The proportion of public funding in the overall budgets of many universities continues to decline at a time when universities are experiencing an upward surge in enrolments (Bundy, 2004; Peters, 2004), and, ironically, in the era where higher education is regarded as critical for economic development (Carnoy, 2001). Considering that, financial resources are crucial to universities' existence, yet budgetary support from the government to the University of the Western Cape and the University of Ghana is steadily declining. Theories that explain the changes and factors that shape the variations are necessary. The propositions of the resource dependency theory have direct implications for the understanding of the relationship between changes in public funding and student access as resource availability determines the survival of the organization (Pfeffer & Salancik, 1978). Hence, the adoption of resource dependence theory for this study.

This chapter is divided into four main parts. First, reflecting on resource dependence theory's first principle of resource constraints, I explore the analytical usefulness of the concept of organizational changes for understanding the relationship between variations in public funding and student access, and how organizations survive under resource scarcity. Secondly, I offer a review of the resource dependence theory's second principle of how organizations are influenced by their environment in the acquisition of resources. Thirdly, I examine the resource dependence theory's third principle of how organizations behave in the context of resource scarcity. Lastly, the criticisms of the theory are also discussed. These considerations fulfil the analytical purpose of highlighting organizational behaviour towards influencing changes in student access in the face of resource scarcity.

The reflections expressed in this section will form the basis for further analysis of the empirical data gathered through in-depth interviews at the two African public universities. I conclude the chapter by providing a summary of the main theoretical principles.

3.2 Resource Dependence Theory

Jeffrey Pfeffer, the American business theorist and Gerald R. Salancik, the American organizational theorist, developed resource dependence theory in the year of 1978 at Stanford University (Pfeffer & Salancik, 1978). The contribution of Gerry Salancik in the field of organizational studies helped to develop the theory further. The first significant work concerning resource dependence theory was a book published by Pfeffer and Salancik. The title of the book is "The External Control of Organizations: A Resource Dependence Perspective" (1978).

The book contains areas such as the internal power struggles among individuals and departments to industry-level relationships (Davis & Cobb, 2010). The aspects of the book that gained much currency were the sources of power in inter-organizational relationships, where power and dependence emanate from, and how managers of organizations utilize their potential and handle their reliance. As explained by Pfeffer and Salancik (2003), resource dependence theory was developed to offer different options to economic theories of mergers and to understand the role of inter-organizational relationships. The managers of those organizations aim to make sure the organization survives to preserve their autonomy while at the same time keeping stable relations with other organizations (Davis & Cobb, 2010).

The resource dependence theory is premised on the works of many earlier scholars, including the works of Emerson (1962), Blau (2017), and Jacobs (1974). Previous scholars such as Aldrich and Pfeffer (1976) have utilized the aspect of resource dependence theory where analysis of the behaviour of organizations is done from the domain of organizations. Nevertheless, Pfeffer and Salancik proposed three different aspects of organizational studies, which include the concepts of "resource interdependence, external social constraint, and organizational adaption" (Pfeffer & Salancik, 1978:11-12). The work of Pfeffer and Salancik led to the development of the resource dependence theory, offering different options to economic theories of mergers to appreciate the type of organizational relationships (Davis & Cobb, 2010:5). The work of Emerson (1962), "Power Dependence Relations," is utilized by Pfeffer and Salancik in the resource dependence theory to demonstrate the differences in the utilization of power within organizations (Pfeffer & Salancik, 1978:27). Another work by Jacobs (1974), which explained the power of exchange relationships in controlling organizations, served as a foundation for the resource dependence theory. The next section discusses the three main principles of the theory that relate to this study.

3.2.1 The First Principle of Resource Dependence Theory

The first principle is that there is a need for organizations to acquire resources to survive. Resource dependence theory postulates that the behaviours of organizations (for example, universities) are influenced by the existence of external resources upon which the organization depends for survival (Pfeffer & Salancik, 2003). To ascertain the resources that an organization needs, one must look for the essential resources in the organization's environment. South African and Ghanaian universities such as the University of the Western Cape and the University of Ghana depend on external resources (public funding) for survival. Relying on essential resources influences organizations' actions and a particular dependency situation can explain organizational decisions (Nienhüser, 2008). To be able to understand the behaviour of organizations, one must first make clear which critical resources the organization needs. A particular resource may only represent a tiny part of total resource needs, but it is vital or essential if the missing or the lack of that resource endangers or threatens the ability of the organization to function or survive (Nienhüser, 2008). For example, without public funding, can the University of the Western Cape and the University of Ghana perform their teaching and learning, research, and community engagement functions, and sustain student access? The criticality, magnitude, or amount of a resource defines its importance and significance to a particular organization's survival (Etomaru, Ujeyo, Luhamya, & Kimoga, 2016). For instance, changes in resources available to the University of the Western Cape and the University of Ghana may determine changes in the number of students to be enrolled.

The theory is based on the principle that the existence of an organization depends on its ability to obtain critical resources from outside its boundaries. Thus, resource dependence theory sets the context within which organizations operate (Etomaru et al., 2016). This suggests that resources are vital to the success of an organization because the attainment and control of resources is a basis of organizational power and existence and that access to resources increases the organization's ability to compete with others and defines its autonomy (Etomaru et al., 2016). The importance and concentration of the resources provided determine the level of dependence (Froelich, 1999). Organizations become highly dependent if they rely on relatively few sources of financial support (Hillman, Withers, & Collins, 2009). In this sense, universities in South Africa and Ghana are highly dependent on the government because their source of funding mainly comes from the state with the government using public funds to steer the management of the universities.

In short, both the University of the Western Cape and the University of Ghana need resources to be able to increase student access. To provide student access, the universities need lecture halls, residential facilities, lecturers, laboratories, and money. The critical or essential resource is a financial resource because the universities use the money to acquire the other resources, and the lack of it would threaten the survival of the universities. It is important to note that the two public universities already have all the resources mentioned. The challenge has been the inadequacy of the resources. The critical support has been public funding, which seems to be inadequate for the survival of the two universities in terms of increasing student access.

3.2.2 The Second Principle of Resource Dependence Theory

The second principle of the theory is that "to understand the behaviour of an organization, you must understand the context of that behaviour-that is, the ecology of the organization" (Pfeffer & Salancik, 2003:1). Organizations cannot have continued existence if they are not attentive to the changing environment (Pfeffer & Salancik, 2003). This implies that resource dependence theory is mainly premised on relations with the external surroundings. It presumes there is an environmental influence. As such, the best way to manage an organization is contingent on the nature of the environment to which the organization relates. Scholars in strategic management and organization theory have long documented the vital role that organizational environment plays in influencing changes in resources (Cannon & St John, 2007; Frishammar, 2006). The environment includes forces, entities, economic conditions, societal pressure, associations, customer-supplier relationships, competitive relationships, social, legal apparatus and institutions surrounding an organization that influence the performance, operations, choices, and resources, which decide its prospects and define the threats of an organization (Pfeffer & Salancik, 2003). In many African countries, national governments have been the single source of the external environment, financing public higher education (Wangenge-Ouma, 2007).

However, public funding for higher education has steadily declined over the years. According to Teferra and Altbach (2003), the main issue confronting all African higher education systems at the beginning of the twenty-first century has been downward changes in public funding. The factors influencing the changes have invariably been ascribed to, among other things, the state of the economy, sectoral competition for public funds, low prioritization of higher education by African governments, a shift of focus from education, funding mechanisms, and overspending in election years (Bawumia, 2013; Currie, 2003; Pillay, 2013; Teferra & Altbach,

2003; World Bank, 1994, 2017a). These factors were also found to be at play in influencing changes in public funding at the University of the Western Cape and the University of Ghana.

Economic challenges for most African countries first became dire in the late 1970s and continued after 1980, leaving most African economies in a serious mess (World Bank, 1986, 1988). In the context of public universities, the macroeconomic environment has been in crisis (Mingat & Tan, 1986; Saint, 1994). State funding of public universities is a function of the economic environment of countries, and any changes in the economy may affect government allocations to the universities (Brown & Gamber, 2002; Duderstadt & Womack, 2003). In the same vein, I find a level of relationship between changes in the state of the national economy and changes in the public funding to UWC and UG, in which adjustments in the economy match variations in the government allocations to the two institutions.

Other than the poor-performing economies, factors such as competition for public funds, low prioritization of higher education, a shift of focus from education, and the presence or absence of funding mechanisms have contributed to changes in public funding to the African public universities (Duderstadt & Womack, 2003; Pillay, 2013). African governments have had the challenge of having to deal with many sectors competing for limited resources, and higher education is but one sector for government consideration. Financial support for higher education thus needs to be taken into consideration against other sectoral needs. This factor is also linked to the priorities of governments where African governments are yet to come to terms with the value of higher education for economic growth and broader social and sustainable development, hence the decreased public funding of higher education (Pillay, 2013). In addition, the mechanisms through which public funding is distributed play a key role in ensuring that resources are directed to meet the needs of the sectors. Trends in public funding need to be accompanied by regulatory frameworks to ensure effective and equitable allocation of public funds (OECD, 2017b). While the overall level of government funding matters, the strategies used to allocate and match resources to the needs of higher education is important (OECD, 2017b). In many African countries, declining public funding of higher education has been exacerbated by the absence of an effective funding mechanism such as a funding formula (Pillay, 2013). Public funding of higher education is largely based on ad hoc budgeting, which normally considers only inputs (student numbers) (Pillay, 2013).

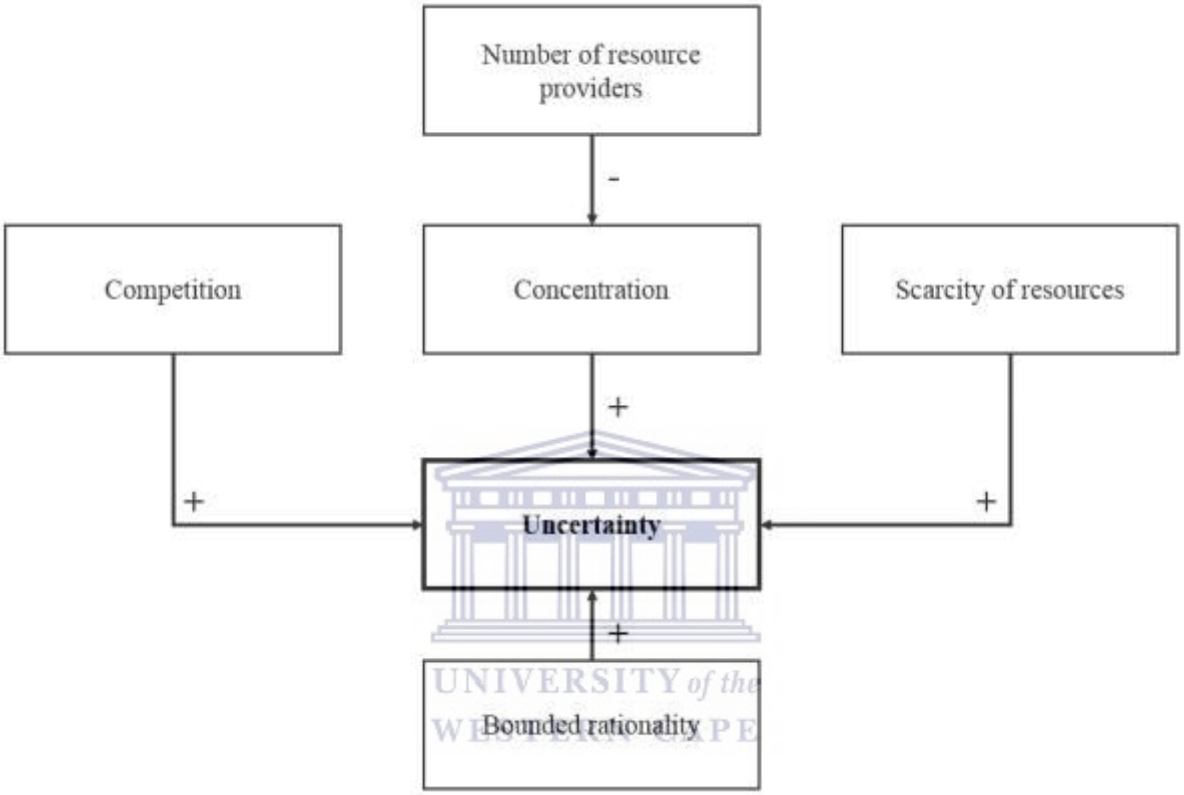
The resource dependence theory further postulates that organizations are responsive to two environmental factors driving changes in resources. These are uncertainty and constraint.

"Uncertainty refers to the degree to which future states of the world cannot be anticipated and accurately predicted" (Pfeffer & Salancik, 2003:67). Pfeffer and Salancik (2003) explain uncertainty as being scarce resources and their low concentration as well as difficulty in an action theory way. Thus, it is always about parties who have resources and about other parties who need these resources, which result in different relationships of dependency. If one organization exists with an enormous amount of resources, this scales down the reliance on and conflicts with other parties (Delke, 2015). When organizations do not possess the resources they require, resource accumulation may be difficult and problematic. Those who possess the funds may be unreliable, mainly when resources are scarce. Uncertainty concerning an essential resource means the organization's survival has become more erratic. Uncertainty or instability about critical support threatens the continued survival of the organization, but to survive, the organizations must alter their behaviour in response to these environmental changes (Pfeffer & Salancik, 2003). Competitors' marketing strategies or alliances, price wars, and an unexpected shift in the political atmosphere are some uncertain dynamics that add to the organization's instability (Gupta, 2010). In the context of higher education, changes in public funding make the environment uncertain. It has become more visible that governments are unreliable because of limited resources resulting in erratic changes in financial resources to higher education institutions.

It is essential to understand that there is no problem if there is a stable and constant supply of resources to organizations and that organizational susceptibility arises from the likelihood of an environment's changing so that the resource is no longer guaranteed (Pfeffer & Salancik, 2003). Problems occur not because organizations rely on their environment but because the climate is unreliable or uncertain, and when surroundings change, organizations experience the possibility of not surviving. As part of a larger societal environment, the relationship between higher education institutions and their environment has been changing. Changes in public funding of higher education make the environment unpredictable resulting in changes in student access. The theory claims that whoever has resources has power over those actors who require those resources (Nienhüser, 2008). Because of reliance on other actors in the environment, the situation of the dependent party is perceived as uncertain concerning the supply of critical resources. As a result, the resource dependence theory sees uncertainty as a core element of organizational behaviour (Pfeffer & Salancik, 1978). The degree of uncertainty can come from different sources. The first source of uncertainty remains in the fact that organizations are not autonomous since a network of interdependencies with other

organizations restrains them (Hillman et al., 2009). The University of the Western Cape and the University of Ghana are not financially independent. The two institutions rely heavily on the government for funding. Their dependency on the government makes it difficult to control financial resources. The government controls the funding and therefore changes the funding as and when it is necessary. Figure 1 below shows the factors leading to uncertainty.

Figure 1: Factors Leading to Uncertainty



Source: Delke, 2015

Figure 1 illustrates those public universities such as the University of the Western Cape and the University of Ghana that depend heavily on government as a provider of financial resources. They will experience resource decline principally because of competing needs from other sectors leading to environmental uncertainty.

The last factor shaping changes in resources is the concept of constraints (Pfeffer & Salancik, 1978). The idea of constraint defines how feasible it is to use an action to respond to given

circumstances, and if one response is more viable than another reaction to a circumstance, this action is constrained (Delke, 2015). In other words, "a constraint is present whenever a response to a situation is not random, but a well-argued choice" (Pfeffer & Salancik, 1978:14). Examples of how behaviour is constrained include "physical realities, social influence, information, cognitive capacity, and personal preferences" (Pfeffer & Salancik, 1978:15). The concept of constraint contends that the individual influence on organizational behaviour is often constrained by conditional contingencies (Delke, 2015). The theory assumes that each organization in the surrounding wishes to decrease its reliance or raise its power on other organizations in the environment (Nienhüser, 2008). The various external constraints and needs to reduce organizational choice and operations, and the organization must act to survive (Maasen & Gomitzka, 1999). Anytime there are changes to the resources, the organizations must also change their operations or risk their survival (Pfeffer & Salancik, 1978). The decline in public funding experienced by South African and Ghanaian higher education institutions mainly results from economic constraints. This study establishes that, at the University of the Western Cape and the University of Ghana, downward changes in public funding are as a result of sluggish economies, resulting in student enrolment variations.

3.2.3 The Third Principle of Resource Dependence Theory

The last principle of the theory that relates to this study is that, in times of resource scarcity, organizations respond to the changes in order to survive. The theory acknowledges the impact of external factors on the behaviour of organizations and, even though the context in which the organizations operate constrains them, the managers can make the necessary changes to limit the reliance and environmental insecurity (Hillman et al., 2009). As Fowles (2014) points out, resource dependence theory is used to demonstrate the need to guarantee a constant supply of resources from external sources of support, which partially influence organizations' actions. The theory asserts that, since organizations do not have in their possession the resources that they need to carry out their activities, they must formulate and implement specific strategies to sustainably have access to funds from their environment, especially in times of resource scarcity (Etomaru et al., 2016). Resource dependence theory assumes that there is a correlation between resource dependence and the discovery of opportunities in those organizations experiencing inadequate resources try to find a chance to resolve the situation (Pfeffer & Salancik, 1978). In this direction, Wangenge-Ouma (2007) argues that the level of government funding determines the direction of income-generating mechanisms of the universities. This

implies that universities look for opportunities to generate revenue to sustain student access. In addition, during these periods of declining public funding, public universities have implemented several strategies that have led to changes in student access. Some of the strategies include tightening their wallets, cutting programmes, and raising productivity levels (Brown & Gamber, 2002; Duderstadt & Womack, 2003).

There are actions that organizations take in responding to resource scarcity. First, organizations adapt and change to respond to the demands of the environment (Pfeffer & Salancik, 1978). For example, firms evaluate the needs of the market place and then adjust their products and production process to fill some of these demands (Kotler, 1967). In brief, organizations set up the environments to which they adapt by choosing the market part they will serve and disregarding some components of the environment (Pfeffer & Salancik, 2003). This will, in part, assist in boosting the possibility of organizational change, organizational survival, and sustainability (Pfeffer & Salancik, 1978). In the 1980s and 1990s, the higher education funding mechanisms were not enough to make up for the declining public funding, resulting in passing on some of the costs of the university education to students (Powell & Rey, 2015). The increasing tuition fees have been a source of contention between universities and their external stakeholders - governments, students, and parents - due to concerns that higher tuition has made higher education less accessible for students of lower socio-economic status (Fowles, 2014; Mitchell et al., 2016). Consequently, demand for resources such as funding in higher education is competitive, inequality has increased, and it has become much more challenging for universities with inadequate resources to widen access (Powell & Rey, 2015). This is a phenomenon, which is generally attributed to declining public funding at all levels (Wellman, Desrochers, & Lenihan, 2010).

Furthermore, the theory's dominant proposal is that organizations use different strategies to take care of their resource dependencies and attain much autonomy leading to a decrease of uncertainty in the acquisition of resources from their environments (Etomaru et al., 2016). For instance, organizations respond to resource scarcity by creating inter-organizational arrangements like partnerships, in-sourcing arrangements, mergers, interlocks, alliances, joint ventures, and collaborations with organizations with similar dependencies or similar scarcity challenges (Etomaru et al., 2016).

Resource dependence scholars have studied a variety of inter-organizational arrangements, each of which has been credited with the ability to mitigate the scarcity of resources and

dependencies. For instance, board interlocks enrich co-optation of and harmonization with relevant resource suppliers, mainly by offering a channel for the exchange of sensitive information and by affording better social cohesion between the main actors working on behalf of the interlocked organizations (Mizruchi, 1996). The formation of alliances and joint ventures enables organizations to have access to knowledge and resources of partner organizations (Drees & Heugens, 2013). Organizations use alliances and joint ventures to develop new products without needing match-up investments in a complete and concentrated resource base (Ahuja, 2000; Gulati, 1998). Alliances and interlocks can provide a constant supply of critical resources for the focal organization by enhancing the compatibility of its administrative systems with those of the resource supplier, and by forging networks with suitable and sufficient governance structures (Dyer & Singh, 1998). Collaboration helps to reduce uncertainty and enables access to essential resources (Pfeffer & Salancik, 1978) and, in turn, these arrangements make them more autonomous and more legitimate (Drees & Heugens, 2013).

For public universities to be able to adapt and change to fit environmental requirements, they need to embrace the marketing concept (Kotler, 1967). This strategy can help public universities to evaluate the needs of the marketplace and then change their product to suit some of the requirements (Pfeffer & Salancik, 2003). One example is collaboration. Establishing partnerships with other universities both locally and internationally, the business community globally, building community partnerships, and collaborating with industries would form the necessary foundation for obtaining needed resources to be able to sustain student access (Wilson, 2011). In the context of university/industry collaborations and from the angle of resource dependence, internship programmes can be developed from the partnership for students (Powell & Rey, 2015). The graduates may avail themselves of internship opportunities to acquire skills that can open employment opportunities for them (Powell & Rey, 2015). Having a job and earning money, the graduates can financially contribute through alumni donations to the university (Powell & Rey, 2015). University/community partnerships are in line with the core mission of public universities (Duderstadt & Womack, 2003; Hirsch & Weber, 2002). University/community partnerships provide a platform for universities to respond to the social needs of communities (Powell & Rey, 2015). This collaboration is an opportunity for some of the societal challenges to be attended to and addressed (Powell & Rey, 2015). Public universities that establish such partnerships are likely to receive resources from external stakeholders and donors towards improving student access (Maurrasse, 2001).

The theory assumes that relying on one source of resources could be detrimental to any organization's existence. Therefore, organizations can implement some strategies to limit the dependence on a single source. In the case of input, organizations may develop inventories of adequate size to allow the organization to continue functioning (Thompson, 2017). Moreover, fundraising is another strategy by organizations to curb inadequate resources and to increase student access. The importance of fundraising is that organizations acquire their capital budget from private donations, and it is non-profit (Pfeffer & Salancik, 1978; 2003). To decrease uncertainty in the acquisition of necessary resources, organizations will try to streamline their reliance with several managerial strategies (Casciaro & Piskorski, 2005). Some of the strategies are unilateral, in that they skip the source of constraint by decreasing the interest in valued resources, generating alternative sources of supply, or forming partnerships (Casciaro & Piskorski, 2005).

From the perspective of resource dependence, the environment can be created by universities and then adapted by deciding on the market segmentation that they will respond to by ignoring some environmental milieus and considering others (Powell & Rey, 2015). For instance, higher education institutions that procure resources from alumni contributions may decide to put in place the necessary selection procedures to ensure adequate and constant supplies of resources (Pfeffer & Salancik, 2003). Some higher education institutions have quotas, which offer a considerable advantage to the children of their alumni. Since the professional backgrounds of the parents are dependable predictors of the achievement of the children, such an admission policy guarantees a potential source of funding for the institution in the future (Pfeffer & Salancik, 2003). Another point of this strategy is data-based decision-making processes (Powell & Rey, 2015). With this strategy, institutional data can be assessed to establish whether their programmes are working effectively or not so that the higher education institutions can make the necessary adjustments and changes (Fischer, 2011). Relatedly, other

"strategies by universities entail [...] substantive organizational change and associated changes in internal resource allocations (reduction or closure of departments, expansion or creation of different departments, the establishment of interdisciplinary units); substantive change in the division of academic labor with regard to research and teaching; the establishment of new organizational forms (such as arm's-length companies and research parks); and the organization of new administrative structures or the streamlining or redesign of old ones" (Slaughter & Leslie, 1997:11).

The purpose, mission, and vision of the universities will be clearly understood if their academic programmes and services are correctly restructured, modified, fused, or removed (Powell & Rey, 2015). With this strategy, the universities will be able to decide on the market segmentation that will help them to focus on procuring resources within their surroundings (Powell & Rey, 2015). For example, if the data of the university shows that there has been more focus on non-traditional students who shuttle and at the same time full-time workers, the university can take some measures such as the creation of online programmes and hybrid programmes to retain continuing students and at the same time attract more non-traditional students (Powell & Rey, 2015).

In the case of the University of the Western Cape and the University of Ghana, downward changes in public funding have compelled the two institutions to implement some strategies that have led to changes in student access. Government subsidy; low tuition fee structure; payment arrangement; and financial support system are some of the strategic responses that influence changes in student access at the two institutions. Resources dependence theory explains that organizations, when faced with financial constraints, may seek direct cash subsidies from the government for growth, enhancement, certainty, and survival (Etomaru et al., 2016). In line with this assumption, the two universities have relied on the government subsidy to make some changes to student access. The study establishes a statistical relationship between changes in government funding and student access, in which there is a significant relationship between the two variables at the University of the Western Cape. However, even though there is a relationship between changes in public funding and student access at the University of Ghana, the relationship is statistically insignificant.

Other than the government subsidy, low tuition fees, payment arrangements, and financial support system are some of the strategies shaping student access. Resource dependence theory postulates that, for an organization to survive, it must sell at a price fixed in the competitive market place (Pfeffer & Salancik, 2003). For this reason, the two institutions charge tuition fees even though the fees are below market price. For instance, the University of the Western Cape has the lowest tuition fee structure among South African universities, which is below market rate and the fees are set between 30 percent and 40 percent lower than those of the other universities in the Western Cape (University of the Western Cape, 2004). This is in line with the university's mission to increase student access and make the university the most affordable higher education institution in the country.

Resource dependence theory assumes that there is a correlation between resource dependence and discovery of opportunities in that organizations experiencing inadequate resources will try to find a chance to resolve the situation (Pfeffer & Salancik, 1978). One of the opportunities created by the University of the Western Cape and the University of Ghana is making a payment arrangement with students, which is an innovative means to generate revenue to support the university's operations and, at the same time, using that to increase student access by allowing students who cannot pay tuition fees upfront to study on credit.

Lastly, resource dependence theory argues that organizations rely on their environment to obtain critical resources in times of resource scarcity. Thus, resource dependence theory frames the context within which the universities operate in terms of procuring essential resources towards increasing student access (Etomaru et al., 2016). In this way, universities' relationship with the external environment is critical in fulfilling their core functions of teaching and learning, research, and community engagement (Etomaru et al., 2016). The two universities, in their attempt to increase student access in the face of scarce resources, have resorted to their environment for financial resources to support students. For example, the University of the Western Cape and the University of Ghana have set up financial aid offices to solicit funds from corporate bodies, organizations, and individuals to contribute to the survival of the institution in terms of giving scholarships and bursaries towards increasing student access.

In sum, the three principal arguments of the theory, which include the fact that organizations need resources to survive; organizations obtain these resources from their environment; and in times of resource scarcity, organizations respond in a certain way depending on the situation to have continued existence, resonate with this study. First, universities need resources like funding to increase student access, whether enrolling students or supporting students to complete their education. Second, universities obtain financing as one of the resources from their external environment, for instance, from the government, industry, families, and the business community (Weber, 2004). Third, in times of resource scarcity (declining public funding), universities respond in a way that enables them to increase student access.

While universities are multifaceted organizations that hold complex and multiple missions, I delimited my study to two concepts of public funding and student access using the theory to gain a deeper understanding of this complex but changing problem in the two African public universities. The next section discusses the criticisms of the theory and how these criticisms affect this study.

3.2.4 Criticisms of Resource Dependence Theory

Resource dependence theory has received a lot of praise from many scholars when it comes to organizational behaviour. However, it has been criticized to the extent that the underlying principles of the theory have not been extensively tested (Delke, 2015). Nevertheless, the critics also recognize that it is not possible to test all the hypotheses of a theory (Nienhüser, 2008). Another criticism of the theory is that the theory cannot be used for testable empirical research, and Casciaro and Piskorski (2005) advocate for a theoretical modification. Their criticism hinges on the fact that the theory has many ambiguities concerning constrained absorption (Casciaro & Piskorski, 2005). The critics explain that the relationship between the rationale behind the management of organizations is not clear and nor their capability to do so, and those perceptions are often confused with predictions (Casciaro & Piskorski, 2005).

Moreover, resource dependence theory concentrates more on narrative analysis with the focus on the interpretation of past research findings (Davis & Cobb, 2010). Even though narrative analysis is critical for sense-making, integration, and agenda-setting tools, it is susceptible to misrepresentations of facts, which may lead to false interpretations (Drees & Heugens, 2013). This is so important because it takes account of the sampling error and does not give an inferential statistics-based combination of all available findings (Combs, Ketchen, Crook, & Roth, 2011).

Furthermore, concerning organization behaviour theory, Pfeffer and Salancik are extremely judgemental of it with its internal organizational focus on leadership and motivation, yet Pfeffer and Salancik do not provide a counter-argument of existing theories of internal organizational behaviour for they mostly overlook it. However, there are exceptions, such as their resource dependence theory of leadership (Donaldson, 1995). The overall judgment is exceedingly critical of the subject of organizational behaviour, but a theory that largely overlooks a lot of intra-organizational behaviour cannot be accepted as having provided any convincing counter-argument of organizational behaviour theory (Donaldson, 1995). Looking at structural, organizational theory again, the significance of Pfeffer and Salancik's thesis is only inadequate as there is little consideration of internal organization, and many parts of organizational structure are not addressed or treated in any depth, for example, span of control, vertical differentiation, project team, matrix structures, organic structures, internal coordination devices (Donaldson, 1995). Thus, the thesis of Pfeffer and Salancik mostly pays no attention

to many of the issues that have been part of organization theory, mainly structural contingency theory (Woodward, 1980).

According to Donaldson (1995), there are exceptions in that Pfeffer and Salancik argue that, contrary to the structural contingency theory of Blau (2017), size is not the reason for structural differentiation, which they argue comes up as a response to demands on the organization by different external stakeholders. Nevertheless, Pfeffer and Salancik (1978) do not deal with most of the structural issues of theories antecedent to organizational behaviour. In contrast, many of the problems which they explore are at the heart of strategy theory, for example, diversification, vertical integration, mergers, and joint ventures. Thus, the resource dependence theory is more a theory of corporate strategy than of organizational behaviour. The theory contributes more to corporate strategy and corporate policy than to organizational behaviour theory. This implies that the theory pays more attention to the strategic areas of management, namely creating an alliance, public relations, and lobbying the government. These are essential managerial responsibilities, but these duties are limited to upper-level executives, but the theory overlooks operational administrators as a crucial part of the organization (Donaldson, 1995). These criticisms affect this study by making it impossible to explain the micro-level behaviour towards influencing changes in student access under public funding fluctuations.

3.3 Conclusion

In this chapter, resource dependence theory has been explored to explain changes in public funding and student access. I argue that resource dependence theory provides useful thinking tools that enable me to analyse the changes in public funding and student access, factors influencing variations in public funding, and responses of the two universities towards influencing student access. I take particular interest in public funding, as I intend to examine how the fluctuations in public funding affect variations in student access. I first discuss the fundamental principles of resource dependence theory in the broader context of higher education as a means to locate the concepts I use in the study in an articulated and systematic framework. I then discuss the theory's principles with the factors driving the changes in the study's constructs in the contexts of the University of the Western Cape and the University of Ghana. Finally, a detailed description of the criticisms of the theory has been given. The next chapter provides a concise account of how data for this research was gathered.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

The focus of this chapter is on a description of the methodology used in collecting data for the research. Broadly, this chapter discusses the research design and rationale for the methods used. It also describes the sampling criteria and selection of research sites. Furthermore, the various instruments and techniques employed in the collection of data are discussed. The study's credibility, transferability, confirmability, dependability, and ethical considerations that were given to its conduct are also addressed to pave the way for data presentation and analysis in the following chapters. Finally, I discuss issues related to data analysis and share some of my fieldwork experiences.

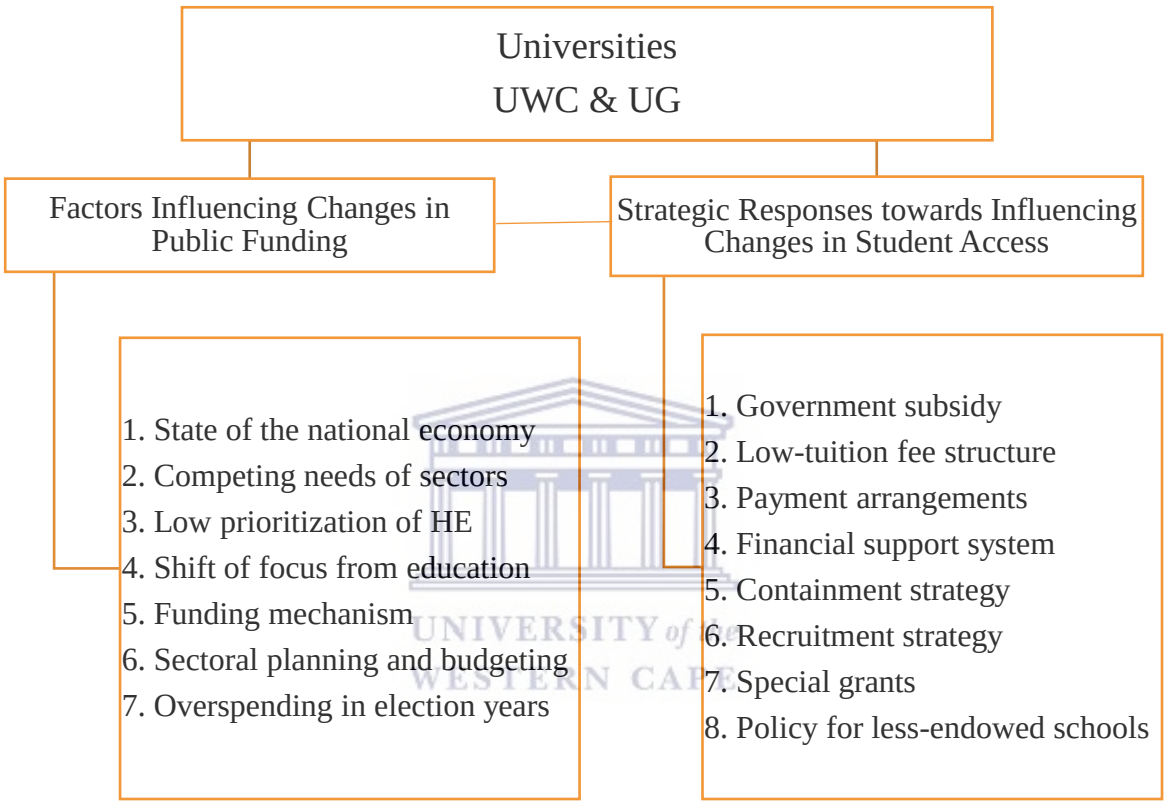
4.2 Research Design

The research design of this study sets out to examine variables in a cross-institutional layer. I adopt a multifaceted research design to construct factors that shape changes in public funding and to come out with strategic responses by UWC and UG towards influencing variations in student access. There are mainly three purposes one can pursue in social research: First, explore an issue; secondly, describe a reality; and thirdly, explain a social phenomenon (Babbie & Mouton, 2001). Each of these objectives may lead to different effects for the research design, but they can also be fused to attain one primary objective (Langa, 2010).

