Practices of Cost Sharing in the Higher Education System of Ethiopia: The Challenges, Retrospections and Repercussions

by

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DECLARATION

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Practices of Cost Sharing in the Higher Education System of Ethiopia: The Challenges, Retrospections and Repercussions

I hereby declare that this thesis is my own work and that all sources used or cited have been indicated and acknowledged with full references.

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ABSTRACT

The purpose of this study was to investigate cost-sharing practices in Ethiopia's higher education system (HES). To do this, the study examined a variety of cost-sharing models applied to education, how students evaluate the services provided by universities, factors influencing repayment practices, challenges encountered, and the views and perceptions of participants. To investigate this topic, a mixed methodology (QUAN-Qual) design was employed. By means of a questionnaire, information was gathered from randomly chosen graduate employees (N = 586) and woreda staff (N = 62). The heads of the Wereda revenue office and the university cost-sharing officers were interviewed. Quantitative data were analysed using descriptive statistics, and the results were manually integrated with qualitative data. The results showed that most of the participants were able to identify and describe the cost-sharing forms used in the Ethiopian HES. The results also showed that most respondents gave ratings to the services that universities offer their students. The results also showed that several factors, including bad record-keeping, poor follow-up, repayment willingness, the inability to collect taxes, unemployment, and a monthly salary, had impacts on repayment practice. Because they believe they cannot afford the tuition, students oppose cost-sharing. Finally, participants evaluated the rationale and objectives of cost-sharing schemes as necessary to reduce public spending, promote equity, allocate higher education costs more equitably, expand access to higher education, and improve the quality of higher education. The results show that respondents are not satisfied with the services they receive from the university and provide a list of variables that influence the repayment practices of graduate employees. The study's conclusions suggest that to improve implementation, a strict legal framework with strict accountability should be established. The study also emphasized the necessity of partner awareness-raising forums and public campaigns to ensure widespread understanding. Policymakers should revise the regulations and incorporate obligations for second- and third-degree graduates. Additionally, it called for a study of a similar nature at private universities, additional regional states, and one that included a higher proportion of graduates..

KEY TERMS: *cost sharing, student loan, graduate tax, higher education, human capital, tuition fee, fee, revenue, repayment, employee, beneficiary, regulation, Woreda.*

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ACRONYMS

AACA	Addis Ababa City Administration
ANRS	Amhara National Regional State
EHES	Ethiopian Higher Education System
EFA	Education for All
EPRDF	Ethiopian People Revolutionary Democratic Front
ERCA	Ethiopian Revenue and Customs Authority
ESDP	Education Sector Development Programme
ETP	Education and Training Policy
GNP	Gross National Product
GDP	Gross Domestic Product
HCT	Human Capital Theory
HECS	Higher Education Contribution Scheme
HEI	Higher Education Institutions
HELB	Higher Education Loans Board
HESLB	Higher Education Students Loans Board
ICETEX	Instituto Colombiano de Credit Education Estudios Exterior
IRL	Income Related Loan
MoE	Ministry of Education
OECD	Organization for Economic Cooperation and Development
PTA	Parent Teacher Association
SFAR	Student Financing Agency for Rwanda
SLTF	Student Loan Trust Fund
SSA	Social Security Authority
TNRS	Tigray National regional State
USD	United States Dollar

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CHAPTER ONE

ORIENTATION OF THE STUDY

1.1. Introduction and background

Tertiary education has changed in the past 50 years from a luxury for the wealthy to a global industry with a growing student population. Since the late 20th century, developing countries have mainly recorded this growth. In 1991, there were 68 million students attending university education worldwide. This number rose to 132 million in 2004 and is anticipated to reach 150 million by 2025, according to Kapur & Crowley (2008). Between 2000 and 2015, 214.1 million students attended higher education institutions and this number is expected to increase to 377.4 million by 2030 and 594.1 million by 2040 (Johansson & Ander, 2021). Kapur and Crowley (2008) claim that sub-Saharan Africa's enrollment rate rose from 1.7% in 1980 to 3.9% in 1997 before reaching 5% in 2004. Because many countries in sub-Saharan Africa are developing their national education systems and achieving higher secondary completion rates, enrollment rates are expected to continue to increase significantly in this region. The number of students is predicted to rise from 7.4 million in 2015 to 8.8 million in 2030 and 21.7 million in 2040, according to Angel (2018).

Higher education does not receive much attention or financial support from the public sector in many developing countries, despite its demand and many socio-economic, cultural, and political roles in the world (Chiwandire & Vincent, 2019; Acquah, 2021). The view that higher education has a lower social return than other investments, especially primary and secondary education, is believed to be the reason for sub-Saharan Africa`s lack of interest in it. One international organization that has encouraged developing country governments to give priority to basic education is the World Bank (Woodhall, 2003). Current financial problems in higher education can be attributed to a number of factors, including increasing per-student costs and increased enrolment (Johnstone, 2004; Souza, 2022).

Due to this, the majority of higher education institutions (HEIs) experienced severe financial issues that may have been caused by their inability to repair their plants; libraries

and laboratories deteriorated; staff morale deteriorated; and lecture halls were overcrowded, to name a few indicators (Johnstone, 2004; Mulyono et al., 2020; Gambo, 2019). Governments have therefore started to rethink their financial policies because the social or public returns on higher education are considered to be lower than the private returns.

In most developing countries, the government provides funding for education. Nevertheless, it has been challenging to increase education due to low and negative economic growth rates, high prices, and a lack of public funding. The key to meeting the high demand for secondary and tertiary education in Africa is better cost sharing at this level combined with significantly lower unit costs (World Bank, 1988; Ayam, 2021). This is due to strict restrictions on public resources in Africa as well as competitive requirements for these resources by other parts of the education system. As a result, the cost of education has changed dramatically in recent years from being primarily paid by governments or taxpayers to being shared by parents and students (Johnstone, 2003; Ishengoma, 2004; World Bank, 2003; Marcucci & Johnstone, 2007; Knight, 2009; Marcucci & Usher, 2011; Johnstone & Marcucci, 2010 ; Xu, 2023)

The majority of countries have raised tuition fees for students, parents, and sponsors or introduced various forms of cost sharing in higher education. Governments and institutions should strive for equity, access, efficiency, revenue diversification, and augmentation are the reasons for higher education cost-sharing to reduce political pressure and maximize economic benefits. As a result, the distribution of education costs, which previously fell primarily on the shoulders of the government or taxpayers, has changed significantly in recent years (Marcucci & Johnstone, 2007; Chiwandire & Vincent, 2019; Dachi, 2021; Ayam, 2021; Xu, 2023).

According to Johnstone (2003), "cost-sharing" is defined as the shift in the financial burden of higher education costs from fully financial support or dependence on the government or taxpayers to a higher degree of financial support or dependent on parents and/or students in the form of tuition fees or charges to cover the cost of accommodation previously provided by the government or institution. The phrase "cost-sharing in higher education" describes a shift where taxpayers or governments are no

longer the primary payers of higher education costs, but parents and students share some of the burden (Johnstone, 2003, 2004, 2004a, 2004b; Johnstone & Marcucci, 2010; Orr, Wespel, & Usher, 2014; World Bank, 2010; H. Vossensteyn, Cremonini, Epping, Laudel, & Leisyte, 2013, Vossensteyn et al., 2013; Rexe & Maltais, 2022; Xia et al., 2022).

According to reports, many governments have looked at cost-sharing as a key solution to their issues with funding higher education. To diversify their sources of income, they might have looked to six different groups of people: family, graduate income, employers, and business activities of universities are internal income and contributions from donors (Barr, 2003; Dickson, 2018; Xia et al., 2022; Xu, 2023)

The Ethiopian government has acknowledged that the country's education system has been plagued by complex issues of relevance, quality, accessibility, and equity in its newly introduced education and training policy promulgated in 1994. Additionally, it promised to develop the frameworks required to invite and support private investors in opening schools and establishing a range of institutions for education and training (MoE, 1994; Kabtyimer, 2020). Under this policy, public funding is provided until the completion of general secondary education and related training, with increasing costs for higher levels of education and training (*Education and training policy.*, 1994).

The cost of higher education in Ethiopia has always been covered by the government. In Ethiopia, a student enrolled in a university is entitled to free tuition, health care, housing, and even textbook allowances. This was the case until the end of 2003. After this time, however, higher education grew at a never-before-seen rate, and the budget for education grew to the point where the government could no longer support education solely (MoE, 2002).

Ethiopia’s public colleges face serious budgetary constraints, which are unlikely to be resolved merely by boosting government funding. Due to insufficient public support for universities, combined with an ever-expanding higher education system, Ethiopian institutions should focus on better revenue diversification in these times of austerity (Feleke, 2015; Teferra et al., 2018).

According to Woldegiorgis (2008); Mgaiwa & Ishengoma (2023), the main problems currently affecting the education sector are the lack of adequate funding for the growing number of students and the inability of the public sector to meet the growing educational needs. despite substantial public investment in education, children from low-income families, women, and people living in rural areas continue to face significant barriers to accessing higher education (MoE, 2002; Bines & Woods, 2007). This problem arises from the lack of cost sharing schemes. The government of Ethiopia is, therefore, trying to alleviate resource problems of education through introducing and implementing cost-sharing mechanisms starting from upper secondary schools.

In the history of Ethiopian education, 1994 marked a watershed moment in terms of educational prices. At this point, a new Education and Training Policy (ETP) was introduced, which distinguishes between "free" education and education that requires users to pay out-of-pocket. According to this policy document, only general education (grades 1-10) shall be provided free of charge using public funds. The remaining educational and training programs will be provided through cost-sharing arrangements that will be reimbursed through post-graduation services or payments. Generally speaking, the 1994 ETP offers at least a theoretical overview of the ideas and issues surrounding cost sharing in Ethiopia's educational system (*Education and training policy.*, 1994). To this effect, MoE stated that:

> Government financial support shall focus on education up to grade 10, beyond this level, the students cost sharing in education expenditure will increase with each step in educational level (MoE, 2002, p.66).

The idea of cost sharing was first introduced in Ethiopia's Education and Training Policy (ETP) in 1994, which aimed to reform higher education in general. However, it did not specify the type of cost-sharing or the timing of implementation. Financial austerity and the need to improve the system to increase accessibility from historic lows of less than 0.8% to higher levels, at least by African standards in sub-Saharan Africa, at 4%, promoted the idea of diversifying funding for higher education (Woldegiorgis, 2008).

In 1994, for the first time in history, the Ethiopian government issued a comprehensive legal document on higher education to establish a suitable legal

framework for the higher education reform program. This document is called Higher Education Proclamation No. 351/2003 (FDRE, 2003b), *and the revised version is known as No. 650/2009* (FDRE, 2009). This proclamation declares that a fundamental reform has been carried out in the Ethiopian "HES" higher education system, including cost-sharing, academic freedom, institutional autonomy, and income diversification. Therefore, other regulating and legislative measures approved by the Council of Ministers have fully clarified the cost-sharing plan outlined in the Higher Education Proclamation. The official names for this regulation are Ministers Regulation No. 91/2003 (FDRE, 2003a), as well as Ministers Regulation No. 154/2008 (FDRE, 2008), which is a revision of it. The beneficiaries of higher education who were required to pay a contribution must report their portion on the graduate tax form from their earnings, payable from salaries or other income earned after graduation.

Increased educational revenue from non-governmental sources, particularly students and families, is one of the main recommendations made by the World Bank and the majority of other development experts as an important solution to the increasingly underfunded and overburdened universities in the developing world (Johnstone, 2003). In Ethiopian higher education, those who sign a contract and benefit from public higher education must cover all room and board costs, as well as at least 15% of tuition fees (Teferra et al., 2018). The graduate tax consists of a flat tax levied as a percentage of wages over 15 years and paid equitably by the student. A graduate tax scheme, a variation on an income-related delayed payment system, was put into place in 2003. As part of its repayment provisions, beneficiaries must be required to make payments in accordance with a formula based on a percentage of their annual income, suggested at 10%, which is automatically deducted from their salaries. Tax exemptions apply to about 35% of students, and beneficiaries who violate their contract by failing to complete their obligations are liable for all unpaid training and education costs as well as interest calculated at the applicable rate of payment (Chapman, 2005).

Under Ethiopia's cost-sharing system, any student enrolled in a public university who is pursuing education or training and has consented to pay for future "educational" or "training" expenses in addition to other services is considered a "beneficiary" (FDRE, 2003a, 2008, and Yizengaw, 2007). Following the publication of the Higher Education

Proclamation and Cost Sharing Regulations, this policy has been in place at HEIs since October 2003. According to Articles 4 and 6 of the Sharing Regulations (FDRE, 2003a; 2008; Teferra et al., 2018), all recipients of public higher education who sign a contract must share all expenses for housing and food, as well as a minimum of 15% of the tuition fees.

At the start of each academic year, beneficiaries will be informed of the amount to be owed. The cost of each institution and the program of study will be taken into consideration when determining this sum, with the cost of studying medicine being the highest and the cost of studying the social sciences being the lowest. Because of this, it is anticipated that the total cost of food and housing will be around 220 USD per student per year, while 15% of tuition that each student will pay will be somewhere between 100 and 230 USD per student per year (Yizengaw, 2007). The total amount due will increase due to any applicable service charges or interest based on the bank rate in effect at the time of the contract agreement.

However, in many ways, implementing cost-sharing policies is more difficult than simply introducing them. There are numerous examples that demonstrate how difficult it has been to implement cost sharing schemes, in less developed countries. Therefore, implementation of cost sharing is not free of such issues given that Ethiopia is one of these developing nations where it is easy to observe various socio-economic policy implementation issues.

Additionally, although implementing a cost-sharing scheme in the Ethiopian HES was started in October 2003, there are several challenges that require attention in practice. Some of the problems are related to attitudinal problems of graduates of HEIs, a shortage of sufficient knowledge about the regulation, the inability to share the cost owing to the low income of students and their parents, repayment malpractices owing to different administrations, and other related problems. Therefore, the objective of this study was to analyse the implementation of cost-sharing policies with respect to the graduate tax repayment practices of graduates of HEIs in Ethiopia. Therefore, it is crucial to research cost sharing implementation methods and the repayment issues that the Ethiopian HES is currently dealing with.

1.2. Rationale for the Study

Higher education is something every citizen aspires to pursue if they want to make a significant contribution to the development of their country. According to Maringe & Ojo (2017) Adewale & Zubaedy (2019); Mbithi et al., (2021); UNESCO (2023), the main objective of higher education is to prepare people to act as agents of development and to contribute as much as possible to local, national, and international development (Adewale & Zubaedy, 2019; Chankseliani et al., 2021; Joaquim & Cerdeira, 2020; Amutuhaire, 2022). In Africa, universities are expected to do more to produce individuals with moral integrity who can make a significant contribution to society while maintaining self-esteem, as well as create a highly qualified workforce and research outputs to meet the economic needs of society (Brennan, King, & Lebeau, 2004; Woldegiorgis & Doevenspeck, 2013). Because of this, African universities are seen as active agents of sustainable development and tools for societal change. But to do this, everyone must play a constructive role, including rebuilding, establishing institutions, paying taxes and making up debts incurred from cost-sharing, establishing new social bonds, etc.

According to reports, the Ethiopian government has always funded higher education. Ethiopian students enrolled in public universities enjoy free education. Up until the end of 2003, this situation persisted. However, after this period higher education saw unrivalled growth, which caused the nation's education budget to soar that the government could no longer afford to be the only source of funding (MoE, 2002; Kabtyimer, 2020).