In this sense, I pursue more than one objective. I set out to explore, describe, and explain the changes in public funding and student access, factors responsible for the changes in public funding and institutional responses towards influencing student access. The study thus constitutes a research design to provide a basic understanding of the relationship between changes in public funding and student access. I seek to provide an account of the inclinations and indicate possible changes in the observed variables. The objective is to come out with public funding rates and relate these rates with student access rates to establish the relationship between them.

There are two comparative levels of observation in this study, namely the cross-national, and cross-institutional (see figure 2 below). In the next section, I explain the reasons for selecting Ghana and South Africa, and the University of the Western Cape and the University of Ghana.

Figure 2: Model of Analysis



4.2.1 Cross-National Comparison

In this study, I examine two universities located in two different African countries, namely South Africa and Ghana. The reasons for selecting these two countries are provided below. According to Hantrais and Mangen (1996:2):

> *A study can be regarded as cross-national and comparative if one or more units in two or more societies, cultures, or countries are compared in respect of the same concepts and concerning the systematic analysis of phenomena, usually with the intention of explaining them. The expectation is that the researchers gather data about the object of the study within different contexts and, by making comparisons, gain a greater awareness and a deeper understanding of [the phenomena being studied]*.

The two countries were selected based on their geographical location. For example, South Africa and Ghana are sub-Saharan African countries. Bray and Koo (2005) have also observed that countries can be compared using geographical location based on colonial history, economic ties, and epistemic culture.

Another reason for selecting the two countries is that, in Africa, one does not find fairly well functioning multi-party democratic systems where the government could be said to be responsible to the electorate, but South Africa and Ghana seem to belong to the same group of reasonably well functioning multi-party democratic systems. Even though in South Africa one party has dominated the political landscape since the end of apartheid, the political stability and the fairness of elections should not be underestimated.

Moreover, countries can be compared using policies (Manzon, 2014). To this end, the recent development of funding and access policy frameworks and programme initiatives in the two countries show a clear focus on the interconnectedness between funding and student access as well as the two countries' development agenda. The two countries exhibit remarkable but varying levels of policy frameworks and governance arrangements for the management of their national and institutional funding and student access regimes. South Africa represents a more elaborate and dynamic funding landscape and student access architecture than Ghana. Still, all two countries exhibit a clear-cut emphasis on implementing more effective national and institutional policies to improve student access. Moreover, higher education institutions across the two countries remain well integrated into mainstream funding and student access initiatives at the national development policy level.

Furthermore, funding for higher education institutions mostly comes from the government in both countries. For example, in South Africa, income sources of public higher education institutions as of 2015 are as follows: government subvention 39 percent, student fees 33 percent, and third stream income 28 percent (Council on Higher Education, 2016b). Similarly, in Ghana the primary sources of income for higher education institutions as of 2015 include

government subvention 47 percent, student fees 39 percent, third stream income 14 percent (Council on Higher Education, 2016b). Additionally, the two countries have reduced government subventions to their higher education sectors. For instance, in South Africa, as a proportion of GDP, public expenditure on higher education has declined from 0.82 percent in 1996 (Wangenge-Ouma & Cloete, 2008) to just 0.72 percent in 2016 (Council on Higher Education, 2016b). In Ghana, the analysis of Newman and Duwiejua (2015) shows that the higher education funding gap ranges from 37.9 percent to 41 percent.

Nevertheless, the changes in policy direction are different in terms of the magnitude of the shift, timing, and actors. The difference is that, for South African universities, the decline in public funding is caused by "self-imposed restrictions on spending" (Tikly, 2001:165), and in part this is due to the country's adoption of neoliberal policies soon after the dawn of democracy. This led to the commoditization and privatization of education, operating through the marginalizing dynamics of the free market (Maringira & Gukurume, 2017). For Ghana, it is as a result of a weak economy, and implementation of the World Bank and IMF imposed structural adjustment programmes (Manuh, Gariba, & Budu, 2007).

It is instructive to note that, according to Rui (2014), policies and practices can be used to compare countries, especially when they relate to the subject matter. In this regard, both South Africa and Ghana have established national financial aid systems to support students who cannot afford the cost of university education. For instance, in 1999 South Africa established the National Student Financial Aid Scheme (NSFAS) to give scholarships and loans to students from a low-economic background (Government of South Africa, 1999). In the same vein, Ghana also established the Ghana Education Trust Fund (GETFund) in 2000 with the mandate of providing financial resources for the development of infrastructure in public educational institutions, mainly in higher education institutions, and also to give financial assistance to brilliant but needy students in the form of scholarships and loans (Government of Ghana, 2000). With these schemes it can be deduced that both countries recognize the importance of higher education development and, therefore, injecting financial resources into the sector with the main aim of increasing student access.

Concerning higher education participation rate, both countries' rates are higher than the African average. For instance, whereas Africa averages 6 percent higher education participation rate (Africa-America Institute, 2015), the higher education participation rate of South Africa is 22.37 percent (Times Higher Education, 2019f), and that of Ghana is 15.69 percent (Times

Higher Education, 2019d). Therefore, the two countries offer suitable contexts against which to compare factors influencing changes in public funding and strategic responses towards influencing changes in student access by the two public universities.

The major difference between South Africa and Ghana is the economic contexts of both countries within which the two universities operate. South Africa has an extremely developed economy and advanced economic infrastructure, making the country the leading African economy and home to 75 percent of the largest African companies (Export Enterprises South Africa, 2020). The same cannot be said of Ghana as the country has been viewed as one of Africa's political and economic success stories, for upholding a multi-party democracy, peace, social cohesion and growing its middle class (Resnick, Diao, Hazell, & Kolavalli, 2019). Yet, despite 30 years of continuous growth in per capita income and rapid urbanization, the country has not been able to industrialize, and most of the population is involved in traditional agriculture (Resnick et al., 2019). As it has been argued, state funding of public universities is a function of the economic environment of countries, and any changes in the economy may affect government allocations to the universities (Brown & Gamber, 2002; Duderstadt & Womack, 2003). This implies that Ghana's public universities, it may be argued, are more disadvantaged than South African public universities with regards to allocation of public funding, mainly because of the deprived economic context in which they operate. Therefore, South African public universities may be able to enrol more students than their Ghanaian counterparts. In the next section, I will look at the level of cross-institutional comparison, which forms the basic unit of analysis in the research.

4.2.2 Cross-Institutional Comparison

Since the study focuses on the relationship between changes in public funding and student access in two countries, cases from the two countries needed to be selected. Glesne (2011) is of the view that the number of cases for a study depends on the research objectives and what the researcher wants to achieve. There are nine public universities in Ghana and twenty-six public universities in South Africa. Choosing all the universities is impossible because of the time limit and financial resources. As noted by Patton (2017:228):

> *No rule of thumb exists to tell a researcher precisely how to focus on a study. The extent to which a research or evaluation study is broad or narrow depends on the purpose, the resources available, and the interests of those involved.*

In this sense, I restricted the study to the two public universities, namely the University of the Western Cape (South Africa) and the University of Ghana (Ghana). They were purposively selected. The choice of the chosen cases was not informed by an arbitrary decision but was guided by sound theoretical arguments. The first had to do with public funding to the two universities. State subsidies for both universities fall short of their budget. For instance, the state subsidy contributes 43 percent to the University of Ghana's budget (University of Ghana, 2017b), while at the University of the Western Cape, the state subsidy represents 48 percent of the university's budget (University of the Western Cape, 2018), implying different levels of changes in public funding to the two institutions, which have different implications for student access.

As claimed by Manzon (2014), curricula can be used to compare institutions. This observation applies to both institutions as they run similar academic programmes. For example, the two universities offer both undergraduate and postgraduate programmes (University of Ghana, 2016; University of the Western Cape, 2016b). The two universities have almost the same numbers of student enrolment and in terms of student body composition. Undergraduate programmes record higher enrolment figures than postgraduate programmes. For instance, in the 2013 academic year, the total student enrolment of the University of the Western Cape was 20 382, out of which 15 979 were made up of undergraduate students (Department of Higher Education and Training, 2015). Out of 26 633 total number of students in the 2013 academic year of the University of Ghana, 23 221 constituted undergraduate students and 3 412 were comprised of postgraduate students (National Council for Tertiary Education, 2014a). Both UWC and UG show similar patterns in terms of student enrolment growth. Student enrolment increased from 2007 to 2016 with an aggregate rate of 40 percent at UWC and 33 percent at UG (see table 2, page 88 and table 3, page 90, respectively). The average annual growth rate from 2007 to 2016 was 3.98 percent for student enrolment at UWC; UG's average annual growth rate for student enrolment amounted to 3.31 percent (see figure 3, page 89 and figure 4, page 91 respectively).

In terms of the length of programmes or timing of certification (Bray & Kai, 2014), both institutions offer four-year bachelor's degrees, one year Master of Arts (MA) degree, and two years Master of Philosophy (Mphil) degree. The difference is that, whereas it takes a minimum of three years to complete a Ph.D. degree at the University of the Western Cape, it takes four years as a minimum to complete the same degree at the University of Ghana (Department of Higher Education and Training, 2015; National Council for Tertiary Education, 2014a).

I could also have selected any of the universities in both countries, be it public or private, but I was searching for universities which stood for a particular history and mission. In that sense, the decision to select the University of Ghana was informed by the fact that it was the first university to be established in 1948. Even before Ghana attained independence, the university's mandate was to assist in the development process of the country (Bailey, Cloete, & Pillay, 2011). Even though the university has undergone significant changes over the years, its mission remains training human resources for the development of the country (University of Ghana, 2014). The University of the Western Cape is also considered as one of the institutions spearheading community development (Cooper & Subotzky, 2001).

The universities were also selected not only for the suitability of answering the research questions but also because of my familiarity and knowledge about the two institutions (alumnus of the University of Ghana and a student of the University of the Western Cape). My familiarity with the environments gave me access to the research sites and quickened the data collection process because the networks were already there as well as good relationships with the participants (Martinus & Hedgcock, 2015). Therefore, the rapport between the researcher and the participants was critical in gathering data for this study (Charmaz, 2000).

On the other hand, the major difference between the University of the Western Cape and the University of Ghana is the economic contexts within which the two universities are located. South Africa has an extremely developed economy and advanced economic infrastructure (Export Enterprises South Africa, 2020). The same cannot be said of Ghana as the country has not been able to industrialize, and most of the population is involved in traditional agriculture (Resnick et al., 2019). Therefore, the data used in this research show institutional variations in the fiscal strength of the two universities, especially as far as state funding is concerned. The variations in state funding are less pronounced at UWC as compared to UG. Across the two universities, UWC was more resourced than UG. Between 2007 and 2016, the quantum of state funding that was earned by UWC was almost twice of the government funding earned by UG (see tables 2 and 3, and pages 88 and 90).

In conclusion, this study compares two public universities in two African countries with the legacy of different histories of higher education systems inherited from their colonial masters. These countries have had the experience of social transformations and challenges, which inevitably have influenced the universities' funding and student access policies.

4.2.2.1 University of the Western Cape

In 1959, Parliament passed legislation creating the University College of the Western Cape as a college of the University of South Africa. The first group of 166 students enrolled in 1960 (University of the Western Cape, 2019d). In 1970, the University of the Western Cape gained university status and was allowed to award its degrees and diplomas (University of the Western Cape, 2019d). The University of the Western Cape has seven faculties. The faculties include Community and Health Sciences, Natural Sciences, Economics and Management Sciences, Education, Law, Dentistry, and Arts (University of the Western Cape, 2019d). The university has twelve centres. The centres include Centre for Adult and Continuing Education, Centre for Higher Studies in Higher Education, Centre for Humanities Research, Centre for Multilingualism and Diversities Research, Law Clinic, SARCHI Chair (AstroPhysics), Science Learning Centre for Africa, Social Law Project, South African-German Centre for Transnational Criminal Justice, the African Centre for Citizenship and Democracy, the Centre of Excellence in Food Security, and the UNESCO Chair (Hydrogeology). The university has seven schools. The schools are the School of Pharmacy, School of Business and Finance, School of Government, School of Natural Medicine, School of Nursing, School of Public Health, School of Science & Mathematics Education (University of the Western Cape, 2019d). The university has forty-seven academic departments (University of the Western Cape, 2019d).

4.2.2.2 University of Ghana

The University of Ghana was initially established by an ordinance on August 11, 1948, as the University College of Gold Coast and was affiliated to the University of London (University of Ghana, 2019). On August 22, 1961, an Act of Parliament (Act 79) was passed to allow the university to become a fully-fledged university, resulting in the name of the university changing from University College of Gold Coast to the University of Ghana (University of Ghana, 2019). The University of Ghana has five faculties. The faculties are Agriculture, Arts, Law, Science, and Social Studies. The university has three schools: the School of Business Administration, School for Medicine and Journalism/Communications, and a College of Health Sciences. The university has three institutes. The institutes are the Institute of African Studies, the Institute for Adult Education, and an Institute for Statistics, Social and Economic Research, and the university also has about forty-five academic departments (University of Ghana, 2019).

4.3 Selection of Participants

In this study, I sought to obtain more in-depth insights into university leaders, government officials, and students' higher education funding and student access experiences and perspectives about changes in public funding, and factors shaping the changes and strategic responses of the two universities towards influencing student access. This led me to purposively select these respondents for this study. Guba and Lincoln (1981:276) argue:

> *Sampling is almost never representative or random but purposive, intended to exploit competing views and fresh perspectives as fully as possible. Sampling stops when information becomes redundant rather than when subjects are representatively sampled.*

In this vein, the purpose of the study was not to generalize but rather to describe the relationship between changes in public funding and student access. Given this, I purposefully selected a group of people who have knowledge (Bryman, 2016) about higher education funding and student access. Initial respondents were asked to suggest the names of other participants involved in the topic of the study, and general networking through personal contacts expanded the sample from the first estimated number of fourteen interviewees to twenty-two respondents.

The twenty-two participants, who were comprised of university leaders, government officials, heads of agencies, and student representative council presidents, were selected because of their involvement in the institutions' funding policymaking and implementation. These were the most appropriate people to be interviewed because of their first-hand knowledge of the formulation and implementation of higher education funding and student access policies. Relatedly, the respondents were selected based on their closeness to the topics of the study and their levels of experience in higher education funding and student access issues.

In all, participants for the study were from the following institutions - eight from the University of Ghana, Accra, Ghana; ten from University of the Western Cape, Cape Town, South Africa; two from the National Council for Tertiary Education (NCTE), Accra, Ghana; and two from the Department of Higher Education and Training (DHET), Pretoria, South Africa.

4.4 Data Collection

Having given a broad methodological account, I now turn to the description of specific methods of data collection. These methods were derived from a qualitative approach. The use of these multiple methods of data collection is imperative for obtaining an in-depth understanding of the study's concern. According to Marshall and Rossman (2016), there are four main methods of gathering data in qualitative research. These are participation in the setting, direct observation, in-depth interviewing, and reviewing of documents. To that effect, a combination of in-depth interviews and document reviews was undertaken at the University of the Western Cape, the University of Ghana, the Department of Higher Education and Training, and the National Council for Tertiary Education. The interviews were face-to-face and constituted one of the most important and valuable sources of information for this study. Inspiration for using these methods was gathered from Atuahene (2006), Cele (2014) and Wangenge-Ouma (2007) who had earlier used the same methods to collect data for similar studies. These methods of data collection were adopted because of the nature of the data to be collected, the kind of research questions, scope of the study and ways of triangulating the data to increase the trustworthiness of the study. The next sections provide detailed accounts of the research methods used and justification for my choice of using them.

4.4.1 Document Review

Document analysis entails data or information previously gathered by others, such as researchers, institutions, and agencies. This approach is essential to follow and understand past events in which the actors may no longer be available or accessible. In addition, document analysis helped me to trace student enrolment and graduation trends, drivers, and assumptions behind higher education funding and student access in South Africa and Ghana. The review of documents covered a wide range of topics, including the cost of accessing university education, organizational behaviour, reform aims, funding challenges, financial sustainability, factors affecting public funding, and key actors involved in higher education funding and student access.

Additional data were provided by relevant university and government documents. A study of materials in the various universities and government agencies in South Africa and Ghana from 2017 gave me some idea of the scope of my research. These documents gave me some statistical information about higher education funding and student access in both countries.

Official government reports from both countries related to higher education funding played a crucial role in my decision to choose that area of study. These documents were collected from the universities, the National Council for Tertiary Education, and the Department of Higher Education and Training's website. Below is an outline showing the key documents analysed and the kind of information obtained from the documents.

Both annual reports and strategic plans of the universities were consulted during my preparation to go to the field as well as when analysing the field data. By law, all public universities in South Africa and Ghana are obliged to prepare and submit annual reports to their Ministries of Education detailing the financial position of the university at the end of any fiscal year. Through the yearly reports, the universities are supposed to give an accurate and fair assessment of the university's finances reporting on a surplus or deficit for that fiscal year. In addition, the annual reports showed the enrolment and graduation targets and actuals of the universities. Strategic plans are prepared by individual universities, which outline the development and strategies to be pursued by the universities over a period. The universities' strategic plans were developed to evaluate their contribution towards national development over a period and the programmes for the future in the context of their current socio-economic conditions. The review of the strategic plans was to analyse the universities' intake goals over a period. The national annual budget statements from 2007 to 2016 were of great help to this study.

The budget statements provided a summary and analysis of revenue and expenditure of the countries and revenue allocations to the various sectors of the economy, including higher education sectors. It showed how much has been allocated to the sectors in monetary, nominal, and real terms. It enables one to argue for or against the declining public funding. The budget reports of the National Council for Tertiary Education were also of great help in terms of the evidence to the effect that government allocations to the universities have been declining over the years in Ghana. The Council prepares the budget reports annually. They provide statistical analysis of important areas of economic and financial activities of the universities in Ghana. In South Africa, the Ministerial Statement on University Funding-2015/16 and 2016/17 gave me a fair idea of the cost per student in a year and the total cost of attending a university for the entire duration of a course. This report explains the funding formula and how the allocations to the universities are done. The Ministerial Statement on student enrolment planning 2014/2015 to 2019/2020 for universities shows national enrolment targets and institutional

enrolment targets. It further highlights the challenges facing public universities in their quest to increase student access.

These documents informed me about the decisions of the universities in terms of funding and student access and helped me uncover the implementation of funding and student access policies. Moreover, document reviews helped me to cross-check official information, review significant issues and technical details, historical events, decisions, and primary stakeholders and their responsibilities. They also helped in exploring particular answers during interviews (Atchison et al., 2017) and in using the principles of resource dependence theory, which states that organizations depend on other organizations. It also says that uncertainties drive resources and that there is a constraint on resources. I examined the documents to see what kind of uncertainties in funding the universities recorded in their documents. I also looked at how they were adapting and responding to the inadequate financial resources towards increasing student access. Finally, I examined documents to analyse the enrolment trends from 2007 to 2016.

4.4.2 Interview Process

Interviews as a method of data collection technique are utilized to collect qualitative data by arranging a scenario that allows participants the time and space to discuss their experiences on a phenomenon and are useful because human matters need to be reported and interpreted through the eyes of the participants (Yin, 2018). I decided to undertake interviews because I was looking for people who had in-depth knowledge about higher education funding and student access and who could give rich and detailed answers to the research questions (Bryman, 2016). Moreover, I chose interviews because "it is the best way to get into the lived experience of a person who has experienced an important issue (higher education funding and student access) to enable the person to narrate that experience" (Nunkoosing, 2005:699). Therefore, carrying out interviews was the best strategy for collecting the type of data needed to answer the research questions. I conducted interviews with twenty-two participants; therefore, I was in a position to reflect on my experiences in a study of this kind.

I designed interview questions (see appendix 1) in line with research questions and objectives, and this was to make sure that during the analysis of the interviews the cases could be compared. Participants were carefully and specifically selected based on their knowledge about funding and student access in each university. As such, university leaders, government officials, and student leaders who were involved in funding and student access were chosen.

Face-to-face in-depth interviews were adopted as the most suitable data collection tool to gather quality data given the nature of information being sought.

In-depth interviews were also to elicit perspectives of the university leaders, government officials, and student leaders on the subject matter. Shanahan and Gerber (2004) note that an individual's social experiences can be examined through in-depth interviews. To understand the behaviour of institutions within the context of changes in public funding and student access required listening to and probing their strategies. Through in-depth interviews, university leaders, government officials, and student leaders shared their ideas that answered the research questions. There are no specific standards for conducting in-depth interviews (Lincoln & Guba, 1985). I was cautious about the limitations of using an interview to gather data. As a result, I augmented the data derived from interviews with that obtained from documents (Van Dooren, 2006). In this case, I tried to confirm information from more than one source.

The interviews began as soon as "saturated" documentary data had been collected (Babbie & Mouton, 2010). The interviews were used to authenticate the data generated by documentary sources and used to address issues and gaps emerging from documentary sources. All interviews were conducted using an interview guide that outlined vital issues to be addressed in the study. Questions that arose from the interviewees' responses were probed further to get clarity on some of the issues. In other words, it was in a conversation form, and this offered me an opportunity to clarify some of the questions and critical issues that were not clearly understood by the respondents.

Additionally, in-depth interviews allowed me as a researcher to conduct cross-checking and follow-ups with the respondents to seek further explanation of the issues after reading through the transcribed notes. Through cross-checking, inconsistencies in the participants' answers were corrected. Loiselle, Profetto-McGrath, Polit, and Beck (2010:269) argue:

> *Member checks involve soliciting study participants' reactions to preliminary findings and interpretations. Member checking can be carried out both informally in an ongoing way as data are being collected and more formally after data have been collected and analysed.*

This assisted the collection of detailed data and strengthened the quality of research findings. The interviewees were put at ease by assuring them that their answers would be kept confidential. I asked their permission to record their answers, and they accepted my request. All the interviews were then recorded using a tape-recorder to get accurate responses from the

respondents (Lincoln & Guba, 1990). The interviews were conducted on different days and in the participants' offices because conducting interviews in their offices was conducive for them. The interviews were mostly at lunch hour time in order not to disrupt their activities for the day. All the interviews were open-ended to allow time for comments and further probing by the interviewer in both countries. The interviews were conducted in English because the medium was suitable for the interviewer and interviewees. All the interviewees were well prepared and had comprehensively read the interview questions and come with supporting documents which were given to me after the interview. I led the interviews asking key and follow-up questions. For example, I asked respondents to discuss the factors influencing changes in public funding and their implications for student access. This helped respondents to provide answers in a detailed manner. My interviews lasted between thirty to forty-five minutes. This time frame was deemed appropriate to get relevant data.

The closure of the interviews was as necessary as the start. I allowed all respondents to recap some significant aspects of their responses. For example, I narrated to the respondents the answers they indicated were responses towards influencing changes in student access. Through this process, inconsistencies in their responses were rectified. Almost all the interviews ended with statements and questions like "I have no more questions, is there anything else you would like to add? Do you have anything you would like to say? Thank you very much for taking the time out of your busy schedule to have a conversation with me today. I appreciate it a lot. Kindly contact me if you think of anything else you would like to share with me." This allowed each participant to have the opportunity to share any further experiences, which, as opined by Patton (2017), is a handy tool. At the end of every interview, I thanked respondents for their participation.

4.4.3 Data Collection Procedure

Before commencing the data collection process, ethics approval was obtained from the Humanities and Social Sciences Research Ethics Committee of the University of the Western Cape (see appendix 3) and the ethics committees of other institutions selected for this study. Applying and obtaining ethics approval was beneficial because the process helped me to be cautious about ethical issues at the early stage of my research. Furthermore, the ethics committees' approval was given based on the documents that I provided. The materials included my research proposal, consent form, participant information sheet, interview guide questions, and letter to participants. The ethics committees made many suggestions, especially

concerning the research proposal. This helped me to refine and refocus the project. Once permission to undertake the study had been granted by the Humanities and Social Sciences Research Ethics Committee of the University of the Western Cape, applications to conduct research at the University of Ghana, Department of Higher Education and Training, and National Council for Tertiary Education were made and subsequently approved by the relevant authorities of the institutions.

In this study, access to the public universities in South Africa and Ghana was not taken for granted. I began by searching for individuals who could provide me with ready access and who could assist me in the data collection process. Lincoln and Guba (1985) argue that both the formal and informal gatekeepers before giving access would like to be told about the nature and the purpose of the proposed research to enable them to evaluate costs and risks associated with the study. In this regard, I contacted and provided introductory letters to the university leaders, officials of the Department of Higher Education and Training (DHET) of South Africa, officials of the National Council for Tertiary Education (NCTE) of Ghana, and Student Representative Council Presidents of both universities. The letter spelled out the nature of the study, the purpose of the study, and the envisaged timeframe for data collection. This strategy contextualized the research for the participants.

Gaining entry into the University of Ghana was very slow. I had to be cleared by their ethics committee, which took about a month and 500 dollars of ethics fees, which were challenging. Securing access to the study sites was considered an ongoing activity. I did not discontinue the process when I gained permission to interview the respondents. I explained to the participants the potential findings of the study being useful for policymakers, planners, and academics. This communication deepened the trust between participants and me. Following the granting of permission to conduct research, data collection at the institutions started. The Pro-Vice-Chancellor: Office of Research, Innovation, and Development of the University of Ghana sent me an email requesting that I should send him an introductory letter and interview guide. I adhered to these requests and gained permission, but he later declined to participate. I tried to persuade him to take part but to no avail.

The Documentation and Information Unit of the University of Ghana, Management Information System Unit of the University of the Western Cape and Documentation Department of National Council for Tertiary Education provided useful documents covering student enrolment from 2007 to 2016, higher education financing, financial statements, annual

plans, strategic plans, and budget reports. Most of the documentary data relating to the funding allocation formula and Ministerial Statements on enrolment planning of South African universities were obtained from the Department of Higher Education and Training website.

Deputy Vice-Chancellor Research and Innovation of the University of the Western Cape declined to participate. I tried through emails to get her to participate, but this proved futile. The university administrators, officials of the Department of Higher Education and Training, officials of the National Council for Tertiary Education and Presidents of Student Representative Councils who agreed to be interviewed requested to know what the interview would cover. I sent them a sample of the interview guide through email. The Deputy Director of Finance of the University of Ghana, who agreed to be interviewed further requested my student identity card as a condition for the interview. This was done, and access was granted immediately. Thus, interviews were conducted with twenty-two participants in the two countries.

4.5 Ethical Considerations

I complied with ethical principles, which aimed to protect the dignity and privacy of all participants who took part in the study. The participants were requested to provide information about their experiences on factors influencing public funding, funding challenges, and factors influencing changes in student access.

When the University of the Western Cape approved my ethics, the gatekeepers of the institutions chosen were written to, to seek their written consent for collection of documents needed for this study and the conduct of interviews (Creswell & Creswell, 2017). They were made aware of the nature and purpose of the study, the risk, and benefits associated with it and were informed that participation was voluntary, and participants had the right to withdraw from this research at any time. In addition, they were made aware of the methods that would be used to collect the data, and how the confidentiality and anonymity of the data would be guaranteed (Creswell & Creswell, 2017). For example, they were informed that data acquired from the field would be treated in a way that protects the confidentiality and anonymity of the participants. I told the respondents that the recording tapes used in the interviews would be destroyed on completion of the study. Codes would be assigned to participants to protect their identification in the research report or any other subsequent publications from this study. Records of the project would be stored on my computer protected by a password. Moreover, the data collected would be archived on compact discs and securely stored for five years as

prescribed by the University of the Western Cape regulations. Only the author and the thesis supervisor would have access to the research records as well as the participants or their representatives.

4.6 Trustworthiness of the Study

I adopted resource dependence theory through qualitative methodology using interviews and document reviews to illuminate university leaders, government officials, and students' views on the factors responsible for the changes in public funding, and responses towards influencing changes in student access. As argued by Morse, Barrett, Mayan, Olson, and Spiers (2002) validity and reliability are concepts used to describe trustworthiness in the quantitative methodology tradition whereas credibility, transferability, confirmability, and dependability are used in the qualitative methodology tradition (Graneheim & Lundman, 2004; Lincoln & Guba, 1985). To this end, the study adopted credibility, transferability, confirmability, and dependability to enhance the trustworthiness of the study (Lincoln & Guba, 1985), which are discussed in the next section.

4.6.1 Credibility

In qualitative research, credibility means crosschecking findings and explanations of the different participants from whom the data was gathered and making sure that the information presented is trustworthy (Lincoln & Guba, 1985). In testing credibility, I crosschecked information collected from respondents with existing knowledge and the opposing perspectives of the interviewees and corrected inconsistencies that emerged from the data. In this particular instance, I asked the respondents questions relating to the themes of the interview to confirm the accuracy or inaccuracy of the responses they provided. In addition, follow up interviews, although not with all the participants, were undertaken which were intended to verify and check the consistency and accuracy of the information and to avoid misinterpretation of the responses to the questions. The participants were allowed to reread the transcripts of their interviews to authenticate them.

Moreover, to establish the reliability and credibility of documents, only government and official university documents were used. For example, concerning the financial statements, only the audited accounts of the universities were used. In some cases, these financial statements had gone through internal and external auditing processes, which generally served as primary sources of data. Furthermore, the use of document reviews and interviews ensured

the credibility of the data. They were used to construct logical justifications for emerging themes. After coming out with initial themes and categories, I looked for evidence consistent or inconsistent with these themes to confirm or disconfirm evidence. The document reviews were augmented by the answers by the respondents. Conclusions were drawn on both data sources, and this enhanced the credibility of the findings. Written studies on higher education funding and student access were also reviewed. This review of written studies ensured that the research was placed in the existing body of knowledge (Shenton, 2004).

4.6.2 Transferability

Concerning transferability, though this research does not give a generalization of the strategic responses towards influencing student access by the two public universities, the principles of the theory and the procedures used in collecting data can be replicated in other settings. The application of resource dependence theory and the interviews and document reviews in different environments and contexts help address matters of transferability. I gave accurate, thorough, and comprehensive descriptions of the study's objectives to help subsequent researchers of the same studies. Detailed descriptions of the study's settings and background characteristics were also provided for reference by researchers and scholars to help them to generalize the findings to their own contexts.

The aim of a qualitative study, as already stated, is not to generalize research findings. However, looking at the multiple and different perspectives obtained from respondents and documents in this research, there is a propensity to believe that the results of this study could be used in a different context. To meet this requirement of the study, I made use of diverse literature on higher education funding and student access in South Africa and Ghana. For these two countries, the study has spelled out the similarities and differences in cultural diversity, which give room for the applicability of the research in other countries. Directed by the concept of "thick description" introduced initially by Geertz (1973), the study covered system and institutional levels to gather comprehensive information about higher education funding and student access. As a result, I interviewed government officials, university leaders, and student leadership to cover all spectrums of higher education funding and student access. Demographics, the cultural context, norms and values, deep-seated attitudes, and motives were all examined to get the required, essential, and quality data. Supporting the above point are Lincoln and Guba (1985). They opine that the answer to transferability issues is a vivid account of the particular setting and context, conditions, subjects, and the procedures of the study. This

study combines multiple perspectives and experiences from the participants in the data analysis. Moreover, by using different data collection procedures such as interviews and document reviews in conducting this study, the level of transferability and the strength of the research increased.

4.6.3 Confirmability

Confirmability may be defined as the extent to which others can authenticate the findings of this research. Confirmability, according to Creswell and Creswell (2017), entails the application of different methods or approaches in research in such a way that conclusions confirm one another, meaning trustworthiness in qualitative research would be realized when the same data from one source validates data from another source. Maintaining confirmability is central in a research project like this study, where my subjectivities are part of the process. To avoid these subjectivities, this research used different measures to ensure the confirmability of the study. For example, data, concepts, and themes that became known from the analysis of one higher education funding and student access policy document were validated by another higher education funding and student access policy document within the same country. Additionally, all the conclusions of the findings are based on the data generated for the research.

Furthermore, data sources and interpretation of the findings of this research are available for an audit trail (Ary, Jacobs, Sorensen, & Walker, 2014; Marshall & Rossman, 2016). For example, data, including documents, audio recordings, field notes, and transcripts are available for any audit. Moreover, to make sure that the findings of the study are confirmable, I maintained a substantial level of accuracy in records and documents. I also tried to emphasise "diligence" in obtaining data from the respondents of the study. According to Rubin and Rubin (2005:70), diligence means "investigating all the relevant options with care and completeness, checking out facts and tracking down discrepancies". To maintain some level of accuracy, I avoided distortion of interviews by consistently asking the participants the same questions, refraining from replacing my own opinions and experiences, views, and perspectives with those of the participants. Lastly, using member checking and triangulation offered a practical approach to confirming the findings of the study.

4.6.4 Dependability

Dependability refers to the fact that the world is dynamic and that research findings must take into consideration changes in setting and how these variations influence the conduct of the study (Lincoln & Guba, 1985). Therefore, interpretations of research findings must be understood within the context of a specific setting. In this sense, the data of this study was thoroughly examined. For instance, measures such as triangulation, audit trail, and replication logic were adopted to instil certainty in the study's findings. There is a provision of methodological design, data collection procedures, and activities that took place in the field while collecting data, all of which are reported in the study. Furthermore, the ethics certificate, consent and complaint forms, interview guide, audio recordings of interviews, participant information sheet, invitation letters to respondents, transcripts, and letters of acceptance are systematically arranged and documented in the study. Lastly, I applied replication logic to ensure that the findings of the study are dependable. For instance, I tried to establish from the data the university leaders, student leaders, and government officials' perspectives on higher education funding, including tuition fees, scholarships, government appropriations, student loans, donations, and direct support to students from family members. This finding was consistent amongst all the respondents. This is supported by Ary et al. (2014:537), who argue that:

> *Replication logic…. is suggested for determining the dependability of a study. According to his logic, the more often a conclusion is found to be true with different sets of people or in different settings and periods, the more confident the researcher can be in conclusion.*

4.7 Data Analysis

Data analysis involves making sense and meaning out of the raw data that has been gathered. It is about scrutinizing, creating themes, laying out, or recombining the evidence to answer the research questions of the study (Yin, 2018). Data analysis began immediately by writing down general themes and categories and possible interpretations. The analysis of this study involved three main processes, namely familiarising and organizing data, coding and reducing data and interpreting and representing data (Ary et al., 2014). Data analysis also involves making theoretical categorizations of the evidence based on the theoretical framework applied to develop evidence for confirming or disapproving the research claim. The data analysis of this study was designed to elucidate the comparison of evidence from two case studies and how

these cases exhibit similar or dissimilar conditions with regard to the changes in public funding and student access.

To familiarise myself with and organize the data, I played the audio recordings and carefully listened to the recorded interviews many times. The idea was to immerse myself in the data before engaging the data through coding. This gave me a fair idea of the information collected. Before any coding process took place, the interviews were transcribed verbatim to allow the respondents to provide comments about their observation of the transcripts before the transcripts could be utilized for rigorous analysis to begin. Transcription meant that I converted the face-to-face interviews gathered from the field into written words. The interview transcripts were bulky in size. There were about five hundred and fifty pages generated from twenty-two interviews. I decided to undertake restructuring and clarification of the interview data (Marshall & Rossman, 2016). This meant the removal of unwanted materials. In this direction, all the interview materials were not utilized during the analysis process because there were repeated materials, which were not relevant for analysis. A decision as to what was relevant was made based on the objective of the study. Moreover, I extracted the similar and different opinions, views, and perspectives expressed by the participants on the subject matter of the research.

The interview transcripts were reduced from their voluminous form using codes. I manually coded the data to make sense of the interviewees' natural settings from their perspectives. Categories were created from the transcripts. After carrying out the creation of categories, I distilled the data with the recognized themes relevant to the research questions. To identify themes, I looked for repeated phrases and patterns of assumptions that linked the respondents and documents together (Marshall & Rossman, 2016).

The themes around which data were organized and analysed included higher education, public funding, funding, student enrolment, student access, funding challenges, institutional responses towards influencing changes in access, and declining public funding. The next task was to interconnect these themes and knit them around the literature and the theoretical framework. This thematic technique helped me to compare different perspectives and experiences from the university leaders, government officials, and student leadership. Quotations were taken to illustrate the themes and categories. It is these quotations from different respondents that were placed under some themes and categories. The use of quotes was beneficial as it helped in supporting conflicting as well as contradictory evidence from university leaders on the one hand and the government officials on the other as well as student leadership on the factors

accounting for the changes in public funding and student access. This was followed by a clear and logical display of evidence enabling the same questions about higher education funding and student access to be answered, hence ascertaining similarities and differences regarding higher education funding and student access. At this stage, I made extrapolations by distinguishing systematic patterns and interrelationships to understand the study's objectives. A flow chart was created to outline major issues and supported with evidence from interviews and documents. Glaser and Strauss (2017) call this the "method of constant comparison", an academically disciplined process of comparing and contrasting relevant and significant issues to lay out meaningful patterns from the data.

The next step was interpreting and representing, which means to assign significance or coherent meaning to data (Neuman & Robson, 2017). I gave meaning to the data by rearranging, examining, and discussing data in a way that provided an accurate interpretation. In this sense, I explored relationships amongst categories and merged them into major themes, such as the relationship between changes in public funding and student access. I reflected on the documents and accounts of the interviewees and deduced understandings from them. I presented this from the data in a story form to communicate the participants' thoughts, feelings, and experiences on the subject matter. However, Hesse-Biber (2016) notes that deep engagement with the data by the researcher and the power differences between the researcher and the interviewees can influence the interpretation of the findings. Therefore, to reduce this bias, I carried out a deep reflection throughout the interpretation process to make sure that there were no misinterpretations of the meaning of the data. A full analysis of the study is presented in Chapter Five and Chapter Six. The analysis reflects changes in public funding and student access, factors that shape changes in public funding, and institutional responses towards influencing variations in student access at the two public universities.

I used the resource dependence theory to analyse the data to approve or disapprove the claims of the study. Through the theory, I was able to interpret the experiences and perspectives of the participants around the research questions. In this sense, I was able to interpret the reasons for the decrease or increase in public funding and student access based on the theory's principles. Furthermore, the study utilizes a qualitative methodology. However, a few statistical analysis was done to establish a statistical relationship between public funding and student access.

4.8 Fieldwork Challenges

I encountered many challenges during my fieldwork activities. I faced difficulties in gaining access to universities. I had to make several follow-ups (seven times in some cases) to the university leaders before an appointment could be made. Follow-ups were done by phone calls, sending of messages through email and visits. Eventually, some of the university leaders did not allow me to interview them. For example, Deputy Vice-Chancellor Research and Innovation of the University of the Western Cape declined to be interviewed as well as Pro-Vice-Chancellor: Office of Research Innovation and Development of the University of Ghana. Despite my consistent persuasion, they claimed to have limited time for interviews.

Some of the universities did not allow me to research their institutions. Initially, I planned to compare four universities - two from each country - the University of the Western Cape and the Cape Peninsula University of Technology from South Africa, and the University of Ghana and the Kwame Nkrumah University of Science and Technology from Ghana. During my data collection in Ghana in June 2018, I visited the Kwame Nkrumah University of Science and Technology to begin the data collection process. The office of the Vice-Chancellor, where I was supposed to get clearance from, told me that most of my participants had gone on holiday since the university was on recess. All my efforts to get them proved futile. As my respondents began to resume duties in the early part of August 2018, students of the university started a series of protests, which later led to a massive student demonstration. This came about because of an impasse between the university authorities and the students when the authorities decided to convert a male hall to a mixed hall. This led to the closedown of the university; hence, my inability to collect data that could significantly answer my research questions. Concerning the Cape Peninsula University of Technology, the issue was about ethical clearance. After persistent interaction with their ethics committee for almost a year, my application was later rejected because I did not include permission letters from the universities in Ghana. This was an unfortunate decision, in my opinion, because, by the time the request was made, the universities in Ghana had not finished with the process of permitting me to conduct the research. Later I asked the ethics committee of the Cape Peninsula University of Technology to allow me to submit the permission letters, but I was told to reapply, which was too late to do. I decided, therefore, to compare two universities, one from each country - the University of the Western Cape from South Africa and the University of Ghana from Ghana - due to time and financial constraints as my scholarship ended in 2019.

4.9 Conclusion

My interest concerning higher education funding and student access and the application of methodological and theoretical principles has illuminated my understanding of the multidimensionality of the subject, mainly from South Africa and Ghana. During the fieldwork, the study revealed several key stakeholders involved in higher education funding and student access, including government officials, students, the business sector, and families making it an exciting area to be researched. This necessitated interaction with the participants in their natural settings to get a deeper understanding of the study's concern. This was accomplished by the use of in-depth interviewing of twenty-two participants from the University of the Western Cape, the University of Ghana, the National Council for Tertiary Education and the Department of Higher Education and Training and reviewing documents such as annual reports, strategic plans, budget reports, access policy documents, and higher education funding policies.

In the brief analysis, I have sought to point out the practical processes of research design through fieldwork activities within a qualitative methodological framework. In terms of methodological approach, I addressed three thematic areas, namely the data collection process, sources of data, and the type of data required to answer my research questions. The study, therefore, provides a thorough account of all the fieldwork activities, subjects, tools, and techniques that were used to collect data for this project. Lastly, the justification for choosing South Africa and Ghana, the selection of the University of the Western Cape and the University of Ghana, and the data analysis processes have been discussed in detail. Generally, this chapter has explained how the study was undertaken. The next chapter presents the data obtained during fieldwork activities.

CHAPTER FIVE

DATA PRESENTATION

5.1 Introduction

This chapter provides the presentation of the data I generated during my research. The data is based on the information collected through face-to-face interviews with the participants and a review of documents. A theme and research questions are posed first, and the data at each of the two universities is presented and analysed, combining it with the literature and the theoretical framework. A summary of the chapter is also provided.

5.2 Changes in Public Funding and Student Access

This section presents the number of students registered at the University of the Western Cape in South Africa and the University of Ghana in Ghana from 2007 to 2016. The main aspects of this section include enrolment targets of the University of the Western Cape and the University of Ghana, and the actual headcounts enrolments at the two universities. This section subsequently deals with the rate of change between public funding and student enrolment. It is important to know that "virtually all students in public higher education are subsidized through the government providing some funding to institutions which either eliminates the need for tuition fees or more commonly reduces the level of such fees required on the part of the student" (Pillay, 2013:159) (including South Africa and Ghana). Therefore, student enrolments are all state-funded study places. The guiding research question is: *What is the nature of the changes in public funding and student access at the University of the Western Cape and the University of Ghana from 2007 to 2016?* First, the case of UWC is presented, followed by UG.

5.2.1 University of the Western Cape

In South Africa, the Higher Education Act of 1997 gives the Minister of Higher Education and Training the power to settle on the extent and limit of the operations of (a) the public higher education system and (b) individual public higher education institutions. This means that the Minister can specify the academic programmes that a higher education institution can provide and how many students should an institution admit (Bunting, Sheppard, Cloete, & Belding, 2010). The University of the Western Cape and other universities negotiate with the Ministry

of Higher Education and Training to set enrolment targets based on the available resources (number of spaces available, number of lecturers, funding) for that particular year. The study found that UWC's enrolment yearly targets have been around 5-10 percent. Table 2 below illustrates public funding allocations and student enrolment at UWC.

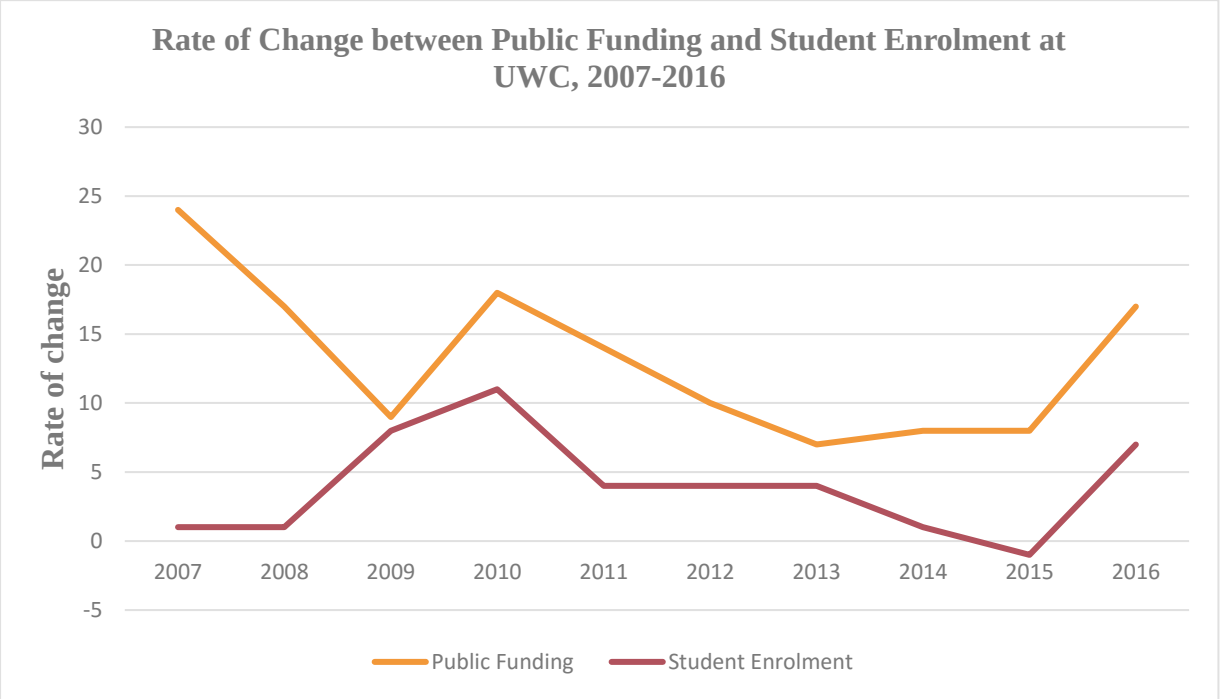
Table 2: Public Funding and Student Enrolment at UWC, 2007-2016

Year	University of the Western Cape			
	Public Funding Amount (in dollars)	Rate of Change (Public Funding) (in percentage)	Student Enrolment	Rate of change (Student Enrolment) (in percentage)
2006	20,162,210	-	14838	-
2007	24,904,958	23.5	14927	0.6
2008	29,238,590	17.4	15074	0.98
2009	31,804,941	8.8	16203	7.5
2010	37,493,309	17.9	18059	11.5
2011	42,564,203	13.5	18764	3.9
2012	46,763,149	9.9	19591	4.4
2013	50,118,064	7.2	20383	4.0
2014	54,106,428	8.0	20582	0.98
2015	58,465,163	8.1	20382	-0.97
2016	68,329,762	16.9	21796	6.9

Source: University of the Western Cape, 2007, 2013, 2015, 2016b; HEMIS database, 2006-2016.

From table 2, the 2006 figures were just used to calculate the 2007 rate of change, but the study was from 2007 to 2016. To calculate the rate of change of public funding, I subtracted the old amount from the new amount; then, I divided the answer by the old amount and multiplied by 100. To calculate the rate of change of enrolment, I subtracted the old number from the new number, then, I divided the answer by the old number and multiplied by 100. To calculate average rates, I divided all percentages by 100 to get decimal numbers. I added all decimal numbers and divided the total by the number of times the numbers appear (which is 10) and multiplied by 100. The currency exchange rate was in December 2019. Figure 3 below shows the rate of change between public funding and student enrolment at UWC from 2007 to 2016.

Figure 3: Rate of Change between Public Funding and Student Enrolment at UWC



Source: Author's calculation based on the data

Note that the figures have been rounded off.

Figure 3 above illustrates the UWC's data on the rate of change in public financing and the rate of change of publicly funded students (student enrolment) from 2007 to 2016. Public funding to UWC declined from 23.5 percent in 2007 to 16.9 percent in 2016. However, the same period saw student enrolment increasing from 0.6 percent in 2007 to 6.9 percent in 2016. It is apparent to see that the rate of change in public funding to UWC has declined, but, while all the years saw changes, not all grew at the same rate. The largest one-year changes were in 2007 (23.5 percent), 2008 (17.4 percent), 2010 (17.9 percent) and 2016 (16.9 percent) whereas, in terms of student enrolment, the largest one-year changes were in 2009 (7.5 percent), 2010 (11.5 percent) and 2016 (6.9 percent). The smallest rates of change in public funding were 7.2 percent in 2013, 8.0 percent in 2014, and 8.1 percent in 2015, while the smallest rates of change in student enrolment were 0.6 percent in 2007, 0.98 percent in 2014 and negative 0.97 percent in 2015. Notably, within ten years (2007-2016), public funding to UWC has grown at a rate of 13.1 percent per year on average, whereas student enrolment has grown at a rate of 3.98 percent per year on average compared with the institution's yearly target of 5-10 percent increase. It has been argued that changes in public funding patterns affect student enrolment, with implications for how successfully the university is likely to meet its target.

Increases in student enrolment seem to follow the same pattern as public funding, as illustrated in figure 3 above. Even though generally there is a downward trend in public funding, increases in student enrolment seem to result from an upward adjustment in public financing, and decreases in student enrolment largely result from decreases in the public funding during these years (2007-2016). The study concludes from the analysis that increasing or decreasing public funding influences the extent to which changes in student enrolment occur. It is evident that having less public funding leads to lower levels of student enrolment at UWC. The next section analyses changes in public funding and student access at the University of Ghana.

5.2.2 University of Ghana

The University of Ghana sets its enrolment targets based on the available resources (the number of lecturers, amount of equipment, number of lecture rooms) to determine what they call the Current Capacity of the university for that particular year. The university typically has an enrolment target of a 10 percent increase annually. Table 3 below shows public funding allocations and student enrolment at UG, 2007-2016.

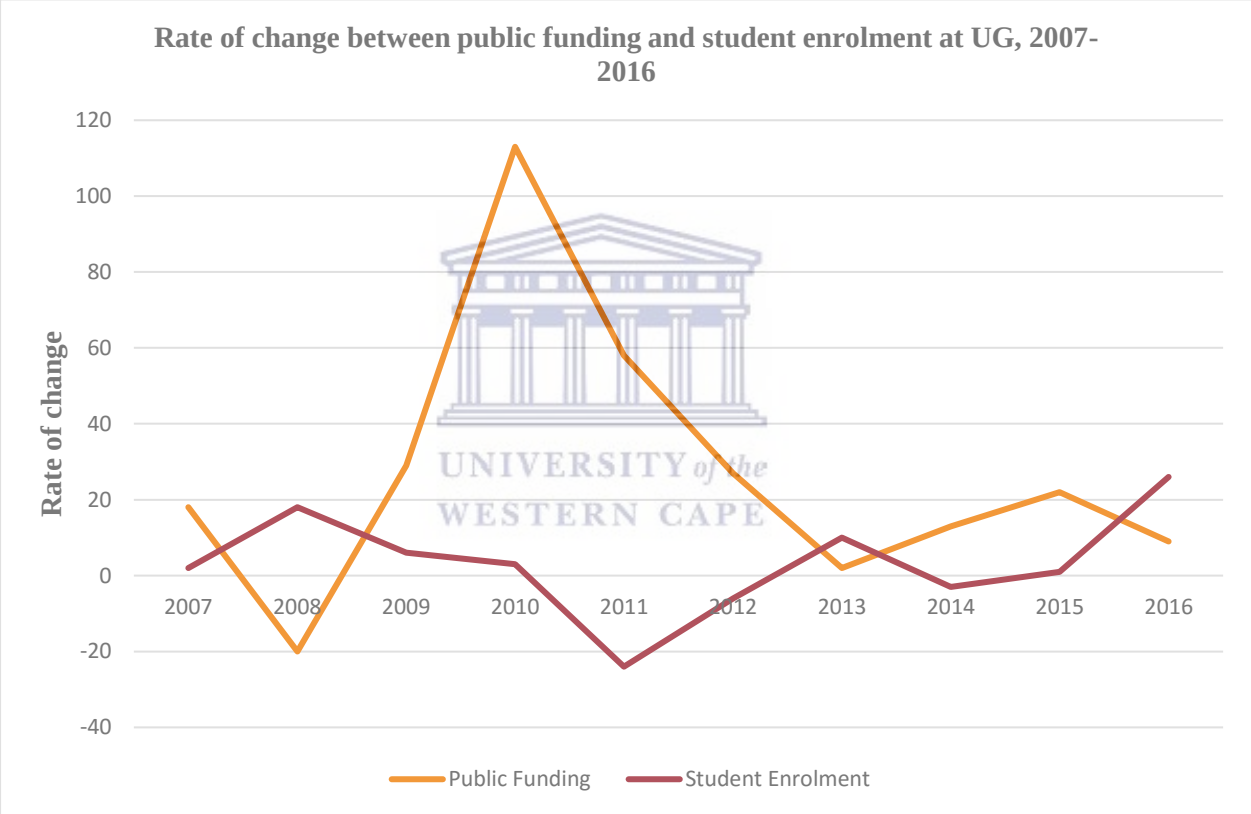
Table 3: Public Funding and Student Enrolment of UG, 2007-2016

Year	University of Ghana			
	Public Funding Amount (in dollars)	Rate of Change (Public Funding) (in percentage)	Student Enrolment	Rate of change (Student Enrolment) (in percentage)
2006	5,556,110	-	28236	-
2007	6,558,006	18.0	28920	2.4
2008	5,276,742	-19.5	34199	18.0
2009	6,800,916	28.9	36092	6.0
2010	14,494,283	113.1	37257	3.0
2011	22,916,981	58.1	28305	-24.0
2012	28,979,360	26.5	26633	-6.0
2013	29,617,865	2.2	29223	10.0
2014	33,472,517	13.0	28288	-3.2
2015	40,761,940	21.8	28552	0.9
2016	44,510,485	9.2	35950	26.0

Source: National Council for Tertiary Education, 2018; University of Ghana Finance Office; National Council for Tertiary Education Finance Office

From table 3, the 2006 figures were just used to calculate the 2007 rate of change, but the study was from 2007 to 2016. To calculate the rate of change of public funding, I subtracted the old amount from the new amount; then, I divided the answer by the old amount and multiplied by 100. To calculate the rate of change of enrolment, I subtracted the old number from the new number, then, I divided the answer by the old number and multiplied by 100. To calculate average rates, I divided all percentages by 100 to get decimal numbers. I added all decimal numbers and divided the total by the number of times the numbers appear (which is 10) and multiplied by 100. The currency exchange rate was in December 2019. Figure 4 below shows the rate of change between public funding and student enrolment at UG from 2007 to 2016.

Figure 4: Rate of Change between Public Funding and Student Enrolment at UG, 2007-2016



Source: Author's calculations based on the data

Note that the figures have been rounded off.

Figure 4 above illustrates the UG's data on the rate of change of public funding and the rate of change of publicly funded students (student enrolment) from 2007 to 2016. Public funding to UG declined from 18.0 percent in 2007 to 9.2 percent in 2016. However, the same period saw student enrolment increasing from 2.4 percent in 2007 to 26 percent in 2016. It is apparent to see that the rate of change of public funding to UG has declined. While all the years saw

changes, not all grew at the same rate. The largest one-year changes were in 2009 (28.9 percent), 2010 (113.1 percent), and 2011 (58.1 percent), whereas in terms of student enrolment, the largest one-year changes were in 2008 (18 percent), 2013 (10.0 percent) and 2016 (26 percent). The smallest rates of change in public funding was negative 19.5 percent in 2008, 2.2 percent in 2013, and 9.2 percent in 2016, while the smallest rates of change in student enrolment was negative 24 percent in 2011, negative 6.0 percent in 2012, and negative 3.2 percent in 2014. Notably, within ten years (2007-2016), public funding to UG had grown at a rate of 27.13 percent per year on average, whereas student enrolment had grown at a rate of 3.3 percent per year on average compared with the university's yearly target of 10 percent student enrolment increase. Even though the university grew at an average rate of 3.3 percent in student enrolment within a decade (2007-2016), UG did not achieve its annual target of a 10 percent increase.

Increases in student enrolment do not follow the same pattern as public funding, as illustrated in figure 4 above. Even though generally there is a downward trend in public funding, increases in student enrolment do not result from an upward adjustment in public financing, and decreases in student enrolment largely do not result from decreases in the public funding during these years (2007-2016). The study concludes from the analysis that increasing or decreasing public funding does not influence the extent to which changes in student enrolment occur. It is evident that having less public funding does not lead to lower levels of student enrolment at UG.

One of the assumptions of resource dependence theory is that, in times of resource scarcity, universities may reduce their programmes or close some of the departments to cut down costs, which may culminate in the decrease in enrolment. The study finds no evidence that some of the changes in enrolment at both institutions were attributable to a decrease in academic programmes or the closing down of some departments to cut down costs. The next section discusses the main contributing factors of the changes in public funding at both institutions.

5.3 Factors Influencing Changes in Public Funding

This section examines factors affecting changes in public funding at UWC and UG. According to resource dependence theory, the key to the organization's continued existence is the ability to obtain and maintain resources, but environmental conditions can change the trend of resources (Pfeffer & Salancik, 2003). Slaughter and Leslie (1997) studied resource allocations to universities and examined factors responsible for fluctuations in the allocations. The guiding question was: *What factors influence the changes in public funding and what are their implications for student access at the University of the Western Cape and the University of Ghana?* First, the case of UWC is presented, followed by UG.

5.3.1 University of the Western Cape

As I reviewed the trend in public funding at the University of the Western Cape in South Africa, six elements emerged as the main contributing factors for the changes in public funding. These factors included the state of the national economy; competing needs of various sectors of the economy; low prioritization of the higher education sector; systematic funding formula; a link between sectoral planning and budgeting; and overspending in election years. The next section discusses these six contributing factors that influence changes in public funding at UWC.

5.3.1.1 State of the National Economy

Analysis of recent developments in the South African national economy presents a gloomy picture. As discussed by the African Development Bank (2020), real GDP grew at an estimated 0.7 percent in 2019, a decrease from 0.8 percent in 2018. The fiscal deficit stayed high at an estimated 4.3 percent in 2019, and rose from 4.2 percent in 2018, as the country continued to face revenue shortfalls due to slow economic growth. The tax revenue-to-GDP ratio dropped marginally to 25.7 percent in 2019 from 25.9 percent in 2018. National government debt was estimated at 55.6 percent of GDP in 2019, an increase from 52.7 percent in 2018. The current account deficit increased to 3.5 percent in 2018 as the terms of trade deteriorated, while the rand prices of imports increased more than those of exports.

The government also faces pressure from stakeholders to spend more on higher education and to ensure fee-free education. South Africa spends only about 0.7 percent of GDP on university education (Burger, 2016). The major concern for analysts and policymakers is that, with South Africa currently experiencing lethargic rates of economic growth, the question then is where

will the funds required to fund higher education come from (Mlambo, Hlongwa, & Mubecua, 2017). One solution is for the government to limit spending and reduce funds to other sectors to raise the needed financial resources to fund higher education (Donnelly, Patel, & Letsoalo, 2017). Nevertheless, analysts say this will further weaken the economy as the country has already recorded a ZAR 50bn in tax shortfall, lethargic economic growth and high unemployment, and reducing funds to other sectors will ultimately disturb public service delivery in the country (Mlambo et al., 2017).

From the analysis above, South Africa is suffering from low economic growth, which places a constraint on tax revenue growth. On the other hand, reflecting on the relationship between the state of the economy and public funding of higher education, a respondent noted the following during an in-depth interview:

> *The economic conditions of the country do not allow the government to be consistent in funding higher education institutions. The fluctuations in public funding over the years have been mainly due to the fragile economic situation in the country. The economy is unable to support all the sectors equally. The government has to make adjustments here and there, and the higher education sector seems to be most affected* (**Respondent 22**).

The study reveals that changes in public funding at UWC are partially attributable to the state of the South African economy. Consequently, South Africa experienced a sharp deceleration of GDP growth from 5.5 percent in 2007 to a fall of 2.9 percent in 2010 (Statistic South Africa, 2011). In the same years, public funding to UWC fell from 23.5 percent in 2007 to 17.9 percent in 2010 (see figure 3, page 89). In 2011, GDP growth was 3.5 percent (Statistic South Africa, 2012), which fell to 1.3 percent in 2015 (Statistic South Africa, 2016). Public funding to UWC declined from 13.5 percent in 2011 to 8.1 percent in 2015 (see figure 3, page 89). Student enrolment also dropped from 3.9 percent in 2011 to negative 0.97 percent in 2015 (see figure 3, page 89). Therefore, the study concludes that fluctuations in public funding to UWC are responsive to structural changes in the economy. This is in line with resource dependence theory's argument that state funding of public universities is a function of the economic environment of countries, and any changes in the economy may affect government allocations to the universities (Pfeffer & Salancik, 2003).

Nevertheless, a respondent was cautious in attributing downward changes in public funding to conditions in the economy. The following interview response represents the typical view in this regard:

> *Even though there is no doubt that a sluggish economy is associated with reductions in public expenditure, it is not always the case that allocations to higher education institutions in times of economic slowdown are automatically affected. In some cases, the government makes special arrangements to maintain or increase funding to the institutions. Nevertheless, generally, the state of the economy determines public allocations to the various sectors of the economy* (**Respondent 21**).

5.3.1.2 Competing Needs of Various Sectors of the Economy

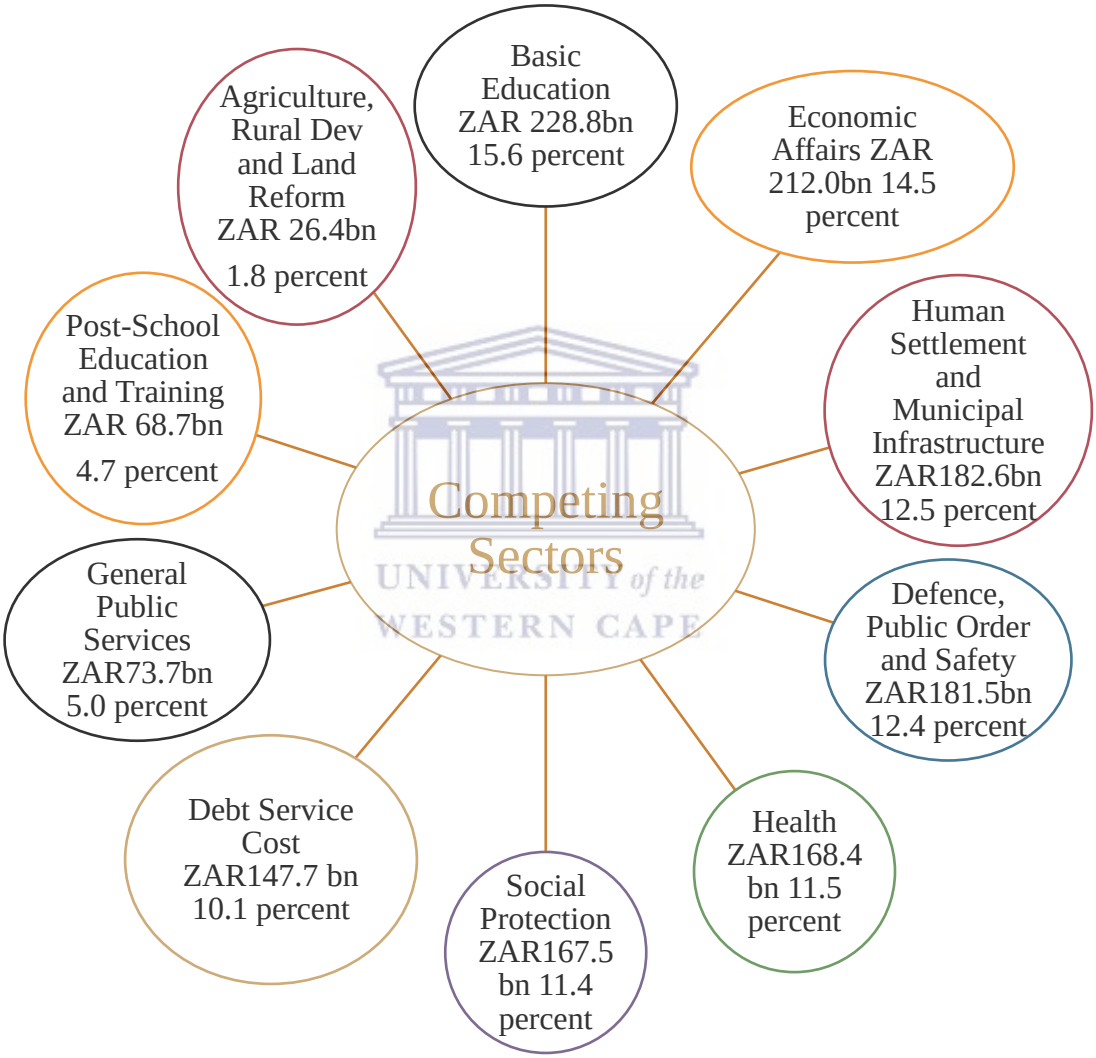
The decreases in public funding and the difficulty in keeping up with the increasing costs of higher education generally are due to competing needs of the various sectors of the economy both within the education sector (primary and secondary education) and outside the sector (infrastructure, public health, housing, social welfare, and other government functions) (Johnstone, 2009).