The cost of attending public universities has increased as a result of the expansion of universities and students in Ethiopia's HES. The cost-sharing scheme has been in place in higher education institutions since October 2003, following the Higher Education Proclamation and Cost Sharing Regulations. According to Articles 4 and 6 of the Higher Education Cost Sharing Regulation (FDRE, 2008), all public higher education beneficiaries entering the agreement must share all living and accommodation costs, as well as a 15% tuition fees. Beneficiaries must begin paying "graduate tax" equal to at least 10% of the employee's monthly salary after a one-year grace period (FDRE, 2008). Beneficiaries are required to repay the loan within 15 years, depending on the type and duration of the

programme. Based on the starting salary that graduates of different disciplines will receive after graduation, the repayment period's length is determined.

Although implementing a cost-sharing scheme in the Ethiopian HES started in October 2003, there are several challenges that require attention. Some of the problems are related to attitudes and a lack of knowledge about the policy and regulations, the inability to share the cost owing to the low economic income of students and their parents, repayment malpractices owing to different management problems of integrity with different and concerned stakeholders, and other related problems. Hence, it is essential to study the practices of implementing cost sharing and the repayment challenges that the Ethiopian HES faces at its early stage.

As a result, integrated techniques that can lead to systematic solutions are required. There should be numerous techniques and solutions for managing the cost sharing repayment procedure. The payback practice of cost sharing is supposed to be seamless and as of the rule and their agreement, especially for graduates of HEIs who are at least first degree holders and have at least some monthly salaries. However, much is not done or seen in searching for inexperienced solutions. The trend in resolving such difficulties is to use a traditional method that does not rely on more formal measures or administrative and formal legal matters.

As a result, I believe that this study will provide fresh insights on how to manage the issues of cost-sharing repayment policies in Ethiopian HES, making it an important study.

1.3. Statement of the problem

Cost sharing in education is both a philosophical and a practical concern. It affects the earnings of graduates from HEIs. With this in mind, I have to question the repayment practice of implementing cost sharing as a policy requirement in this study. Accordingly, this study concentrated on the problems of implementing cost-sharing programs and repayment habits in the Ethiopian HES. Education was one of the social services that were once supplied for free throughout many decades. Students used to be entitled to stipends and/or accommodations. This encouraged many thousands who were not attending school. Because of the multitude of attendants in schools, the government could

not afford to provide stipends and accommodations (Kabtyimer, 2020). Therefore, even though this trend could only last a short while, the government remained committed to offering education for free until the introduction of the New Education and Training Policy in 1994.

However, free government-subsidised education, which had been practiced for many years, had not made all levels of education available to the entire country's population. According to Woldegiorgis(2008), the existing unequal participation is mostly due to a lack of appropriate public resources, which have been completely dependent on the government alone. This shows that the government's resources are insufficient to cover the level of spending necessary to support the rising student population. Although there was considerable community involvement, the government was the primary actor in funding the entire cost of education at all levels. However, as it has become difficult for the government to cover all the costs of education with taxes levied on the public, the cost-sharing policy scheme is currently being introduced, and an attempt is underway to shift some portions of the cost from the government to students starting in upper secondary school.

The success of policy implementation requires a wide variety of actions and depends on the adequacy and presence of provisions, policy implementation strategies, the commitment of the stakeholders, the capacity of the system, and other environmental factors (UNESCO, 2010). Given that educational development affects and involves a large number of beneficiaries, institutions, and political figures, all of whom have a stake in the process and the outcome; it is evident that it is a very complex endeavour. Obviously, there has been substantial public opposition against introducing a cost-sharing policy or raising tuition in any country that has tried to do so (Lergetporer & Woessmann, 2019). In addition, policies take a long time to achieve their objectives. These factors make it important to introduce policy changes and adjustments carefully.

To meet the goals of the policy programme effectively, however useful it may be, the suitability and popular recognition of the policy programme should be ensured far and wide before it replaces the existing situation. In a country like Ethiopia, where students are

used to receiving free education from the government, a change in attitude among the students, their parents, and the general public is needed to accompany policy changes.

Therefore, in addition to the differences in accepting the implementation of the scheme in high schools and universities and forms of objection to the implementation of participation for cost sharing, I have viewed this particular question as a topic of debate between students and their parents since it is implemented in the Ethiopian education system. This may be because of the inadequacy of provisions, policy implementation strategies, commitment of the stakeholders, the capacity of the system, etc. Some students and parents support it, but some tend to oppose it. It appears that some parents, students, and other community members have little understanding of how the cost-sharing policy is implemented, despite its importance.

A study of this kind is justified since it aims to change the already-noticed unsustainable pattern of government-only funding of the educational system, as well as inadequate provisions, policy implementation strategies, stakeholder commitment, and system capacity. The researcher claims that there have been some issues with the repayment practise and cost-sharing implementation in the Ethiopian HES, primarily due to the attitude and awareness of the personnel assigned to lead the implementation process, which concerned government institutions and stakeholders with the necessary authority to implement the process, particularly the implementation and repayment process. As a result of these problems, the purpose of this research was to identify elements that could improve cost-sharing implementation methods, repayment procedures, or processes, revive failing processes, and provide recommendations to prevent failures from occurring in the future.

As a result, since graduates are subject to the implementation of cost-sharing schemes, getting involved in this matter and evaluating the implementation and repayment practises of the cost-sharing policy in the educational system becomes a top priority.

1.4. Research Questions

The purpose of this study is to analyse the practice of Ethiopia's HES cost-sharing scheme as well as address gaps and limitations in its implementation. Furthermore, the study attempted to conduct a more thorough and in-depth investigation into the problems

of implementing cost-sharing and repayment procedures in the Ethiopian HES, defined the overall problem, and recommended at least one remedy.

1.4.1 **Main research question:**

What are the challenges, retrospections and repercussions in the practices of implementing cost sharing in the HES of Ethiopia?

1.4.2 Sub-questions:

1.4.2.1 What are the forms of cost-sharing in education adopted in Ethiopian HES?

1.4.2.2 How do students evaluate and rate the provision of facilities and services in HES Ethiopia in relation to the implementation of cost sharing?

1.4.2.3 What are factors that affect the repayment practices of higher education graduate employees of Ethiopia?

1.4.2.4 What are the main practical challenges encountered in the implementation and repayment practices of cost sharing in the Ethiopian HES?

1.4.2.5 What are the views and perceptions of the stakeholders on the rationale and objectives of the policy statement regarding cost sharing?

1.5. Purpose, aims and objectives of the study

Based on the research questions and sub-questions above, the main objective of this study was to analyse and determine the implementation process of cost-sharing and repayment practices in the Ethiopian HES. Therefore, the study focuses on the following specific objectives:

The specific objectives are:

1.5.1 To identify and describe the forms of cost sharing in education adopted in the Ethiopian HES

1.5.2 To evaluate and rate the provisions of facilities/services provided to students in the Ethiopian HES with reference to cost sharing implementation.

1.5.3 To determine the elements influencing Ethiopian higher education graduates' repayment habits.

1.5.4 To examine the major problems and Challenges in Cost Sharing implementation and Repayment Practices in Ethiopia's HES.

1.5.5 To scrutinise the views and perceptions of the stakeholders on the rationale and objectives of the policy statement regarding cost sharing.

To achieve the study objectives, the validity of the following null hypotheses was tested at the 5% significance level.

H_{o1}: There is statistically no significance relationship between forms of cost sharing adopted in Ethiopia and repayment practice in the Ethiopian HES.

1.6. Research Methodology and Design

In terms of its objective, this study evaluated Ethiopia's HES's cost sharing and repayment practices in light of policy and strategy orientations as well as various international viewpoints on cost sharing delivery systems. It attempted to enhance knowledge and comprehension of the cost sharing system of HEIs by providing a realistic account of the current circumstances and trends in the repayment practice of cost sharing. As a result, a pragmatic mixed approach to data collection and analysis was used together with a cross-sectional descriptive survey design as the research design. By looking at the views, perceptions, and opinions of study participants, the descriptive survey was used to quantify what has happened and what has been established regarding the practice of cost sharing implementation and repayment practices in the HES.

The fourth chapter of this study includes a comprehensive explanation of the research methodology used.

1.7. Limitations of the Study

Due to some limitations, research efforts had to be focused on this study. One of the limitations was the delimitation of the study area and the small sample size of the participants, which necessitated the involvement of graduates in providing quantitative data (filling out questionnaires). I had a difficult time locating and recruiting graduate employee respondents with five years or more of experience and those who graduated from all 33 universities in these study areas because graduates are dispersed across the nation in all national regional states and city administrations. The second limitation was the limitation of financial and material resources. Since I was a self-sponsored student, I had

trouble paying for everything, so I had to travel to all 35 woredas and five public universities to gather the necessary information. The third barrier was the COVID-19 related delay in completing the thesis as well as the conflict between the federal government and the TPLF in the northern Ethiopia, where I currently reside, which prevented me from having access to electricity, telephone service, or the Internet.

Delimitations of the Study

Ethiopia is a federal country with nine national regional states, two City Governments, and additional local governmental entities. Ethiopia also has a total of 33 public universities. If this study had included graduates from both public and private HEIs (universities), it would have been more insightful. A national-level study would have been as important. However, for the sake of manageability and resource scarcity, it was limited to regular program graduates of public HEIs and graduates employed only in woreda public sector offices of the two national regional states and one city administration known as Amhara National Regional State (ANRS), Tigray National Regional State (TNRS), and Addis Ababa City Administration (AACA). In addition to manageability, the private and non-formal systems were excluded because they were primarily dependent on individuals covering the full cost of their education. ANRS is the third-largest regional state nationwide and the second-largest by population. It represents approximately 22 million inhabitants. With more than five million residents, TNRS is the sixth largest national regional state, and Addis Abeba, the capital of Ethiopia, is home to nearly five million. Together, these two populations make up one-third of Ethiopia's estimated 90 million-plus population. In this regard, these regions and the City Administration absorb a large number of graduates every year from all public universities as public servants. Although the empirical focus of the study was these two regions and the City Administration, it would be generalised within the broader context of the concerns of cost sharing implementation, challenges and graduate employees' repayment practices throughout Ethiopia.

The study has also involved only those who are employed and have at least five years of service because their long stay and experience in the public sector together with their repayment practice based on their agreement during their study at the HEI enables them to give more refined and better information for the study than those who have less

than five years' service. Because most new graduates will not enter the workforce immediately after graduation and will have at least one year of grace before beginning repayment in the system, involving senior graduates with some years of service helps to learn more about the practical challenges faced in the implementation process and repayment practices than involving those with less than five years of service or work experience. As a result, the higher a graduate employee's level of employment in the public sector, the more likely knowledge she or he will have to provide about the practical issues and repayment practices of their own and others they witness.

Definition of Key Concepts

Beneficiary: is a person who is enrolled in a public university pursuing "higher education" or "training" and has committed to the relevant institution to pay for future education, training, and other services (FDRE, 2008, p. 4145).

Cost-sharing: is program in which all students in public higher education and the government share the cost of education and other services (Johnstone, 2003,p. 351).

Employee: means a person who, after graduating from a university, is employed by a governmental, private, non-governmental organization, or an international or regional organization.

Fee: refers to a payment to cover all or most of the costs associated with a particular product or service provided, such as food and lodging expenses, transportation, and medical expenses that are commonly used by some students (Marcucci & Johnstone, 2007).

Graduate Tax: refers to a scheme whereby an amount is deducted from monthly income as taxes payable by the beneficiary, who is obligated to share the cost of his higher education (FDRE, 2008,p. 4145).

Higher Education: means the post-secondary education provided by a university for the pursuit of a profession and is intended primarily for those who are not subject to compulsory education. It includes education in the arts and sciences offered to undergraduate and postgraduate students with any of the qualifications set out in Article 19 of the Higher Education Proclamation No. 650/2009 (FDRE,

2009, p. 4977), which is intended for enrolment in the mode of delivery of specified degree programs. In this research, "HEIs" refers to universities.

Human capital: is a type of capital made up of the knowledge and skills that people acquire through education and training. This capital is the result of conscious investments that generate returns (Nafukho, Hairston, & Brooks, 2004). Furthermore, the OECD (2001), states that the development of a person's personal, social, and economic well-being is facilitated by the knowledge, skills, abilities, and qualities that make up that person's personality.

Student loan: is a type of loan designed to help students pay for their post-secondary education and related expenses, such as tuition, books and living expenses.

Tuition fee: refers to fees charged to all students and/or their parents to pay part of the tuition fee. In this context, it indicates that part of the tuition fee per student is borne by the student and/or his or her family.

Woreda: is the third-level administrative division of Ethiopia.

1.8. Chapter Outline

This research is divided into six chapters. An introduction to problem statements, the purpose of the study, and the significance of the study are all discussed in the first chapter. The second chapter deals with a review of the relevant literature. Chapter three describes the theoretical underpinnings of the research study. The fourth chapter begins with a description of the research methodology used, followed by a thorough analysis and discussion of the results presented in Chapter five. The final chapter provides an overview of the findings, the conclusions drawn from the findings, and potential solutions that could address the issues identified in the findings.

1.9. Chapter Summary

This chapter contained an introduction, a brief historical overview, a problem statement, a list of research questions, and information on the study's purpose. The significance, constraints, justification, and motivation of the study were also discussed. Both the research methodology and the key concepts underlying this study are described. The next chapter describes the literature review that served as the basis for this study.

CHAPTER TWO

REVIEW OF THE LITERATURE

2.1. Introduction and Background

The previous chapter provided an overview and historical background of the current study on cost-sharing practices in Ethiopian HES. This chapter then includes a review of the relevant literature on the topic. It examines how cost-sharing arrangements in higher education are currently understood. It shows how cost-sharing initiatives are equally appreciated and used in developed and developing countries. To promote cost sharing in higher education from both a global and local perspective, it takes into account what is generally known about it and reviews studies and experiences with the cost-sharing programme. Since a cost-sharing programme is being introduced in the Ethiopian HES, this chapter helps to illustrate the situation.

This chapter discusses the concept of cost sharing in higher education, views on it, financial difficulties associated with it, student loan and tuition management policies in HEIs, co-payments funding and cost-sharing recovery in HEIs, and education and higher education funding in Ethiopia.

2.2. The Concept of Cost Sharing in Higher Education

To start with, the concept of cost-sharing carries diverse meanings and is broadly perceived. For this study, I draw mainly on Johnstone's work. Johnstone (2003) defines "cost sharing" as the shifting of the financial burden of higher education costs from complete reliance on the government to financial dependence on parents or students, under the form of tuition or user fees to pay for accommodation previously provided by the government or institutions. Historically, public higher education has been one of the sectors where it has been offered free of charge or at very little cost, depending on the country. Higher education costs have been covered by government spending or a larger taxpaying population. Below are some historical justifications for free higher education (Marcucci & Johnstone, 2007; Gayardon, 2019):

- Higher education's public returns were considered greater to its private returns.
- Historically, societies and governments have generally viewed education as a fundamental right.
- In terms of social benefits and equity, students from low-income households, rural areas, and ethnic minorities are particularly affected by tuition fees.
  When the costs associated with lost student earnings are added in, maintaining a student is already out of reach for many families.

Even though free higher education is intended to increase participation among low-income families, rural areas, and racial and ethnic minorities, the majority of students come from politically, economically, and socially powerful groups. These considerations have changed as economic developments have changed, resulting in new situations. Given the contradiction between the expansion of higher education and the need for public funds to maintain higher education as it is, this new situation has implications, including the expansion of higher education, a re-evaluation of the benefits, and general financial austerity. As a result, many nations have passed laws allowing students, parents, NGOs, and others to share in the cost of public higher education. Despite the wide range of degrees, governments have primarily used cost-sharing to broaden access to higher education by raising money for the creation and growth of HEIs, requiring that students pay a portion of their tuition, and enhancing effectiveness and quality (Teixeria et al., 2008; Xu, 2023).

Johnstone developed the cost-sharing theory's underlying concepts between 1986 and 2006 (Johnstone, 2006). This theory also serves as its global description of influence.

Conceptually, "cost-sharing" refers to a change in the distribution of the financial burden of higher education costs, moving from total dependence on the government to some financial dependence on parents or students in the form of tuition or "user fees" to cover accommodation and meals previously provided by the government or institutions (Johnstone, 2004b; Xia et al., 2022; Kamara & Momoh, 2023). It can also lead to significant cost increases in areas where user fees were previously used to pay for expenses such as housing, food, healthcare, and other living expenses, or other related

fees to pay a portion of the student's education or other living expenses (Johnstone, 2004b).

Higher education cost-sharing can result from government initiatives shifting students from the heavily subsidized public sector to the significantly less subsidized and tuition-dependent private sector, especially in rapidly expanding systems (Johnstone, 2006). The practice of cost-sharing was swiftly embraced by both developed and developing nations. Also, in many other developing nations in the Latin American and Asian regions, it has gained popularity in policy discussions in Kenya, Ethiopia, Tanzania, and Uganda. This was done in order to increase private funding for higher education while also lessening the concept's political sensitivity (Woodhall, 2007).

The term "cost sharing" in relation to higher education denotes a change in the way governments or taxpayers bear the financial burden of funding higher education, as opposed to the government or taxpayers bearing all or most of the costs. It includes tuition fees, the cost of food, lodging, and others (Johnstone, 2003, 2004, 2004a, 2004b; Ishengoma, 2004; Marcucci, Johnstone, & Ngolovoi, 2008; Johnstone & Marcucci, 2010; Orr, Wespel, & Usher, 2014; World Bank, 2010; Vossensteyn et al., 2013).

A fee is understood as any sum of money paid by students, with which they formally and compulsorily contribute to the cost of their higher education. This may include, but is not restricted to, a registration fee, tuition fees, graduation fees, administrative fees, etc. Payments to student unions are not taken into account (European Commission /EACEA/ Eurydice, 2018; Kučaidze & Jurgelevičius, 2020). A fee for instruction is referred to as tuition in the US. However, 'tuition' is used to refer to 'instruction' in the rest of the world, so the cost of instruction is referred to as a tuition fee (Johnstone & Marcucci, 2010).

According to Dezhina and Nafikova (2019), tuition fees are sums of money paid to cover all or a portion of the costs associated with offering classes, lectures, or tutorials for particular courses. Where this is applicable to students, they or their parents are obliged to pay the specified amount (Jongbloed, 2008). The general term ‘fees’ can cover a variety of costs incurred by institutions and levied on students for the provision of services, which may be availed of by all or only some students (Marcucci & Johnstone, 2007). Such fees might be paid for food, accommodation, general wellbeing, and any travel expenses. They

may, in some circumstances, cover costs of materials associated with specialist courses such as art or travel to work experience placements (Johnstone & Marcucci, 2010). Fees may also cover general administration costs like registration, examination setting, invigilation, and correction.

To help pay for higher education, several nations have put in place cost-sharing programs. University funds can be raised in several ways, including family contributions, student earnings from casual work, student taxation on employers, employee contributions, revenue generated from university businesses, and donations (Barr, 2003).

Johnstone (2004b) listed the parties that share costs in the following order: government, parents, students, and individual or institutional donors (Johnstone, 2004b, p. 404; Amin & Ntembe, 2020). The categories under the four headings of parents, students, governments, and donors were also further clarified by him.

The Governments: - Financing higher education has primarily become the responsibility of government (Nkisi, 2021). Since it is legally permitted to levy taxes on behalf of the nation, the government is in charge of providing the majority of the funding for higher education. It provides block grants or grants based on performance to HEIs (Oseni et al., 2020). People who pay taxes, whether directly or indirectly, are the source of revenue (Johnstone, 2004b). Governments have continued to cover a portion of the cost based on the idea that it has a positive social rate of return. There are additional justifications for continued government involvement in funding higher education. These include market imperfections, monopoly and market power, inefficiency in politics, unequal income distribution, and information asymmetry.

Additionally, the government's involvement might be justified by gaining political support and lowering political pressure on cost-sharing. As a result, governments continue to provide financial support for higher education, decreasing the financial burden on students, parents, and benefactors (Oseni et al., 2020).

Students: In addition to the government, students also pay for a university education. The presumption that students pay a portion of the cost of their education is supported by the assumption that they will receive substantial personal, social, and

economic, or monetary and non-monetary, benefits (Skrbinjek, 2020). The argument in favour of students paying for their education is supported by these socioeconomic advantages. Depending on the country, the cost is split either through a deferred loan or a system of surtaxes based on future earnings. Furthermore, by paying in advance, students could spread the cost of their more expensive courses. After that, students could use a loan system or their income to make payments. In general, economists, policy analysts, politicians, and students or parents favour loan-based deferred repayment (Johnstone, 2004b, 2007; Dachi, 2021).

Parents: There are two justifications offered for parents paying for their children's education. The first reason is that parents benefit indirectly from the education of their children. This is apparent everywhere, where many parents genuinely enjoy and take great pride in supporting their children's higher education by taking all reasonable steps. The second factor is the cultural presumption that, at the very least, students who are regarded as the children of financially dependent parents owe those students a duty of care in terms of both moral and financial support. Many industrialized nations, including the USA, Canada, Japan, China, and some European nations, view this portion of cost-sharing as its key element (Johnstone, 2007).

Donors: The other members of the cost-sharing arrangement are donors, either private individuals or institutional entities. To improve the university's educational standards, their contributions might be added to the overall institutional budget (Nwakpuda, 2020). Additionally, some students may receive grants or scholarships by donors, possibly in a significant way depending on their need for money or their family's low income. The amount that must be distributed to parents and students may decrease as a result. In order to achieve some specific goals, both individuals and institutions must adhere to the philanthropic culture, which encourages donors to support HEIs and/or students (Johnstone, 2004b; Amin & Ntembe, 2020; Mohd Isa et al., 2022).

However, many institutions have discovered that looking for and receiving funding from a third party is difficult and time-consuming. This is undoubtedly not an easy task for the majority of HEIs in third world countries. In nations with no charitable or giving culture,

the pressure is fabulous. In this regard, the US is in a better position. The culture of funding higher education in various ways is well-established in society (Fullan, 2009).

Given that it awards scholarships to deserving students from low-income families on the basis of need, it is possible that the university itself is a donor. The source of the funds in this instance is unclear. In these situations, the true donors are frequently the parents of wealthier students because they frequently pay more than what is required to cover the university's actual instructional costs (Johnstone, 2004).

2.3. Perspectives on Cost-Sharing in Higher Education

Tertiary education is thought to be of utmost importance when it comes to encouraging new research, instructing a larger student body, and subsequently reviving the national economy with innovative ideas and a large number of highly skilled graduates (Vossensteyn, 2009; Joaquim & Cerdeira, 2020). Recent years have seen a rise in the importance of higher education, both for personal and societal benefits. It has been an essential component in the growth of democratic civil societies, acted as a stimulant for economic expansion, and been a vital tool for advancing social justice and economic mobility. Teixeria et al. (2008) also note that the attention of all stakeholders, including the government, students, and donors, has been attracted by its potential to promote great social cohesion, believe in social institutions, encourage democratic participation, encourage open debate, and appreciate diversity of gender, ethnicity, religion, and social class.

Despite the fact that finance ministries are aware of the importance of higher education to a country's economic development, the sector is frequently under-resourced in most countries (Adewale & Zubaedy, 2019; Griffiths, 2019; Chakrabarti et al., 2021). This lack of funding is evident (Johnstone, 2004; Chumba et al., 2019; Gambo, 2019; Mulyono et al., 2020), in overcrowding owing to space limitations, unsatisfactory staff-to-student ratios, and poorly maintained infrastructure. Woodhall (2004) summarizes the difficulties facing higher education today as “the twin pressures,” resulting from extreme underfunding and escalating demand, especially in a developing country. Increasingly, higher education is also being recognized as a crucial part of the global economy, and

people are becoming more aware of knowledge's intrinsic value. The result is a greater demand for infrastructure, quality delivery, and the ability to adapt to ever-changing environmental pressures.

More funding is required to guarantee high standards and adequate resources. Higher education is becoming increasingly necessary all over the world. In most cases, this occurs as a result of the availability of primary and secondary education in developing countries, which increases the likelihood that a third level will also be available. Higher education is influenced by graduate salaries and employment opportunities in developed countries. University graduates have statistically much lower unemployment rates than the national average and earn significantly more money than those with less education in Organization for Economic Development and Cooperation (OECD) countries (Mora & Vila, 2003; Zhao, 2019).

To invest in higher education and accomplish all of these objectives, the sector requires adequate and long-term financial structures. In the majority of countries, the public sector has traditionally funded all tertiary education, but for a variety of reasons, there is a growing need to expand access to tertiary education or to maintain tertiary standards. According to Teixeria et al. (2008) and Chiwandire & Vincent (2019), this condition requires the implementation of additional funding sources.

Gross enrollment rates in developing countries are still far below those of developed countries, yet financial constraints are severe. Lack of resources contributes to the poor condition of tertiary education in developing countries. Higher education has historically received insufficient funding in developing nations (Chumba et al., 2019). It makes sense that student spending is much lower in developing nations than in developed nations, and their GDP share is also much lower. It became even more money-hungry as it expanded and received less attention from the government (Mohamedbhai, 2008; Oketch, 2003).

In many developing countries, tertiary education has received little attention from the public sector, despite its greater demand and superior socioeconomic, cultural, and political importance compared to primary and secondary education. People in sub-Saharan Africa tend to think that primary and secondary educations in particular are better

investments than higher education. International organizations like the World Bank have supported this advice to developing country governments to focus on delivering basic education (Woodhall, 2003). The rate of return from primary education was found to be 18.9% in a study of 98 countries between 1967 and 1997, while the rate of return for tertiary education has been calculated to be 10.8% (Psacharopoulos, Patrinos, and Anthony, 2002; Oseni et al., 2020). Due to factors like rising enrolment, rising costs per student, and the labour-intensive nature of tertiary education, financial problems in higher education have gotten worse (Johnstone, 2004b). Because of this, the majority of HEIs experienced severe financial issues that could be attributed to, among other things, the inability to maintain facilities, the depletion of libraries and laboratories; the staff's declining morale, and overcrowding in lecture halls (Johnstone, 2004b).

The principle of rate of return for higher education, that the social or public rate of return for higher education is anticipated to be lower than the private rate of return, has prompted governments to re-evaluate their financial policies accordingly. The cost-side, the revenue-side, or both have been re-examined in an effort to end financial austerity (Teixeria et al., 2008). Most countries have also put in place a variety of cost-sharing plans or increased tuition costs, which are paid for by the government, parents, students, and donors. Governments and institutions believe that cost sharing for higher education is justified by factors like equity, access, efficiency, revenue diversification, and supplementation in order to avoid political pressure and maximize economic benefits.

2.4. Financial challenges of higher education in Africa

Because economies are so reliant on agriculture, they are unable to compete on an equal footing in international trade, and their tax collection mechanisms are inefficient. Because of political insecurity and corruption, foreign investors are hesitant to participate in economic activity, resulting in poorer income collection. The difficulties are exacerbated further by too expensive public services, many of which are unnecessary. It is thus a task for sub-Saharan African countries to overcome all of the economic problems posed by regional and global issues (Johnstone, 2004b).

Up until recently, higher education was almost entirely funded by governments and taxpayers in many nations. As a result, many nations experience funding problems

because their sources of income are insufficient to keep up with the rising demand (Souza, 2022). Due to the high birth rate in sub-Saharan African nations and the rising number of graduates finishing second-level education, the cost per student is rising as more staff are needed to handle the increased number of applications and deal with the introduction of new institutions and programmes (Johnstone, 2004).

Despite calls for higher education to be expanded, governments have repeatedly been found to be unable or unwilling to fund it as usual (Clark, 1998). For instance, government spending per person declined in the UK by 13.1% between 1995 and 2005, Australia by 17%, the US by 2.7%, and Canada by 1.5% (Fullan, 2009). According to Hinchliffe (1987), the GDP share of education in sub-Saharan Africa increased from 3.2% in 1965 to 4.1% in 1980. Only 20% of current public spending is devoted to higher education, despite receiving 0.78 % of Africa's GDP over the previous 15 years. In the 1990s, budgets for higher education were drastically reduced. In low-income African nations, budgetary support for higher education decreased from 0.67 % in 1990 to 0.63 % in 2006. The World Bank claims that this decline is due to the lack of interest African governments have shown in higher education (World Bank, 2010).

The concept of universal education was adopted in 1990, and it had two major effects. It strongly encouraged African nations to prioritize basic education over higher education, and it reduced the amount of funding coming from foreign sources for higher education (Oketch, 2003). The World Bank supported only basic education; it advised governments of low-income countries to fund elementary education rather than higher education, to concentrate on recovering the costs of any financial outlay, to foster private enterprise, and not to invest in educating or up skilling their people (Woodhall, 2003).

According to Bloom, Canning, & Kevin (2006), the World Bank decreased its assistance from 17% in 1985–1989 to 7% between 1995 and 1999. Despite high demand and rising secondary school enrolment, higher education has typically been neglected and constrained by budgetary issues. Although public spending has more than doubled, with an average annual growth rate of 6%, enrolments increased by more than triple between 1991 and 2006, from 2.7 million to 9.3 million, or 16% annually, while sub-Saharan Africa saw a decline in funding for higher education, from 19% in 1980–1984 to 15% in 2000–

2005 (Ezeh, 2008). The situation is even worse for the poorest countries in the region. Only 0.63% of the GDP of some of these countries is allocated to higher education (World Bank, 2010).

Public HEIs in the majority of African nations are heavily reliant on the government for funding and policy-making. However, most states do not provide adequate funding for the education sector. This is probably due to the economy's fragility and recommendations from foreign donors to prioritize primary and secondary education. The World Bank recommends that funding for education programs should focus primarily on elementary and secondary education.

The majority of tertiary education in Africa is funded in large part by foreign aid. One-fourth of all foreign aid provided to sub-Saharan Africa's education sector, or about $600 million, is made up of this and is spent on higher education each year on average. This low percentage is a reflection of the low priority that most donors gave higher education, preferring to fund primary and secondary education expansion instead. Only about 26% of the limited amount of funding from abroad has gone to universities and research facilities. By adding up the cost of attendance at the donor's universities, the remaining amount has been designated for international scholarships. Second, aid has been dispersed, in part because of a lack of coordination among donors and unacceptable prerequisites. Funding for higher education, however, is probably going to have to compete with other priorities like eradicating poverty, ensuring access to food, or boosting energy (World Bank, 2010).

Public spending per student has decreased by 30% since 1995 due to the financial crisis. Africa is the only continent in the world where such deterioration has taken place. The effects differ between nations. In 15 African countries, including Ethiopia, per-student spending is lower than the global average, according to the World Bank (2010). Universities are also struggling to retain their teaching staff due to overcrowded lecture halls, deteriorating buildings, the underuse of instructional technology, and a lack of funding for teacher preparation programs and academic research. As a result, many teachers are forced to accept part-time work in the private sector to earn extra income.

These factors collectively resulted in a significant decline in educational standards (World Bank, 2010; Pillay, 2020).

Higher education financial austerity has a profound impact, especially on sub-Saharan African countries. In Africa, higher education is rising quickly, economies are fragile, revenues are inadequate, there is political instability and social unrest, conflicts are common, taxation is poor, corruption is rampant, and foreign aid is condition-laden. All of these factors combine to create financial limitations on higher education (Maliyamkono & Ogbu, 1999; Mlambo, 2021). But the number of students enrolling in higher education increased significantly, and many higher education facilities, such as research labs and university libraries, deteriorated due to a lack of funding (Maliyamkono & Ogbu, 1999; Chumba et al., 2019; Uzoamaka & Chijioke, 2023).