This is consistent with what is happening in South Africa, as the government is unable to meet all the expenditure demands of the universities, including the University of the Western Cape, due to the competing needs of about ten main sectors. That said, public resources are limited, and higher education is but one sector for government consideration in South Africa. It is imperative to understand that 22 percent of the population funds the chunk of government expenditure, and this presents a different set of challenges concerning how to divide the inadequate financial resources available to the government (University of the Witwatersrand, 2016). The limited government revenue means that the government remains financially constrained in what it can do and cannot simply increase funding to higher education institutions to adequately address the expenditure needs of the institutions (University of the Witwatersrand, 2016). This phenomenon was captured in the following response:

> *Managing various needs of the government involves setting priorities and allocating resources accordingly. Resources are often scarce, while goals are large, and the government can meet only a few of the corresponding needs. Higher education is one sector competing with other sectors of the South African economy* (**Respondent 21**).

The government argues that other sectoral priorities have to be balanced against the needs of higher education institutions. For example, financial support for higher education needs to be taken into consideration against other social justice projects such as the planned National Health Insurance System, and the Reconstruction and Development Housing Programme that have enormous social ramifications and are also political priorities for the government (University of the Witwatersrand, 2016). Figure 5 below shows the competing sectors of the South African economy.

Figure 5: Public Expenditures by Sector, 2016/17



Source: University of the Witwatersrand, 2016

Figure 5 shows public allocations to the various sectors of the economy in 2016/17. As it is shown, the South African government has to divide the inadequate financial resources available to the different sectors of the economy. This means that higher education institutions, including UWC, cannot be allocated a constant flow of financial resources. In some years, depending

upon government priorities, public funding may increase or decrease. In 2016/17, Basic Education received the highest funding from the government with ZAR 228.8bn, constituting 15.6 percent. The second place was taken by Economic Affairs with ZAR 212.0bn, recording 14.5 percent. The last but one position was taken by Post-School Education and Training with ZAR 68.7bn, and 4.7 percent. The last position was occupied by Agriculture, Rural Dev, and Land Reform with ZAR 26.4bn and 1.8 percent. The rests are Human Settlements and Municipal Infrastructure with ZAR 182.6bn, and 12.5 percent, Defence, Public Order and Safety with ZAR 181.5bn, and 12.4 percent, Health with ZAR 168.4bn, and 11.5 percent, Social Protection with ZAR 167.5bn, and 11.4 percent, Debt Service Cost with ZAR 147.7bn, and 10.1 percent, and General Public Services with ZAR 73.7bn, and 5.0 percent (University of the Witwatersrand, 2016). The study finds that the fluctuations in public funding of higher education (including UWC) are a reflection of the government's consideration of other sectors of the economy.

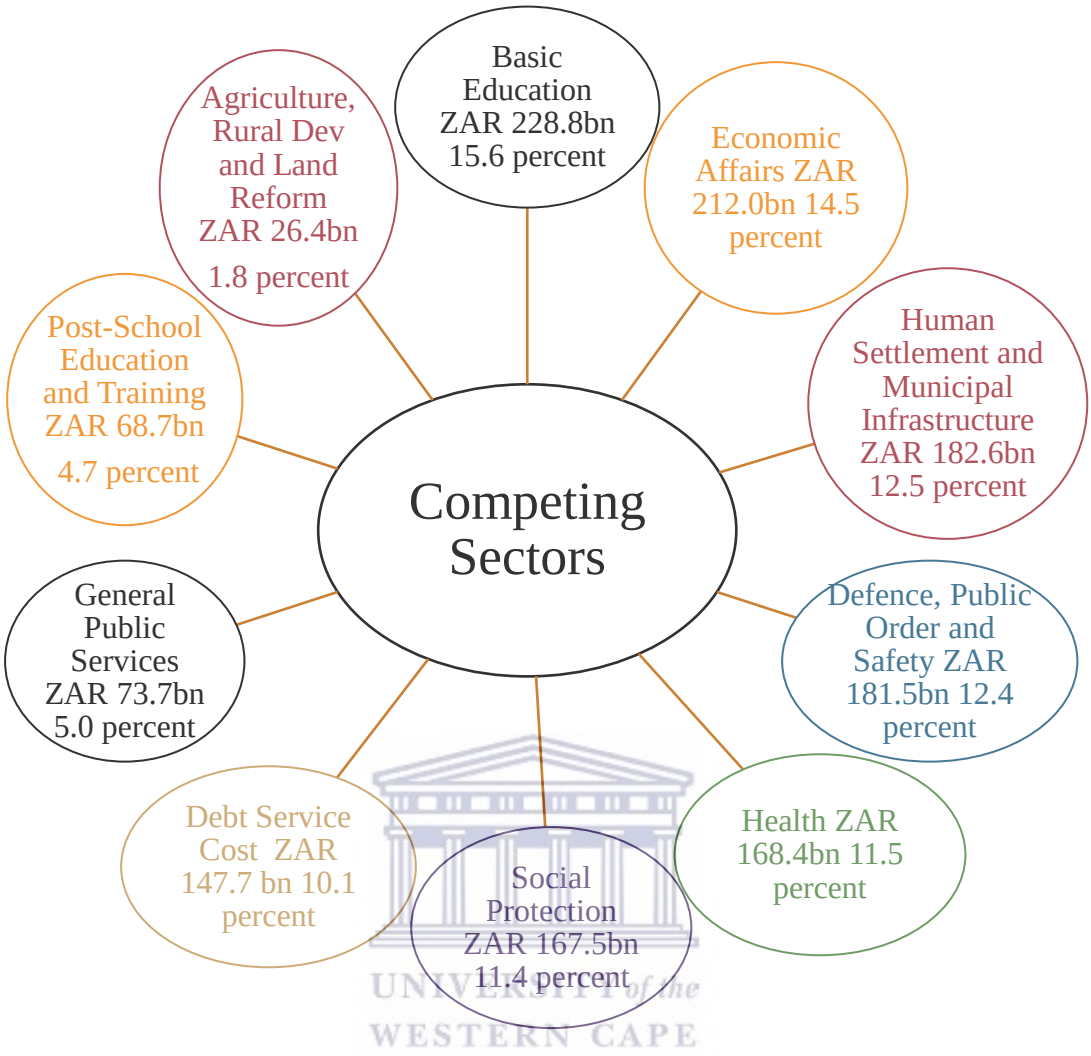
Fussy (2017) argues that globally with few exceptions due to inter-sectoral competition for government resources, public funding keeps changing and funds less than the costs of higher education provision are allocated to higher education institutions by governments, which impedes the ability of higher education institutions to provide more spaces for students.

In summary, the study finds that the changes in public funding at UWC are partly due to the competing needs of various sectors of the South African economy, limiting the government's ability to meet all the yearly expenditure needs of the institution.

5.3.1.3 Low Prioritization of Higher Education Sector

The study finds that, in South Africa, the government does not fully appreciate the immense contribution of the universities in terms of economic growth and development hence less public funds to the universities, including the University of the Western Cape. Other sectors, such as health, infrastructure, security, social grants, and secondary schools receive more attention in terms of funding than higher education institutions. For example, figure 6 below shows the different sectors of the South African economy and government spending.

Figure 6: Public Spending by Sector



Source: University of the Witwatersrand, 2016

Figure 6 shows the ten main sectors of the South African economy and how much each of the sectors received and their percentages in 2016/17. Looking at the allocations, several deductions can be drawn. The most important deduction is that not all the sectors received equal government financial support, and post-school education and training is part of the two sectors that received the least allocation. For example, the sectors that were most disfavoured were Agriculture, Rural Dev and Land Reform with ZAR 26.4bn, and 1.8 percent, followed by Post-School Education and Training (including universities) with ZAR 68.7bn, and 4.7 percent. It is also important to know that the sectors that received the highest allocations were Basic Education with ZAR 228.8bn and 15.6 percent, followed by Economic Affairs with ZAR 212.0bn and 14.5 percent. Figure 6 shows that out of the ten sectors, Post-School Education and Training, which includes Universities, Technical Vocational Education and Training

(TVET), and other training institutions, is the sector that received the lowest public funding apart from Agriculture, Rural Dev and Land Reform. This tells where the government priorities are, and the government's highest priorities are Basic Education and Economic Affairs. The lowest priorities are Agriculture, Rural Dev, and Land Reform and Post-School Education and Training. The analysis above confirms the assertion that most countries in sub-Saharan Africa have prioritized pre-tertiary education at the expense of higher education due to the rate of return argument that pre-tertiary education poses more benefits than higher education, thus necessitating the need to invest more in pre-tertiary education than higher education. A respondent opined on the relationship between the low prioritization of the higher education sector and changes in public funding as follows:

> *If you go through national budgets, you will see that higher education is one of the sectors that receive less funding from the government. Even Basic Education receives more funding than higher education. It tells you that higher education is not one of the prioritized sectors of the government, hence downward fluctuations in public funding* (**Respondent 1**).

Moreover, as discussed by University of the Witwatersrand (2016), the reality of higher education in South Africa is that it is publicly funded below OECD (Organisation for Economic Co-operation and Development) and even other African country levels, as a proportion of GDP. For example, the South African government spends just 4.7 percent of revenue, or 0.75 percent of GDP, on the Post-School Education and Training sector, which includes universities, Technical Vocational Education and Training (TVET), and other training institutions. The OECD, on average, spends 1.59 percent of GDP on higher education, with the UK spending 1.23 percent and Germany spending 1.31 percent (University of the Witwatersrand, 2016). It has been asserted by some scholars that at least a country should spend 2 percent of its GDP on higher education. As it stands now, the South African government spends less than 1 percent of GDP on Post-School Education and Training. The GDP indicator shows whether the government has prioritized the sector, but the analysis above shows that higher education is not a priority of the government in South Africa, hence there is a consistent downward trend in public funding to UWC. In summary, (Pillay, 2013:159) argues that:

The case for increased higher education financing has not been helped by the low prioritization of the higher education sector by many African governments. The value of higher education for economic growth and broader social and sustainable development has not yet been fully recognized by African governments.

On the other hand, an argument by a respondent seems to contradict an assertion that higher education receives less prioritization from the government of South Africa. This is illustrated by Respondent 22:

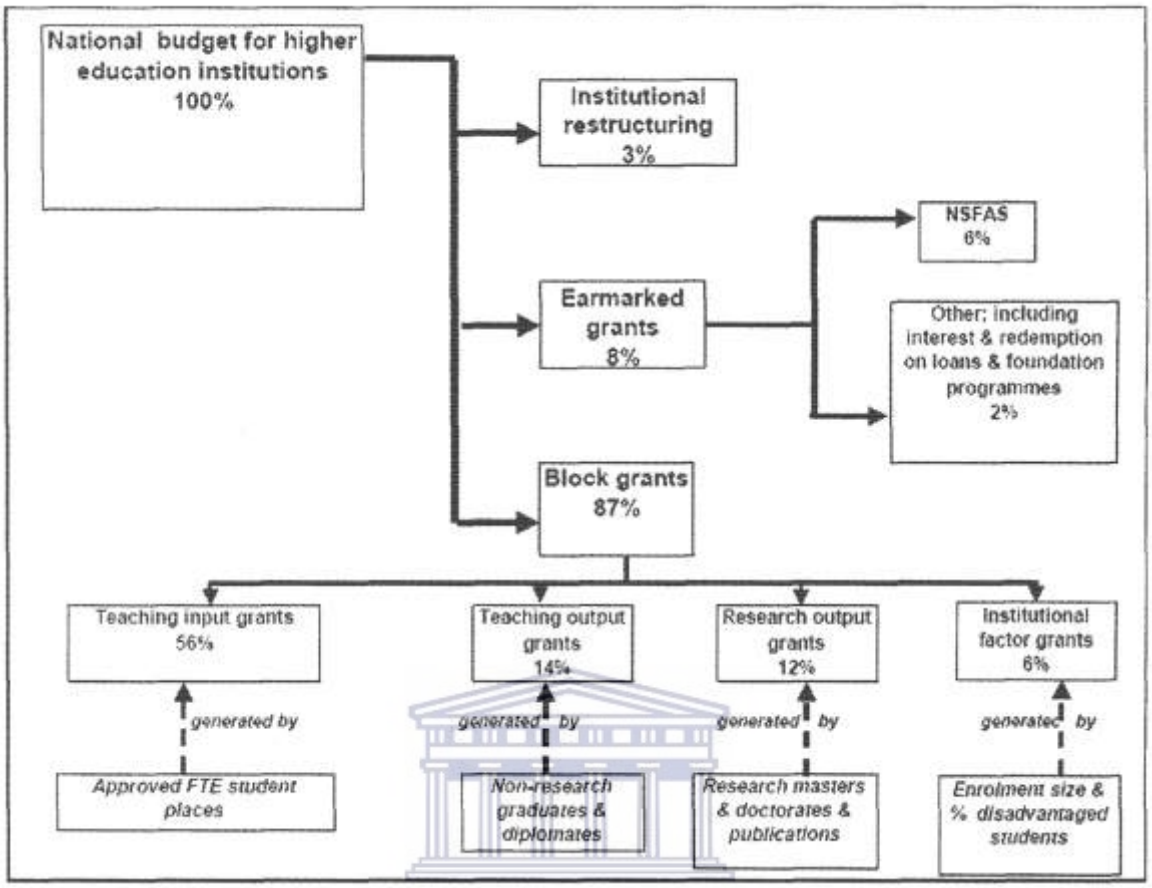
Higher education has, for some time now, received serious attention from the government. Even though in the mainstream public expenditures, higher education may receive less funding from the government compared with other sectors, the government spends on the other areas of higher education that are not always captured. For instance, public expenditure on the costs of student loans and debts is not in the mainstream discussion as some loans will never be paid back in full and are classified as government expenditure.

5.3.1.4 Funding Mechanism

The rationale behind the development of a systematic funding formula is to promote efficiency in funding allocation by linking funding to the performance criteria (Salmi & Hauptman, 2006). The performance criteria in the funding formula include outputs of research, and the number of students enrolled and retained (Newman & Duwiejua, 2015). Consequently, any higher education institution desiring to increase its share of public funds would have to enrol more students and show results in the other performance indicators to benefit from more public funding (Newman & Duwiejua, 2015).

It is important to know that South Africa has developed a well-functioning and systematic funding formula for the higher education sector. Before the funding formula was developed and adopted, both the Education White Paper 3 of 1997 and the 2001 National Plan for Higher Education in South Africa (Department of Education, 1997; Ministry of Education, 2001) underscored the need for a new higher education funding formula that could serve as an effective steering mechanism for the realization of transformation goals of the post-apartheid state. In 2003, a new funding framework was developed (Ministry of Education, 2005). Figure 7 below is the funding formula showing the division of government budget between grant categories.

Figure 7: How Public Funds are allocated to Public Higher Education Institutions in South Africa



Source: Ministry of Education, 2004:5

Figure 7 shows that the national budget for higher education institutions is divided into three components. These are block grants (87 percent), earmarked funds (8 percent), and institutional restructuring funds (3 percent). Block grants consist of four components. These are teaching input grants (56 percent), teaching output grants (14 percent), research output grants (12 percent), and institutional factor grants (6 percent). Institutional restructuring grants are special earmarked amounts used to assist institutions, which merged in either 2004 or 2005.

Most earmarked grants are allocated for the NSFAS (6 percent). A small proportion of earmarked funds (2 percent) is set aside for other specific purposes, such as interest and redemptions payments on approved government loans. Block grants, which represent 87 percent of total allocations to higher education institutions, consist of a teaching input grant calculated through a formula, which considers approved student places, and a teaching output grant which represents the institution's actual number of non-research graduates and diplomats

which it should have produced in terms of national targets. Other components of the block grant are research output and institutional factor grants.

An institution's research output grant represents actual totals of research graduates and research publication units that the institution should have produced in terms of national targets. Institutional factor grants are for institutions with a large proportion of disadvantaged students. For this grant, disadvantaged students are deemed to be African and coloured students who are South African citizens (Ministry of Education, 2004).

The study finds that the changes in public funding at UWC are partly because of the funding formula implemented by the government. Any changes to the criteria and requirements for public funding by an institution under the funding formula influence the final allocation to the institution. For example, failure of any institution (including UWC) to adhere to the enrolment targets agreed upon between the institution and the government results in a cutback in public funding. Institutions are allocated with more funding from the Research Output Grant if they can graduate more students. The following views explain the workings of the funding formula:

> *Once the funding formula identifies the needs of an institution, the government then finds the financial resources to satisfy those needs. Even though there have been negative changes in public funding, student enrolment is mostly catered for by public funding at UWC because of the existence of a funding formula in South Africa* (**Respondent 4**).

For resource dependence theory, the presence of an effective mechanism for resource distribution accounts for a consistent allocation of resources to organizations (Pfeffer & Salancik, 1978).

5.3.1.5 Sectoral Planning and Budgeting

Downward changes in public higher education funding in most sub-Saharan African countries are due partly to the fact that higher education funding is mostly ad hoc and is not based on any effort to build a closer link between sectoral planning and budgeting (Pillay, 2013). In some cases, budgeting is done on a purely incremental basis and in others solely on inputs (student numbers) (Pillay, 2013). There is a general lack of planning in these departments of higher education, sometimes resulting in higher education institutions spending more than they have been allocated or incurring huge debt burdens (Pillay, 2013). The notable exception is South Africa, where there is a closer link between sectoral planning and budgeting. The study finds

that some of the modest upward changes in public funding are partly because of a properly developed link between sectoral planning and budgeting. The sectoral planning and budgeting link removes the uncertainty of revenue and ensures revenue predictability for higher education institutions (Pillay, 2013).

The planning process entails the following aspects (Ministry of Education, 2004:3):

1. The Ministry begins the process by analysing each institution's actual student enrolment data across a four to five year period. It also analyses each institution's student output performance in the context of approved national benchmarks. The Ministry also takes account of any recent plans (e.g., three-year rolling plans, equity plans, and operational plans) which institutions were required to submit to it.

2. After completing these analyses, the Ministry gives each higher education institution a preliminary indication of what its funded student enrolment size and shape is likely to be for the next cycle of funding years. The Ministry allows institutions to react to these preliminary proposals, and to submit alternative or amended proposals to it. These are then discussed with the institutions concerned.

3. At the end of this interactive process, the Ministry sets rolling student enrolment planning and rolling totals of funded student places for each institution for a specified planning period. The individually approved institutional plans are consolidated by the Ministry into system-wide totals student places to be funded by the government during this planning period.

4. The approved institutional enrolment plans are rolling ones in the sense that each is subject to review each year, to take account of changing external circumstances or changing institutional performances. The key steps in the integrated planning and funding processes are these as described by (Ministry of Education, 2004:4):

(a) The Ministry of Education, based on its readings of the national higher education environment and its interactions with institutional planning processes, submits Medium Term Expenditure Framework budget proposals, as proposals for the final budget for the next year to the national treasury.

(b) The national treasury approves provisional three-year rolling budgets for the higher education system. It also finalizes the higher education budget for the next financial year.

(c) The Minister of Education approves the allocation of grants to institutions for a specific funding year, taking account (a) of the total amounts allocated to higher education by the National Treasury and (b) of the enrolment plans approved for each institution. This phenomenon was captured in the following response:

> *The link between sectoral planning and budgeting ensures that universities are incentivized to plan on the basis that is consistent with the government's priorities. It ensures that financial resources are allocated against the expenditure needs of the institution. The small increases in public funding at UWC can be attributable in part to the synergy between sectoral planning and budgeting because the institution's needs are properly packaged to attract the government's consideration for funding* (**Respondent 3**).

In summary, the absence of a properly developed link between sectoral planning and budgeting can result in downward changes in public funding because institutions cannot ensure certainty and predictability of revenue to adjust their operations accordingly, which may affect enrolment decisions. On the other hand, the presence of a properly developed link between sectoral planning and budgeting can result in upward changes in public funding because it ensures greater predictability and certainty of revenue, which can help the institutions to adjust their operations accordingly to attract government funding, which may lead to increases in student enrolment.

5.3.1.6 Overspending in Election Years

The government of South Africa, along with some African governments, faces tough decisions regarding public spending in election years. The study finds that overspending by the government in election years has contributed to downward changes in public funding at the University of the Western Cape. The following views of a respondent illustrate the crux of the matter confronting the UWC because of the government overspending in election years:

> *Public expenditure on general elections is also a factor for fluctuations in public funding because government budgets for elections are not yearly expenditure items of the government. Elections are held every five years, and during those years, the government has to allocate money from the consolidated fund to finance the elections. This may reduce total government revenue and subsequently decrease the allocations to the universities* (**Respondent 21**).

South Africa has suffered some deficits in election years as government spending increases, sometimes causing the government to miss its deficit targets. For example, in 2009, which was an election year, the budget deficit increased from 1 percent of GDP in 2008 to a deficit of 7.6 percent in 2009 (National Treasury, 2010a) against the deficit target of 7.3 percent (National Treasury, 2010b). In the same year, public funding to UWC declined from 17.4 percent in 2008 to 8.8 percent in 2009 (see figure 3, page 89). However, the decline did not affect student enrolment much as enrolment increased from 0.98 percent in 2008 to 7.5 percent in 2009 (see figure 3, page 89). In 2014, which was another election year, the budget deficit target was 4.0 percent (National Treasury, 2014), but the deficit ended up reaching 5.8 percent of GDP (National Treasury, 2015a). At the same time, public funding to UWC reduced from 9.9 percent in 2012 to 8.0 percent in 2014 (see figure 3, page 89). Student enrolment also decreased substantially from 4.4 percent in 2012 to 0.98 percent in 2014 (see figure 3, page 89). Therefore, it can be argued that overspending in election years by the government reduces public funding and subsequently affects student enrolment at UWC. The next discussion focuses on the University of Ghana.

5.3.2 University of Ghana

As I reviewed the trend in public funding at the University of Ghana, five elements emerged as the main contributing factors for the changes in public funding. These factors included state of the national economy; competing needs of various sectors of the economy; a shift of focus from education; ad hoc budgeting; and overspending in election years. The next sections discuss these factors.

5.3.2.1 State of the National Economy

Ghana has experienced an extended period of high economic growth since the early 2000s, sustained by substantial investment inflows, particularly in the extractive industries. In 2011, as the start of oil production increased per capita income, Ghana moved from low-income to lower-middle-income status (World Bank, 2017b). However, macroeconomic conditions have deteriorated over the years, giving rise to substantial domestic and external imbalances (World Bank, 2017b). For example, in 2007, Ghana's economy grew by 5.2 percent (Ackah, Bortei-Dorku, & Aryeetey, 2009), but by 2016, economic growth had slowed to just 3.6 percent (Wakeford, 2017). In the same vein, public funding to UG had also declined from 18.0 percent in 2007 to 9.2 percent in 2016 (see figure 4, page 91). Interestingly, the reverse is the case when

it comes to student enrolment as enrolment increased from 2.4 percent in 2007 to 26.0 percent in 2016 (see figure 4, page 91). Therefore, changes in public funding can be attributable to economic conditions in the country, but the changes in student enrolment do not originate from the state of the economy and variations in public funding.

As discussed by the World Bank Group (2019), fiscal performance for the first half of 2019 showed an overall budget deficit (on a cash basis) of 3.3 percent of GDP, higher than the target of 2.9 percent of GDP. This is because the revenue shortfalls of 1.6 percent of GDP was higher than expenditure cuts of 1 percent of GDP. The pace of fiscal consolidation was expected to slow in 2019, and the overall fiscal deficit was projected at 4.5 percent of GDP in 2019. Real GDP growth is projected to reduce from 6.3 percent in 2018 to 4.8 percent in 2021.

The major concern for analysts, policymakers, and stakeholders of higher education is that, with Ghana currently experiencing lethargic rates of economic growth, the question then is where will the funds required to fund higher education come from and how will this affect student access. A respondent opined on the capacity of the national economy to increase funding to public universities as follows:

> *In general, the Ghanaian economy is not performing as expected, and the revenue shortfalls make it difficult for the government to keep increasing state funding to the universities. Since the government is not getting the expected revenue, public allocations to the universities would continue to fluctuate. This is the reason the universities have been encouraged to diversify their funding sources* (**Respondent 19**).

This is consistent with Jongbloed's (2000) claim that developing world countries such as Ghana are cutting down their expenditure towards the higher education sector due to the poor economic situation in their countries.

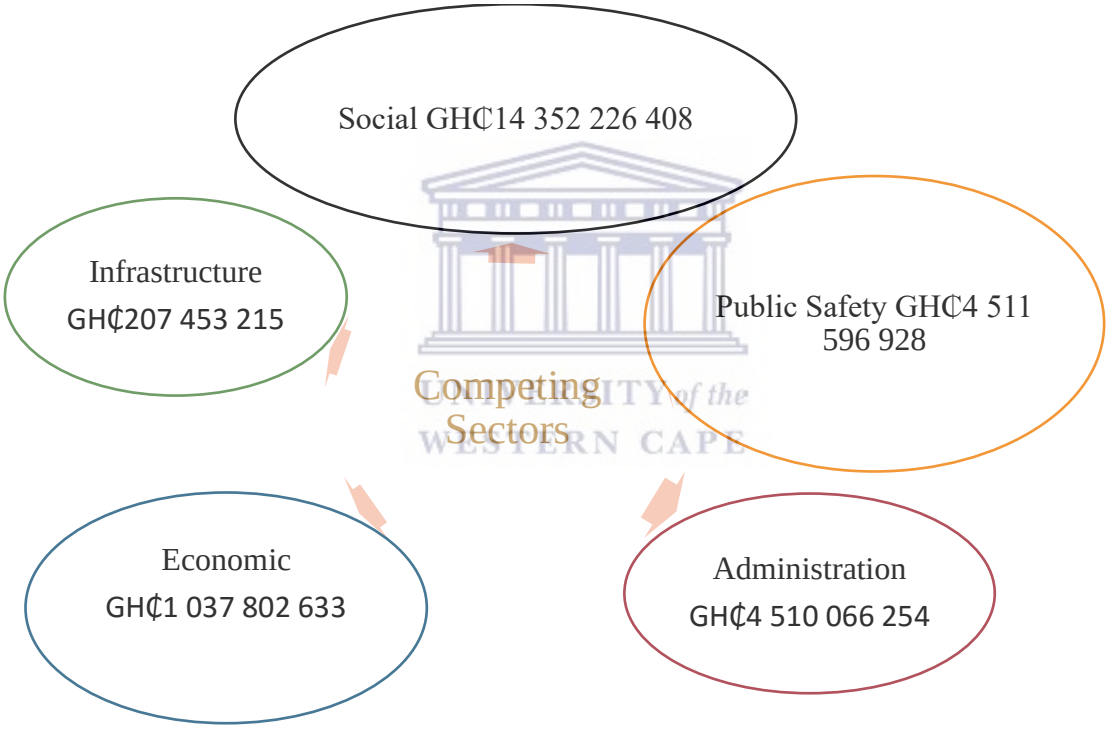
5.3.2.2 Competing Needs of Various Sectors of the Economy

The role of government in a developing country like Ghana indeed cannot be underestimated. The government spends to make available social amenities, merit goods and social interventions, as well as ensuring economic growth (Keynes, 1936). Ghana, over the years, has attempted to reduce poverty, increase income, and provide greater access to health services and education (especially higher education) to its citizens (Abukari, Kuyini, & Kuyini, 2015). That said, government resources are limited, and higher education is one of many sectors for government consideration in Ghana.

It is instructive to know that the Chief Revenue Officer of the Ghana Revenue Authority (GRA), Richard Hakeem Quainoo, who was speaking at a Sensitisation Programme in Accra, revealed that out of the expected 6 million taxpayers, only 1.5 million paid their taxes (Larnyoh, 2019). This implies that few people have to contribute by way of paying taxes for the development of the country for everybody. This poses a considerable challenge concerning how to divide the limited financial resources available to the government to different sectors of the economy.

Ghana's economy comprises five main sectors, with each sector consisting of at least six sub-sectors. The five main sectors include Administration, Economic, Infrastructure, Social, and Public Safety (Government of Ghana, 2019). Figure 8 shows public spending by sector.

Figure 8: Public Spending by Sector, 2019



Source: Government of Ghana, 2019

Figure 8 shows all the five major sectors that are competing for the total amount of GH₵24 619 145 438 (Government of Ghana, 2019). The Social Sector comprises of eight sub-sectors namely Ministry of Employment and Labour Relations, Ministry of Youth and Sports, National Commission for Civic Education, Ministry of Chieftaincy and Religious Affairs, Ministry of Health, Ministry of Gender, Children and Social Protection, National Labor

Commission, and Ministry of Education (Government of Ghana, 2019). Sub-sectors under the Ministry of Education include Basic Schools, Secondary Schools, Universities, Technical Universities, Nursing Training Colleges, and Colleges of Education. All the sub-sectors under the Social Sector are sharing GH₵14 352 226 408. The study finds that the competition from the other sectors of the economy makes it challenging to have a consistent flow of financial resources from the government to the universities (including UG). Therefore, the fluctuations in public funding at UG are partly accounted for by the competing needs of various sectors of the economy. Still, the study could not establish whether it has implications for student enrolment. Reflecting on the competing needs of various sectors of the Ghanaian economy, a respondent noted the following during an in-depth interview:

> *Some of us have been advocating for a more significant role of government in funding universities. Still, the truth of the matter is that the government is saddled with many public sectors, which are competing for the same limited resources of the country. Therefore, depending on the priorities of the government, a sector may receive less funding, and unfortunately, the universities seem to have fallen under less funded sectors* (**Respondent 11**).

This is consistent with Johnstone's (2009) argument that the downward trend in public funding globally with some exceptions is due to competing for public needs both within the education sector (primary and secondary education) and outside it (infrastructure, public health, housing, social welfare, and other government functions), and to their inability to increase tax revenue. This is consistent with resource dependence theory's proposition that governments have had the challenge of having to deal with many sectors competing for limited resources, and this in some cases triggers fluctuations in resources of the government (Pfeffer & Salancik, 1978).

However, an interviewee believes that higher education institutions can benefit immensely from competition for government resources, as explained below:

> *Depending upon the priorities of the government, higher education institutions can benefit immensely from competition for public resources. For instance, any government that prioritizes higher education will always make sure that enough funds are allocated to the sector instead of the other sectors* (**Respondent 19**).

5.3.2.3 Shift of Focus from Education

The study reveals that the shift of focus of government from education to other sectors, especially administration, is partly responsible for the changes in public funding being experienced by UG. Reflecting on the shift of focus from education, a respondent noted the following during an in-depth interview:

> *As recent as the 1990s, university education was free. The government bore all the costs, including paying allowances to students. What we see today is a total shift from education in general to other sectors like security and health* (**Respondent 11**).

This is in line with Jongbloed's (2000) argument that developing countries such as Ghana are cutting down their expenditure towards the higher education sector because the national government tends to be more attentive to other sectors, especially basic social needs of the people, rather than to higher education. Table 4 below shows trends in public spending in Ghana from 2011 to 2016 as a percentage of GDP.

Table 4: Public Spending by Sector, 2011-16 (percent of GDP)

Sectors	2011	2012	2013	2014	2015	2016
Public Administration	**1.85**	**9.32**	**8.59**	**24.81**	**10.01**	**8.75**
Economic Spending	**1.18**	**2.61**	**1.85**	**0.95**	**0.47**	**0.41**
Ministry of Food and Agriculture	0.16	0.25	0.17	0.11	0.09	0.09
Ministry of Energy	0.65	1.65	1.32	0.51	0.10	0.10
Infrastructure Spending	**1.65**	**1.07**	**1.28**	**0.58**	**0.57**	**0.60**
Public Security Spending	**2.03**	**2.23**	**2.45**	**1.79**	**1.66**	**1.51**
Social Spending	**6.09**	**9.01**	**6.95**	**6.17**	**6.53**	**4.61**
Ministry of Education	4.44	6.18	4.81	4.63	4.10	3.35
Ministry of Health	1.29	1.29	1.29	1.29	1.59	1.16
Other Spending	**0.12**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Source: World Bank, 2017b

From table 4, the government has shifted the focus of public spending away from the Social sector, which includes Education to Administrative spending. The data in table 4 indicates that Social spending has fallen significantly as a share of GDP. The Social sector, including Education and Health, accounted for the largest share of public spending in 2011 (6.09 percent). However, since 2014, the 'Administration sector,' which includes spending on debt management, exchange-rate deprecation, and other government obligations, has accounted for more than two-thirds of total spending (World Bank, 2017b). The Administration sector, which recorded just 1.85 percent of GDP in 2011, increased to as high as 8.75 percent in 2016, whereas the Social sector, which includes Education, decreased significantly from 6.09 percent in 2011 to just 4.61 percent in 2016. Moreover, Education spending declined from 4.44 percent in 2011 to 3.35 percent in 2016. In short, the Administration sector has crowded out spending on Education and Health, which forms Social spending. In the same vein, public funding to UG declined from 58.1 percent in 2011 to 9.2 percent in 2016 (see figure 4, page 91). In contrast, student enrolment increased from negative 24.0 percent in 2011 to 26.0 percent in 2016 (see figure 4, page 91).

5.3.2.4 Ad Hoc Budgeting

Negotiations between the government and higher education institutions are the most traditional means by which the public funds for the operation of public institutions (including universities) are allocated to individual institutions. The amount of funding agreed through the negotiations process, usually based on historical trends and not the actual expenditure needs, are then distributed to institutions (Salmi & Hauptman, 2006).