Higher education is not affordable for a variety of reasons. First, the government's allocation for financing education may not be adequate. Second, there are powerful political incentives to make sure that basic education receives the majority of the public sector's investment in education, even when spending on education is believed to be appropriate or reasonable. Third, there is often high competition between sectors for financial resources in many countries where there are limited resources. This covers social welfare, housing, the health sector, and other government operations (Knight, 2009; Oseni et al., 2020). Finally, African governments are less likely to prioritize increased funding for higher education and still do not fully understand the importance of higher education for both economic growth and broader social development (Knight, 2009; Mlambo, 2021).

2.5 African Higher Education's Responses to Financial Challenges

Due to their financial difficulties, many African nations are looking for alternative methods of financing higher education, such as cost-sharing and private sector participation. There are two main factors to take into account as governments consider providing high-quality higher education and a workforce with a high level of education (Johnstone, 2009b). These options are:

- **Cost reduction**: this can be accomplished by merging institutions, increasing student-to-faculty ratios, and increasing productivity by reducing faculty costs by hiring more part-time and lower-paid employees.
- **Revenue increasing methods**: substitute a portion of limited public funding with student tuition and services fees, donations, monetising the product (e.g., offer higher education distance learning modules).

Countries often combine these two methods. In order to provide access to those who are least able to pay for it, those who live in remote areas, or those who are disadvantaged due to their ethnicity and language, African countries are beginning to recognize the value of financing higher education in other ways than the conventional tax-funded model (Sawyerr, 2004; Mlambo, 2021). Almost all countries had adopted a cost-spreading model of higher education by 1970 for beneficiaries, for example, students and parents (Maliyamkono & Ogbu, 1999).

In Sub-Saharan Africa, cost-sharing is widely used by many governments. By 2009, more than 26 African nations had already begun some type of cost-sharing (World Bank, 2010). In Africa, the average parental and student contributions to higher education account for about one-fourth of the overall cost. Depending on the nation, this percentage can range from 10% in Mali, Chad and the Republic of the Congo to 50% in Uganda and Guinea-Bissau. In Africa, HEIs typically generate 30% of their revenue through a variety of sources. This varies by nation and can be as low as 5% in Madagascar and Zimbabwe, 56% in Uganda and 75% in Guinea-Bissau (World Bank, 2010; Leka & Chalchisa, 2012).

In conclusion, the cost of higher education in Africa has inevitably increased faster than demand. Changing demographics and the number of high school students wanting to study are two factors leading to increased demand for higher education. Due to financial austerity brought on by this and high unit costs, private HEIs have been established, cost sharing has been implemented, and tuition fee increases have been implemented.

2.6. Rationale for cost-sharing in higher education

Educational systems are increasingly running at a loss (Bray, 1986). The costs include the resources used to provide infrastructural facilities, equipment, software

materials, teacher and non-teaching staff compensation, boarding fees, and so on (Mbanefoh, 1990). To meet all of these requirements, educational systems must have a consistent source of funding. However, in most nations, education financing has been solely or nearly solely the responsibility of the respective governments or taxpayers. This is accurate for all academic levels.

However, as time went on, the burden of paying for secondary and post-secondary education exclusively shifted from individuals and their families to governments or taxpayers, a practice known as "cost-sharing in education" for some reasons. Sharing expenses amongst taxpayers, donors, parents, students, institutions, and entrepreneurs has become a widespread practice throughout the world, particularly at the higher education levels, and is almost certainly essential for African higher education (Vossensteyn, 2004).

In many countries, public funding has long been the main source of funding for higher education. Considering the cost of higher education, attitudes have changed dramatically since the 1960s. In the past, the general consensus has been that post-secondary education is a "public good" that benefits society by allowing students to acquire new information and skills. It was agreed that society should cover most of the cost of higher education, as it is considered a public good. However, attitudes began to change in the second half of the 20th century. The World Bank and various studies have found that higher education is increasingly seen as a "private good", which benefits individuals more than society as a whole. This paradigm shift is justified by the need to place a heavier financial burden on beneficiaries, in this case, students and their families. Policy in many countries requires parents and students to pay an increasing proportion of the cost of post-secondary education (Altbach, 1999).

Schwarzenberger and Opheim (2009) contend that because higher education benefits both society and the individual, it is reasonable to anticipate that parents and individual students will contribute to its cost. According to Marcucci and Johnstone (2007) Awotwe et al., (2020), the reason for higher education cost-sharing is increasing demand and decreasing government revenues. Furthermore, the authors argue that tuition fees are

essential because they can yield a large amount of money and will have a positive effect on equal access, and therefore on social justice.

Besides providing resources for education, the main arguments in favour of cost-sharing emphasize improving education's accessibility, effectiveness, and quality. Although it is challenging to determine the functional connection between these elements and cost-sharing, the fundamental justification for cost-sharing addresses these concerns (Robinson-Pant, 2001).

Therefore, policymakers are attempting to come up with more convincing justifications to place the cost-sharing issue in a larger policy context and lessen resistance from various societal groups. The following are the main traditional arguments in favour of revenue diversification:

- The concept of equity holds that those who benefit should at the very least share the burden. It encourages the relationship between those who bear costs and those who benefit as well as allowing those who were previously excluded to participate;
- increased efficiency the idea that paying those tuitions will encourage students and families to make better-informed purchases, and universities to provide services in a more economical manner;
- the receptivity of universities to the notion that tuition will augment public revenue and assist universities in meeting both individual and societal needs;
- According to Johnstone (2004), the World Bank (2010), and Rehman (2020), the need for government revenue to support growth, quality, access, and participation may be the most significant and least persuasive justification.
- The main justifications for cost-sharing, according to Johnstone (2003, p. 352, 2006, p. 5), and Rehman, (2020,pp. 33-34), are based on three fundamental economic, political, and ideological presuppositions that are different from one another. They are as follows:

2.4.1. The Absolute Need for Sources of Income Other Than Government Revenue

The demand for tertiary education is rising globally, which puts pressure on providers due to a variety of factors. The proportion of people who complete secondary school and apply for third level has significantly increased. This pressure is particularly difficult for developing and lower-income nations, which must manage a sudden rise in demand for higher education while also trying to develop their economies so that they can compete in the ever-expanding global market. However, due to students' expectations of lifelong learning, pressure is also felt in nations where higher education has long been fully accessible.

Both developed and developing nations struggle with a general lack of funding for their educational institutions. The reason for this is not only the increase in demand for places, but also the rise in per-student costs, which rise disproportionately to unit costs. Colleges are often forced into this position because they do not rationalise their costs by measuring productivity, by cutting undersubscribed courses, and by cutting staff numbers. One of the primary reasons for financial hardship, especially in poorer countries, is a lack of government funding; this can be caused by a decrease in tax revenue or by increasing demands from other sectors, sometimes politically powerful sectors, putting pressure on governments.

As a result of these financial pressures, HEIs have had to look for revenue sources other than public funding: sources like "cost sharing," which was already mentioned, as well as market sources like asset sales, facility sales or leases, service sales, and the never-ending search for grants and donations from companies, alumni, and friends. The time it takes to pursue these entrepreneurial pursuits is very high; so, it seems obvious that tuition fees provide a much more cost-effective method of boosting revenue (Rehman, 2020).

According to the argument, prospective students from low-income, rural, or other disadvantaged families may be turned away if tuition is raised or additional fees are imposed. It is possible to prevent this by making readily available loans that are not based on a borrower's creditworthiness or the financial situation of their family, as well as means-tested student grants funded by increases in tuition revenue. Cost-sharing proponents are

likely to argue against a significant increase in public revenue and instead argue in favour of maintaining public HES austerity, which would have the effect of lowering enrolment levels and/or deteriorating the quality of and underfunding universities. The most vulnerable students whether they are present or prospective, will be the extremely disadvantaged ones who tuition resistance is meant to protect. There will always be options available to wealthy children, whether they work in the private sector or abroad (Johnstone, 2003).

2.4.2. The Notion of Equity

Equity and fairness are frequently used interchangeably. Maitra (2007) Jääskeläinen (2021); Kizilcec & Lee, (2022) explains that fairness means treating everyone equally and giving them the chance to take part and contribute without being held back by bias or discrimination. The terms equity and equality are not synonymous. A sizable group of economists, social scientists, and philosophers are now debating ideas on equity. This sentiment is also supported by a number of regional conventions. Nowadays, it is very important for intellectuals and society to be considerate, fair to all social orientations, and care about their well-being. Therefore, equity is becoming a central topic of discussion in most cost-sharing policy documents. Human capabilities should be developed by everyone without discrimination. Equity is often viewed in the contemporary political context as part of democratization, which acknowledges that all people have rights and needs and that these things have an impact on strategies and policies (Maitra, 2007; Jääskeläinen, 2021).

Due to their exclusive admission standards, longstanding practices, and/or severe financial constraints, the majority of HEIs have historically been restricted to a few wealthy social groups. For instance, HEIs in the OECD nations could be divided into three categories: demand-driven (such as in Italy, Germany, Belgium, and the Netherlands), supply-driven (such as in United Kingdom and Ireland universities), and student market-driven (such as in the US), where government access is left to market forces. Most developing and ex-communist nations have long had limited access to higher education for socially advantaged groups. In previous admissions procedures, economic,

sociocultural, and human capital needs were not taken into account, nor were the calibre and suitability of applicants' qualifications for particular study programs (Maitra, 2007).

When we talk about equity in tertiary education, what we really mean is that everyone has the same opportunity to participate on a rational basis (Jääskeläinen, 2021; Kizilcec & Lee, 2022). Almost every country has included it among their major agendas. It was because there are strong and vocal groups advocating for affordable and accessible education for all (Usher, 2006; Rehman, 2020).

In higher education, the term "equity" can be interpreted in a number of different ways. In essence, regardless of learning ability, higher education should be accessible to all individuals of all socioeconomic and racial backgrounds. This narrow definition of higher education equity states that elements like socioeconomic class, occupation, race, religion, language, parent's ethnicity, or gender are typically not acceptable indicators of participation in higher education (Johnstone, 2004b). However, academic aptitude, also known as academic preparedness, and interest are respectable indicators of participation in higher education.

If a country is to achieve true equity in its policy directions of increased market forces and/or cost-sharing, it will be necessary to pay attention to both those who are interested in and prepared for higher education as well as those who are historically underprivileged and less prepared. Higher education may cost more if the student comes from such a background. People from low-income, rural, or ethnic and linguistic minorities, as well as women from some cultures, may show higher levels of consistency, perceived opportunity costs, and debt aversion. The government should provide enough information to persuade rural, ambivalent, and underprepared people to pursue higher education (Johnstone, 2004b).

Through cost sharing and increased institutional capacity, developing nations assert that higher education will become more equitable. Several nations have already put in place a cost-sharing system. However, it can be difficult to strike a balance between the composition of favoured elites and groups that are economically, socially, and culturally disadvantageous. The expansion of HEIs through cost sharing might be the most efficient method for achieving equity. In spite of the fact that opportunities have undoubtedly

increased as a result of the expansion of higher education, social justice or equity cannot be the result of these expanded opportunities because they are still not distributed equally (Maitra, 2007; James, 2007).

2.4.3. The Neo-Liberal Economic Notion

The third reason for cost-sharing is the popularity of Neo-Liberalism and market-oriented policies, which are aimed at reducing state funding and interference, leading to privatisation and austerity. According to this philosophy, people value and respect what is received privately. If parents and students are asked to pay a fee, they are more likely to understand the price of a college education and give it fair value. As a result, there will be cost savings due to increased staff productivity and student consumption. The assumption is also that institutions will become more aware of student and societal needs if they have to source funds from tuition fees, entrepreneurial activities, and donations from benefactors.

Therefore, a rationale for promoting the above can be: (a) promoting equity; (b) promoting efficiency; (c) providing a higher standard of delivery and learning while using resources more prudently; (d) recognizing the need to generate income to meet the rising demand for college spots combined with a reduction in government funding; (e) promoting a culture of responsiveness by institutions in regards to student preferences, uptake, and quality; (f) providing a higher standard of delivery in terms of quality while using less government resources; (g) encouraging innovation and creativity by institutions; and (h) enhancing the value (Johnstone, 2003).

2.5. The Problems and Resistance to Cost Sharing

Various reasons explain why cost-sharing would be and is unpopular with scholars: it is viewed as a step backward by citizens of nations where free education has always been the norm for citizens who qualify through second-level academics and where advancement is seen as a social right. Furthermore, some people believe that the advantages of higher education for society should outweigh those for specific students and their families (Johnstone, 2003).

There is no proof to support the claim that cost-sharing raises standards or improves effectiveness, and that it instead discriminates against applicants by preventing them from applying. As a result of cost-sharing, governments can reduce education funding even as tax revenues rise, since people are required to spend more on goods and services (Robinson-Pant, 2001).

A majority of cost-sharing is funded by student loans, but this can be problematic, not only because of the opposition to the concept, but because the repayment arrangements can lead to some degree of default; where government agencies provide the loans, this results in high administration costs and further revenue declines (Baum & Tolbert, 1986; Salmi, 2003; Dachi, 2021).

Although cost sharing is a growing norm in many parts of the world, it remains politically problematic. Johnstone (2004b, p.408) argues that poorer countries are disadvantaged owing to technical, strategic and ideological reasons. In the technical sense, it cannot succeed because its key elements, namely, means-testing and student loans, are not feasible. Rather than being motivated by cost-effectiveness or administrative reasons, the objection assumes that it would disadvantage education when it comes to distributing public funds.

The ideological opposition can be summed up as opposition to capitalism and globalization. The promotion of an ideology that places such value on markets, private property, and the mobility of capital is seen as encouraging economic and social inequality (Johnstone, 2004b, pp. 408–410).

2.6. Debates on Cost sharing

In the literature, there are justifications for and against cost-sharing in higher education. According to Johnstone (2004b), proponents of cost-sharing in higher education make the following arguments: The justifications are as follows: (a) for those unable to contribute, cost sharing is a tried and tested method for providing grants, loans, and scholarships. It is a step towards greater equity, responsiveness and equity. (b) because investment in higher education yields a high private rate of return for individuals, those who benefit from it should contribute to higher education; (c) through cost sharing,

schools operate more efficiently and are more answerable to students and parents; and (d) because cost sharing goes hand in hand with making higher education accessible to more people.

Regardless of socioeconomic, cultural, and political contexts, some countries have imposed and/or implemented cost sharing in higher education. As a result, some succeeded while others struggled. All groups in society oppose government initiatives. Financing for higher education has become a source of unresolved disputes among political parties, academics, and professionals, despite the growing need for higher education by students and their families to improve their socioeconomic status, the growing belief that the private benefit of higher education outweighs the public welfare or benefit, and the continued involvement of governments in covering much of the higher education costs.

Some contest it for personal reasons. In a country where higher education has long been free, it is difficult for parents and students to accept the increase in tuition fees. In some cases, political groups hold public debates to demonstrate their dominance over the people (Lergetporer & Woessmann, 2019). Johnstone (2004b) conceptualized and divided cost-sharing opposition into three distinct but related categories based on technical, strategic, and ideological debates.

2.6.1. The Technical Debates

Johnstone emphasized that cost-sharing frequently "doesn't" and probably "can't" work, particularly in less industrialized countries that lack the technical resources to be successful. This holds true despite technical objections or arguments against it. He went on to say that cost-sharing, in addition to need-based grants and ability-tested loans, must be able to match a student's future income in order to be effective.

Instead of opposing cost-sharing, organisations that support this concept assert that it is technically impossible, particularly in developing nations with fragile economies and underdeveloped systems. They consequently think that cost sharing should encourage equal access. Two conditions must be met for this to be realized. One is to help underprivileged students financially. This requires adequate student loans and grants

that are need-based or means-tested. Contrary to industrialized nations, developing nations lack the economic and technical capacity to recognize and adequately support financially needy students. Groups that question the viability of cost-sharing view grants and loans as either impractical or expensive, at least in non-industrialized nations, in the absence of the necessary technical infrastructure (Johnstone, 2004b).

The five main factors listed below will make it difficult or impossible to consider resources and targeted subsidies for needs in developing countries (Tekleselassie and Johnstone, 2004).

- An ineffective taxation and collection system;
- The fact that many adults work a second or third job but the government does not always keep track of their income;
- An unsatisfactory banking culture and banks' reluctance to share information about deposits, withdrawals, and interest payments made by specific individuals;
- Inaccurate real estate market value information; and
- Difficulties in turning real estate into cash have made it more difficult to mortgage or borrow money using real estate as collateral.

Tekleselassie and Johnstone defend the viability of cost sharing and related characteristics of grants and loans despite the issues mentioned above. They contend that grants for needy students or parents could be made available by the government or any other pertinent body or system by determining "means" and "need" using "at least rough justice" or "categorical indicators." Indicators are frequently used in a categorical approach to improve the data on assets and income that is already available and to maximize the desired social objective. Some categories of indicators might include, for instance, a person's occupation, the type of housing they live in, where they live, whether they own a car, how old and large their families are, their ethnicity, and their gender. These variables are important for determining both means and need, but they may also have additional social benefits that go beyond what the means can provide. Depending on the government’s choice, such targeting could include ethnicity, language, region, or single parenthood.

Such indicators also have the advantage of being hard to change and reasonably simple to observe, which makes them less expensive to measure. Therefore, in addition to income testing, categorical indicators may be used. In reality, almost all programs that use means-testing require participants to meet additional requirements in addition to their income (Tekleselassie & Johnstone, 2004).

Therefore, despite the fact that some categories, such as ethnicity, language, region, and others, may only partially function in politically unstable and ethnically sensitive nations like Africa; they can also be used as pawns by opposing political groups, causing discord and unrest. Several questions may arise, including how the assessment will be made and who will fund it. These show that these methods are not without problems.

2.6.2. The Strategic Debates

As justification for the strategy of opposing cost-sharing, Johnstone (2004b) argues that political acceptance of it disadvantages higher education in comparison to other requests for public funding. Assuming that higher education has a greater capacity to supplement the need for private revenue equity, it is "politically too easy" to deny public funding of higher education. Just as high tuition increases total resources devoted to higher education, politicians under pressure to raise funds for the state may want to do so without providing the higher levels of aid needed to meet the needs of higher education and the needs of students and families with lower incomes.

To put it another way, neither the efficiency nor the application of cost sharing present any problems for these groups. They disagree, though, regarding the strategic rationale for cost sharing. If cost-sharing is politically feasible, the relative right of higher education to seek public funding may be limited. Theoretically, these groups want to share the cost of all public services. Because of its political transparency, cost-sharing has become a widespread practice in higher education. Compared with basic education, health care, and social welfare, and even defence, opponents of the cost-sharing strategy argue that higher education has taken a significant hit. because none of these sectors can easily supplement government revenues with their own revenues (Johnstone, 2004b). He further argued that sharing the cost of higher education is more beneficial to the government than

the corresponding public subsidy. The additional funds will occasionally be used without promoting access to meet state financial austerity requirements.

However, proponents of cost sharing assert that many developing countries might concur with this assertion. This is due to the fact that taxes only cover a small portion of income and that graduates are more likely to be taxpayers than other workers due to their propensity to work in the formal economy. The philosophical underpinnings of the tax system can be used to support this argument. Redistribution, national security, health care, and compulsory education are just a few of the uses for tax money. Higher education graduates are implicitly exempt from paying for or bearing a smaller share of the costs of other public services than all other tax payers if the additional taxes they pay are only used to pay back the public subsidy for their education. The theory claims that graduates only pay more taxes to fund their higher education if and when a disproportionately large portion of the additional tax is set aside for this purpose (Chapman, 1999).

Two justifications are offered for this by Chapman (1999) and Jongbloed (2003). “Vertical equity” is the initial one. Graduates of higher education may be required to pay an additional fee in exchange for the benefits of their education that pertain to them personally. A graduate has an advantage over a non-graduate by enrolling in a higher education that is financially supported, so they shouldn't pay the same amount of taxes.

The second is referred to as "horizontal equity." Think about two people who both make high salaries, one with higher education and the other without. It would be unfair if both paid the same taxes because the person without a college degree was paying for the other's college education, which increased their income. If the government completely exempted the undergrads from other tax obligations and made their additional tax payment at the same rate as other people of the same income, they would be treated unfairly even when they worked hard and earned high wages (Chapman, 1999). They will bear a disproportionate share of the tax burden on public services beyond higher education.

2.6.3. The Ideological Debates

The third element of this cost-sharing competition is more critical and ideological in nature. Some of the arguments put forward by these organizations against cost sharing include market theory, private capital ownership, international capital, production and trade mobility, acceptance of persistent economic and social equality, etc. These opposing ideologies, which can be traced back to "neo-Marxism and socialism," place more emphasis on the social than the financial benefits of higher education (Johnstone, 2004b). These opponents argued that the cost burden was the result of higher education budget cuts and that the current financial crisis was caused by the government's inability to effectively use resources to generate sufficient tax revenue. Another element that contributes to these groups' financial hardship is the pervasiveness of corruption.

In developing countries, where there is widespread corruption, social unrest, and political instability along with low economic capacity, these issues are so pervasive and common. The cost-sharing policy is impacted in some ways by these discussions. Those who oppose cost sharing in particular would negatively impact the implementation process.

2.7. Forms of Cost Sharing in Education

Today, it is a global trend for nations to use sources other than the government to fund education (Johnstone, 2003; Vossensteyn, 2004; Panigrahi, 2018; Ayam, 2021). One choice is to use a cost-sharing or cost-recovery method. Rather than replacing government funding, expense sharing allows students, parents, and other stakeholders to shoulder a portion of the costs (Johnstone, 2003, p. 351, 2004b, p. 403, 2006, p. 3, Ishengoma, 2004, p. 102). For example, governments or taxpayers, parents, students, and/or donors are the four major groups that may have an opinion about the cost-sharing of higher education.

The government funds education directly or indirectly through taxpayers. Instead, parents use their own money or savings to pay for their children's education by paying for their school fees or a portion of their living expenses while they are away from home. Because it refers to someone who helps a student, the term “parents” might apply to

grandparents, family members, or even members of a community or a church. Students who borrow money to cover some expenses also contribute to the cost of education, particularly tertiary education. On the other hand, individual or institutional donors are those who might contribute to funding education, which could then result in students receiving scholarships (Johnstone, 2004b). The types of cost sharing specifically consist of the following:

2.7.1. Fees

"A fee is understood as any sum of money paid by students, with which they formally and compulsorily contribute to the cost of their HE". This may include, but is not restricted to, a registration fee, tuition fees, graduation fees, administrative fees, etc (European Commission /EACEA/ Eurydice, 2018; Kučaidze & Jurgelevičius, 2020). It is the sum of money that students or pupils pay to receive instruction. In order to receive their education, students may have to pay at all levels of education. This is known as "tuition." When such payments are made, we refer to them as student tuition payments. In most cases, students and pupils are required to pay additional costs in addition to tuition, such as registration fees without tuition, exam fees, lab fees, development or PTA fees, book fees, uniform fees, and so on. These are all feasible ways to solicit money from students or pupils (Mbua, 2002, p. 12, 2003, p. 499; European Commission /EACEA/ Eurydice, 2018; Kučaidze & Jurgelevičius, 2020).

At public sector schools, fees such as tuition, examinations, and lodging costs are changing. Fees are typically assessed for secondary and higher education. To influence enrolment and prevent disparities between the rich and the poor, fees are typically not set at a high level. Most of the time, fees are charged to cover the costs of institutionally provided services (Baum & Tolbert, 1986, p.126).

A tuition fee that goes toward the price of education is required of all students and/or their parents. On the other hand, a fee is a charge made to cover all or a portion of the costs related to a specific good or service that an institution offers. Examples include the cost of things like housing, food, transportation, and healthcare, which some students use frequently but not all of them do and which, in some cases, may be provided privately (Marcucci & Johnstone, 2007).

2.7.2. Student Loans

Financing of higher education through the students' loan scheme is a global phenomenon as both developing and developed countries have to contend with financial austerity, which curtails equal access to HE. Due to financial austerity affecting most countries, the student loan scheme has become a popular government approach to financing HE for both developed and developing countries (Kossey & Ishengoma, 2017; Musundire & Mumanyi, 2020; Mgaiwa & Ishengoma, 2023). Loans are given to students with the understanding that they will be repaid after graduation, either in cash or in the form of services. They are offered by governmental organizations, commercial banks, or other financial organizations. It may be lent at a fixed interest rate or without any interest at all. Additionally, loans may be granted to all students or only to those who require them. For post-secondary education, a loan system is typically used in nations where public funding for the education system is insufficient. Under this system, students are loaned money to pay for immediate educational expenses, like tuition, supplies and living expenses, until graduation (Psacharopoulos & Woodhall, 1985; Salmi, 2003).

Student loans are designed, implemented, and managed differently in each country. Ghana makes use of the Social Security Commission, as opposed to some countries with multiple government agencies, like Australia and Singapore. America, the Netherlands, Denmark, and some other European countries use public or private banks; Britain and Sweden use offices intentionally established for this purpose; Malawi, China, and Chile use directly the institutions where students are studying to administer and collect the loans specified at the outset (Mapunda, 2019; Kossey & Ishengoma, 2017). Due to this, the administrative costs of collecting the loan are greater than the money raised from the graduates (Duferra, 1998; Psacharopoulos & Woodhall, 1985).

2.7.3. Scholarship and Bursaries

Scholarships are granted by the government to qualified residents based on merit or in an effort to stimulate educationally underserved parts of the country. Companies, volunteer organisations, philanthropists, and communities, in addition to the government, can provide scholarship grants to those who wish to further their education. In certain cases, governments may be interested in paying for their citizen's education through the

award of bursaries. These bursaries are usually of a fixed amount irrespective of the programme of study being undertaken (Mbua, 2002; Kaye, 2020).

2.7.4. Sponsorships

Institutions or willing individuals may cover the cost of a student's education if they are unable to pay for it or meet certain criteria established by the institutions (Liu et al., 2020). Additionally, educational institutions may award scholarships to students based on their income or that of their parents. That means, these institutions or individuals will cover the education cost of a certain body which otherwise would have to be covered by that certain body. These institutions may make a certain agreement with students that gain the scholarship after they complete their education the students can in turn give service to that institution which covers their cost.

Parents consider the education of their children to be their duty to their children and therefore, they try to make it possible for the funds required for such education to be made available. In some cases, when parents are extremely poor, they contact relatives to assist in educating their children. In our society, it is common to see parents send some of their children to their relatively richer brothers, sisters and cousins to give financial assistance to pay fees when the child is going to school.

While cost-sharing can take many different forms, imposing or dramatically increasing tuition has the most significant financial impact. Tuition fees have come to represent the disagreement between those who think the government should continue to fund higher education for free and those who believe that sharing costs, especially tuition fees, is necessary (Marcucci & Johnstone, 2007). Tuition is also the most ideologically and politically divisive form of cost-sharing.

However, Johnstone (2015) argues that cost-sharing plans can be implemented in different ways and take on very distinct forms, with the following being the most common:

- The imposition of fees in nations where tertiary education was previously free.
- The continuation of free tertiary education with the inclusion of a unique track that requires payment of tuition.

- For students who consistently receive acceptance and state funding.
- Where it already exists in the public sector, a very substantial increase in tuition. It is essential to reduce the proportionate share of governments or taxpayers and increase the proportionate share of parents or students in order to move toward greater cost-sharing. In order to achieve this, tuition must increase more quickly than overall institutional costs.
- The implementation of user fees to offset the costs of housing and dining facilities that were previously provided (and heavily subsidized) by the government or institutions: This has happened in the vast majority of countries, including nearly all of the former socialist countries and sub-Saharan Africa, where the subsidised cost of living previously consumed most of the higher education fund.
- The removal or reduction of student loans, scholarships, and grants. To achieve this, it is sufficient to "freeze" grant or loan levels, keeping them constant despite inflation, which reduces their real value. The formerly generous cost-of-living allowances in Britain started to decline and eventually vanished. The majority of socialist and communist countries in Asia, many African countries, Eastern and Central Europe have seen a decline in the value of maintenance allowances.
- Changing from grants to loans as the primary form of student aid: As was previously mentioned, this happened in the UK. The same thing has happened in the US, where the overall amount of federally sponsored student loans has grown significantly, with the majority of them being subsidized, despite the fact that need-based grants have not grown at a rate that has kept up with increases in the cost of higher education for students.
- An increase in interest rates: Reducing the number of loans where repayments have to be repaid for some reason or reducing the interest-free period are two factors that can increase the likelihood of a cost-effective recovery on student loans. This can be done by reducing the value of non-repayable grants, which is equivalent to reducing student loan grants.
- The government's official support for a tuition-based private sector combined with the capacity limitations of the low-cost or free public sector (Johnstone, 2015, pp. 12-14; 2004b, p. 405).

2.9. Who Shares Costs in Education?

The process by which the financial burden of paying for a student's education shifts from being borne in whole or almost entirely by the government or taxpayer to being partly borne by the student's parents and/or other students, either through tuition fees or imposing "user fees" to cover accommodation costs previously described by Johnston as "cost-sharing" from an international comparison (Johnstone, 2004b).

In the context of education, the phrase "cost sharing" refers to the notion that there are four main sources of education costs: government or taxpayers; students; parents; and/or sponsoring individuals or organizations. These are statements by Johnstone (2004b, pp. 404–405) and Woodhall (2007, p. 22).

2.9.1. The Government

Most economists believe that taxpaying citizens, not "government," are the primary source of public revenue in market-oriented economies. The majority of people can pay taxes on their income, property, retail sales, everyday items like gasoline, cigarettes, and alcoholic beverages, as well as special items like air travel and imported goods. Alternately, taxes may be paid covertly using other methods. These indirect taxes are similar to other retail or excise taxes and are generally not disclosed. They are usually applied to businesses before being passed on to consumers as a higher price on the goods they ultimately purchase. The majority of government spending is ultimately paid for by average taxpayers because there is not much oil or significant mining revenue to tax. But this tax is very challenging.

In other words, the government receives its funding from the general public through taxes. Most people can choose to pay taxes on their earnings, property, retail sales, regular purchases, etc. (Johnstone, 2006).

2.9.2. Parents

The parents also contribute to cost-sharing. They might pay a portion of the college tuition or take care of some of the living expenses by keeping the student at home.

Parents have several options for paying for these additional expenses, including using their current income, some of their previous savings, or even borrowing money from their future earnings. Grandparents, other family members, or even fellow citizens or members of a religious organization can all be regarded as "parents" in terms of raising a student.

Regarding parental funding of higher education, there are two hotly debated points. The first is that parents shouldn't be expected to foot the bill for their kids' higher education. This is predicated on the notion that students will be mature adults by the standards of most nations when they enrol in higher education institutions. They are now citizens with their own legal rights. In addition, because they stand to gain the most from higher education, students are also the ones responsible for covering the costs of the services they use. However, the majority of students cannot afford higher education while in school, so student loan programs or other forms of financial aid must be in place at the beginning of the school year. The burden of repayment, however, ought to fall on the shoulders of the students rather than the parents (Barr, 2002).