The study finds that a major factor influencing the downward changes in public funding at UG is the adoption of an ad hoc budgeting process for the allocation of public funds and the absence of a properly functioning funding formula. A funding formula serves as a comprehensive framework that identifies the resources of the country; ascertains the needs of the higher education institutions including the number of students to be enrolled; and also identifies various strategies and approaches that will be used to deal with the challenges facing the institutions (Salmi & Hauptman, 2006). The absence of a funding formula implies the lack of adequate preparation for the needed financial resources for higher education institutions. The overall outcome of this situation is that the higher education sector in Ghana lacks a clear direction and coherent argument for more public funding, and therefore fosters inconsistent allocation of public funds to the institutions (including UG) (Newman & Duwiejua, 2015). The

following views illustrate the crux of the challenges confronting UG as a result of the ad hoc budgeting process and the absence of a funding formula:

> *The funding framework considers the costs of higher education and student enrolments. Unlike ad hoc budgeting, funding formula ensures that as enrolments increase, public funding does not decline, but increase to match enrolment increases because funding formula determines enrolment targets to foster planning and distribution of funds to the higher education institutions. Ad hoc budgeting does not consider all of these but just historical trends of funding* (**Respondent 19**).

This is consistent with the assertion that the funding formula is aimed at encouraging fairness in resource allocation by linking funding to the performance criteria (Salmi & Hauptman, 2006). The performance criteria include the number of students enrolled and retained, and, therefore, an increase in student enrolment by an institution means maximization of its share of public funds (Newman & Duwiejua, 2015).

The study concludes that the absence of a funding formula accounts for the inconsistencies in public funding at UG because the current funding framework disregards the number of enrolled students hence the minimal relationship between public funding and student access at UG. For resource dependence theory, the absence of an effective mechanism for resource distribution accounts for inconsistencies in resources to organizations (Pfeffer & Salancik, 1978).

However, the assertion that the ad hoc budgeting process does not consider enrolment must be argued with caution as explained by an interviewee:

> *Even though the ad hoc budgeting process strictly speaking does not focus on the student as the unit of production to determine the total funding allocation from the state, the universities negotiate the budget with the government having in mind the present number of students enrolled. Therefore, it may not be completely accurate that the absence of a funding formula leads to downward changes in public funding* **(Respondent 16).**

5.3.2.5 Overspending in Election Years

The study finds that overspending by the government in election years has contributed to downward changes in public funding at the University of Ghana. The following views of a

respondent illustrate the crux of the matter confronting UG because of the government overspending in election years:

> *Every government in power wants to win and maintain power, and in an attempt to maintain power, the government sometimes spends more than planned. If you look at all the election years, the government spent more than projected. The resultant effect of spending more than planned on universities (including UG) is less public funding* (**Respondent 14**).

Ghana has long suffered from expanded deficits in election years as government spending blows up in an attempt to win votes, sometimes causing the government to miss its target by as much as double (Songhai Advisory, 2019). For example, in 2008, which was an election year, a budget deficit of 6.5 percent was recorded (Bawumia, 2013) as against the projected deficit of 4.0 percent (Government of Ghana, 2007). In the same year, public funding to UG declined substantially to negative 19.5 percent in 2008 from 18.0 percent in 2007 (see figure 4, page 91). However, the reverse is the case concerning student enrolment as enrolment increased from 2.4 percent in 2007 to 18 percent in 2008 (see figure 4, page 91). In 2012, which was another election year, the deficit target was 6.7 percent, but the deficit ended up reaching 12.5 percent (Songhai Advisory, 2019); again, public funding to UG declined from 58.1 percent in 2011 to 26.5 percent in 2012. Despite this decline, there was an improvement in student enrolment from negative 24 percent in 2011 to negative 6.0 percent in 2012 (see figure 4, page 91). Furthermore, overspending in 2016 elections led to a decline in public funding to UG. For instance, Ghana's budget deficit target in 2016 was 5.3 percent, yet the deficit widened to 7.8 percent (Songhai Advisory, 2019). At the same time, public funding to UG declined from 21.8 percent in 2015 to 9.2 percent in 2016 (see figure 4, page 91). On the other hand, student enrolment rose substantially from 0.9 percent in 2015 to 26 percent in 2016 (see figure 4, page 91). Therefore, it can be argued that overspending in election years by government reduces public funding to UG. However, it cannot be argued that overspending in election years affect student access.

Nonetheless, as argued by an interviewee, the need to obtain an electoral majority may prompt governments to spend more on education and to prioritize education over other sectors within the national budget.

> *While it is widely believed that spending in general elections is associated with decreased public spending to the various sectors, in some instances, the quest to win an election has resulted in increased state expenditure on education in general to win the hearts and minds of many stakeholders in the education sector* (**Respondent 13**).

The next section compiles concise accounts of the strategic responses towards influencing changes in student access by UWC and UG.

5.4 Strategic Responses towards Influencing Changes in Student Access

This section examines the strategic responses towards influencing changes in student access. In their study of public universities and resource acquisition, Duderstadt and Womack (2003) introduce institutional responses that can improve resource acquisition towards increasing student access. Pfeffer and Salancik (2003) were masters in analysing strategies that enable universities to raise resources to increase student access. Casciaro and Piskorski (2005) attempted to explain strategies that universities employ to sustain student access in the face of inadequate resources. The guiding question was: *what are the strategic responses towards influencing changes in student access by the University of the Western Cape and the University of Ghana in the face of fluctuations in public funding*? First, the case of UWC is presented, followed by UG.

5.4.1 University of the Western Cape

In the face of downward changes in public funding, student enrolments at UWC have increased, in some cases, quite dramatically. The study finds that the enrolment changes have been made possible through the implementation of six strategies by the university. These strategies are government subsidy; low tuition fee structure; payment arrangements; recruitment strategy; special grants; and financial support systems. I discuss these strategies in the next sections.

5.4.1.1 Government Subsidy

Resources dependence theory explains that organizations, when faced with financial constraints, may seek direct cash subsidies from the government for growth, enhancement, certainty, and survival (Etomaru et al., 2016). Traditionally, public universities in South Africa have relied on a block system and earmarked funding from the state. Based on this system, the government allocates funds as a lump sum grant to each university, taking into consideration

the number of students agreed between the institutions and the government to develop their infrastructure to support the students. An interviewee explained the process further:

> *In theory and practice, the government subsidy goes into student housing, and the entire infrastructure in the system, and it supports students to sustain access because subsidies ensure that the system can keep its infrastructure at the appropriate levels to support the teaching of students* (**Respondent 22**).

In the case of UWC, the university receives state subsidies each year to assist in paying the costs that will arise during that year. State subsidy forms the most significant portion of its revenue streams, contributing 48 percent to income in proportion to the combined pool of funding, student income is 26 percent, and the third stream income is 26 percent (University of the Western Cape, 2016b). Another interviewee further explained the process:

> *Without government funding, we would not survive in terms of giving access to students. It is good that we are a public institution, and the government funds us because we seem to be playing a role that is bigger than just producing people for the world. It is more of a national contribution. It is a nation-building responsibility. The whole thing of being a public university puts us at a good advantage because we always have government support financially to be able to enrol more students* (**Respondent 2**).

This is similar to other systems where higher education institutions receive direct financial support from the government because higher education is regarded as an essential tool for economic growth. For example, the government provides about 54 percent of the University of Botswana's annual revenue through government subsidy (Simelane, 2007). However, Williams (2016) maintains that the government should not finance higher education because it is more equitable for the costs to be borne by individuals. It is said that public funding means paying for individuals who come from a high socio-economic background and that society should not be obliged to expend financial resources to pay for the rich who are already financially capable and privileged to access higher education, as this would be unfair and unjust (Martin, 2017). Barr (2017) concludes that public funding is a policy that mainly hampers student access through a shortage of higher education places and stifling activities that increase access. Table 5 below shows the statistical relationship between public funding and student enrolment at the University of the Western Cape.

Table 5: Statistical Relationship between Public Funding and Student Enrolment at UWC, 2007-2016

University of the Western Cape			
Variable	**Student Enrolment (2007-2016)**		
Public Funding (2007-2016)	**Coefficient**	**p-value**	**R-squared**
	779.824	0.000	0.938

Using a linear regression model, the relationship between public funding and student enrolment from 2007 to 2016 was examined for the University of the Western Cape. The p-value was set at $p<0.05$. The analysis was done using statistics software STATA version 14. $P<0.05$ means that the p-value is a probability of 0.05 that you will mistakenly reject a true association between public funding and enrolment. In order words, it is saying that you are 95 percent confident that your result is correct or accurate.

From table 5, there is a statistically significant relationship between public funding to the University of the Western Cape and student enrolment at the university from 2007 to 2016 at p-value<0.05 (p=0.000). For a unit increase in public funding to UWC, there is a corresponding increase of 779.8 in student enrolment (places) at the University of the Western Cape. Approximately 94 percent of change in enrolment between these periods (2007-2016) is accounted for by public funding. (Unit increase is approximately one million dollars. Approximately 94 percent of change in student enrolment is accounted for by public funding means from table 5, R-square is 0.938, converted into a percentage gives 94 percent. This explains the magnitude of the change in the enrolment attributable to public funding).

5.4.1.2 Low Tuition Fee Structure

Tuition fees encompass student billings for courses registered during the year (University of the Western Cape, 2006). In the case of public universities, the level of government subsidy is a strong deciding factor of tuition fee increases (Long, 2004a). Government subsidy allows public universities to decrease, maintain, or increase tuition fees, which influences student access (Long, 2004a). During the last several years, the government subsidy to higher education in South Africa has fallen significantly in real terms and has been mostly compensated for by tuition fees. For example, “the universities did well in almost doubling

third-stream income but used student fees to compensate for the 9 percent drop in government subsidies" (Council on Higher Education, 2016b:118). Inspired by the notion that higher education generates substantial benefits for individuals, South African higher education institutions charge their students market-rate fees, set by individual institutions (Wangenge-Ouma, 2007). This assertion is consistent with the resource dependence theory's argument that, for an organization to survive, it must sell at a price fixed in the competitive market place (Pfeffer & Salancik, 2003).

Contrary to the above assertion, the University of the Western Cape has the lowest tuition fee structure among South African universities, which is below market rate and the fees are set between 30 percent and 40 percent lower than those of the other universities in the Western Cape (University of the Western Cape, 2004). This is in line with the university's mission to increase student access and make the university the most affordable higher education institution in the country as argued by the University:

> *UWC has a proud history of facilitating equitable and affordable access to quality higher education. We are committed to making education accessible to all academically deserving students from all walks of life. This commitment is displayed in various ways and includes the fact that UWC continues to charge some of the lowest fees in the country, with meagre upfront fee payment requirements* (University of the Western Cape, 2015:17).

Part of the reason for low tuition charged by the university is to assist students who struggle financially to access a university education as further argued by the university:

> *UWC remains committed to providing access to students who were formally excluded from higher education and who struggle to afford a university education. Part of the strategy for giving effect to this is the low tuition that we charge. Due to UWC's fees being smaller than most South African universities, we assist large numbers of students through this initiative* (University of the Western Cape, 2013:19).

An interviewee confirmed this:

> *The university's tuition and student accommodation fees are amongst the lowest in the country. The positive is that the poorest of the poor are given a chance to access higher education that they could not have done anywhere else and thereby participate in building the nation* (**Respondent 1**).

The perceptions of the interviewees concerning low tuition fee structure in increasing student access are found to take the same form of resource dependence theory's argument that in times of financial difficulties, institutions like universities can charge moderate fees to attract more potential students. They would invariably contribute financially to the sustainability of the institution. Another interviewee had this to say:

> *We currently have one of the lowest tuition fee structures of the universities in the country. We do not increase fees even up to the CPI inflation rate. You cannot say we are never going to increase staff wages at the end of the day. We want to be affordable, but you also need to be sustainable, but we are one of the lowest, and that is where we would always want to stay, and we also look at how can we structure our fees so that we can allow for more access to the university* (**Respondent 4**).

The negative aspect of low tuition fee structure as lamented by the Vice-Chancellor is that the University of the Western Cape has to finance unfunded indigent students with its working capital and, in the process, accumulates debt, which negatively affects the university's operations and the quality of programmes.

5.4.1.3 Payment Arrangement

There is a direct correlation between academic success and fee collections, and this must affect UWC's enrolment strategy and its student development and support programmes (University of the Western Cape, 2006). UWC has a large number of students from economically deprived backgrounds, but the institution has a history of enrolling academically sound, indigent students without the necessary financial resources to pay tuition and resident fees upfront (University of the Western Cape, 2016a). This is in line with UWC's mission statement that obliges the university to provide access to as many students as possible. In return, students and families take responsibility for the cost associated with higher education provision to support the university's commitment to providing access. At registration, all students are required to make an upfront payment, which is less than 20 percent of the average student payment per annum, but students have great difficulty paying their fees during the year of study (University

of the Western Cape, 2006). Settlement agreements, therefore, are entered into with individual students to stagger payments throughout the year (University of the Western Cape, 2016b). Given this, the University of the Western Cape has put in place the Student Credit Management Unit to assist the students who cannot pay upfront to spread the payment. The following statement from an interviewee illustrates this:

> *The University of the Western Cape is one of the very few universities that have a Student Credit Management Unit, where we allow students to study on credit. Some students want to study, but they cannot afford the payment. The Unit would enter into negotiations with the students or parents, and they would then come out with some arrangements that allow the student to pay a particular contribution towards his fees and be allowed to continue studying at the university* (**Respondent 4**).

In support of this, this is what an interviewee said:

> *Student access is strategically disconnected from student financial viability. The university's Student Credit Management impresses on students to pay an upfront registration fee. Students are required to sign an acknowledgment of debt forms and payment plan for the year of registration. Graduation rates are impacted where completing students have debt outstanding. The university has allowed symbolic graduations through a concessionary debt settlement agreement to assist students in accessing the job market* (**Respondent 1**).

Therefore, debt is how much a student owes the university at any given time, and what the Credit Management Unit does is to manage the student debt aspect and how that debt is paid to the university on time. Now a large number of students at the University of the Western Cape are funded for their tuition and accommodation fees by the National Student Financial Aid Scheme (NSFAS) and other bursaries. What the Unit then does is to work out who is funded, and the scholarships or NSFAS are generally handled through the Financial Aid Office. The Financial Aid Office informs the Unit as to the cohort of students who are going to be NSFAS funded and the cohorts that are going to be financed by other bursaries. Then the Unit takes that information and works out the students who are supported by NSFAS or by scholarships versus the students who are going to be self-funded. A respondent explained this:

> *The self-funded students are students where our mandate comes in. For self-funded students, we have a team of credit controllers. At registration where students are coming in to register, they would need to come and see us about their clearance and at that stage we would then assess their clearance, work out what they need to pay upfront and work out what payment arrangements are going to be in place for that academic year* (**Respondent 6**).

As far as generating revenue for the university is concerned, this is what an interviewee had to say:

> *University rule states that 50 percent of fees must be paid by the 30th of April every year. 100 percent of fees must be paid by the 31st of July every year. Your account must be settled before any registration can be done in the subsequent years. We go through that process of income and expenditure to assess and come to a suitable arrangement between the financial sponsor and the university. The debit order document is then signed* (**Respondent 6**).

An analysis by the university takes the same view:

> *The university has consistently improved its collection rate over the years. This is due to numerous improvements in debt-collection processes, financial aid processes, and direct engagement with individual students and their parents, student leadership, donors, and stakeholders regarding the settlement of debt* (University of the Western Cape, 2016b:55).

Moreover, the Student Credit Management Unit generates revenue for the university by converting debt into cash. The process is vividly explained by an interviewee as follows:

> *Student Credit Management Unit converts debt into cash. The sooner the student pays the fees, the better for the university to put that debt into money for infrastructure. If students or financial sponsors were left to pay as and when they wanted to pay, the university would not survive. There would be a significant component of revenue not coming in an ordered fashion so that we can get this money in time to ensure the survival of the university in terms of allowing students to access the university* (**Respondent 6**).

"Despite a challenging year of collections, the university managed to recover student debt to the extent that its student debt book grew by ZAR 50.2m in 2016" (University of the Western Cape, 2016b:55). The target for the planned period on collections as a percentage of billings is set at 94 percent (University of the Western Cape, 2016b). The target is based on the minimum requirement for the university to meet its cash flow obligations. Projected collections are as follows:

Table 6: Total Student Fee Income and Collection of UWC, 2006-2011

Year	**Total Student Fee Income**	**Collection from Students**
2006 R 000'	165,660	92,959
2007 R 000'	187,315	109,405
2008 R 000'	202,250	122,018
2009 R 000'	218,378	135,528
2010 R 000'	238,453	150,930
2011 R 000'	264,654	173,274

Source: University of the Western Cape, 2006

Table 6 above indicates that the university was able to generate revenue of 93 percent in 2006 to 95 percent in 2011 of the total student debt (University of the Western Cape, 2006). This strategy of payment arrangement has helped the university to avoid academic calendar interruption.

The following argument by an interviewee carries the point home:

> *Student Credit Management is one of the ways in which we get some form of stability on campus and assist with our enrolment numbers. Otherwise, if we do not have that available, we are not going to register at least 50 percent of our student body. It manages stability. It stabilizes the campus, less student unrest, and it is good for our reputation and giving access to students* (**Respondent 3**).

Therefore, payment arrangements by the university enable students who cannot afford to pay upfront and would have been denied access are allowed to have a university education. Moreover, the strategy assists not only in generating revenue from student debt but helps in keeping the calendar year stable. This is in line with Reisberg and Watson's (2011) assertion that many higher education institutions and national systems have employed strategies to support students from low-income families and underrepresented groups to enrol by giving these students priority through affirmative action programmes, quota programmes, and special payment arrangements. This is consistent with resource dependence theory, which assumes that there is a correlation between resource dependence and discovery of opportunities in those organizations experiencing inadequate resources to try to find a way to resolve the situation (Pfeffer & Salancik, 1978). One of the opportunities created by the University of the Western Cape is the payment arrangement with students, which is an innovative means to generate revenue to support the university's operations and, at the same time, using that to increase student access. Nevertheless, this strategy has negative consequences. For instance, it has been argued that payment arrangements can increase student debt accumulation, thereby denying the institution a substantial revenue for infrastructural development and other operations (Scott et al., 2018).

5.4.1.4 Recruitment Strategy

The University of the Western Cape has established the Student Enrolment Management Unit (SEMU), whose main task is to laisse with schools to recruit students for the university. Two interviewees had the following to say about the Unit's establishment:

> *In terms of student access, the Student Enrolment Management Unit was established to recruit students to the university. The Unit goes out to schools and markets the university. The Unit provides information to potential students about the university for them to know about closing dates, about application processes, and about tuition fees* (**Respondent 4**).

> *Without schools, there is no university because whatever school you have, they feed into university. We are involved in recruiting students, and that recruitment begins from when they start school. We prepare them when they are in school, mainly when they are in grade ten. We start preparing them until they enter university so that they become aware not only of what the university offers but the requirements. By the time they write the matric, they are sufficiently clear about what is expected of them* (**Respondent 8**).

Moreover, the Student Enrolment Management Unit has a responsibility to mobilize financial resources from other sources for the university, having also been established to involve the prospective students in contributing to the university's finances through tuition fees. An interviewee points out that there is fee income that is generated by the university through the efforts of the Unit:

> *We want to make sure that the students that we attract are fee-paying. The poor students can apply and get funding through NSFAS. However, we also target those students who come from high economic background to pay tuition fees. This generates revenue for the university. The biggest thing we do is we target well-to-to students who come from those middle-class families who can afford to pay tuition fees. We do that so that the university can construct more lecture rooms for more students* (**Respondent 8**).

Other studies also make arguments in support of tuition fees when they say that without tuition fees, student access to higher education can be impeded because that would create supply-side constraints (Barr, 2017). Relatedly, the argument for the introduction of tuition fees stems from the fact that complete reliance on government subvention would mean higher education institutions would come under pressure to decrease per-student expenditure and reduce student enrolments (Murphy et al., 2017b). This argument is consistent with the resource dependence theory's principle that, in the context of higher education where resources are inadequate, the best option is to pass the costs in the form of tuition to students to sustain access (Powell & Rey, 2015).

This seems to be in contrast to OECD (2017a) and Ziderman's (2013) studies, which argue that no tuition can increase student access in higher education, especially for students from low-income families, who may feel the pinch of an upfront payment of tuition. Tuition fees can even cause suffering for enrolled students and are likely to hinder access to higher education and even completion.

5.4.1.5 Special Grants

The official terms to differentiate between universities in post-apartheid South Africa are the research-intensive universities, comprehensive universities, and universities of technology. However, the legacy of apartheid has brought about various forms of distinctions. These include historically disadvantaged universities and historically advantaged universities. The reasons for this include governance, their geographical locations, student preparedness, lecturer morale, and funding conditions for the universities (Leibowitz & Bozalek, 2014). Nevertheless, the research-intensive universities are generally associated with the historically advantaged universities because of the funding flow they have enjoyed over the years. The same cannot be said of the traditionally disadvantaged universities, and the argument has been that they, too, are determined to be research-intensive institutions. On that basis, they need extra funding (Council on Higher Education, 2016a).

Many of historically disadvantaged institutions find themselves caught in a condition of under-development and funding challenges compared to their traditionally advantaged counterparts (Department of Higher Education and Training, 2014a), making it challenging to increase student access. The following seven universities are historically disadvantaged: the University of Fort Hare, the University of Limpopo, the Mangosuthu University of Technology, the University of Venda, the Walter Sisulu University, the University of Zululand and the University of the Western Cape (Department of Higher Education and Training, 2014a). These universities enjoy additional funding support from the government in the form of an historically disadvantaged institutions grant, Foundation Provision Funding Grant, Teaching Development Grant, and Research Development Grant to maintain or increase student access. The general intention of these funds is to put in place structures within the beneficiary institutions to develop and ensure financial sustainability and to enable the institution to strengthen its academic activities and fully realize its potential (Department of Higher Education and Training, 2014b). An interviewee explained why the University of the Western Cape benefits from the Historically Disadvantaged Grant:

Department of Higher Education and Training has realized that historically disadvantaged institutions have always been short-changed. There are developmental programmes that they need to engage in to get to a level where they can perform competitively with the ones that were advantaged all alone. That is how Historically Disadvantaged Institutions Grant started, and UWC is one of the beneficiary universities of the Grant. The main aim is to increase student access (**Respondent 2**).

Following the government's directives to the universities to implement a zero percent fee increase in 2016, a ZAR 361 million historically disadvantaged institutions grant was allocated to the universities, including the University of the Western Cape in 2015/16 to help them fund the shortfall and other costs related to the "FeesMustFall" campaign (Department of Higher Education and Training, 2016a). As indicated in the 2013 Ministerial statement, ZAR 410 743 million was set aside in 2015/16 as an amount earmarked as a Historically Disadvantaged Institution (HDI) grant for historically disadvantaged institutions (Department of Higher Education and Training, 2014b). This amount is additional funding provided by the fiscus to the institutions to increase student access by way of constructing new buildings or maintaining old ones (Department of Higher Education and Training, 2014b). Table 7 below shows the Historically Disadvantaged Institution Grant (HDI) to UWC.

Table 7: HDI Grant of UWC, 2009-2015

Year HDI (R' million)	2009	2010	2011	2012	2013	2014	2015	**Total**
UWC	40	80	69	70	62	62	62	**447**

Source: Department of Higher Education and Training, 2014b

From table 7, UWC received ZAR 40 million in 2009, and this increased to ZAR 62 million in 2015. An interviewee from the University of the Western Cape narrated a recent example of this process as follows:

UWC used funds from Historically Disadvantaged Institution Grant to construct the chemical sciences building, but at times they would give you half of whatever you require, and then you need to go and find the other half of the money (**Respondent 4**).

There is another grant called the Foundation Provision Funding Grant. One of the critical programmes undertaken to increase student access by the South African government over the years, hasbeen the implementation of Foundation Programmes, formally known as Extended

Curriculum Programmes. Extended Programes were recommended by higher education policy in the 1997 White Paper, and have been financed by the government since 2004 (Department of Higher Education and Training, 2016a). The focus of the programme is the articulation gap between students' educational backgrounds as influenced by their family, socio-economic circumstances as well as schooling (Department of Higher Education and Training, 2016a). The articulation gap involves subject knowledge, conceptual development, academic literacies, and socialization (Department of Higher Education and Training, 2016a). This has a negative effect on students' academic work throughout curricula, mainly where there are considerable transitions in knowledge development for which students are differently prepared (Department of Higher Education and Training, 2016a). The Foundational Provision Funding Grant provides funding for extended programmes to tackle the problem of under-preparedness of students to enhance their success rate at the universities, including the University of the Western Cape (Government of South Africa, 2017). The following interview responses represent the typical view in this regard:

> *We have what we call Foundation Provision Funding. Each university will apply for extended curricular programmes. The Grant is for students who the university monitors in the system. They have taken them into the sector, and they have met the minimum requirement, but often they know that these students are not going to pass, so they put them on foundation provision programme, which is supported financially by Foundation Provision Funding Grant, which UWC has been a beneficiary over the years* (**Respondent 21**).

The universities use the grant to provide access for students who have failed to meet regular institutional admission criteria. Some 80-90 percent of foundation students would not have had an opportunity to enter higher education without the entry route provided by extended programmes (Council on Higher Education, 2013a). "Providing additional curriculum space is an essential condition for enabling the majority of students to bridge the articulation gap" (Council on Higher Education, 2013b:94). The average percentage of first-year contact tuition students that are on Ministerial approved extended curriculum programmes is estimated to rise from 12 percent in 2014 to 30 percent for the future in the university sector (Department of Higher Education and Training, 2016a). The intention of this student enrolment growth in extended curriculum programmes is to significantly reduce the dropout rate of first-time entering students in their first and second years of study (Department of Higher Education and Training, 2016a).

In 2015/16, the University of the Western Cape received a ZAR 19 494 000 foundation provision grant, but this amount was decreased to ZAR 17 444 000 in 2016/17 (Department of Higher Education and Training, 2016a). Through their strategy to address the articulation gap at entry-level, extended programmes of the universities have provided some answers to the systemic constraints on both student enrolment and success rates. The programme has allowed for the enrolment of students who would not otherwise have been admitted to their choice of programme in higher education, and have aided thousands of students, including a proportion of struggling students initially admitted to the mainstream, to complete their studies and achieve a qualification (Department of Higher Education and Training, 2016a).

The third grant is the Teaching Development Grant, a fund allotted to public universities by the government since 2004 (Department of Higher Education and Training, 2013b), which is to be used according to each university's programmes and policies on projects aimed at improving teaching and learning with enhanced student success as its primary objective (Department of Higher Education and Training, 2016a). In support of this, this is what an interviewee said:

> *There is a Grant called Teaching Development Grant. UWC benefits financially from this Grant as a university. The Grant is for student support and dealing with the issues that can make or break a university because of a student feeling not well or not feeling accommodated, or funding is an issue or mental health issues. Teaching and learning cannot resolve that on its own; research cannot answer that on its own. We use this funding called the University Teaching Development Grant to address those issues* (**Respondent 2**).

The Teaching Development Grant is also used to address some of the social challenges facing the students, which could hinder their academic success. An interviewee made the following comments on this issue:

> *Student support funded through the Teaching Development Grant has been used over the years to address some of the social problems of students like the Gender Reconciliation Program, which is a societal problem, but people call it Rape Culture at institutions. How do we start addressing those issues? We, by just merely having workshops and discussions around gender and perceptions of gender is where we get funding to address these issues* (**Respondent 2**).

Student support funded through the Teaching Development Grant with allocations towards mentoring, tutoring, student advising, and a tracking system and associated training has the intention to improve student academic performance (Department of Higher Education and Training, 2016b). UWC was allocated ZAR 19 913 000 by the government in 2015/16, and this figure increased to ZAR 20 292 in 2016/17 (Department of Higher Education and Training, 2014b).

The last grant is the Research Development Grant. The primary purpose of Research Development Grants is to develop research capacity among academic staff at universities so that they can contribute to post-graduate teaching and research output (Department of Higher Education and Training, 2016a). The weighted total of research output is the sum of research masters and doctoral student graduates and research publication units (books for the specialist, conference proceedings, and articles in accredited journals), each weighted according to the funding weightings (Department of Higher Education and Training, 2016a). UWC received as much as ZAR 14 868 in a Research Development Grant in 2016/17 (Department of Higher Education and Training, 2016a).

These findings are consistent with the literature on the strategies to increase student access where public universities have traditionally depended heavily on grants from the government for financial support (Altbach, 2013; Powell & Rey, 2015; Teferra, 2013).

5.4.1.6 Financial Support System

A good number of students who study at the University of the Western Cape come from poor socio-economic backgrounds, and they rely on student financial aid for their studies. These financial aids include the National Student Financial Aid Scheme, UWC bursaries, and other bursaries from philanthropic organizations and individuals (University of the Western Cape, 2016b). Concerning NSFAS, the government established the NSFAS in 1996 aimed at ensuring that academically prepared students without financial resources can attend higher education (Council on Higher Education, 2016b). The National Student Financial Aid Scheme (NSFAS) has been one of the main strategies available to the government via UWC and other universities to increase student access for the poor and working-class communities (Universities South Africa, 2014). An examination of government constructs offers the following picture:

Students who meet the requirements for NSFAS get funded. This eliminates the worry that they have around food security and accommodation problems. We know that funding or lack of funding is not the only reason why students succeed or not succeed, but at least if you have proper financing, you are likely to succeed. That is why the national and the universities, including UWC's strategy of providing focus study through bursaries to deserving students, are a crucial intervention to increase access for students (**Respondent 22**).

The NSFAS pays for tuition, accommodation, books, and living expenses for those who qualify. In 2011, NSFAS made 221 653 awards to students in universities, compared with a total undergraduate enrolment of 703 747, and this number decreased in 2013 as NSFAS made 194 923 awards, with a total enrolment of 800 955 (Council on Higher Education, 2016b). The number of university students funded by NSFAS is projected to grow by 86 percent from 230 469 in the 2017 academic year to 428 367 in the 2020 academic year (National Student Financial Aid Scheme, 2018). The massive upsurge in the number of students funded under NSFAS indicates the universities and government's determination to increase student access to higher education for students coming from the poor economic backgrounds (National Student Financial Aid Scheme, 2018).

In the case of the University of the Western Cape, the National Student Financial Aid Scheme, the UWC bursaries and other bursaries are concurrently offered to students. Cumulatively, the Funds administered by the UWC financial aid office have increased year on year from ZAR 304.5 million in 2013, ZAR 330.3 million in 2014, and ZAR 335 million in 2015 to ZAR 451 million in 2016 (University of the Western Cape, 2016b). Table 8 shows the number of bursaries offered by UWC.

Table 8: Funds Administered by the Financial Aid Office, UWC

Funding Categories	**2013**	**2014**	**2015**
Funds administered by Financial Aid Office (including NSFAS)	ZAR 304.5 m	ZAR 330.3 m	ZAR 335 m
Total NSFAS Allocation	ZAR 229.3 m	ZAR 216.1 m	ZAR 219 m
UWC Bursaries	ZAR 15 m	ZAR 16 m	ZAR 18 m

Source: University of the Western Cape, 2015

A participant commented on how NSFAS contributed financially to assist students in accessing the university.

It must also be noted that the National Student Financial Aid Scheme (NSFAS) has been exponentially increasing over the years that had accommodated a significant component of impoverished students. NSFAS, by no means, has accommodated and helped many students of UWC over the years (**Respondent 1**).

These findings are in line with Asharaf and Mustafa's (2016) set of strategies to increase student access. They postulate that strategies such as student loans, bursaries, and scholarships give students from low socio-economic families the opportunity to attend higher education. However, "Scholarships are the most commonly known and practiced solutions, but one of the key issues is that they are not cost-effective; therefore, they will never be able to meet growing demands" (Commonwealth Education Hub, 2016:3).

Table 9: Number of Student Beneficiaries per Year, UWC

Number of Student Beneficiaries per Year				
Fund	**2013**	**2014**	**2015**	**2016**
NSFAS	5890	4676	5838	7185
UWC Bursaries	4816	4866	4862	5783
Other Bursaries	6240	5792	5970	6343
Total	16 946	15 334	16 670	19 311

Source: University of the Western Cape, 2016b

From table 9, the number of students who got financial support in 2015 is less than those assisted in 2013. A year-on-year assessment, however, indicates that the number of students who received some form of financial support rose from 15 334 in 2014 to 16 670 in 2015. Since UWC had a total headcount enrolment of 20 382 students in 2015 (see table 2, page 88), the 16 670 students who received financial support constituted 82 percent of the total student population in 2015. This indicates the significant contribution of the financial support system towards changes in student access at UWC. Many of these students come from poor socio-economic backgrounds and would not be able to afford university studies without this student financial support system (University of the Western Cape, 2015).

Since its establishment, the NSFAS provision of financial resources to the most impoverished students has been central in providing access to education for students from low-economic and

working-class backgrounds who would otherwise not have been able to access higher education (Department of Higher Education and Training, 2016a). Through NSFAS, the government through universities has financially supported 1.5 million students, many of whom were first-generation higher education entrants (Department of Higher Education and Training, 2016a). However, the 2010 Ministerial Review of NSFAS found that NSFAS resources have not been well administered and best operated since its establishment, and that some 72 percent of NSFAS-funded students drop out, signifying that providing the student with an opportunity to enter higher education is not commensurable with academic success (Mathebula & Calitz, 2018). This suggests that lack of funding is not the only factor for low participation by most impoverished students (Mathebula & Calitz, 2018).

From the preceding analysis, it is clear that UWC has employed some strategies to increase student access. However, in their quest to increase access, the study finds that several funding challenges hamper the university's efforts. The funding challenges are, first, UWC faces high dropout costs. Dropping out of university, generally, refers to students who give up on their studies before they finish their academic programme. A respondent confirmed this:

> *One of the challenges is the level of dropout. We have an almost 40 percent dropout rate nationally. UWC falls in the same dropout category. In South Africa, when we charge a student ZAR 40000 a year for a programme, it costs the university ZAR 150000. This means ZAR 110000 is left multiplied by three years. Two years after graduation, the university takes a copy of the certificate and gives it to the government, and they will provide us with this money. If a student drops out, the university loses all that subsidy* (**Respondent 7**).