Another assumption is that parents should fund their children's college education with their current income, a portion of their past savings, or even by taking out a loan (Johnstone, 2006). Grandparents, other family members, and even people living in villages or churches can all be considered "relatives" for the purpose of helping students with financial matters. According to Johnstone (ibid.). his mother In this case, unless there is another way to pay for their college education, parents are responsible for covering travel, meals, tuition, and other expenses for their children.

If the government or another representative provides students with a loan or other type of financial aid, it means that they are sharing the burden of the expense that would otherwise fall on their parents. Parents also gain from receiving loans or other forms of financial aid because they would be responsible for paying the costs of their financially dependent child's education without this help. As a result, they owe it to the students to help with the debt repayment or any other additional contributions that are needed. It is also assumed that parents experience great fulfilment when their children succeed in pursuing higher education, and even greater fulfilment and even social status when their children succeed in obtaining admission to the "best" university they are able to afford.

German parents, for example, face legal repercussions if they do not support their children's living costs up to their officially calculated means (there are still no tuition fees) (Johnstone, 2006, p. 6). They therefore have a moral obligation to provide for the financial needs of their dependent children and help pay for their college education.

There are, however, two potential issues that must be considered when it comes to parental contributions, as mentioned by Johnstone (2006) and Chapman (1999). The length of the presumptive obligation to contribute as well as the challenges in determining and verifying the parental capacity to contribute are two of them. Despite the high level of compliance, figuring out one's ability to contribute financially can be challenging. Furthermore, it is simple to hide income and assets. How many academic years, academic levels, or academic degrees are covered by extended parental financial responsibility? What about a divorce with no custody while raising children? Despite these obstacles, parental contributions can, with careful planning, constitute a sizable portion of the diversification of revenues for higher education.

2.9.3. Students

The student is the third party who must shoulder the cost of higher education. They can primarily finance some of the costs by taking out loans, though in some circumstances they might also be able to supplement their income by taking on part-time jobs. The loans can be repaid in monthly instalments after graduation and employment, just like any other loan. Repayments may also be income-dependent, capped at a specific percentage of earnings, or the graduate may elect to make a contribution if the funds were borrowed from the government and are therefore subject to income surtaxes or other types of additional income tax until the loan is fully repaid (Johnstone, 2006; Chapman, 1999).

The idea that students should pay is somewhat influenced by the fact that they personally benefit from attending a university. They are in charge of paying for their higher education. According to Bloom et al.(2006), education improves people's knowledge and skill sets; as a result, there may be more opportunities for production and lower costs. In this respect, education raises labour productivity, raises employment chances, and raises

chances of earning highly competitive wages. By increasing their human capital, they can earn more money and have a lower chance of being unemployed (Mora & Vila, 2003). Along with financial advantages, higher education also offers non-financial advantages like better job prospects, higher savings rates, increased productivity and net earnings, and greater personal and professional mobility. These benefits include increased educational attainment, better working and health care conditions, better access to financial and leisure information, and persona development.

According to Woodhall (2007), the theory behind student contributions is that going to college is a wise private investment that will yield significant returns. Because some benefits, particularly the non-financial ones, are challenging to quantify and calculate, it can be challenging to account for all the benefits that higher education offers individuals. For the reasons outlined above, the majority of studies on the financial aspect of higher education concur that individual benefits outweigh social benefits. As a result, students pay a portion of the cost of their higher education.

2.9.4. Individuals or Institutional Donors

Donors include individuals (parents, alumni, and affluent students) and/or global organizations such as the World Bank who can use their contributions to improve the quality of life at universities, increase funding for the entire institution (thereby reducing the amount of money that has to go directly to parents and students), or provide some form of student support (Liu et al., 2020). The generosity of the donor or organization is often the driving force behind these donations. Agreements between these agencies and higher education institutions are less binding than those that exist between higher education institutions, students, and parents (Johnstone, 2006).

Although some of these donors have passed away in the past, the university retains its previous major contributions in the form of endowments, and only the income generated is directed towards scholarships or operating budgets for current operations, reducing the need for external funding. The university itself appears to be a donor because it awards specialized, need-based scholarships to bright students from low-income families (Johnstone, 2004b, p. 405).

2.10. Tuition Fee and Student Loan Policies in HEIs

2.10.1. Tuition Fee Setting Policies in HEIs

The financial sustainability of HES's is under pressure as countries implement several measures in times of limited resources. The most widely used measure is the implementation of tuition fees, which implies that students must pay a fee to be enrolled in higher education while HEIs profit from this additional source of income (Golovic & Berger, 2020).

Mbua (2002) like the scholars previously referred to also elaborate on the definition of tuition fees. He further cites other fees, such as registration, examination, laboratory, books, unifier and the cost of setting up Parent Teacher Associations, that may be levied on students (Mbua, 2002,p.12, 2003,p. 499).

Due to the revenue at stake and the impact their implementation will have on accessibility, equality, and social justice, the charging of tuition fees is seen as a critical global phenomenon, as are the policies that support it (Marcucci & Johnstone, 2007).

Whatever the arguments, it is undeniable that as enrolments have increased and government spending has decreased, there are an increasing number of state policies in most countries that support, or permit, the collection of tuition fees.

According to Johnstone and Marcucci (2010), the following conditions apply when determining tuition costs:

- The acceptance of public sector charges throughout culture and history;
- The existence of nondiscretionary fees that are not considered to be tuition in addition to the acknowledged tuition fee;
- The underlying instructional costs for students, which serve as the foundation for determining tuition fees;
- The perceived balance between a program's or institution's private and public benefits, which is very similar to determining a program's or institution's market value;
- The kinds and amounts of financial aid offered to students

The basic cost of instruction per student determines tuition fees in the majority of developed nations, including Ethiopia. The cost of education varies by nation, institution, system, and program.

It varies greatly from nation to nation how important student fees are for funding higher education. Some nations charge little to no tuition, while others demand that students cover all or almost all of the total cost of their education (OECD, 2017; Dang, 2021).

The authority to determine tuition rates at public HEIs belongs to various organizations in various countries. The legal framework that establishes the rationale for levying or prohibiting tuition fees typically forms the foundation of a nation's tuition policy. The Higher Education Law of 1998 requires all students in China to pay tuition fees (Johnstone & Marcucci, 2010). Other countries have laws against collecting tuition. Constitutional or legal frameworks in Russia and some countries in Central and Eastern Europe generally provide free tertiary education (Johnstone, 2004, 2004a, 2007). In Nigeria, the government declared in May 2002 that no tuition or other academic fees would be allowed at the 24 federal universities (Obasi & Eboh 2002). The Irish government tried in vain during the summer of 2003 to bring back the tuition fees that had been eliminated in 1996 (Marcucci & Johnstone, 2007).

According to the World Bank (2010), countries that regulate tuition fees at the state or provincial level are the United States, Canada, and India. The central government determines the cost of tuition fees in Hong Kong and the UK. Other countries, for instance Chile and South Korea, allow each institution to set its own tuition rates.

According to (Wright, 2008), universities in Australia have the authority to raise tuition by up to 25% over the going rate. In many countries, the states and institutions, or the federal and state governments, set tuition rates. According to Marcucci & Johnstone (2007), for example, in the Netherlands, institutions that choose tuition fees for students who do not qualify for financial aid, such as part-time students, have exhausted all of their financial aid eligibility or whose personal income is higher than the financial aid eligibility thresholds.

In 2004, Japan underwent a major reform that allowed selected national universities to become public corporations and set their own tuition fees. However, universities are not permitted to charge more than 110% of the typical fee established by the Ministries of Education and Finance. According to Marcucci and Johnstone (2007, p. 30), local governments continue to set tuition fees for neighbouring public schools. Federal universities in Nigeria are not permitted to charge tuition fees, but state-owned and funded institutions are permitted to do so (Marcucci & Johnstone, 2007).

In Ethiopia, the cost-sharing framework for higher education institutions was established by the Ethiopia Higher Education Proclamations No 351/2003 (FDRE, 2003b) and No 650/2009 (FDRE, 2009) and the Higher Education Cost Sharing proclamations No 91/2003 (FDRE, 2003a), and No 154/2008 (FDRE, 2008). Under regulations No 91/2003 (FDRE, 2003a) and No 154/2008 (FDRE, 2008), HEI beneficiaries are required to pay 15% of the instructional fees set by the board of directors, which may include cash payments or in-kind services.

2.10.2. Types of Tuition Fee policies in HEIs

The legal basis for authorising or prohibiting the collection of tuition fees is often established by law or other types of legislation (Marcucci & Johnstone, 2007, p. 27; Bietenbeck et al., 2023). According to Marcucci & Johnstone (2007), how a country views the financial responsibility of parents for their children's higher education has a significant impact on the type of tuition policies that are adopted.

According to Marcucci and Johnstone (2007), there are three types of tuition fees associated with cost sharing internationally. These include dual tuition fees, upfront tuition fees, and differentiated tuition fees. According to Johnstone and Marcucci (2010) and Dang (2021), the upfront tuition fee is predicated on the assumption that parents will be able to contribute the stated expected amount. On the other hand, deferred tuition is predicated on the idea that adult students are in charge of all of their costs, including the tuition portion.

Dual truck refers to two distinct student groups that are enrolled in the same degree program, one of which pays no tuition and the other of which does so at a high

tuition rate. Dual truck tuition fees are frequently charged in East Africa, Russia, and Eastern Europe (Smolentseva, 2022). In East Africa, dual truck tuition was first implemented in 1992 at Makerere University in Uganda, followed by the University of Nairobi in 1998, and then the majority of regional institutions in 2003 (Court, 1999; Kiamba, 2003). In terms of politics, the Middle East, North and West Africa, and those regions can only accept the lowest tuition rates (Johnstone & Marcucci, 2010). Examples of different tuition fees for public universities from around the world are shown in Table 1 (World Bank, 2010, pp. 60-63).

Table 1 Public Tuition Fee Policies around the World

Up-front tuition fee		No tuition	Dual-track tuition fee	Deferred tuition fee
Austria	The Netherlands	Brazil	Australia	Australia
Belgium	Nigeria (State)	Denmark	Egypt	Ethiopia
Canada	Philippines	Finland	Ethiopia	New Zealand
Chile	Portugal	France	Hungary	Scotland
Hong Kong	Singapore	Francophone	Kenya	UK (since 2006)
India	South Africa	Africa	Poland	Wales
Italy	Spain	Germany	Romania	(since 2007)
Japan	Turkey	Greece	Russia	
Kenya	England (now)	Ireland	Tanzania	
Korea	United States	Luxembourg	Uganda	
Mexico	Wales (now)	Malta	Vietnam	
Mongolia		Nigeria (federal)		
		Norway		
		Sweden		

***SOURCE**:* World Bank (2010); Marcucci & Johnstone (2007)

As of 2009, there were at least 26 African nations that charged some kind of tuition fee, according to the World Bank (2010) and Caillaud et al. (2009). Upfront, dual tuition and deferred tuition are the three primary styles of tuition fee policies used in Africa. There

are some countries where the major tuition fee policy categories listed in Table 2 are combined.

2.10.1.1. Upfront Tuition fee Policies

These laws are founded on the idea that parents have a duty to provide for the educational needs of their children and should do so within their means. In this situation, a family's income determines how much financial aid is offered or how much of the tuition must be paid. As these tuition fees must be paid at the time of matriculation, parents are typically responsible for covering them to the extent of their financial means (Teixeria et al., 2008; Marcucci & Johnstone, 2007; Dang, 2021).

At the beginning of each semester or school year, the student or other family members must pay the full amount remaining from the original tuition. The majority of African countries are implementing upfront tuition fees, where free higher education has long been considered a fundamental right (World Bank, 2010).

2.10.1.2. Dual Track Tuition Fee Policies

The second type of truck is a dual truck, based on government request providing a small amount of space or almost free due to political or legal considerations, while allowing tuition fee-paying trucks to educational institutions to supplement income (Marcucci, Johnstone, & Ngolovi, 2008, p. 104; Oketch, 2016; Dang, 2021).

Many countries with tuition that is either illegal or faces strong public opposition have dual-track policies that are common. In these countries, the government offers a certain number of free university places to candidates who meet certain criteria in the secondary school graduation exam, and additional spots to candidates who meet certain conditions but lower scores and must pay tuition fees. Universities also develop specialized professional development or continuing education courses for which they charge tuition (Marcucci & Johnstone, 2007).

No matter what one's ideologies or political views are, tuition prices and government funding for students are rising everywhere. Any increase in the number of

students enrolled in higher education will necessitate more investment from parents and students due to the current financial difficulties that governments are experiencing as well as the competition in the public demand for health care, primary education, housing, and the environment.

Two separate dual truck tuition policies are used in Africa. The first, which is employed in nations like Ghana, Uganda, Tanzania, and Kenya, allots a limited number of free or affordable places based on how well students perform on the high school exit exam. Other fee-paying students are then allocated to students who do worse, but still meet admission standards or, as in Angola and Ethiopia, to students who attend evening or summer classes. The latter applies in Benin, Madagascar and Senegal, where all high school graduates are given complimentary seats in faculties with open admission and complimentary paying seats in faculties or institutions that are more selective.

The dual truck policy was first put into effect at Makerere University in 1992 using the Private Entry Scheme (PES). Later, it was expanded to include all Ugandan public universities. According to Marcucci, Johnstone, and Ngolovi (2008), the Public Universities Joint Admission Board (PUJAB) and PES administer a two-stage admissions procedure for dual-truck tuition fee-paying. All students must first complete PUJAB application forms in order to attend government-sponsored institutions where the best students are awarded scholarships based on their performance on the Uganda Advanced Certificate of Education Examination (UACE).

The PUJAB process is followed by a separate admission procedure. Students can apply for the PES program if they do not receive a government scholarship. Very few students who have previously applied under PES receive a government scholarship for a program that was not their first choice. Joint admission is a procedure used by public universities to admit students to private universities that is similar to the PUJAB process (Marcucci, et al., 2008).

Students in Kenya enrol in higher education institutions through programs similar to those in Uganda's Module I and II programs. The Kenya Higher Education Lending Board (KELB), which charges a 4% interest rate, pays the remainder of the Module I costs after the majority is covered by the government. The Joint Admissions Board will approve

a student for state-sponsored programs in Module I if they meet the specified cut-off point (Marcucci, et al., 2008). Module II is required of students who meet the requirements for self-paying university admission. Government-funded students and those who pay for their own education attend classes together.

Some students choose to enrol in the self-paying programs rather than accept their places in the Module I programs because they must wait a year after graduating from high school or because they are assigned to academic programs they do not want to pursue. Students who enrol in Module II programs therefore have more freedom in selecting their courses and can complete their education more quickly than students who enrol in Module I programs (Kiamba, 2004; Otieno, 2007).

Tanzania implemented a dual-track tuition policy at a time when a cost-sharing system was already in place for higher education (Marcucci, et al., 2008). In 1992, fees for admission, registration, entry exams, and student unions were eliminated, and families and students were now responsible for covering their own transportation costs (ibid.). In 1996 and 2002, the proposal to accept privately funded Tanzanian students was formally approved by the University of Dar es Salaam Board. The university was formally advised to accept privately sponsored, tuition-paying students to fill any open seats that could not be taken by government-sponsored (tuition-free) students. The University Council as well as the children and spouses of staff members were also given the option to pay only half of their tuition costs in the same academic year (Ishengoma, 2004).

When student loans were introduced in Tanzania in July 2005, the government put an end to dual-truck tuition fees. Now, regardless of whether they were sponsored by the government or private sponsors in public universities or paid for themselves in private universities, these loans cover tuition, room fees, and other academic fees for all university students. The country's tuition policy has changed drastically after moving from a dual tuition system to student loans; All students now pay tuition, even if it is deferred, in the form of a loan that must be repaid upon graduation (Marcucci, et al., 2008).