In short, dropout is a challenge to the university because the university's funding from the government is also tied to the number of students the university graduates in a particular year. If a student becomes a dropout, the university does not get a subsidy for that student. What is missing from the conversation is that the university seems to be unaware of other consequences. For instance, dropping out of university has significant implications for individuals, institutions, and society (Sarra, Fontanella, & Di Zio, 2018). Dropout rates may also give a university a negative image and affect the institution's future recruitment drive. This is because potential students who can pay tuition fees to increase the funding pool of the university can interpret institutional dropout rates as a sign of poor teaching and turn away from enrolling (Voelkle & Sander, 2008). Therefore, the university ought to put in place workable measures

to reduce if not eliminate dropout rates to attract students who can contribute financially to ensure the survival of the institution.

Secondly, the university faces the funders' conditionality challenge. Conditionality covers the strategy of the funders' bursary and the specific objectives outlined by the donor in collaboration with the institution. The introduction of conditionality in bursaries and scholarships has become a common way of making sure that the awards or scholarships reach the needy students. The challenge is that the bursary's objectives and goals, as prescribed by funders, may deviate markedly from the institution's values. With the conditionalities, tensions can manifest between the funders and the institutions. If unresolved, these tensions may lead to the cancellation of the bursary even halfway into the year leaving the beneficiary students in financial limbo, ultimately affecting students' continued to stay in the university. In the case of UWC, that is the situation, as explained by an interviewee:

> *Some of the funders give money with a string attached. The university looks to see that the values, the ethos, and the culture of the person donating also match with that of the university. The university does not entertain donors whose conditionalities do not match our culture, and even if the bursary is halfway and the funder introduces any requirement that conflicts with UWC's values, the university cancels the bursary* (**Respondent 4**).

It may be deduced from the above statements that the University of the Western Cape has a culture and values, which the university promotes, so any conditionality that goes contrary to or against their culture is not sanctioned even if the bursary is halfway through. This may pose a significant challenge for the institution in the quest to increase student access as the beneficiary students may lose their scholarships. However, it is not always the case that funders give negative conditionality as a funder may use conditionality as a reward for good work by the university and the students and try to assist in accelerating ongoing activities.

Thirdly, the study finds that a low tuition fee structure is a challenge for the university. It is based on prospective students from low economic backgrounds likely to be kept away from entering higher education that the University of the Western Cape has over the years implemented a low tuition fee structure as a strategy to increase student access. Nevertheless, the strategy has become one of the challenges facing the university because of its unintended consequences on the university's finances. The following response is exemplary in this regard:

The university's tuition and student accommodation fees are amongst the lowest in the country. The student accommodation book runs at a loss. The budgeting process provides for doubtful debt and student accommodation loss so that the shortfall is accounted for within the financial framework. The negative is that the University of the Western Cape has to finance unfunded indigent students with its working capital (**Respondent 1**).

Student fees are stagnant at the University of the Western Cape. If they were increased according to the market rate, the level of income would improve. The university leadership is not keen to endorse an increase in the student fees because of dire implications on the university's mission of providing access to the poor, but in the process accumulating debt, which may negatively affect the university's operations and the quality of programmes.

The fourth challenge facing UWC is the uncertainty around the third stream income. The third stream income contributed 26 percent to the university's budget in 2016 (University of the Western Cape, 2016b), which means it forms a significant part of the institution's funding streams, but the university faces some challenges in generating third stream income. This is how the problem looks like according to two interviewees of the university who were concerned about the developments in this regard:

UWC has different sources of third-stream income, including businesses, banks, industries, philanthropists, and alumni. The challenge with third stream income is that all the universities in South Africa are competing for the same funders. A lot has to do with performance and visibility. More money goes to those already visible, and not much comes to the ones who have not been visible. UWC happens to belong to those who have not been visible (**Respondent 2**).

The other funding challenge is the third stream income. The government is trying to get funding from the same people where the university is getting financing. The government wants the private sector to contribute to the general fund for "fees must fall." The donors are cutting off the universities and not giving it directly to the universities, but they are giving it to government, and this has an impact on access in terms of getting money to expand the infrastructure (**Respondent 5**).

The perception of the interviewees concerning uncertainty around third stream income is consistent with the resource dependence theory's argument that organizational susceptibility stems from the likelihood of an environment changing so that the resource is no longer

guaranteed. Uncertainty concerning essential support like funding means the organization's survival has become more unreliable. The theory goes further to argue that uncertainty around a vital resource threatens the continued existence of the organization because it makes it more difficult for the organization to operate effectively. In the case of UWC, the uncertainty around the third stream income is negatively affecting student access because some of the students are losing the bursaries that keep them in the school.

The last challenge facing UWC is inadequate government subsidy. Higher education funding is a difficult topic in South Africa. For many years, scholars have written about funding challenges facing universities in South Africa (De Villiers & Steyn, 2006; De Villiers, Van Wyk, & Van der Berg, 2013; Wangenge-Ouma, 2012). For instance, universities, including the University of the Western Cape, have argued that the tuition fees increases are because of the declining public funding as explained in various ways by the participants from the university:

> *There have been annual increases in public funding in monetary terms. Nevertheless, the increases over the years have been below inflation. It has been an ongoing trend where the pace of subsidy increases is much lower than the annual inflation. The cost of higher education is higher than what we receive through state subsidy. This is why the student fee is under pressure to be increased. I am not sure where we would land, but it is challenging to increase infrastructure when your income is less than your expenditure* (**Respondent 3**).

Declining government subsidy has implications for student access. An interviewee of the university puts it as follows:

> *If public funding is decreasing, it means income to the university is decreasing, which means the university cannot maintain its resources. Therefore, the implications are always that if a university gets less money, all other supporting structures are going to take a hit at some point in time unless you can bring in more cash via another avenue. For UWC, decreased government subsidy has negatively affected the construction of buildings, which has implications for student access* (**Respondent 4**).

The inadequate government subsidy has resulted in restrictions on student enrolment. A respondent from the university confirms this:

> *You used the word inadequate funding that infers that the funding is not enough, especially from the government side. The point is that we have to live with reality. I do not think we would get more money. So you can do what you want to do, you are still not going to get more money than what you are currently getting. Because of that, we have restrictions on enrolment, and we cannot just go and enrol extra students if your infrastructure cannot accommodate them. We cope with what we receive. We cope with great difficulty* (**Respondent 3**).

This section ends with the argument of Johnstone (2004), which epitomizes the challenge facing UWC. He claims that the primary funding challenges facing higher education institutions come from two forces. The first of these is the high and rising unit cost or per-student cost of higher education without a corresponding increase in public funding. He further explains that when these higher education cost build-ups are not offset with an equal measure of revenue from the state, the resultant effect in some cases is increasing tuition fees culminating in less efficiency, low productivity, and students from less economic background unable to enrol in higher education institutions. The next section focuses on the University of Ghana.

5.4.2 University of Ghana

In the face of fluctuations in public funding, student enrolments at UG saw some increases in some of the years and some decreases in some of the years and, in some cases, quite dramatically. The study finds that the enrolment changes have been made possible through the implementation of seven strategies by the university. These strategies include government subsidy; low tuition structure; containment strategy; payment arrangements; policy for the admission of athlete students; policy for less-endowed schools; and financial support system. The next sections discuss these strategies.

5.4.2.1 Government Subsidy

Government subsidy allows the public higher education institutions to charge students affordable tuition fees, and the level and distribution trends of these state subsidies compellingly influence student enrolment decisions (Long, 2004a). For instance, state subsidy

contributes 43 percent to the University of Ghana's budget (University of Ghana, 2017b). Two interviewees described how the government subsidy assists in growing student numbers as follows:

> *This University is a public university, and for that matter, we get the majority of our funds from the Ghana government. Relatively, we get about 43 percent of our funding from the government. The government is paying salaries, the government is paying electricity, the government is paying water, and the government is, to some extent maintaining the facilities. This is to make sure the university can enrol and keep students until they graduate* (**Respondent 13**).

> *For government subvention, even though there are no clear-cut goals, the primary target is to make university education accessible to all the citizenry through the provision of infrastructure and as a social intervention to reduce the cost of training students* (**Respondent 15**).

Interestingly, an interviewee disagrees with an assertion that government subsidy goes to increase student access. The interviewee puts it as follows:

> *I doubt if government subsidy goes into helping to boost student numbers because the financial support from the government to the university only goes to cater for staff emoluments and nothing else* (**Respondent 12**).

This seems to agree with the National Council for Tertiary Education's (2015a:27) budget report, which states that:

> *The bulk of the revenue, which represents 99 percent, would be consumed by compensation of employees. The compensation of employees constitutes basic salary, anticipated recruitment, promotions, book and research allowances, Council Members salaries and arrears. Goods and Services represent 1 percent. Capital expenditure also represents 0 percent of the total government subvention for 2015. This is because there was no allocation for the sector to undertake new capital expenditure activities.*

Nevertheless, it appears that there are studies in support of government subsidy for higher education institutions in pursuance of increasing student access mainly in the area of equity where a level playing field is created for both the rich and the poor students to access higher education. For example, a study by Tilak (2004) explains that when market forces dictate to the higher education system, higher education becomes the preserve of people from affluent

families because they can pay. Therefore, some form of government subsidy is necessary to cushion the poor. As pleaded by Martin (2017), it is only fair and just for the state to intervene in higher education funding; otherwise, many students from low-income families will be denied access to higher education. However, Martin (2017) points out that government subsidy increases inequality by paying the costs of higher education for students who come from the wealthiest families and the top pre-tertiary education institutions. Table 10 below shows the statistical relationship between public funding and student enrolment at the University of Ghana.

Table 10: Statistical Relationship between Public Funding and Student Enrolment at UG, 2007-2016

University of Ghana			
Variable	**Student Enrolment (2007-2016)**		
Public Funding (2007-2016)	**Coefficient**	**p-value**	**R-squared**
	315.727	0.509	0.0564

Using a linear regression model, the relationship between public funding and student enrolment from 2007 to 2016 was examined for the University of Ghana. The p-value was set at $p<0.05$. The analysis was done using statistics software STATA version 14. The p-value is a probability of 0.05 that you will mistakenly reject a true association between public funding and enrolment. In other words, it is saying you are 95 percent confident that your result is correct or accurate.

From table 10, although not statistically significant at $p<0.05$, for a unit increase in public funding to the University of Ghana from 2007 to 2016 results in 315.7 increase in the number of students enrolled in the same period. (Unit increase is approximately one million dollars).

5.4.2.2 Low Tuition Fee Structure

For several years, a government subsidy to higher education in Ghana has fallen significantly in real terms and mostly compensated for by tuition fee increases. This is not the case with the University of Ghana as the institution has kept tuition fees substantially at a lower rate for students. For the above point, this is what a respondent had to say:

> *Currently, our economic circumstance generally is not too good. If you ask a parent to pay a realistic full cost, it will be a big problem in Ghana. They pay less compared with other universities, mainly private ones. The actual instruction that the University of Ghana offers, the full fee is not offloaded unto parents or students. Parents do not pay the total costs of the instructions that have been given to their wards in the university* (**Respondent 11**).

The following statement made by a government official confirms this:

> *This government, since they came into power in 2017, has stopped increasing tuition fees for two years. The public universities, including the University of Ghana, charge GH 2,000 once a year, but for the private schools, you pay GH 2000 every semester. If you pay GH 2,000 in school, it is considered probably the lowest fee public universities charge. Private universities charge around GH 4,000 to GH 7,000 a year. This is one of the ways the government is helping public universities to increase access* (**Respondent 19**).

The perception of the interviewees concerning low tuition fee structure for increasing student access is found to take the same form of resource dependence theory's argument that in times of financial difficulties institutions like universities can charge moderate fees to attract more potential students. They would invariably contribute financially to sustain the institution. However, the negative side of this strategy is that it makes it difficult for the university to obtain enough funding to make up for inadequate government funding.

5.4.2.3 Containment Strategy

The University of Ghana, realizing the debt being accumulated in 2011 due to declining state subsidy, decided to admit students based on the amount from the government. For instance, if the funding from the government could only finance 5000 students, then they would admit the same number of students. An interviewee from the university explained the issue as follows:

> *We are implementing a "containment strategy." Containment is that we are not going to increase enrolment necessarily, but we stay within a certain threshold that matches government subsidy. The strategy is that if we stay within the numbers that commensurate with government subsidy, at least we are likely to be balanced in our expenditure* (**Respondent 11**).

They also took that decision based on the university's facilities, which were deemed inadequate to enable the university to increase student numbers above the current figures. The same interviewee confirmed this:

> *We do not want to jump over to increase the student numbers. Facilities like library facilities, ICT, even lecture spaces that we need to have to support teaching and learning are inadequate. We are, therefore, mindful of the available resources. We do not necessarily need to increase student intake when we do not have enough funds to administer to students. We want to keep ourselves within that particular line that matches government subsidy to avoid unwanted debt* (**Respondent 11**).

An interviewee confirmed this with some illustrations:

> *The strategy is to have the number of students that government subvention can cater for to avoid overstretching the facilities. For example, if the government decides that it cannot give you all the money that you need to admit 10 000, but the government provides money that can cater for 7 000, we take the 7 000 and not the 10 000, because the money is not enough to take the 10 000. Funding and access are twin brothers. That is what we have been doing* (**Respondent 13**).

In the 2008 academic year, enrolment was 34 199, but this was increased to 37 257 in the 2010 academic year (National Council for Tertiary Education, 2018). However, the trend changed in the opposite direction when the university began the implementation of the "containment strategy" in the 2011 academic year. The enrolment decreased from 37 257 in 2010 to 28 305 in 2011 (National Council for Tertiary Education, 2018). The enrolment further reduced to 26 633 in the 2012 academic year (National Council for Tertiary Education, 2018). This is consistent with the resource dependence theory's argument that in times of financial constraints organizations must spend within their means and not go overboard in their expenditures. However, it can be deduced from the statistics above that this strategy, even though it might have helped the university in avoiding enormous debt, led to decreases in student enrolment in some of the years.

5.4.2.4 Payment Arrangement

The University of Ghana currently maintains a programme aimed at waiving tuition fees. This waiver programme is targeted at specific students that the university has identified as warranting special consideration related to payment of fees. The waiver programme is typically

defined as a programme that allows special groups of students who cannot afford to pay their fees upfront to enrol and pay the fees later, even when registration may be over. These students are given enough time to look for money and pay their fees. The following interview response represents the typical view in this regard:

> *Some people come with hard conditions and cannot pay fees upfront. The student may be given two months to come and pay after the deadline for registration has elapsed. If registration is about to end, and a student does not have the money, the student can go and see the Pro-Vice-Chancellor Academic. The student writes a letter and explains why he or she cannot pay. If the Pro-Vice-Chancellor buys into the explanations, he has that power to give the student a month off or two months off to search for the money* (**Respondent 18**).

As far as the establishment of a payment arrangement is concerned, it can be analysed in the context of the studies of Addo et al. (2016) and Boatman and Evans (2017). They argue that for some decades now payment arrangements have been set up in some countries to help students defray the costs of higher education and that such payment arrangements are now one of the essential models for increasing student access. However, the inability of students to pay their debt on time denies the institution a substantial amount for investment in the sector.

5.4.2.5 Policy for the Admission of Athlete Students

The University of Ghana has adopted a policy facilitating entry requirements for sportsmen and women to increase student access. Following the university policy, the students who do sports have the right to be admitted to the university with no regard to the university's cut-off point provided the student has at least the minimum academic requirements. The university has what it calls the University of Ghana Policy on Admission for Athletes Students (UG-PAAS). The UG-PAAS is geared towards giving access to sportsmen and women and supporting the growth and development of students' performance in sports, thereby building a viable relationship between sports and academic performance (University of Ghana, 2018). An analysis by the University of Ghana (2018) takes the same view that UG-PAAS forms part of the University of Ghana Sports Directorate (UGSD) reforms to unearth and exploit prospective and gifted young athletes. The university, through Policy on Admission for Athletes Students, offers students the chance to be admitted into the University of Ghana through the minimal

entry requirements (University of Ghana, 2018). An interviewee made the following comment on this issue:

> *Now the sportsmen and women, once you can prove that you are an excellent sportsman or sportswoman, the university would consider that and give you admission even if your academic credentials are not so proper. That is even though under normal circumstances, you were not supposed to get admission; because of your sports, you will get it* (**Respondent 18**).

In 2010, the University of Ghana adopted the Sports for Academic Credit (SPAC) into the mainstream academic calendar. The purpose of SPAC is to promote participation in sports at the university. Thus, all student-athletes who sacrifice their time to represent the university in the major competitions are awarded grades that add up to their Final Grade Points (University of Ghana, 2018).

> *Once the student is enrolled, the university focuses on training the student on his or her sports aspects. Those students get enrolled in the university sports team. There is a programme called Sports for Academic Credits. While the student is performing in sports, he or she is also getting academic credit. All of them pay their fees. The university receives money from them and, at the same time, allows those who otherwise would not have gained admission to the university to get that opportunity* (**Respondent 18**).

This is a deliberate policy of the university to increase student access. The vital part of the policy is that a student does not need to meet the cut-off point before gaining admission into the university. The cut-off point is one measure that denies many students from getting admission, and this admission constraint is removed for sportsmen and women. It is important to note that these students pay fees to assist the university in carrying out the operations of the university. What is worrying is the fact that some of the sportsmen and women are not prepared for academic work. They focus on their sports and pay less attention to their academic work.

5.4.2.6 Policy for Less-Endowed Schools

Ghana Education Service has, for a long time now, categorized public senior high schools in Ghana into less-endowed and well-endowed schools by their location, infrastructure and teachers, among other factors. The well-endowed schools are located in the cities and the less-endowed mostly in rural areas (Anyan, 2016). The selection of students from Senior High

Schools (SHS) into public universities is based on academic performance in the West African Senior School Certificate Examination (WASSCE) (Yusif & Ali, 2013). Between 1998/1999 and 1999/2000 academic years, 60 percent to 92 percent of students enrolled in the University of Ghana came from the top 50 senior high schools in the country (Addae-Mensah, 2000). It was reported that, between the same years, students from less-endowed schools who are mostly the children from disadvantaged families in the country never enrolled in any of the public universities (Yusif & Ali, 2013). This disparity in the universities' enrolment is attributed to the competitive nature of the admission process because of inadequate academic facilities making it difficult for students from less-endowed schools to compete with students from well-endowed schools (Addae-Mensah, 2000; Yusif, Ishak, & Hassan, 2011). It is against this backdrop that the system was described as unfair as the first top 50 senior high schools were the preserve of students from a high economic background (Yusif et al., 2011).

Moreover, the number of less-endowed senior high schools (SHSs) was 297 out of about 600 senior high schools in 2002, accounting for about 49.5 percent (Budu, 2017). This number has not changed much even though the number of senior high schools grew to about 697 in 2009 (Yusif & Ali, 2013). It was for this reason that the University of Ghana began the implementation of a policy called a less-endowed admission policy in 2004. This policy allows the university to admit students with the minimum admission requirement of an aggregate not exceeding 24 with credits in English language, Mathematics and Integrated Science from less-endowed schools. They pay normal, highly subsidized tuition fees to the university. Professor Kwadwo Asenso-Okyere, then Vice-Chancellor of the University of Ghana in 2004, made some disclosures during the university's congregation:

> *The University of Ghana has reserved 300 vacancies for student applicants from less endowed Senior Secondary Schools with effect from the next academic year. These are students who pass their Senior Secondary School Certificate Examination within aggregate 24 but are beyond the cut-off point* (GhanaWeb, 2004).

In 2016, the Vice-Chancellor at the university's congregation made a similar statement:

> *The university continued to increase access through its policy of offering the opportunity of university education to applicants from Less Endowed Schools* (Citi FM, 2016).

Resource dependence theory postulates that, when organizations face limited resources, they try to respond to survive. In the case of the University of Ghana, one of the responses has been

the admission of students from less-endowed schools who would pay fees for the survival of the institution.

Nonetheless, the study by Yusif and Ali (2013) suggests that even though the policy for less-endowed schools has helped towards increasing student access, some of the beneficiary students are unable to pay their fees to complete their studies. They have, therefore, implored the government, district assemblies, and philanthropists to offer some financial assistance to less endowed students admitted into universities to enable them to enrol and complete their studies successfully.

5.4.2.7 Financial Support System

The university has set up a student financial aid office to give scholarships and bursaries to brilliant but needy students. The student financial aid office improves the university's mission of making the University of Ghana more relevant to national and international development by considerably decreasing or removing financial barriers that might proscribe or hinder students' access to the University of Ghana's high-quality teaching and learning (University of Ghana, 2017).

Established in 2005, the University of Ghana sees the activities of the student financial aid office (SFAO) as an essential part of its programmes as it allows needy but brilliant students to access university education (University of Ghana, 2017). Financial aid is available to Ghanaian students and is planned to eliminate the cost barriers that may preclude students from achieving their educational ambitions (University of Ghana, 2017). Financial aid at the university includes a full scholarship, partial scholarship, and fee arrangements. Financial assistance is available from a variety of sources such as funding from government, the university, corporate organizations, national and international non-governmental organizations (NGOs) and other private sources and bright students who have financial challenges qualify for financial support to enable them to access and complete their education (University of Ghana, 2017). This was expressed by an interviewee as follows:

> *The university has what we call the Student Financial Aid Office, where we have some corporate entities and the university itself putting money in a kitty where we sponsor very hard-pressed students, students who have challenges with funding. The university creates access to students who may not, perhaps on their own, be able to enter the university through scholarship programmes that we have* (**Respondent 11**)

Individuals and entities also give scholarships for specific programmes or courses. An interviewee explains this point:

> *There are some scholarships available, and most of them are particular to some programmes because donors have an interest. They want to support, for instance, history because the one who is giving the money is a grandfather or great grandfather of somebody who was a historian and a professor at the University of Ghana. He puts some money aside and says, every year, I want to support two very brilliant female history students* (**Respondent 11**).

Table 11 below shows the types of scholarships for students. The amounts are in Ghana Cedis.

Table 11: Types of Scholarships/Bursaries, UG

Scholarships/Bursaries	**Academic Year**		
	2013/2014	**2014/2015**	**2015/2016**
Legon Interdenominational Church	7,500.00	7,500.00	10,000.00
Christian Anglican Church	5000.00	5000.00	10,000.00
Fidelity Bank	7,500.00	7,500.00	
Papaye	2,500.00	2,500.00	2,500.00
K.N. Owusu	2,380.00	2,618.00	3,134.00
Fosuaba Female School	2,045.00	2,273.75	2,322.50
Prudential Bank	5000.00	10,000.00	
Ghana Reinsurance	8000.00	10,000.00	15,000.00
Latex Foam	10000.00	10,000.00	10,000.00
Lawrence Addo	20000.00	25,000.00	50,000.00
Prof. Ernest Ayeetey	4,438.00	4,573.00	6,000.00
HFC Bank	15000.00	18,000.00	21,000.00
Chaplaincy Board	1044.15	876.00	1,277.00
UTAG	5000.00		
Ecobank	30000.00	35,000.00	50,000.00
University of Ghana	87,000.00		50,000.00
Total	**212 407.15**	**140 840.75**	**231 233.5**

Source: University of Ghana Financial Aid Office

Table 11 above shows that in the 2013/2014 academic year, the university was able to give out 212 407.15 Ghana Cedis to students. This figure decreased to 140 840.75 in the 2014/2015 academic year but increased to 231 233.5 in the 2015/2016 academic year.

Resource dependence theory proposes that when organizations face limited resources, they try to behave in a way that makes them useful. In the case of the University of Ghana, one of the behaviours has been the establishment of a financial support system where government agencies, corporate bodies, churches, non-governmental organizations, individuals and alumni contribute to the survival of the institution in terms of increasing student access. Table 12 below shows the number of student beneficiaries per year.

Table 12: UG Bursaries: Number of Student Beneficiaries per Year

Year	**Number of student beneficiaries per year**
2005/2006	121
2006/2007	122
2007/2008	319
2008/2009	172
2009/2010	131
2010/2011	154
2011/2012	191
2013/2014	421
2014/2015	486
2015/2016	479
Total	**2 596**

Source: University of Ghana Financial Aid Office; University of Ghana, 2017

Table 12 above indicates the number of students who have benefited from the University of Ghana's financial support system. The university started with 121 student beneficiaries in the 2005/2006 academic year, but by the 2015/2016 academic year the beneficiary students had increased to 479, an increase of about 358 students. The total beneficiaries as of the 2015/2016 academic year are pegged at 2 596. The problem with a financial support system is that most of them have conditionalities that may hinder the progress of the students and, in the end, affect the institution. For example, one of the conditionalities may be academic performance. Failure of one or two subjects may lead to the cancellation of the scholarship or bursary. If a student

cannot find another funder, he/she would have to withdraw from the institution. This failure may stay with the student for the rest of his/her life, and the institution may lose some revenue.

From the preceding analysis, it is clear that UG has employed some strategies to increase student access. However, in their quest to increase access, the study finds that several challenges hamper the university's efforts. The challenges are, first, UG faces capping of internally generated funds. Internally Generated Funds (IGFs) are non-tax income that is generated through the activities and operations of tertiary education institutions (National Council for Tertiary Education, 2015a). These include academic facility user fees, residential facility user fees, admission fees, registration fees, investment income, and donor contribution (National Council for Tertiary Education, 2015a). IGFs are used to support direct academic expenditure. For instance, acquisition of books and periodicals, equipment for libraries and field trips; and administrative and service activities (National Council for Tertiary Education, 2015a). IGFs support printing of admission forms and registration expenses, matriculation expenses, payment of examination costs, payment of utility bills incurred by halls, general maintenance costs and investment activities like infrastructural projects, rehabilitation of buildings, maintenance of assets, procurement of laboratory equipment, and procurement of auditorium facilities (National Council for Tertiary Education, 2015a). Even though internally generated funds seem to play a significant role in the financing of public universities in Ghana, the recent directive by the government for the universities to cede part of these funds to the government has become problematic for the universities. An interviewee confirms this as follows:

> *The universities use Internally Generated Funds (IGFs) to support the goods and services to run the operations of the university. In 2015, the government capped the IGFs. The universities used to retain 100 percent, but the universities were directed to use 66 percent and then cede 34 percent to the government. In other words, they were supposed to use 66 percent of IGF, and then the government's share was 34 percent. The universities, including the University of Ghana, are complaining that it is hurting their operations towards increasing access* (**Respondent 20**).

Professor Ebenezer Oduro Owusu, the Vice-Chancellor of the University of Ghana, lamented about this issue when speaking during the university's congregation. This is what he said concerning the capping of internally generated funds:

> *We have received notification that public universities are required to cede 34 percent of their Internally Generated Funds (IGF) to government. The University of Ghana, like other public universities, depends heavily on its IGFS to operate, as government funding is woefully inadequate. Having to relinquish 34 percent of IGFs would put the university in a dire financial state* (GhanaWeb, 2017).

The implication of this decision on student access is that it financially disables the university to embark on infrastructure expansion to increase enrolment.

Secondly, the study finds that a low tuition fee structure is a challenge for the university. Low tuition has the potential to slow down the operations of the institution, thereby negatively affecting the access drive agenda of an institution (Bahrs & Siedler, 2018). In the case of the University of Ghana, low tuition is both a blessing and a curse. Even though a low tuition fee structure is one of the strategies that the University of Ghana has employed to increase student access, at the same time, it has become one of the funding challenges facing the university. The following interview responses confirm this assertion:

> *We charge fees that do not allow the university to break even, and as we speak, the deficit is in millions of Ghana cedis. The excess of expenditure over income is a lot. What it means is that we are unable to maintain our facilities and put in critical infrastructure to be able to increase enrolment. For the past two years, we have not been able to increase our fees because parliament has to approve, and parliament has not approved it* (**Respondent 12**).

> *For the past two years, UG has not been able to increase fees. It is affecting the university. What we have been charging is far too low. We only accommodate for inflation. We increase by about 10 percent and sometimes even less than that. I mean, this has been agreed between the universities and government. Still, for the past two years, we have been having challenges with the fee increase and is something that affects the university in terms of increasing access* (**Respondent 14**).

Nevertheless, a low tuition fee structure is one of the strategies used by the university to increase student access and ought to be enhanced if the institution were to continue its mission of giving access to students irrespective of their background.

The last challenge facing the University of Ghana is inadequate government subvention. Inadequate government subsidy is explained in terms of declining state funding and funding

allocations not matching the needs of the growing expenditures of higher education institutions (Wangenge-Ouma, 2011). The second aspect of declining state funding refers to a situation where public funding for higher education has not fallen in real terms, but the allocations remain inadequate in respect of the expansion of, and enrolment increases on the sub-sector, and the mounting costs of higher education, which far exceed inflation (Benjamin & Carroll, 1998). For the University of Ghana, inadequate government subvention has been one of the challenges facing the institution as lamented by an interviewee:

> *Yes, public funding has been dwindling over the years. The government used to fund everything, including administration, investment, development, and emolument. What we have now is only for emoluments that we receive from the government and even that we have some restrictions. The government has to give you clearance, and clearance means you are required to hire staff up to a certain level. This is affecting the lecturer-student ratio limiting the university's ability to enrol more students* (**Respondent 14**).

Inadequate government subsidy has had some implications on the operations of the university as narrated by a participant:

> *The money for goods and services that we get is nothing to write home about. It is woefully inadequate because if you compare that to the budgetary requirements, it does not meet it at all. The institution is unable to recruit and replace lecturers because of declining public funding. We get zero for capital expenditure. For 2016, it was zero. The government said they were offloading all our capital expenditures to get funds, so for some years now, we have not been getting any allocation for capital expenditure* (**Respondent 20**).

All the participants interviewed stated that the government of Ghana is urging all the public universities to find alternative ways of generating revenue because the government has reached a point where it can no longer fully finance the universities. This, they admit, is hampering the university's ability to increase student access.

5.5 Conclusion

Many stakeholders in the Ghanaian and South African higher education sectors, including the governments, parents, and students, have expressed interest in the need to increase student access. This study was therefore premised on the overarching need to ascertain the extent to which two public universities (UWC and UG) have been able to increase student access in the

face of the declining state funding by examining the relationship between changes in public funding and student access. This study, therefore, delved extensively into the key issues of higher education funding and student access by unravelling first and foremost the changes in public funding and student access and following up to unearth the factors influencing those changes. The study subsequently found that several challenges hinder the two universities' ability to increase student access, which were also discussed exhaustively.

Overall, downward changes in public funding necessitated the adoption of various access strategies to guarantee the continued existence of the universities. It is imperative to understand that these access strategies seem to be giving the universities some revenue to be able to carry out their teaching and learning, research, and community engagement mandates. From the resource dependence theory's perspective, procuring critical resources is a condition for the survival of universities, which has a direct correlation with student access. For example, more financial resources mean the expansion of infrastructure to accommodate more students.

Finally, this analysis raises important questions of changes in the pattern of public funding and student access. The study finds evidence that changes in public funding are a major factor of variations in student access at UWC. Nonetheless, the study finds a little evidence that changes in public funding are a major factor of changes in student access at UG. Moreover, the study finds that changes in public funding are more responsive to structural changes in the economy, competing demands from different sectors of the economy, a shift of focus from education, and overspending in election years. The next chapter, which is chapter six, presents a comparative analysis and discussion of the findings.

CHAPTER SIX

DISCUSSION OF THE RESEARCH FINDINGS

6.1 Introduction

This chapter presents a comparative analysis and discussion of the findings. The findings are discussed under each theme, as established through the research questions. This chapter highlights notable similarities and differences. The chapter explores three sets of themes. First, it analyses and compares the nature of changes in public funding and student access at the two universities from 2007 to 2016. Second, the chapter examines and compares the factors that influence changes in public funding and their implications for student access. Finally, the chapter explores and compares strategic responses towards influencing changes in student access. I address these three main themes to show the possible relationship between changes in public funding and student access.

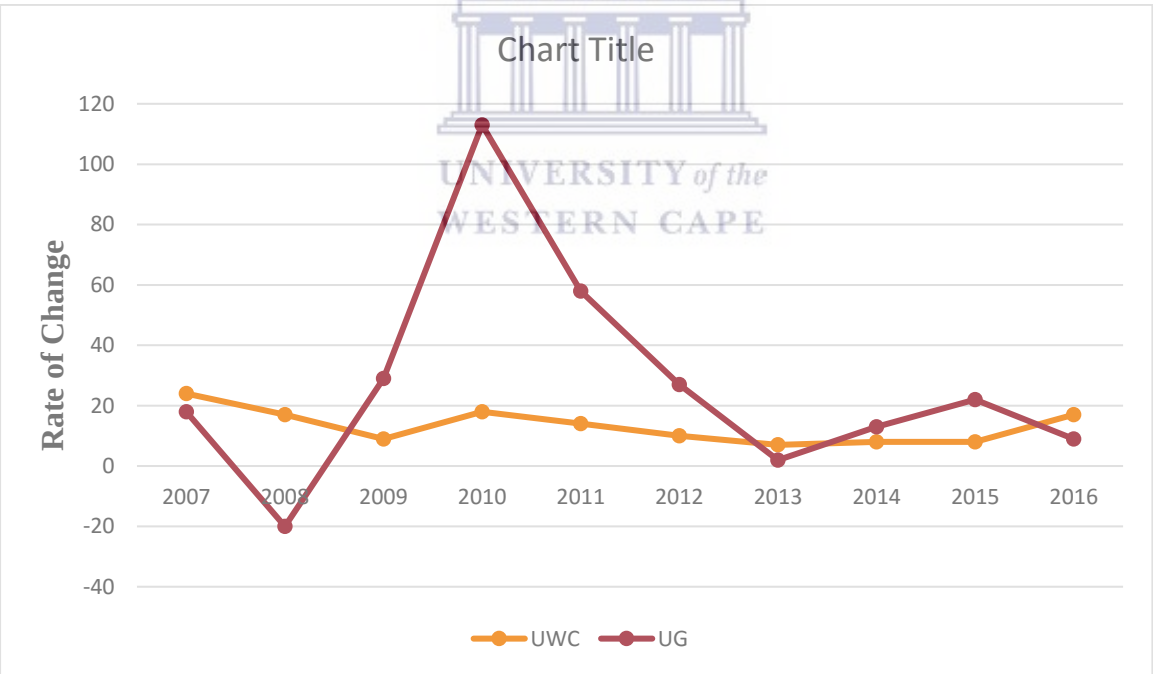
6.2 Changes in Public Funding and Student Access

Concerning student enrolment targets, universities in South Africa have a national enrolment plan, a five-year national enrolment plan which they decide upon with the Department of Higher Education and Training (DHET). The targets they decide on are linked to the various degrees that are offered in the universities. For example, how many Ph.D., Masters, Honours, and undergraduate students can a university admit? This is linked to the resources of the institution, like class sizes and available lecturers. The DHET approves UWC's enrolment targets. The DHET technically sets the targets for the university, but there is always a negotiation between the two in terms of how many students the university can take. The government subsidy is also linked to the number of students that the university admits, and the institution is not allowed to go over a certain percentage of the target. For example, if the university over enrols or under enrols by more than 2 percent of the target, the university is penalized. The University of the Western Cape's enrolment plan is always with an upward projection. The university's five-year development plan is always that the numbers increase year-on-year, and then the university has to ensure that resources are put in place to match the increases. The annual targets have been around 5-10 percent increase in student enrolments.

Unlike universities in South Africa, universities in Ghana have no national enrolment plan. Individual universities set their student enrolment targets with no discussion with the government. For the University of Ghana, there is what they call the "General Quotas Committee". The General Quotas Committee meets and considers various factors such as the number of lecturers, the amount of equipment, the amount of equipment for science or for practical based courses, the number of classrooms, and government subsidy to determine what they call the "Current Capacity of the University". Those factors determine how many students could be admitted in a particular year. The University of Ghana's annual targets have been around a 10 percent increase in student enrolments. What is common to both, however, is that both universities' enrolment plan is always that the enrolment increases year-on-year.

Regarding changes in public funding and student enrolment, several trends can be teased out. A comparative analysis of the public funding and student enrolment patterns at the two universities in the ten year period 2007-2016 shows trends that are both similar and different. Figure 9 below shows the rate of change in public funding of UWC and UG from 2007 to 2016.

Figure 9: Comparison of Rate of Changes in Public Funding at UWC and UG, 2007-2016

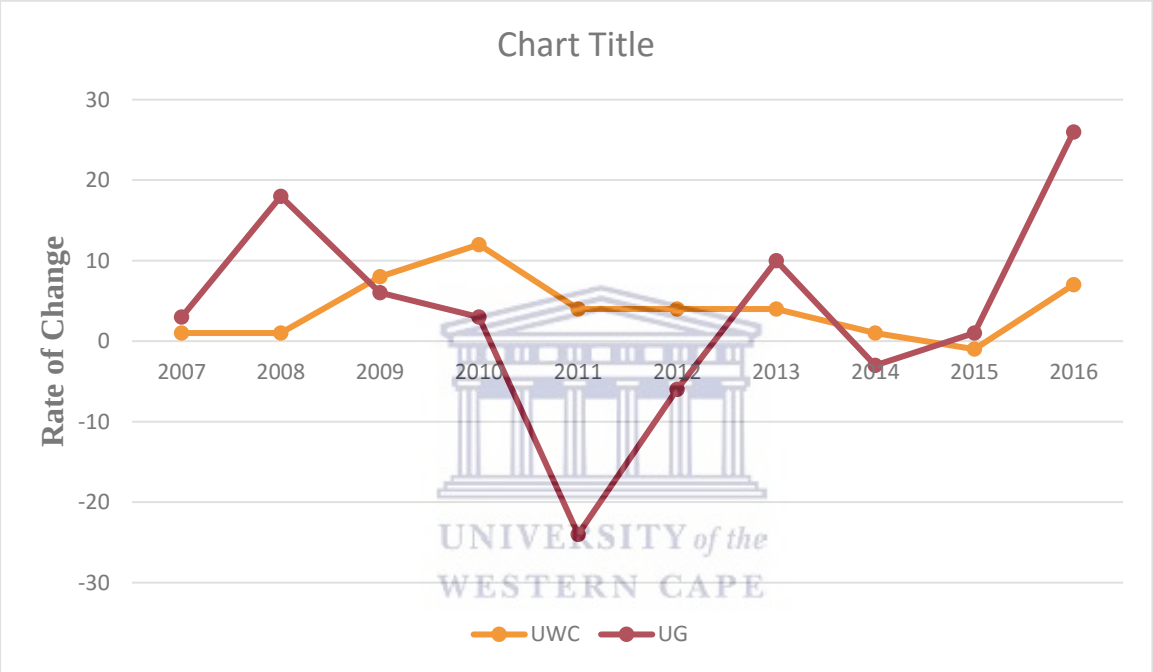


Source: Author's calculation based on the data

Note that the figures have been rounded off.

Figure 9 shows that at both institutions changes in public funding were greater in the 2007-2011 period (except 2008 for UG) than they were in the 20012-20015 period. One major difference that characterizes changes in public funding at the two universities is that public funding to UG is marked by monumental fluctuations, including significant reductions in 2008, 2013, and 2016. In contrast, UWC's is relatively stable, marked by small and moderate changes. Figure 10 below shows the rate of change in student enrolment at UWC and UG from 2007 to 2016.

Figure 10: Comparison of Rate of Changes in Student Enrolment at UWC and UG, 2007-2016.



Source: Author's calculation based on the data

Note that the figures have been rounded off.

UG is the larger of the two in terms of student enrolments. Within ten years (2007-2016) total enrolment at UG increased from 28 920 in 2007 to 35 950 in 2016 recording a total student enrolment of 313 419 within the period (see table 3, page 90) while total enrolment at UWC grew from 14 927 in 2007 to 21 796 in 2016 recording a total student enrolment of 185 761 within the same period (see table 2, page 88).

Figure 10 shows that at UWC changes in student enrolment were greater in the years 2009, 2010 and 2016 period than the others. For UG, changes in student enrolment were greater in 2008, 2013 and 2016 than in other years. The lowest changes in student enrolment at UWC

came in the 2007, 2008, 2014 and 2015 periods, whereas the lowest changes at UG happened in 2011, 2012, 2014 and 2015. One major difference that characterizes student enrolment at the two universities is that enrolment at UG is marked by monumental fluctuations. In contrast, UWC's is relatively stable, marked by small and moderate changes.

Within a decade (2007-2016), total student enrolment at UG increased by 24 percent (see table 3, page 90). Within the same period, total student enrolment at UWC grew by 46 percent (see table 2, page 88). Notably, within the ten years (2007-2016), UG's student enrolment has grown at a rate of 3.3 percent per year on average, and UWC recorded almost the same average growth rate of 3.9 percent within the same period. UWC's enrolment growth rate per year, on average, was higher than UG by 0.6 percent. The inconsistent changing patterns of public funding had some implications for student access as, in some cases, a reduction in public funding saw some decreases in student enrolment at UWC.

One significant finding in this study is that there are constraints on resources such as space, equipment and, most importantly, funding, which determine the targets for increasing student access. While the universities aim, in accordance with their mission and vision, to increase access, this is not always playing out in the same way the universities wish. It must be stated that it is not surprising that at UWC there is a positive relationship between changes in public funding and student enrolment because the formula for government allocation of funds to the universities takes into consideration student enrolment. For UG, it is not surprising that there is little relationship between changes in public funding and student enrolment because no funding formula exists in Ghana. The universities in Ghana (including UG) use an ad hoc budgeting approach, which does not consider the number of students to be enrolled.

Although the two institutions operate in different contexts, the evidence from this study supports the resource dependence theory's assumption that there exists a link between the uncertainties in funding and the success of organizations. Uncertainties in public funding at the University of the Western Cape seem to have affected student access. This suggests the need for the universities to refocus their initiatives, not just to accumulate extra resources but also to efficiently and effectively manage the limited resources already in place to mitigate the uncertainties. The next section discusses the factors responsible for the changes in public funding and their implications for student access at the two institutions.

6.3 Factors Influencing Changes in Public Funding

Globally, discussions are ongoing about the system of funding higher education because state funding of higher education institutions has generally been limited. Looking at the data from the two universities in the two countries, it is clear that there have been changes to public funding. Several factors accounted for the changes. These factors include the state of the national economy, competing needs of the various sectors of the economy, low prioritization of higher education, a shift of focus from education, funding mechanism, and overspending in election years. I examine these factors in the next section.

6.3.1 State of the National Economy

The first factor responsible for the changes in the public funding at both institutions is the state of the national economies of both countries. Both universities are highly dependent on government subvention, with all of them being dependent on state allocations by over 45 percent. Changes in the allocation of public funding to universities cannot be decoded sufficiently in isolation of the state of the national economies in which the university is situated (Wangenge-Ouma, 2007). As indicated in Chapter Five, South Africa and Ghana have been in an economic nightmare in recent times. Economic growth has been sluggish and external debt has skyrocketed with substantial interest payments.

The study finds that poor economic performance has led to downward changes in public funding to UWC and UG, but more importantly, depending on the year, the rate of change may appreciate or decline. For example, in 2008, when the real GDP growth rate of Ghana declined from 6.3 percent in 2007 to 6.2 percent (Gockel, 2010), public funding to UG also declined to negative 19.5 percent from 18.0 percent in 2007. However, in 2010, when Ghana's economy was said to have slightly improved with real GDP growth of 7.7 percent (African Development Bank, 2012), public funding to UG appreciated to 113.1 percent from 28.9 percent in 2009. Furthermore, in 2016, when Ghana's Gross Domestic Product (GDP) growth rate of 3.7 percent was described as the anaemic growth rate (GhanaWeb, 2018), public funding to UG declined to 9.2 percent from 21.8 percent in 2015.

For UWC, the lowest changes in public funding came in 2013 (7.2 percent), 2014 (8.0 percent and 2015 (8.1 percent). The South African economy in 2013 was described as an economy that continued to grow, but at a slower rate than projected at the time of the 2012 Budget (National Treasury, 2015a, 2015b). In 2014, the GDP growth was just 1.4 percent down from 2.2 percent

in 2013 (National Treasury, 2015a, 2015b). In 2015, the South African economy was projected to grow at only 2 percent (National Treasury, 2015a, 2015b). Slight improvements in the economy in 2016 saw public funding to UWC increase to 16.9 percent from 8.1 percent in 2015. It was projected that GDP would rise to 2.4 percent in 2016 from 2 percent in 2015 (National Treasury, 2015a, 2015b). The two universities have experienced declining public funding from 2007 to 2016, partly because of sluggish economies. The public funding pattern of the two universities seems to follow the economic status of each country. The difference is that the changes in public funding at UG, as a result of the state of the economy, seem to be drastic compared with UWC.

6.3.2 Competing Needs of the Various Sectors of the Economy

The findings of this study reveal that one of the main factors responsible for the changes in public funding at UWC and UG is the competing needs of the various sectors of the two economies (South Africa and Ghana). These findings confirm findings of similar studies elsewhere (Altbach, 2013; Ngolovoi, 2008) that reveal that public funding to higher education institutions in Africa has been fluctuating because of competing needs from various sectors of the economy. Both South African and Ghanaian economies comprise several sectors, including higher education, competing for limited financial resources. For example, South Africa has ten major sectors, and Ghana has five major sectors competing for the same resources. The difference is that South Africa has more sectors than Ghana, implying that, depending on the resource base, higher education institutions in South Africa are likely to receive less public funding than Ghana, but from the data this assertion does not seem to be the case. The data used in this study shows cross-institutional variations in the fiscal strength of both universities, especially as far as government revenue is concerned. UWC received more money from the government than UG. For example, within a decade (2007-2016), UWC received 443 788 567 dollars (see table 2, page 88) from the government, whereas UG received 233 389 095 dollars (see table 3, page 90) from the government. The reason for the difference is likely to be that South Africa has a larger economic base than Ghana. For instance, South Africa's population was much larger, 57 398 421in 2018 (United Nations, 2018) compared with Ghana's 29 463 643 in 2018 (United Nations, 2018). Therefore, the South African government is likely to generate more revenue from the economy in terms of taxes than Ghana.

6.3.3 Low Prioritization of Higher Education

The third factor responsible for changes in public funding at UWC is the low prioritization of higher education by the government. For UG, changes in public funding were influenced by a shift of focus from education to other sectors by government. Both factors seem to be similar. The study finds that higher education in South Africa is not a priority of the government because the sector receives less funding from the government compared to other sectors. For example, in 2016, of ten major sectors, Post-School Education and Training, which includes universities, Technical Vocational Education and Training (TVET), and other training institutions, received the least funding apart from Agriculture, Rural Dev, and the Land Reform sector. The two sectors received ZAR 68.7bn and ZAR 26.4bn respectively compared with other sectors like Basic Education (ZAR 228.8bn), Economic Affairs (ZAR 212.0bn), and Health (ZAR 168.4bn). The Education sector in Ghana has financially suffered from a shift of focus by the government. The government has shifted the focus of public spending away from the Education sector to the Administrative sector. The data indicate that Education spending has fallen significantly as a share of GDP. For instance, the Social sector, which includes Education and Health sectors, accounted for the largest share of public spending in 2011. However, since 2014, the Administration sector, which includes spending on Debt Management, and Exchange-Rate Depreciation, accounted for more than two-thirds of total spending. Therefore, South Africa and Ghana are among the countries in sub-Saharan Africa that have subjected their higher education institutions (including UWC and UG) to decreased state funding partly because of low attention given to the institutions (Pillay, 2013).

6.3.4 Funding Mechanism

The next factor responsible for changes in public funding is the implementation of a funding mechanism. The study established that, in South Africa, there is a proper funding formula, which is used to allocate public funding to higher education institutions. The funding formula uses student enrolment as one of the criteria to distribute public funds to higher education institutions. Figure 7 (on page 101) shows that changes in public funding affect changes in student enrolment at UWC. On the other hand, in Ghana, the study established that there is no funding formula and that the mechanism for allocation of public funds to higher education institutions is an incremental and negotiated approach (ad hoc budgeting). Newman and Duwiejua (2015:3-6) explain the process as follows:

A case is presented to the government for funding every year based on annual budgetary demands from the institutions. Fund allocation is the same yearly, based on the previous year's allocation with minor variations. This system of funding pays little or no attention to national priorities and the changes in the volume of activities performed by the institution. Funding for higher education in Ghana is not focused on the student.

One major difference that characterizes the two systems is that, whereas South Africa's approach of allocating public funding to higher education institutions considers student enrolment, hence there is a strong relationship between changes in public funding and student enrolment at UWC, Ghana's approach of allocating public funding to higher education institutions does not consider student enrolment, so there is little relationship between changes in public funding and student enrolment at UG.

6.3.5 Overspending in Election Years

Organizing a competitive and legitimate election boosts not only the democratic process of a country but also has positive effects on the deepening of civil liberties in society (van der Straaten, 2019). Nevertheless, elections are costly projects. This is because it requires the creation of polling stations across the country and ensures they are of a standard that facilitates free and fair elections (Oyugi, 2003). Consequently, elections have become very costly for the governments that have to manage them. For South Africa and Ghana, the costs of elections relate to the procurement of resources such as ballot papers, ballot boxes, electronic equipment, and stationery, and have a tremendous influence on the finances of the governments (Maphunye, 2010; Obeng & Sakyi, 2017).

In 2008, the government of Ghana's total expenditure on the elections was 138 million dollars and going into the 2012 elections it shot up to 267 million dollars and before the 2016 election it was estimated to cost 269 million dollars (Ansah, 2015). For South Africa, the 1999 elections cost the government 117 million dollars, and the government expenditure on the 2004 elections was 122 million dollars (National Institute for Legislative Studies, 2015). The South African Independent Electoral Commission's budget for 2014 elections was a little over ZAR 1.5 billion (Fakir, Holland, & Kotler, 2014). It is important to know that these expenditures, even though they are always budgeted for, are not normal expenditure patterns of governments. Therefore, they create an extra burden on the public purse that disallows the government to increase funding to public universities.

A comparative analysis of the spending patterns of the two countries during election years shows that both countries not only just missed their budget deficit targets but targets were missed by large margins. For example, in 2008, the government of Ghana recorded a budget deficit of 6.5 percent against a projected deficit of 4.0 percent. In the same year, public funding to UG declined substantially to negative 19.5 percent in 2008 from 18.0 percent in 2007. In the 2012 elections, the budget deficit almost doubled from a projected deficit of 6.7 percent to 12.5 percent. Consequently, public funding to UG declined from 58.1 percent in 2011 to 26.5 percent in 2012. In the 2016 elections, Ghana's budget deficit target was 5.3 percent, yet the deficit widened to 7.8 percent. At the same time, public funding to UG declined from 21.8 percent in 2015 to 9.2 percent in 2016. For South Africa, the 2009 elections might have posed some financial challenges to the government as the budget deficit increased from 1 percent of GDP in 2008 to a deficit of 7.6 percent in 2009 against the deficit target of 7.3 percent. In the same year, public funding to UWC declined from 17.4 percent in 2008 to 8.8 percent in 2009. The 2014 elections also might have disrupted government finances. The budget deficit target in 2014 was 4.0 percent (National Treasury, 2014), but the deficit ended up reaching 5.8 percent of GDP (National Treasury, 2015a, 2015b). At the same time, public funding to UWC reduced from 9.9 percent in 2012 to 8.0 percent in 2014. One major difference that characterizes spending patterns of the two countries during election years concerning government allocations is that, whereas public funding to UG is marked by drastic changes, public funding to UWC is marked by moderate fluctuations. The next section analyses the strategic responses towards influencing variations in student access.

6.4 Strategic Responses towards Influencing Changes in Student Access

The institutional responses towards influencing variations in student access that were presented in the previous chapter can be classified into those that are similar to both institutions and those that are different. In other words, some of them are common to the two institutions, and others are peculiar to a single institution. Those that are common to both institutions include government subsidy; low tuition fee structure; payment arrangements; financial support system; and overspending in election years. One that is unique to the University of the Western Cape is special grants, and one that is unique to the University of Ghana is the containment strategy. I review these strategies to highlight how these responses impact student access. The next section examines these strategic responses.

6.4.1 Government Subsidy

A comparative analysis of government subsidy to the two universities in the ten years 2007-2016 shows both similarities and differences. One significant difference that characterizes the two universities' government subsidy is that, whereas for UWC the subsidy is 48 percent of the total budget, for UG it is 43 percent, even though the government subsidies to the universities account for less than half of the total budget expenditures. This is consistent with the assertion that higher education institutions in developing countries are heavily dependent on public funding (Banya & Elu, 2001; World Bank, 2000). The statistical analyses show that in both universities the government subsidy was higher in 2007 than it was in 2008 in percentage terms. Another common trait in the government subsidy to the two universities is that, in 2013, both institutions experienced the lowest decline in government subsidy. For UWC, the decline was 7.2 percent, and for UG the decline was 2.2 percent. The difference is that UWC's decline was better than the UG.

According to the participants, the UWC uses the government subsidy for salaries, construction, and maintenance of infrastructure, student housing and the entire infrastructure in the system and this supports the university's drive to increase access because government subsidies are utilized to make sure that the university can keep its infrastructure at appreciable levels to support teaching and learning. It was revealed at UWC that state subsidy improves teaching input and teaching output levels. For UG, the findings show that government subsidy goes into paying salaries, electricity bills, water bills, goods, infrastructural developments, maintenance of the facilities, and services to run the institutions. This is consistent with the resource dependence theory's proclamation that organizations, when faced with financial constraints, may seek direct cash subsidies from the government for growth, enhancement, certainty, and survival (Pfeffer & Salancik, 1978). However, one criticism of this strategy is that the inadequate government subsidies for the two universities imply that not enough financial resources have been made available for improvement and expansion of infrastructure to a considerable level that can increase student access.

The weak economies of these countries could not permit the interviewees to be optimistic about the level of funding that could be made to the institutions by their governments as public funding keeps going down in real terms. The findings reveal that a decline in public finance is typical globally and that all over the world with some exceptions public financing of higher education is going down because there are other sectors like agriculture, health, security,

primary and secondary education, transport that are all depending on the government for funding. It is now common knowledge that higher education institutions are diversifying their sources of financing, and this was evident in both UWC and UG. From the perspective of resource dependence theory (Pfeffer & Salancik, 2003), depending on one source for resources is not desirable. This implies that diversifying sources of financial resources is a strategy against uncertainties and a mechanism for universities to have financial sustainability to increase student access. Diversification is, thus, a way of defending against decreases from one revenue source (Wangenge-Ouma, 2011).

6.4.2 Low Tuition Fee Structure

The type of tuition fee policy implemented by an institution has implications for ensuring student access for its most vulnerable groups (World Bank, 2010). There is a similarity in the desire to increase student access between the University of the Western Cape and the University of Ghana by structuring their tuition fee policy in such a way that it is affordable. Whereas the literature (see Chapter Two) advocates fee increases to meet some of the operational costs, this is not the case at UWC and UG as the two universities have lowered their tuition fees to give access to students who otherwise could not have afforded the market-rate fees. If the fees were increased as has been the norm with other universities, some students would have been denied access to the universities.

Moreover, participants at UWC revealed that in terms of values and the history of the university, it serves particular communities within the Western Cape and South Africa, and the fees are low because the institution serves those specific communities. The university wants to provide access, and as the previous Rectors have said, the "doors of learning should be opened, and that is opened to all races but also all classes of society". This means that the university does not become elitist and says that it is going to charge at the market rate for the year, knowing that the average South African would never be able to pay that fee. It is about how low can the university have its fees to allow access and then, with inflation, can increase it just enough so that the university does not overburden the students at the end of the day. For UG, interviewees disclosed that even though university education in Ghana is expensive, the university has put some measures in place to lower the fees. Formerly the universities could increase their fees, but for quite some time now the university has kept the fees at a low level such that it is affordable for the poor.

Furthermore, students who can afford to pay tuition fees would compare the level of tuition fees in the two countries. The low-level tuition fee structure of the two universities attracts students who can afford the fees. In effect, the low tuition fee structure is also a strategy employed by the two universities to attract fee-paying students. An interviewee at UWC observed that the low tuition fee structure of the university had boosted the enrolment plan of the institution because even well-to-do students who can pay tuition fees are choosing UWC. Similarly, some of the interviewees at the University of Ghana stated that a low tuition fee structure has made it possible for students who can pay tuition fees to select UG over other universities because the tuition fee is lower. Long (2004a) also makes similar arguments when he says that Community Colleges in the US tend to maintain low tuition fees in keeping with their mission of supporting student access and affordability. In all of this, the sight should not be lost of the fact that the two universities accrue funds from this strategy.

6.4.3 Payment Arrangement

Both the universities have some payment arrangements with the students to assist in enrolling them and keeping them in the system. This is to help students who cannot make an upfront payment to enrol and pay the fees by instalment as is the case of UWC. The findings at UWC reveal that, even for continued students, the university does not say the student has accumulated so much debt, so the university is not going to allow him or her back to the university. The university always says, even though the student might have accumulated some debt, the student must be allowed to come back to the university as long as the student has an agreement in place with the university. One would find even at graduation that the university would allow the student to graduate from the university as long as the student has some payment arrangement in place. According to the interviewees at UWC, everybody has a bank account, or everybody should have a bank account. Therefore, the university can have an arrangement with the students. However, it is important to note that there is a line between whether a student is going to be funded by the government or self-funded. Thus, if the family income is so low that it is unlikely that you would be able to pay to finance your child to go to a university, then that student should be government-funded. However, if the family income is of such a nature that the student does not qualify for government funding, then the thoughts are that the family is generating some income that puts that family out of the government-funding bracket and, therefore, you would have things like a bank account. This means the student should be able to make a payment arrangement with the university.

Current figures show that about 198 757 of students have payment arrangements with the University of the Western Cape. The challenge with UWC has been the failure of students to pay. These findings confirm a study by Ziderman and Albrecht (1995), who argue that debt recovery failure is common in developing countries. This is attributable to poor debt collection strategy and high administrative costs. For the University of Ghana, the payment arrangement is like a waiver from registration where students who cannot pay upfront are allowed to pay the full amount at a later date. The registration portal is open for the said student to register even if the registration deadline is over. The student then arranges with the Pro-Vice-Chancellor Academic to pay the full amount at a fixed date. For the University of Ghana, no Unit sees to the collection of the fees, but the office of the Pro-Vice-Chancellor Academic has the legal right under the university's rules and regulations to revoke the admission of defaulted students. It is worth noting, as reported by the interviewees, that economic challenges such as unemployment faced by a large portion of the population in South Africa and Ghana is making the debt recovery process very challenging.

6.4.4 Financial Support System

The introduction of cost-sharing mechanisms such as tuition fees without a financial support system would make existing disparities worse between the affluent families and the much larger numbers of the low-income families, between urban and rural populations, and in many countries between dominant ethnic groups and marginalized groups (World Bank, 2010). However, cost-sharing models, namely payment of tuition fees, can contribute financially to the expansion, improvement, and increase in student access. Nevertheless, these can only be achieved if the financial support system for students continues to be offered in the form of loans, bursaries, and scholarships (World Bank, 2010). Therefore, there is a need to substantially increase the number of scholarships and bursaries available, particularly to those who are most likely to be financially excluded (Commonwealth Education Hub, 2016). The financial support system is, therefore, an important part of higher education funding globally.

In countries that have introduced tuition and other fees, different financial support mechanisms have been implemented. Looking at the University of the Western Cape and the University of Ghana, it is evident that all of them have managed to put in place a financial support system for students. In the case of UWC, it was revealed that the contribution of the financial support system put in place is impacting student access. There is a significant impact in terms of the fact that you find bursaries such as an ABSA bursary that covers everything. Other bursaries

also cover partially. For UG, there are many scholarships and bursaries for students. The findings revealed that, if a student gets admission and he or she is not able to pay the fees, he or she applies for some of these scholarships and bursaries. The number of people the university enrols in the scholarship and bursary schemes keeps increasing every academic year. It was also revealed that the UG has scholarships and bursaries solely dedicated to specific programmes and courses, especially geology and other science related courses. For instance, the university typically seeks bursaries from corporate institutions such as Ghana National Petroleum Corporation (GNPC) to assist geology students. All two universities help students with bursaries and scholarships. However, the data used in this analysis shows institutional variations in the number of beneficiary students between the two universities. UWC between 2013 and 2016 offered financial support to about 68 266 students, whereas the University of Ghana financially supported 1 386 students over the same period. However, it is worth noting that included in UWC's financial support system is the NSFAS, which is a national financial aid scheme managed by the government. This partially explains why the number of beneficiary students is higher compared to UG because the UG financial support system excludes the national scheme of financial assistance for students. The number of students receiving financial support is, therefore, more pronounced at the University of the Western Cape than the University of Ghana. By implementing this strategy, as Chattopadhyay (2007) argues, would ensure equal access to higher education.

6.4.5 Special Grants

The search for financial strength is an essential imperative for university leaders. It is only by obtaining a robust financial base that university leaders can dedicate their time to the core functions of teaching and learning, research, and public service (Wangenge-Ouma, 2007) and, by extension, increase student access. In responding to the challenges of teaching a more differentiated student body, universities need to rely on financial resources and skilled staff. The limited funding and the workloads of academic staff add to the challenges of increasing student access and bettering throughput and retention (Council on Higher Education, 2010). The student access as a concept has not been clearly defined nor is easy to solve, and the goals and the means to succeed in attaining the stated targets are also tricky (Council on Higher Education, 2010).

However, to leave out potential students because those students are unable to go through the system in the expected time frame is unfair. The issues of throughput, dropout, and retention

rates matter a lot to students and their families, to universities and to the government as the leading funder of higher education (Council on Higher Education, 2010). For this reason, the government of South Africa and higher education institutions have put in place strategic programmes with special financing mechanisms to ensure an improvement in throughput, dropout, and retention rates. These unique financing strategies include Foundational Provision Grant; Research Development Grant; Teaching Development Grant; and Historically Disadvantaged Institutions Grant. The findings reveal that UWC has been a beneficiary of these grants since 2004. According to the interviewees, UWC uses these grants to run programmes such as extended curricular, research capacity development, coaching programmes, and infrastructural development. UWC offers these programmes supported by these grants to ensure that students' success and graduation rates improve.

According to the interviewees, most faculties have been made aware that you cannot get students in without success or helping them to graduate. You cannot just take in hundreds and thousands of students without passing most of them. Enrolling students without successfully graduating is not going to be helpful, so the university has a section called Success Unit. The Unit reports directly to the Deputy Vice-Chancellor Academic. The university leadership is convinced that the university cannot enrol students and not prepare them, so there are many programmes through faculties, and through different support units where the university upscales students to get them prepared for academic success. There is a centre for student support services which looks at upscaling students. For instance, there is an academic support system, where students get themselves prepared for writing essays, study skills, mapwork programmes, data learning analytics, leadership training, mentorship programmes, and coaching programmes. All these programmes are meant to maintain or increase student access by helping students to complete their education on time. These programmes are made possible through the Foundational Provision; Research Development; Teaching Development; and Historically Disadvantaged Institutions Grants.

The findings at UWC reveal that these grants also support institutions to do what is now called the Extended Curriculum Programmes. Essentially, it is a structured curriculum for students who may need an additional year. Most of the students in the system, regardless of educational background, do not finish in the minimum degree time. Most of them take four years for a three-year degree or sometimes even longer. The university tries to identify students who would take four years to do a three-year degree. The university gives them the option of completing by extending the time because it gives them more curriculum time and more

teaching time. Some of these grants are also about supporting institutional mechanisms for improving teaching and learning. It was revealed that, even though the institution has such a high level of undergraduate dropout in the system, there have been considerable improvements in that more students are succeeding. The university still has problems, but the funding mechanisms have had some effects on the success rate.

Moreover, these Grants are strategic funding mechanisms by UWC to support capacity development in both teachings and learning towards staff development, and helping staff to work on their teaching skills. The other aspect of it is the curriculum development where the university looks at how curricula are developed and where changes can be made. This strategy focuses on supporting student success by supporting direct interventions on students' success through teaching support. Finally, all these grants are geared towards increasing student access and improving throughput and graduation rates in the system.

6.4.6 Containment Strategy

The University of Ghana, after recognizing the huge debt being incurred in 2011 due to declining state subsidy, decided to admit students based on the total allocation from the government. For instance, if the funding from the government could only finance 5000 students, then they would admit the same number of students. The findings reveal that when the university is admitting students, it takes into consideration the number of lecturers available, the amount of space, the facilities available, and, most importantly, the total fund allocation from the government. According to the respondents, if the facilities have not improved or expanded, the university does not just overshoot the number of students to be admitted. The university either maintains the numbers or increases them marginally. The interviewees asked: what is the purpose of admitting a student who will come and stand outside and listen to lectures? What is the purpose of admitting students who would have to travel from far away to go for lectures? It was disclosed that the university does not expect a class to be more than 400 for those in humanities and 200 for those in the sciences. Therefore, the university admits students according to the facilities and the funding available. The findings reveal that the university implemented this “containment strategy” vigorously as the student population decreased drastically from 37 257 in 2010 to 28 305 in 2011. It is important to note that the containment strategy began in 2011. The rationale behind this strategy is informed by the resource dependence theory’s view that, when faced with scarce resources, organizations can live within their means to ensure their continued existence (Pfeffer & Salancik, 2003).

The findings reveal that, in an attempt to make changes to the student access, UWC and UG encountered some funding challenges. First is the low tuition fee structure. The analysis in Chapter Five reveals that the tuition fee is one of the sources of revenue of UWC and UG. The tuition fee is part of the global strategy of finding solutions to higher education funding by diversifying their sources of income to shift higher education costs from national governments to individual students and their families (Wangenge-Ouma, 2007). However, in their attempt to increase student access through low tuition fee structures, the two universities have come under intense financial pressure. For instance, interviewees at UWC complain that a low tuition fee strategy has put the university in debt. In the UG, the interviewees lamented over the same issue of debt because the structure of the tuition fee does not allow the university to break even, resulting in millions of Ghana Cedis in debt. The consequence of this strategy is that both institutions are unable to maintain their facilities and put in critical infrastructure to be able to admit more students. For both institutions, the student accommodation book runs at a loss. Many attempts have been made to accelerate the student accommodation fees to break even over a period but has proven to be prohibitive and highly politically charged.