2.10.1.3. Deferred Tuition Fee Policies

The premise of this hypothetical scenario is that parents are not financially responsible for their children's education and that kids are unable to pay for their own education. In contrast to other Scandinavian countries, the state contributes a sizable amount of money from taxpayers to pay for all tuition costs for eligible students. Students who are financially independent adults must take out subsidized student loans to cover their living expenses. This kind of loan repayment is either fixed or dependent on the graduate's current or anticipated future income (Marcucci & Johnstone, 2007).

Deferred tuition policies have become popular in recent years as a means of balancing the need for students to pay for their education with their inability to do so while still in school. One method of deferring tuition payments is through the use of income-based loans. Until the loan is repaid fully at the agreed-upon interest rate, the borrower has not repaid the loan in full or within a certain number of years, whichever comes first, these loans are obligated under contract must repay a predetermined percentage of future earnings. Graduate tax is a modification of income-based loans in which students agree to pay additional income taxes, usually for the rest of their working lives, in exchange for government funding for their education in the form of low or free tuition (ibid.).

A deferred tuition policy expects the student to pay the tuition rather than the family, which would then be given a loan to cover it. Such a policy effectively forgoes some, if not all, of the funds that could be provided by a family contribution linked to an "up-front" tuition fee, but it does have the political advantage of concealing the imposition of a tuition fee.

Deferred tuition fees, which are typically paid by the student, have been contrasted with upfront tuition fees, and upfront tuition fees, which are typically paid by families, as well as between income-based repayment obligations for student loans and fixed scheduled repayment obligations for student loans, given that student loan programs are frequently used to cover students' necessary living expenses, including food, housing, and other necessities. As a result, there is a great deal of policy ambiguity. It is believed that employees will be most productive when employers are able to collect income contingency loans at the time of payment of wages or salaries, as well as deduct income tax and retire

accordingly required, as in Australia or the United Kingdom. This program has been less successful in sub-Saharan African countries, where tax codes are still rare and university graduates are more likely to take up multiple jobs, alone or abroad (Johnstone, 2006). Deferred fees, which recognize that regardless of the wealth of the parents, students ultimately bear part of the cost of higher education, which is used only in Botswana, Ethiopia and Lesotho students ultimately bear part of the cost of higher education, which is used only in Botswana, Ethiopia and Lesotho students ultimately bear part of the cost of higher education, which is used only in Botswana, Ethiopia and Lesotho

The option of deferring tuition payment and repaying it as a student loan upon graduation or leaving is available to all students admitted to university in these three countries (World Bank, 2010).

Many of the "up-front" laws focusing on tuition fees exist in Tanzania (since 2005), Rwanda (since 2003) and Namibia (since 1997). This means that parents are responsible for funding their children's college education through deferred or income-based parental repayment options, and students who are ineligible or only partially eligible for loans must pay in full (World Bank, 2010).

According to Atuahene (2009), a student loan program was put into place in Ghana in 1971–1972 as a way to address the financial problems institutions were having. However, the plan had difficulties with loan recovery. During the 11 years of the program, students owed a total of US$375,560 to the Social Security and National Insurance Fund (SSNIT), which is responsible for Ghana's pension and retirement programs. The fact that the government heavily subsidized the interest rate was one crucial element of the new policy. In the 1990s, the required percentage for students to pay was raised to 6%. The administration of the program experienced a $16 million deficit as a result of the high rates of default on the part of both the government and the students. Favourable repayment terms, alleged SSNIT administrative shortcomings, inadequate loan recovery mechanisms, and the fact that graduates don't always find employment right away were the main causes of this.

The graduate tax is a variation of an income-based loan in which the student receives little or no financial aid in return for agreeing to pay an income surtax for the rest

of the student`s working time after graduation. There are no "balances owed," and there is no way to change one's mind or get out of the obligation. Although there are no countries with a formal graduated tax, Ethiopia actually refers to its income-based repayment obligation as a "graduate tax."

According to Yizengaw (2007), in 2003, the Ethiopian government introduced cost sharing under the graduate tax system. A modified version of Australia's income-based reimbursement system allows tax deductions from salaries or other post-graduation incomes to cover your expenses. According to (Yizengaw, 2007, p. 180), the graduate tax is a plan to raise money rather than replace government spending on higher education. Table 3 lists the various tuition fee policies that are in place in a few African nations. For those who can afford it, the Ethiopian Graduate Tax Scheme offers an upfront payment with deferred taxes.

Table 2 ***Types of Tuition Policy in Africa***

Up-front	**Dual track**	**Deferred & dual truck**	**Upfront & deferred**	**No tuition**
Ivory Coast	Angola	Kenya	Ethiopia	Burundi
Gambia	Benin	Rwanda	Lesotho	Cameron
Liberia	Botswana	Tanzania	Namibia	Cape Verde
Mozambique	Burkina Faso		Swaziland	Chad
Nigeria (state level)	Egypt			Guinea
Sierra Leone	Ghana			Mali
South Africa	Madagascar			Mauritius
	Malawi			Niger
	Mauritius			Nigeria (federal)
	Uganda			Sudan
	Zambia			Togo
	Zimbabwe			Francophone Africa

SOURCE: World Bank (2010)

2.11. The financial importance of tuition fees

The revenue generated from cost sharing and the impacts of the tuition fee on enrolment growth are indicative of the importance of the tuition fee (Table 3).

The number of students enrolled in Uganda rose from 14,400 to 34,500 between 1997 and 2006. In the same time frame, there was a significant shift in university funding, with private funding increasing from 30% to 60% of the total budget. Only those students who were sponsored by the government received public funding, and their number only went up from 6,710 to 6,948. The average public resource per student fell by 50%, and those students' percentage of all students dropped from 46 to 20. In spite of this, things have improved since 2001. Since 1997, total public and private sector spending on education has decreased by 10% per student. The dual-truck tuition policy has certainly benefited Makerere University and the University of Nairobi financially. It can also have positive effects at Dar es Salaam University, Kenyatta University, and other educational institutions where it is used (Marcucci, et al., 2008).

Table 3: ***The Financial Importance of Tuition in African Countries***

Insignificant (≤10%)	***Significant (11-29%)***	***Very significant (>30)***
Madagascar	Ethiopia	Benin(selective programme)
Malawi	Kenya (Module I)	Burkina Faso
Mozambique	Namibia	Ghana
Rwanda	Rwanda	Kenya (Module II)
Tanzania	South Africa	Malawi (non-residential)
Zimbabwe	Swaziland	Mauritius
		Nigeria (state universities) Rwanda Uganda (fee paying) Zambia (fee paying)

SOURCE: World Bank (2010)

The Ghana Education Trust Fund (GETF), according to Atuahene (2009), was started in the year 2000. To supplement state budgetary contributions to higher education, the Internal Revenue Service increased the current sales tax rate under this program from

10% to 12.5%, with 2.5% of that amount going to the GETF account. The GETF, which accounted for 10% of government spending in 2006 and 12.9% in 2008, is the second-largest source of funding for the education sector. By funding more than 500 different projects, the majority of which involved building construction and renovation, it significantly increased enrolment from 63,576 in 2003-2004 to 88,445 in 2006-2007. GETF is making significant progress in higher education in Ghana in terms of infrastructure, student support and development, faculty research and development, support for teaching mathematics, science, and technology, as well as strong support for the Ministry of Education and its institutions (Atuahene, 2009; Ayam, 2021).

The GETF could be imitated and modified by developing nations with comparable issues with paying for higher education in Africa. Yizengaw notes that graduate tax contributions from Ethiopian graduates can improve the accessibility and quality of higher education institutions through public investment, even if the cost burden does not represent revenue directly or if the institutions themselves cannot recover quickly (Yizengaw, 2007, p. 181). In the hope that some costs will be recouped in the future, the government is investing significantly in tertiary education. Higher education has improved both in terms of accessibility and quality.

Marcucci & Johnstone (2007, p. 38), state that there is little empirical evidence on the effectiveness of policies such as subsidies and loans tested on affordability or on the best effects of cost-sharing and attendance for access and enrolment in higher education. To help create higher education policy, they suggest more research should be done.

2.12. Student Loans

Many countries have established loan programs that cover tuition, living expenses for students, or both and are repaid from post-graduation earnings to help students pay for their education (World Bank, 1994; Czarnecki, Korpi, & Nelson, 2021).

Students frequently borrow money to pay for their education all over the world. Due to the risk involved in lending money to students who lack guarantees and may not be able to repay the debt for many years, very few students can finance their studies by borrowing, unless their families are financially secure or special loans are made available.

Students have frequently borrowed money from family members or close friends to cover living expenses or tuition costs (Woodhall, 1983).

Theoretically, a student loan program combines the social and political imperatives of expanding access to education with the financial imperatives of increasing tax revenue. Student loans were created under the assumption that those who will benefit most from the opportunity to receive an education can be expected to contribute modestly to its high costs. Student loans also contribute to equity because they insulate it from the financial standing and worldview of the borrower's parents (Johnstone, 2003).

According to Woodhall, the primary objective of a student loan or educational credit is to provide students with access to capital funds so they can borrow money while enrolled in school to cover all or a portion of their educational expenses and repay it later. A "student loan" or "educational credit" is a type of student financial aid that entails a repayment obligation on the part of the recipient. In other countries, the repayment obligation entails a commitment to work in a specific area or field (such as teaching) instead of monetary repayment, and this type of aid is sometimes referred to as a "repayment scholarship" rather than a loan. These loans have also been referred to as "service loans" in the context of developing countries (Woodhall, 1983). Contracts de préembauche (bonded scholarships) is the French term for these loans.

Many countries now understand the importance of increasing secondary student aid in order to increase access to postsecondary education. More scholarships are being offered to secondary school students in both Colombia and Brazil, and student loan organizations, like ICETEX (Instituto Colombiano de Credito Estudios Exteriores) in Colombia, are frequently tasked with managing these programs. The agency provides subsidized loans to students from the poorest families, ethnic minorities, and students with disabilities. The poorest students receive zero real interest over the life of the loan (Salmi & D'Addio, 2021). In Ecuador, "family loans" are now readily available to help parents pay for their kids' secondary education (Woodhall, 1983).

In Sweden, loans are available for adults enrolled in post-experience training at both the secondary and postsecondary levels. Those who receive loans for both their secondary and higher education are protected by special rules that allow them to write off

a portion of their secondary loans or have them retroactively converted to grants. It is crucial to look into whether other developing countries can benefit from these programs. According to lessons learned from both developed and developing nations, borrowing money to pay for higher education is not always necessary (Woodhall, 1983).

2.12.1. Forms of Student Loans

As already said, loans are monies given for a period and must be repaid. The repayment periods may vary and the instalment amounts may be in the form of an agreed portion of income to be earned at a later date: the so called 'income contingent' loan (Woodhall, 1983). Considering the various loan types is therefore necessary.

Salmi & Hauptman (2006,p.23) reference a number of models in different countries. These loans may differ according to repayment schedules, the lending institutions providing the capital, how the loan will be used, eligibility factors which may include the nature of the educational institution and any subsidy paid to the student.

All student loan programs share the basic feature of giving students the ability to borrow money to cover study or living expenses. Graduates are required to repay any loans they took out after completing their studies, whether or not interest was charged (Barr, 2006). Additionally, Woodhall (1992); Johnstone (2004b, 2006) also instance the differences in loans, depending on factors such as whether they are operated by governments, educational institutions or financial institutions; the interest rate, how instalments are collected, whether there is a subsidy, the period of time involved-as in a lengthy mortgage type-or whether graduates will contract to pay a fixed amount from earnings: so call 'income-contingent' loans.

2.12.1.1. Conventional Mortgage-Type or Fixed-Schedule Loan

A mortgage is "the assignment of an interest in real estate as security for the repayment of a loan," according to the dictionary.

The terms of the contract governing this kind of loan will specify the interest rates, which may be fixed or variable; there will be a time period by which the loan should be repaid as well as a specified number of instalments and amounts, equal, increasing, or

decreasing over the period of the mortgage (Salmi & Hauptman, 2006; Johnstone, 2004b; 2009, Asian Development Bank, 2009; Pant et al., 2021).

So simply expressed, a contract for a 'mortgage style' or long term loan based on the conveyance model, is governed by three principles: 1. A rate of interest which may be fixed for a period of time or vary, depending on factors such as world bank interest rates; 2. A date by which repayments will begin and the agreed total amount will be repaid; 3. Agreed amounts, which may vary at different specified times throughout the schedule, to culminate in the repayment of the full amount borrowed, plus the agreed interest.

The most cited disadvantage of this type of loan is the start time for repayments, which is generally shortly after the borrower graduates and therefore when salary levels are at the lower end of the scale. Default can be a recurring problem because of this factor, plus there being no inbuilt mitigation for unforeseen events such as a recession or unemployment (Asian Development Bank, 2009).

2.12.1.2. Income Contingent or Income Repayment Loan

Repayments on this type of loan are not based in the normal way on the amount borrowed but on an agreed amount per annum, for an agreed period, of the projected amount the graduate will earn. Based on the average income of the maximum earned over the course of the contract, the borrower will receive a subsidy if the loan is not fully repaid by the deadline or a write-off of the outstanding amount (Johnstone, 2006; Tsegaye, 2004).

This kind of loan is comparable to all other types in that there is a repayment schedule agreed upon, but it differs mainly in that the amount to be repaid is calculated as a fixed or variable amount per annum based on the projected earnings of the borrower over a working lifetime. It will have some specific features:

Mandatory Income Contingent Repayment

As well as mandatory repayments based on a projected salary after graduation, borrowers may have an option to prepay. There are generally two approaches regarding initial fees:

Fees initially paid by students and families. This is where an amount is borrowed to cover educational expenses and a repayments schedule is arranged, based on income, to commence on a date subsequent to the student graduating. There are variations of this type of loan in many countries such as South Africa, Sweden, Germany, Hungary and New Zealand.

Fees initially paid by government. In this scenario, governments pay fees, to be repaid as a percentage of earned income after graduation and will sometimes exempt students from repayment, depending on a below standard rate of income. Australia was first to introduce this type of loan namely their Higher Education Contribution Scheme (HECS) 1988 and variations have since been introduced in Scotland for quite some time and in England and Thailand 2006 (Salmi & Hauptman, 2006).

Optional Income Contingent Repayment

Loans advanced under this heading differ in just one main way from the Mandatory version: borrowers are given an option to repay their loans contingent on their earnings once earning and in the tax system. The US has offered such a scheme since 1994 and Chile further facilitates borrowers by moving them into a tax bracket which may mitigate rates of default (Salmi & Hauptman, 2006,p.35).

The following elements are also included in the income-contingent type of loan repayment:

1. The amount to be repaid plus interest must be sufficient to cover costs, such as administration and collection associated with the loan and some also include an amount to offset loss through default by other borrowers (Asian Development Bank, 2009).

2. When a borrower has paid the agreed-upon amount for the maximum number of years agreed-upon and the loan has not yet been fully repaid, this is also the case; the outstanding amount will be written off or considered a grant/subsidy, based on the acceptance that the borrower's education did not lead to the anticipated level of earnings (Johnstone, 2004b).

3. A limit for high earners: to balance out defaulters, this calls for high earners to make payments for a short while after their loans have been amortized. Yale's Tuition

Deferred Plan in the early 1970s was the only other such program and it had a maximum reimbursement amount (Johnstone, 2009b).

Australia's Higher Education Contribution Scheme, which defers repayment until income has reached a level that matches typical expectations of higher education graduates, is often considered the best example of this type of loan depends on this income. Following that, payments are planned based on a decided-upon percentage of annual income (Asian Development Bank, 2009).