The budgeting process provides for doubtful debt and student accommodation loss so that the shortfall is accounted for within the financial framework of the institutions. The negative is that the University of the Western Cape has to finance unfunded indigent students with its working capital. Globally, as government subsidy keeps declining, universities' leaders use tuition fees to fill the gap, but this is not entirely the case at UWC and UG as both institutions keep charging tuition fees below the market rate. This is inconsistent with a study by Stigler (1966), which states that, in the long run, for organizations to continue in business, they must carry out their work at the minimum point on their long-run average cost curves and must sell at a price set in the competitive market place. The difference between the two institutions is that, whereas the government sometimes intervenes in fixing the tuition fees at UG, this is not the case at UWC as there was no evidence of government interference when it comes to setting the tuition fees below the market price.

The second funding challenge facing the two universities is uncertainty around third stream income. As higher education funding has become more competitive and convoluted, the debate of establishing a reliable funding base has taken to greater heights. Some scholars have argued that diversification is one of the strategies most higher education institutions globally have employed to make up for inadequate funding from the government side to establish a sound financial base for their institutions.

Consequently, universities that turn away from extreme dependence on one revenue source become financially stable, and thereby decrease the danger of financial difficulties or breaks in funding (Wangenge-Ouma, 2007). To make up for inadequate public funding, UWC and UG have resorted to some form of third-stream income, which includes research contracts, partnerships with industry, donations and gifts, and alumni contributions, but with some challenges associated with it. Given the volatilities that characterize incomes from some of the third stream sources, the two universities can move from one funder to another depending on the behaviour of revenues from third stream sources. This study found that there is uncertainty around third-stream income, and it is an issue that requires attention between the universities and the funders. Some of the interviewees at UWC expressed that, because almost all higher education institutions in South Africa are approaching the same businesses, banks, industries, and philanthropists, the funders are not sure as to how much to give to every institution. Furthermore, the government of South Africa wants the private sector to contribute to the General Fund for "Fees-Must-Fall." This has forced the donors to cut off the universities. The donors want to give funds directly to the government instead of the universities.

Moreover, the findings reveal that the announcement of supposedly free education by the government made the funders to complain that if the government was going to offer free education, then it is not prudent to continue to provide bursaries and sponsorships to the universities. Meanwhile, the so-called free education was not free for everybody. The policy was meant for households whose combined income is not more than ZAR 350 000 annually. Additionally, when it comes to alumni contribution, UWC does not have a well-to-do alumni base given the history of the institution as a historically disadvantaged institution. This means most of the alumni are not at the level where they can contribute and provide a sustainable funding base for the university. For UG, the problem of third-stream income has to do with the "capping" as the findings reveal that public universities in Ghana are to cede 34 percent of all the funds accrued from Internally Generated Funds/third stream income to the government and retain only 66 percent. The interviewees lamented over 66 percent to the institution, especially when government subsidy keeps declining. This has put the university in a dire financial state.

Whereas the need for the third stream income is evident in the light of inadequate financial resources provided by the governments to the universities, clarity of its sustainability is less visible in both the University of the Western Cape and the University of Ghana. Some scholars have emphasised that revenue uncertainty can be challenging. Considerable year-to-year variations in the contributions from third stream income sources can make it difficult for higher

education institutions to strategize for the future or even to guarantee stable funding sources. This analysis echoes resource dependence theory's perspectives that problems occur not because organizations rely on their environment but because the climate is unreliable or uncertain, and when the environment changes, organizations experience the possibility of not surviving. When organizations do not possess the resources they require, resource accumulation may be difficult and problematic. Those who possess the funds may be unreliable, mainly when resources are scarce. Unpredictability concerning an essential resource means the organization's survival has become more erratic and that uncertainty concerning critical support threatens the continued survival of the organization (Pfeffer & Salancik, 2003).

The third funding challenge facing the two universities is inadequate public funding. At UWC, the interviewees lamented that the most prominent funding challenge that all South African universities face is the decrease in the government subsidy. For all the South African universities, regardless of which university you are, that is always the dominant stream of income and the moment that gets cut, then it becomes a challenge. The interviewees painted a very bleak picture going forward by forecasting that government subsidy would continue to decrease. The government subsidy has not been increased enough to cover the full costs of higher education. The university has been relying so much on student fees and third stream income. According to the interviewees, government subsidy is supposed to be bigger than the student fees and third stream income, but it is not enough; that is why the university and the students end up putting pressure on the government to increase funding.

In the case of Ghana, there is no clear strategy to allocate public funds to higher education institutions. The government allocates funds based on the availability of revenue and priorities. In addition, the inadequate government subsidy has had some implications for teaching and learning at the University of Ghana. According to interviewees, insufficient public funding affects the teaching mode. The university has classes that should have 50 students, but the numbers are in the region of 1000 students because the number of lecturers is not enough to divide the class into smaller numbers. The university does not have the money to hire more lecturers because the government has not given the clearance to hire them. It was revealed that the lecturer-student ratio is low to the extent that lecturers are over-burdened and so they do not make their classes enjoyable. In both universities, the interviewees explained why there is inadequate funding from the government side. The prominent factor was the weak economy of the two countries. According to the interviewees, the tax base of these countries is not big enough to pay for the full funding. The interviewees explained that the tax base is shrinking,

and social grants are growing. This is consistent with a study by Brown and Hoxby (2015) when they argue that state governments, faced with falling tax revenues due to weak economies and increasing demand for social insurance, often decrease appropriations to public colleges and universities.

6.5 Conclusion

This chapter has outlined some of the issues of higher education funding and student access in the two institutions that participated in this study. First, I began by examining changes in public funding and student access at the two universities, which include student enrolment targets, actual student enrolment figures, and rate of change of public funding and student enrolment to establish a relationship between them. There were some changes in public funding and student enrolments, and this was uneven across the two universities. The University of Ghana recorded relatively significant changes in public funding and student enrolment compared with the University of the Western Cape. Secondly, I also analysed factors influencing the changes in public funding and their implications for student access. Moreover, challenges facing the two universities in their attempt to increase student access were discussed. Lastly, strategies employed by the two universities to influence variations in student access were explored. The next chapter puts together the conclusions and implications of the study.

CHAPTER SEVEN

CONCLUSIONS AND IMPLICATIONS

7.1 Introduction

This chapter concludes the study. This dissertation has studied the relationship between changes in public funding and student access in South Africa and Ghana from the perspective of specific research questions. The chapter summarises the main research findings and draws relevant conclusions. The main findings and conclusions are discussed in line with two major issues. First, the findings are linked to the theoretical frameworks developed in chapter three. Second, I discuss the methodology and contribution of the study, which are included in the concluding remarks. In doing so, I need to recapitulate the main purpose of the study. It asked the question: What is the relationship between changes in public funding and student access at the University of the Western Cape and the University of Ghana?

The first research question was: *What is the nature of the changes in public funding and student access at UWC and UG from 2007 to 2016?* In this research question, I wanted to understand the balance as well as the dynamic interplay between public funding of universities vis-à-vis student access. The second research question was: *What factors influence the changes in public funding and what are their implications for student access at the University of the Western Cape and the University of Ghana?* With this question, I wanted to understand factors causing the variations in public funding and their implications for student access at the two institutions. The last research question was: *What are the strategic responses towards influencing changes in student access by the University of the Western Cape and the University of Ghana?* This question sought to explore strategies that shape the increases and decreases in student access at the two institutions. The main research assumptions and interpretation of these research questions were informed by the resource dependence theory.

7.2 Summary of Findings of the Study

This research has come up with several findings. They range from the two universities' public funding and student access changes to factors influencing the changes in public funding as well as institutional responses under public funding constraints towards influencing variations in

student access. The findings show both similarities and differences. The next section starts with the changes in public funding and student access.

7.2.1 Changes in Public Funding and Student Access

This section focuses on issues that might explain why there is a perceived increase or decrease in public funding and student access to the institutions. The research question for this section was: *What is the nature of the changes in public funding and student access at UWC and UG from 2007 to 2016*?

Data collected for the analysis of changes in public funding were predominantly official documents. For example, policy papers, financial reports, budget statements, annual reports, and strategic plans. Interviews were conducted both at national and institutional levels. These documents show variations in public funding to the universities. An analysis of official data provided by the Department of Higher Education and Training (DHET), the National Council for Tertiary Education (NCTE), UWC, and UG regarding the meeting of the enrolment targets by the universities was undertaken between 2007 and 2016.

In respect of enrolment targets, the data indicated that UWC was able to meet 2009, 2010, and 2016 annual targets but missed the rest. Therefore, the data showed that over the years (2007-2016) public funding, and student enrolment at UWC have seen marked disparities in terms of annual changes. Notably, within ten years (2007-2016), public funding to UWC has grown at a rate of 13.1 percent per year on average, whereas student enrolment has grown at a rate of 3.98 percent per year on average compared with the institution's yearly target of 5-10 percent increase. The data means that even though the university appears to be on track in meeting the student enrolment yearly targets, more needs to be done. There are several contributing factors to the changes in public funding at UWC, which will be discussed later.

In the case of the University of Ghana, the enrolment figures show that the institution was able to meet 2008, 2013, and 2016 annual targets but missed the rest and, in some cases, by large margins. There were marginal yearly increases in 2007, 2009, and 2010 but did not meet the targets. In the 2011 academic year, student enrolment dipped substantially to negative 24 percent from 3.0 percent in 2010. The main contributing factor was the implementation of the "containment strategy", which sought to match student enrolment against funding allocation from the government. In other words, the number of students to be enrolled depended on the total funding allocation from the government. The implication of the "containment strategy"

was that the University of Ghana's debt burden was reduced or their debt profile was improved. Notably, within ten years (2007-2016), public funding to UG has grown at a rate of 27.13 percent per year on average, whereas student enrolment has grown at a rate of 3.3 percent per year on average compared with the university's yearly target of 10 percent student enrolment increase. Even though the university grew at an average rate of 3.3 percent in student enrolment within a decade (2007-2016), UG did not achieve its annual target of a 10 percent increase. The university does not appear to be on track in meeting the student enrolment yearly targets. There are several contributing factors to the changes in public funding and student access at UG, which will be discussed later.

Taking student access to be study places (enrolment) and to address the question of changes in public funding and student access, a quantitative presentation of the performance reveals that the two institutions have seen downward adjustments in public funding even though changes in public funding at UG are more drastic than at UWC. The study reveals that the two universities saw some upward changes in student access within the period (2007-2016). In terms of meeting enrolment targets, UWC is performing more satisfactorily than UG. However, it must also be noted that UWC's annual enrolment targets are from 5-10 percent as against UG's 10 percent. Therefore, UWC's enrolment targets are moderate and easier to achieve than UG's enrolment targets. The study reveals that, in some cases, student access is dependent on the resource capacity of the universities. This implies that resources available determine the quantity of student enrolment, especially at UWC. In this case, the study finds that the relationship between changes in public funding and student access at UWC was statistically significant from 2007 to 2016, whereas the relationship between changes in public funding and student access at UG was not statistically meaningful. The next section draws conclusions on factors influencing changes in public funding and their implications for student access.

7.2.2 Factors Influencing Changes in Public Funding

The second set of findings regarding factors responsible for the changes in public funding at the two universities are generally consistent with the global trend of factors that account for changes in public funding of higher education institutions. Several factors characterize the changes in public funding at the two universities. The six main factors include state of the national economy; competing needs of various sectors of the economy; low prioritization of higher education; a shift of focus from education; funding mechanism; and overspending in election years. It follows that, firstly, UWC and UG have experienced some changes in public

funding partly because of the state of the national economy, which has had some implications on student access. For instance, South Africa experienced a sharp decline in economic growth from more than 5 percent in 2007 (OECD, 2010) to a fall of 2 percent in 2015 (National Treasury, 2015a, 2015b). Over the same years, public funding to UWC declined from 23.5 percent in 2007 to just 8.1 percent in 2015. Predictably, student enrolment also declined from 0.6 percent in 2007 to negative 0.97 percent in 2015. On the other hand, Ghana's economy has also gone through some economic challenges. For example, in 2007 Ghana's economy grew by 5.2 percent (Ackah et al., 2009), but by 2016 economic growth had slowed to 3.6 percent (Wakeford, 2017). Over the same years, public funding to UG plummeted from 18.0 percent in 2007 to 9.2 percent in 2016. Interestingly, student enrolment increased substantially from 2.4 percent in 2007 to 26 percent in 2016, affirming an insignificant relationship between changes in public funding and student access at UG. The two national economies have exhibited economic fragility resulting in downward changes in public funding to the two universities. The difference is that, whereas the changes in public funding resulting from the sluggish economy have some implications on student access at UWC, changes in public funding emanating from the weak economy seem to have little to do with student access at UG.

The second factor responsible for changes in public funding has been the competing needs of various sectors of the economy. Every government has a wide range of responsibilities and priorities to juggle. The government needs substantial resources to enable it to cope with several priority projects within sectors. This comes with unprecedented pressure on public sector finances. As already discussed, the health of the economy is one of the biggest challenges facing the government of South Africa and Ghana. The two governments need to determine how to spend their limited resources on ten main sectors of the economy in the case of South Africa and five main sectors of the economy in the case of Ghana. Otherwise, the governments would find themselves in real difficulty dealing with the pressures of spending cuts. Unfortunately, education or higher education is one of the public sectors competing with other sectors for limited government funding. This means that higher education institutions, including UWC and UG, cannot be allocated a constant flow of financial resources. In some years, depending upon government priorities, public funding may increase or decrease. The difference is that South Africa has more public sectors than Ghana, implying that, in theory, higher education should receive less funding from the government than Ghana. However, the study finds that higher education institutions in South Africa receive more funding from the government than higher education institutions in Ghana.

The third set of factors accounting for the changes in public funding are the low prioritization of higher education and the shift of focus from education. The findings show that the South African government sees some of the sectors as more important than higher education. For example, in 2016, Post-School Education and Training was allocated ZAR 68.7bn, whereas sectors like Basic Education, Economic Affairs, and Health were allocated ZAR 228.8bn, ZAR 212.0bn, and ZAR 168.4bn, respectively. The data shows that Post-School Education and Training is not a priority of the government in terms of deserving more public funding; hence, less funding from the government to UWC. For Ghana, the government has gradually shifted its attention from the Education sector to other sectors like the Administration sector in terms of public spending. The study found that, in 2011, the Education sector received enough financial support from the government, but the support changed drastically in 2016. For example, the government allocated 4.44 percent of GDP to the Education Ministry in 2011 but reduced it to 3.35 percent in 2016. It is important to note that this reduction reflected in the public funding allocated to UG as public funding reduced from 58.1 percent in 2011 to 9.2 percent in 2016. Interestingly, there was no relationship between variations in public funding and student access resulting from the shift of focus from education, as student enrolment at UG between the same years increased from negative 24 percent in 2011 to 26 percent in 2016.

The next factor responsible for shaping changes in public funding at UWC and UG is the funding mechanism. The application of a funding formula facilitates the steering of public higher education institutions towards the implementation of national policy priorities for higher education (Newman & Duwiejua, 2015). Most funding formulas consider the number of students to be enrolled and public funds allocated accordingly. In South Africa, the government uses a funding formula to distribute public funds to higher education institutions. The funding formula takes into account the enrolled students, as explained in figure 7 (see page 101). On the other hand, Ghana's higher education sector operates without a well-functioning funding formula that considers student enrolment. The sector uses an ad hoc or negotiated budgeting process to distribute public funding. The disadvantage of this funding approach is that public funding of higher education in Ghana is not focused on the student as the unit of production; therefore, there is no serious planning and budgeting (Newman & Duwiejua, 2015), resulting in consistent fluctuations in public funding at UG. The common trait of these two funding mechanisms is that both models operate within fragile financial environments; therefore, little consideration is given to the number of students to be enrolled as against the economic strength of the country. The difference is that there seems to be a meaningful relationship between

changes in public funding and student enrolment at UWC resulting from the funding formula being implemented in the higher education sector in South Africa, whereas this is not the case at UG. The next section deals with institutional responses towards influencing changes in student access.

7.2.3 Strategic Responses towards Influencing Changes in Student Access

The evidence suggests that there are practical financial strategies by UWC and UG to maintain or increase student access. The findings show that the leadership of the institutions has prioritized the matter of funding interventions that could contribute to the access indicators. The following strategies were teased out. These were low tuition fee structure; financial support system; payment arrangements; recruitment strategy; special grants; government subsidy; containment strategy; policy for less-endowed schools; and policy for the admission of athlete students.

One of the most important strategies of both institutions to increase student access in the face of fluctuations in government subsidy is the low tuition fee structure. In the case of UWC, the institution sets its tuition fees annually. Apart from assisting students from low economic backgrounds to access university education through low tuition fees, the university also accrues revenue from this strategy. Tuition fees in Ghana's case are set by individual universities but approved by parliament. In collaboration with the government, the University of Ghana charges fees nearly 50 percent below market price. This strategy implies that more students from low-income families can access university education and, at the same time, contribute financially to the financial sustainability of the university.

Moreover, the financial support system has become a smart strategy to increase student access by the two universities, as it is globally (Chattopadhyay, 2007; Ziderman, 2013). The main strategies that the two universities have employed to increase student access under the financial support system are scholarships and bursaries. Some of the students get financial assistance from their governments, philanthropic organisations, and individuals by procuring study scholarships and bursaries through the universities to pay for tuition, board, and meals.

Regarding payment arrangements, the two universities have put in place a mechanism to help students who cannot pay upfront to pay their fees by instalment. For UWC, this strategy is called Credit Management. The university allows students to study on credit. The Credit Management Unit prepares settlement agreements with individual students to stagger payments

throughout the year. The Unit generates income for the university by converting debt to cash on time. In the case of the University of Ghana, students who cannot make the upfront payment would have to contact the Pro-Vice-Chancellor Academic for a deferred payment arrangement. This is similar to "deferred tuition" policies where students financially contribute to their higher education costs but are unable to do so while still studying until they complete their education. The difference is that, with UG, the payment is deferred for only a few months. Failure to pay can result in cancellation of a student's admission. The rationale for such deferred tuition payment policies is to ensure that students access university education regardless of socio-economic background (Wangenge-Ouma, 2017).

In the 2011 academic year, the University of Ghana employed a unique strategy called "containment strategy" in response to fluctuations in public funding. The findings reveal that the university actually executed this containment strategy spiritedly and, in the process, student enrolment reduced significantly from 37 257 in 2010 to 28 305 in 2011. It can be inferred that the university took into consideration the total public funding allocation against the number of students enrolled in that academic year. The study, therefore, finds that institutional expenditures relating to student access are quite responsive to changes in revenue patterns resulting from the containment strategy. For example, as funding from the government side declined from 113.1 percent in 2010 to 58.1 percent in 2011, the University of Ghana responded with the implementation of containment strategy. This led to a dip in student enrolment from 3.0 percent in 2010 to negative 24 percent in 2011.

The two universities are also benefiting from and using the government subsidy as a financial strategy to increase student access. This involves transferring financial resources from the government to the institutions annually. The government's contribution through the subsidy constitutes about 48 percent of the University of the Western Cape's annual budget and 43 percent of the University of Ghana's yearly budget. There have been slow increases in the government's annual contribution in monetary terms, but in percentage terms, it has been declining. Consequently, the government subsidy as a portion of the universities' budgets is dwindling. Generally, the governments of South Africa and Ghana are financially supportive of their higher education sectors.

In their efforts to increase student access, the two universities have experienced some funding challenges. The primary funding challenge that is facing both universities is that the public funding is inadequate to cater for all the needs of each institution because the proportion of the

funding that the government allocates to the universities is way below the expenditure of the universities. This is because the universities are competing against the demands of other sectors of the economy for the same public resources. There are other funding challenges internal to the universities. For example, there is a funding challenge of low tuition fee structure in both universities. Tuition fees are funding mechanisms for finding solutions to inadequate funding from the government side. However, in their attempt to increase student access through a low tuition fee structure, the two universities have come under intense financial pressure. Participants were of the view that as much as a low tuition fee structure has been a blessing in giving access to students from a low financial background, it has been at the same time a curse to the universities by putting the institutions in debt, which affects the universities' capacity to increase student access. As Wangenge-Ouma (2007:250) has pointed out, "fee increases, determined in one way or the other by prevailing national consumer price index inflation rate, point to the concept of maximum cost recovery." This is not the case with the institutions under study because at UWC the fees are set 30-40 percent below the prevailing national consumer price index inflation rate, making it difficult for the institution to recover the maximum cost.

There is uncertainty around third stream income. The two universities are approaching the same funders other institutions are approaching. They are competing with other public and private universities for the same donors. The implication is that the donors are cutting the amount they used to give to the universities. More universities are approaching the private sector for funding because of declining government subsidy. This rush to the private sector by universities is also an indication of the era of revenue diversification. Almost every university is diversifying its source of funding. The universities are moving away from depending on a single source of financing. In doing so, the funders would have to decide as to which university is to be funded and with what amount. In the case of UWC and UG, there has been a drastic reduction in some of the bursaries and scholarships, and the reason adduced by the funders is the increase in the number of institutions that are being funded.

Moreover, UWC's third stream income has been affected by the "Fees-Must-Fall" campaign by South African students in the sense that some of the funders withdrew their bursaries and scholarships with the belief that higher education was going to be free as promised by the government. It turned out to be free for some sections of the students. The implication for access is that there have been decreases in the amount, which means that the university has to decrease the number of beneficiary students. This means some of the affected students may

struggle financially, which may impact their academic performance, and some may drop out of the university.

In Ghana, there are some tensions between the public universities on the one hand and the governments on the other side. This tension has to do with the ceding of 34 percent of the Internally Generated Funds (IGFs) by the universities to the government. The public universities used to retain 100 percent of the IGF until 2015 when the government declared that the universities, including the University of Ghana, should cede 34 percent to the government, meaning the institutions could use only 66 percent of the Fund. The tension is around the fact that the IGFs are used to compensate for inadequate government subsidy. By ceding 34 percent to the government would mean plunging the University into a financial abyss, which affects the institution's ability to improve its infrastructure to increase student access.

For UWC, the tension is between the university and the funders, especially the conditions set by the funders. The university has a culture and values which it always wants to promote. Any conditionality that goes contrary to or against their culture and values is not accepted even if the bursary is halfway through. This poses a severe funding challenge for the institution. The problematic aspect is when the scholarship is halfway, and the funders change the focus, which does not fit the culture of the institution. In this case, the university has to cancel the bursary leaving the beneficial students in financial limbo. It was found that some students leave the university because of financial uncertainty.

There is also a tension in the two universities between low tuition fee structure as a strategy to increase student access and the low tuition fee structure that poses a challenge of contributing to generating less revenue for the institutions. It seems that instead of becoming a blessing by way of increasing student access, it has become a curse by not helping to bring the needed revenue because, by this strategy, students pay far less than what they are supposed to pay.

The study also found that the more the sources of funding the less the power imbalance between the government and the universities, which confirms the resource dependence theory's proposition of power imbalance or power differential between two organizations. The power imbalance means the extent to which a focal organization depends on resources controlled by nominally independent parties in its environment (Pfeffer & Salancik, 1978). Organizations are constrained and affected by their environment and act to attempt to manage these resource dependencies by coming up with different strategies to wean themselves from the party on

which they depend for these resources (Pfeffer & Salancik, 2003). This implies that UWC and UG are constrained by declining public funding but are acting to manage their dependence on government by employing different strategies like payment arrangement, and financial support systems to increase student access.

Overall, the declining public funding, which is affecting student access, has triggered the universities to behave in specific ways towards influencing changes in student access. Reducing dependence on government funding seems to be the overall financial strategy to increase student access. From the resource dependence theory's perspective, organizations (universities) experience certainty when they are not depending only on government support, which is an adaptation that has enhanced the two universities' continued existence in terms of increasing student access. With modest degrees of success in student access, the two universities have employed not only strategies of low tuition fee structure; financial support system; payment arrangements; containment mechanism; and government subsidy but also recruitment strategy; special grants; policy for less-endowed schools; and policy for the admission of athlete students. On the whole, the main conclusion of this study is that the University of the Western Cape and the University of Ghana, like many other universities in the world, are responding towards influencing changes in student access triggered by inadequate public funding and are behaving in a way that exhibits the general principles of resource dependence theory.

7.3 Concluding Remarks

This dissertation has examined public funding and student access in Ghana and South Africa. This research has indeed demonstrated that the change of environment, that is, changes in funding mainly from the government side, proved to be a critical factor in the adoption of some strategies by the University of the Western Cape and the University of Ghana to survive by way of increasing student access. In summary, this study has established that the universities are taking advantage of different sources of funding in their environment to increase student access. This research is a comparative study that achieved its objectives. It is anchored on the knowledge and perspectives of university leaders, student leadership, and government officials who are in charge of funding and student access and is supported by documents. Currently, the world is witnessing a growing interest in comparative approaches. On the one hand, politicians are seeking "international educational indicators" to build educational plans that are legitimized by a kind of "comparative global enterprise". On the other hand, researchers are adopting

"comparative methods" to get additional resources and symbolic advantages (for instance, the case of the European Union where the "comparative criterion" is a requisite for financing social research). The idea of rankings is a means to compare different organizations and provide funding based on those that claim to be the best. Students are ranked. Countries and universities are also ranked. The problem is that the term "comparison" is being mainly used as a flag of convenience, intended to attract international interest and money and to assess national policies concerning world scales and hierarchies. The result is a "soft comparison" lacking any solid theoretical or methodological grounds. This study contributes to comparative higher education by showing that, while countries and universities have several things in common, there are also many differences. This might suggest the need to do more in-depth comparative research.

As higher education funding and student access are getting attention in Ghana and South Africa, this thesis might contribute to the formulation and implementation of new policies or the improvement of the existing ones. It can serve as a resource to policymakers, higher education researchers, and practitioners when they want to know the experiences and perspectives of academics and government officials about higher education funding and student access. Additionally, the literature reviewed as a foundation for this study did not reveal information about the strategies by universities to influence changes in student access in times of fluctuations in public funding. This study adds to the literature by adding new knowledge of detailed comparative and empirical data on public funding and student access, hence expanding existing knowledge on the subject, especially in Africa.

Moreover, the study contributes to the field of resource dependence theory by providing systematic empirical data on the responses of organizations in times of resource scarcity towards influencing changes in student access. This study contributes to the resource dependence theory by applying it to two different contexts, and it shows that caution needs to be exercised in establishing relationships between issues such as funding and access. How a university adapts to changes and meets its mandates should be placed in context in terms of time, history, and issues as well as the methods and theory used to understand the problems. Since the resource dependence theory is a tool for understanding the behaviour of organizations in general, it may be argued that this thesis is among the first studies to undertake student access from the theory's perspective. The study, therefore, contributes to the understanding of the higher education funding landscape and student access architecture in the context of organizational behaviour through the lens of resource dependence theory.

One important implication of the findings of this study are the moves that emerge as the universities seek to adapt to the changes in their environment that threaten their survival in terms of sustaining student access. By encouraging public universities to diversify their sources of funding, World Bank and IMF thus contributed to a significant reduction of financial support for the public institutions by the governments of Ghana and South Africa. The two institutions, in their attempt to increase student access in the face of changes in public funding, employ various strategies to generate more revenue to supplement government allocations. In the process, the two public universities have been able to make some modest gains in terms of changes in student access. The implication of the strategic responses towards influencing student access by the University of the Western Cape and the University of Ghana is that the strategies have allowed students from low-economic backgrounds to access university education.

The thesis was limited to only three areas of higher education funding and student access. There are noticeable gaps both in the literature and in practice that call for further research. I hope that the research presented here will help others understand more thoroughly how two public universities in Africa are increasing student access in the context of declining government funding.

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ACADEMIC OUTPUT

Publications

Kwasi-Agyeman, F., Langa, P., Swanzy, P. (2020). Higher Education Funding and Student Access in the Global South. Journal of Comparative and International Higher Education (JCIHE). (Manuscript accepted for publication).

Conference Attendance

Higher Education Funding in Ghana: The use of Education Trust Funds. Paper presented at the conference of Consortium of Higher Education and Researchers (CHER). "Universities as political institutions-HEIs in the middle of academic, economic, and social pressures." The University of Jyväskylä, Finland-27/08 to 29/08/2017.

Higher Education Funding: Synthesis of Literature. Paper presented at the CRHED/REAL/IPSS Ph.D. Conference. "Critical Higher Education Studies: Theories and Research." The University of Free State, South Africa-01/03 to 02/03/2018.

Methodological Experiences of Cross-National Research: A Comparative Study of Two Public Universities in Africa. Paper presented at Power Conference. "Power & Governance: Forms, Dynamics, Consequences." The University of Tampere, Finland-29/08 to 30/08/2018.

Changes in Student Access: The Case of the University of the Western Cape and the University of Ghana. Paper presented at the Russian Higher Education Conference (RHEC). "Contributions of Higher Education to Society and Economy: Global, National, and Local Perspectives." Higher School of Economics (HSE), Russia-23/10 to 25/10/2019.

Funding Challenges Facing Public Universities in Africa: The Case of the University of the Western Cape and the University of Ghana. Paper presented at the Higher Education Learning and Teaching Association of South Africa (HELTASA). "Pedagogies in Context." Rhodes University, South Africa-25/11 to 29/11/2019.

APPENDIX 1

Interview Guide

I. Government Officials

a. Sources of funding: How do the two universities acquire their financial resources?

1. What has been the government's policy concerning giving financial support to public universities?

2a. How would you describe the trend of allocation of public funds to public universities? 2b.Why the changes in public funding?

3. How has the government financially supported public universities?

4. Have there been any rules and procedures that are set out by the government on how funds allocated to the public universities are to be utilized? If yes, what are they, and if no, why not?

b. Changes in student access: What have been the changes in student access at the University of the Western Cape and the University of Ghana?

1. What factors influence the changes?

2. What have been the admission criteria for public universities?

3. What have been the enrolment and graduation benchmarks for the universities 2007-2016?

4. To what extent is the government encouraging university initiatives to increase the universities' student enrolment and graduation rates?

5. Have there been specific programmes to influence changes in student access?

6. In your opinion, do you think there have been significant changes in student access (enrolment) given the declining public funding? If yes, how and if no, why not?

c. Funding Challenges: What funding challenges are the two public universities facing in their quest to maintain or increase student access?

1. What have been the funding challenges facing the public universities in their quest to maintain or increase student access?

d. Strategies to maintain or increase access: What strategies have the University of Ghana and the University of the Western Cape employed to maintain or increase student access given the declining public funding?

1. What strategies has the government been exploring to support public universities to sustain student access given the declining public financing?

2. To what extent is the government encouraging or supporting universities' initiatives which are geared towards sustaining student access?

II. University Administrators

a. Sources of funding: How do the four universities acquire their financial resources?

1. What have been the sources of funding for your university?

2. What proportion does each of these sources make into the university's total revenue?

3. How would you describe the trend in the allocation of public funds to the university? What influences the changes in public funding?

4. Have there been any specific goals that the funders/financiers are supporting through the funds to the university?

b. Changes in student access: What have been the changes in student access at the University of the Western Cape and the University of Ghana?

1. What factors account for the changes in student access?

2. What have been the admission criteria?

3. What have been the enrolment and graduation targets of the university, 2007-2016?

4. What have been the actual enrolment and graduation figures/rates of the university, 2007-2016?

5a. Have there been financial programmes specifically aimed at increasing student enrolment and graduation figures/rates? Elaborate on your answer?

5b. Was a category of students targeted? (STEM students or students from social sciences). If yes, how and why?

6. In your opinion, do you think there have been significant changes in student access (enrolment and graduation) given the declining public funding, 2006-2013? If yes, how and if no, why not?

c. Funding Challenges: What funding challenges are the two public universities facing in their quest to maintain or increase student access?

1. What have been the funding challenges facing the university in the quest to maintain or increase student access?

d. Strategies to maintain or increase access: What strategies have the University of Ghana and the University of the Western Cape employed to maintain or increase student access given the declining public funding?

1. What have been the strategies of the university to maintain or increase student access given the declining public financing?

III. Student Leadership

a. Sources of funding: How do the two universities acquire their financial resources?

1. How are you involved in the financing of the university?

2. What is the trend in public funding? What factors account for the changes in public funding?

3. How are you financing your education?

b. Changes in student access: What have been the changes in student access at the University of the Western Cape and the University of Ghana?

1. What factors shape the changes in student access?

2. In what ways is the student leadership assisting in the enrolment and graduation processes?

4. In your opinion, have there been significant changes in student access given the declining public funding for the years you have been a student?

c. Funding Challenges: What funding challenges are the two public universities facing in their quest to maintain or increase student access?

1. What are some of the funding challenges you are facing as a student?

d. Strategies to maintain or increase student access: What strategies have the University of Ghana and the University of the Western Cape employed to increase student access given the declining public funding?

1. What specific programmes do you know the university has put in place to increase student access? Do you think that the current financial programmes to increase student access are adequate? Please elaborate.

APPENDIX 2

Ethics Approval Letter-UG

UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)
P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No.....

15th June, 2018

Mr. Fredua Kwasi-Agyeman
Institute for Post School Studies, University of the Western Cape
South Africa

Dear Mr. Kwasi-Agyeman,

ECH 156/17-18: PUBLIC FUNDING AND STUDENT ACCESSIBILITY: A COMPARATIVE STUDY OF PUBLIC UNIVERSITIES IN SOUTH AFRICA AND GHANA FROM 2005 - 2015

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for an expedited review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date:	14/06/19
On Agenda for:	Initial Submission
Date of Submission:	14/05/18
ECH Action:	Approved
Reporting:	Bi-Annually

UG/ISSER/ECH VALID UNTIL 14 JUN 2019 APPROVED DOCUMENT

Please accept my congratulations.

Yours Sincerely,

Rev. Prof. J. O. Y. Mante
ECH Chair

Tel: +233-303933866 Email: ech@ug.edu.gh | ech@isser.edu.gh