Income-dependent loan with a hybrid fixed schedule

This is also referred to as "soft income contingent" and has the benefit of easing repayment obligations during challenging circumstances, such as periods of unemployment. Borrowers then have the facility of switching from a fixed repayment schedule to the Income-Contingent one and back again when incomes improve for the remaining amount of the loan (Johnstone, 2009a).

Different types of income-based loans

This type of loan can be structured in more general ways, such as income-related loans(IRLs) with risk pooling, where all participants share the cost of default for student and risk-sharing loans, in which all borrowers are required to pay a higher amount based on the present value of defaults (Chapman, 2006).

2.12.1.3. Human capital contracts

With this setup, a private investor or company agrees to pay for an individual's college education in exchange for a percentage of the income earned during a specified period of time. The repayment amount, like graduate taxes, would be larger than the amount borrowed for high earners and less for poor workers. This model is attractive to both investors and borrowers, depending on risk aversion and self-belief. Chile, Columbia, Germany, and the United States offer this option (Asian Development Bank, 2009; Chapman, 2006).

2.13. Comparing Forms of Cost-Sharing

Income-dependent loans, according to Johnstone (Johnstone, 2004, 2006), shift responsibility for paying for tuition and other educational costs from parents to students or, in the case of loans that are not repaid, to the taxpayer.

Chapman (2005,p.17) puts a very positive argument for income-contingent loans in that he sees them as a means of raising revenue for institutions as well as furthering equity of access, not only for students from poorer families but for those who might otherwise be dependent on ungenerous parents or partners. Talent is therefore not wasted and the economy is not deprived because of family financial situation or the state of economy in general at a specific time.

Barr (2006) also saw the shift from institutions depending on the capital market for funding to government intervention through income contingent loans as a very positive development in insurance and evening out access. In this way, the public sector takes market failure out of the equation. He further concurs with the view expressed by Chapman in (Chapman, 1999) that administration of this type of loan is more cost effective and fairer to the borrower because of collection through the tax system and repayment being relative to earnings.

However, Johnstone is less than enthusiastic about income-contingent loans being the answer for developing or transitional countries. According to him, tracking borrower's income over their lifetimes in these countries would be difficult, if not impossible, and therefore would result in poor cost recovery and collection from salary and wages. Additionally, since the ability to collect revenue from various sectors would also differ, the ease of collecting revenue from the public sector and big corporate companies versus the difficulty in collecting revenue from the smaller private sector and self-employed would mean not only a limit on revenue but an inequity and distortion of the market as well. Since most of the funding for income-related loans is provided by the state, he contends that the goal of cost sharing is irrelevant because taxpayers already receive funding from it (Johnstone, 2006).

Chapman, Barr, and Johnstone all concur that this type of cost-sharing is preferable to no cost-sharing, despite the fact that it does not generate enough new funds

to close the revenue gap in developing countries. This is due to the fact that they are all in agreement that an efficient system for tracking and collecting income is required for effective income-contingent loan repayments.

2.14. Cost Sharing Recovery in HEIs

According to World Bank (2010), HEIs in Africa generate on average 30% of their income, with varying amounts in Madagascar, Zimbabwe, and Guinea-Bissau (which generate 75% of the continent's income on average) and Uganda (56%). A dual-track tuition fee policy exists in Uganda, where some university spots are given away for free or at a very low cost based on factors like academic excellence, income level, etc. There are additional university spots that are fee-paying or have deferred tuition. Some public universities in French-speaking countries do not charge tuition fees for excellent professional programs, unlike all public universities in countries like Benin, where free higher education has long been considered a right (World Bank, 2010).

Johnstone (2004b) suggests lowering student loan subsidies, raising interest rates, reducing the number of loans cancelled for any reason, or shortening the period during which interest is not charged in order to achieve effective cost recovery. The cost could also be recovered by tightening collections or by reducing defaults without changing the effective interest rates that borrowers were already paying.

In the majority of nations, the main obstacle to the viability and sustainability of student loans is cost recovery (Johansson & Ander, 2021). Student loans have a number of problems, including excessively low interest rates, extended grace periods, repayment plans lead to increased losses, and loans are made in such a way that the majority of borrowers are unaware of their true repayment obligations. In addition, legal systems frequently make it expensive to collect debt (World Bank, 2010).

A graduated tax system almost certainly won't result in a significant cost recovery because the majority of developing and transitional nations lack trustworthy and effective collection systems. In the absence of such pervasive systems, governments will probably be able to track the incomes of and collect taxes from the majority of civil servants, as well as perhaps from some important private sector employers and multinational corporations.

Furthermore, it is difficult for young graduates to repay loans due to the lack of employment opportunities in African economies (World Bank, 2010, p. 26).

The World Bank (2010) and Kossey & Ishengoma (2017) both argue that the greatest threat to student loan programs worldwide is high default rates. But they are especially harmful in sub-Saharan Africa. This is because (a) a culture that understands what credit is and the obligations that come with it is not widespread, especially outside of the urban middle class; (b) Unemployment is high even in wealthy countries, and the economy is in recession.

The following 11 major patterns (World Bank, 2010, pp. 90–94) can be used to analyse why it is challenging to maintain the financial viability of student loans and collect repayment.

One: Inadequate means testing allows students to borrow money when they don't really need it. Loan programs are typically offered in Africa, which means they are not determined by the family's financial situation but are, open to all students and targeted at specific populations, such as poor students or those from less developed areas. Nine out of thirteen loan schemes in Africa require a check to determine eligibility, but all undergraduate students in Ethiopia, Lesotho, and Swaziland are eligible for the loans. Awards are awarded in Botswana based on course weight. Means testing has been criticized for failing to identify students who actually need financial aid.

Two: Interest rates are unreasonably low (typically as a result of politicians' worries that students will oppose cost sharing, which are frequently linked to student loans). Only three of the nine loan programs actually charge higher real interest rates than the current inflation rate: Botswana, Lesotho, Malawi, and Tanzania In Ghana, Kenya, Rwanda, and South Africa, only four of the nine loan schemes charge interest while the borrower is still in school and offer a grace period once a year. This implies that substantial interest subsidies are present in more than half of the programs, which have an adverse effect on cost recovery.

Three: Excessively, the grace period and repayment are too long, resulting in double losses brought on by excessive interest subsidization. In Lesotho, Namibia, and South Africa, repayment terms for student loans range from extremely short to indefinite.

The amount of grants hidden inside the loan can change when student loan repayment periods are subsidized, as they are in the majority of African nations.

Four: It is common for students to be unaware of their obligations to repay due to the way student loans are disbursed. The majority of loans disbursed in Africa are given to students for living expenses and to universities and colleges to pay for tuition. Students never see money in countries like Botswana, Ethiopia, and Lesotho, where tuition fees are fully deferred, which may restrict their understanding of their debt repayment responsibilities. Since money is paid directly to the institutions, students may not be convinced by the thought of a loan, but they are also less likely to use it for purposes other than their studies.

Five: There are several student loan repayment plans available in Africa that, under specific conditions, grants full or partial loan forgiveness. If a student completes their program, majors in a particular industry, or chooses to live or work in a particular area after graduation, their student loan debt may be discharged. Teachers and other professionals are exempt from Ethiopia's "graduate tax" because they are seen as being of public benefit. Lesotho only requires its citizens to repay 50% of their loans if they work in the public sector, 65% of their loans if they work in the private sector, and 100% of their loans if they work abroad. Students enrolled in Botswana programs where there is a staffing shortage are not required to pay tuition or any other fees.

Sixth: Debt collection is expensive and often unsuccessful due to the legal system. Before the establishment of semi-autonomous councils with enforcement powers, Student loan programs in Africa, including those in Kenya, Ghana, Tanzania, and Rwanda, cannot cover the cost. These boards had the power to enforce student loan repayment or compel employers to make loan payments.

Seventh: How quickly a loan is repaid could be negatively impacted by the timing and size of the loan. Late loan payments prevent students from meeting their upfront expenses for the entire semester. Ghanaian students must apply for a loan from the Social Security and National Insurance Fund before classes begin. As a result, they do not receive their money until the end of the semester. However, the Student Loan Trust Fund (SLTF) requires students to submit a loan application along with their application for

admission to a higher education institution. Therefore, the loans will be given out when students need them to pay for tuition at the start of the semester.

Eight: Whether or not their student loans are enough to pay for all expenses is a crucial factor in their capacity to recover. If student loans aren't enough to cover all of the costs, students from low socioeconomic backgrounds might decide not to attend. Lack of loans can also force students to live in unhealthy conditions or go without food, which leads to dropout and makes it difficult to find employment after graduation. Recovery from borrowers who are unemployed is much more challenging. For instance, Burkinabe students complain that the maximum loan does not cover living expenses and tuition. The same is true for Kenya, where loan amounts may be adequate for students whose education is sponsored by the government but fall short for those whose education is self-financed.

Nine: the system is unable to recoup significant repayments due to underdeveloped administrative systems and inadequate staffing. In many African nations, overburdened government bureaucracies are charged with managing student loan programs on top of their other duties, and they lack adequate funding, resources, and procedures for consultation with other stakeholders. The Higher Education Loans Board in Tanzania, the SLTF in Ghana, and other governmental organizations that oversee loan programs and maintain formal ties with other stakeholder institutions appear to be more effective. Although Ethiopia has not yet established a separate graduate tax lending agency, the Federal Revenue Authority, academic institutions, and the Ministry of Education have all received clear administrative guidance on their respective roles. In many nations, including Ghana and South Africa, on-campus loan offices have been set up to communicate with students.

Ten: It is difficult to properly track borrowers using records. The collection rates for student loan programs have been appalling in some African nations, and repayments have been essentially non-existent. Despite this, things are getting better as governments realise the value of transparent and reliable collection techniques. The Ministry of Finance in Botswana recently established a Loans Recovery Service Division and intends to outsource the collection of student loans. In order to increase the rate at which outstanding loans are collected, professional debt collection agencies are also used in Tanzania and

Lesotho. The bureaucracies in charge of managing loan programs have started to collaborate with other public and private organisations. Along with employers and educational institutions, the Federal Revenue Authority is one of the parties involved in debt collection in Ethiopia. To ensure that defaulters are located, Kenya's HELB collaborates with the tax authority and credit bureau of the government. Information is also made available to the Government Computer Centre and the National Social Security Fund. It is becoming more widely recognized that enforcing negative consequences for non-repayments is crucial for collection.

Eleven: The economy doesn't offer enough jobs for all of the graduates from colleges and universities. For borrowers who are facing unemployment or other financial hardships, loan programs may offer deferment or forbearance options. HELB loan programs in Kenya, scholarship and loan programs in Botswana, the Namibian national student financial aid scheme, and Student Financial Aid and Recovery (SFAR) programs in Rwanda both offered deferral options. Payments may be suspended for borrowers whose employment, income, or disability renders them unable to repay their loan. No interest has accrued since the suspension. However, once repayment resumes, it will start to accrue once more. Other loan programs don't offer many options for deferment and forbearance, which could lead to default among unemployed students (World Bank, 2010).

2.15. Higher Education in Ethiopia

Although Ethiopia has a history of education dating back more than a thousand years, Addis Ababa University was founded on March 20, 1950 (World Bank, 2003). Addis Abeba University, which has several colleges in different regions, has been the only higher education facility in the nation for more than 50 years. The Gondar Public Health College, Holy Trinity Theology College, Kotebe College of Teacher Education, Bahir Dar Polytechnic Institute, Institute of Building Technology, and Addis Abeba College of Engineering were all founded in the 1960s(Yizengaw, 2005). Several technical colleges were established over the course of the following 20 years.

Gross enrolment increased at all educational levels between 1990–1991 and 2003–2004. However, according to Yizengaw (2005), only 0.8% of the population attended higher education in 2000/01. Therefore, the government has made higher education

reform a top priority. Over the past ten years, there have been significant changes to Ethiopia's higher education system (Areaya, 2010).

As a result, some old Addis Abeba University colleges were converted into full-fledged universities with independent status, and other new universities were established. With this addition, Ethiopia now has 33 public universities. When the 11 universities currently under construction are finished, this number of universities will soon increase to 44. As a result, universities now have significantly higher numbers of students enrolled in regular programs.. It increased to 593,571 students in the 2013–2014 school year (MoE, 2015).

2.15.1. Financing Higher Education in Ethiopian

The amount of financial, material, and human resources that are available determines how well any HES will be able to meet its organizational needs and accomplish its missions. Facilities, qualified personnel, technological resources, and equipment, as well as related teaching materials of the right quantity and quality, enable universities to carry out their missions and maintain the standard of education while operating at the highest possible level. To ensure the success of its overall institutional activities, a university generally requires sufficient financial resources (Feleke, 2015, p. 11).

The federal government has always provided funding for higher education in Ethiopia. Since 1950, those attending public universities have been entitled to free tuition, free health care, free room and board, and even stipends to help with living expenses and the cost of textbooks (Wagaw, 1990). Due to rising education spending, the government was no longer able to afford to be the only source of funding for the nation's educational system by the end of 2003 (MoE, 2002).

In response to the growing demand for higher education and the financial constraints these factors impose on institutions and governments, policies regarding reallocating resources to various social services in the fields of primary education, infrastructure, and health services were carried out. A few of the policies that have been implemented include cost sharing, deferred loan repayment, and pressure on universities to diversify their funding sources (Johnstone, 2004b).

The portion of public sector GDP devoted to education has increased from 3.2% to 4.5% since the year 2000. This amount of financial effort is less than the sub-Saharan African average of 3.9%. Additionally, the portion of the state budget devoted to education has grown from 9.5% to 16.8%. This indicates that there is still room for the government to step up efforts to fund education, as it is still below the normal range of 20–25% for the majority of developing countries. Due to the quick growth of this subsector, budgetary support for higher education has increased from 14.9% to 23% (World Bank, 2003, p. Vii).

Ethiopia spends 2.8% of GDP on education, which is lower than the average for sub-Saharan African countries of 3.4% (Yizengaw, 2007), increasing from 2.5% in 1995–1996 to 4.3% in 2002–2003. With amounts ranging from 9.5% in 1999 to 21.8% in 2005, the annual budget dedicated to the education sector is approximately 14% on average. From 1995 to 2002/03, this percentage increased from 12.5% to 18.8% and reached 21.8% in 2005. In contrast to the 20% average for Africa, this is still a low number (Yizengaw, 2007). Over the past 12 years, higher education has received between 15 and 25% of the total education budget, reaching nearly 23% in 2003–04.

Dea (2016) asserts that the Ethiopian government has made considerable efforts to develop and expand the country's higher education system in order to increase public access to top-notch education. For instance, according to the same source, the total number of university students enrolled in both public and private institutions increased from 444,553 in 2010–2011 to 491,871 in 2012–2013.

2.15.2. Introduction of Cost-Sharing in Higher Education in Ethiopia

In order to strengthen the education sector, which is crucial for the socioeconomic development of the country, the first comprehensive higher education reform policy was adopted in 1994. The policies place a strong emphasis on student cost sharing, income generation, and HEIs' introduction of financial diversification (Ayalew, 2013).

The cost of primary education and education up through grade 10 is expected to be fully covered by the government; recipients will, however, be responsible for paying for secondary and tertiary education. However, university students in Ethiopia were not formally charged until very recently. After the Declaration of Higher Education (FDRE, 2009) and the Regulations (FDRE, 2008) were published, HEIs only started to implement

cost sharing in October 2003. Every student who completes a public higher education program and takes on repayment obligations is responsible for paying their own tuition, fees, and other expenses. Following graduation, taxes will be deducted from salaries and other income to cover expenses. According to Yizengaw (2007), Ethiopia has adopted a graduated tax system that is modelled after Australia's income contingent repayment system but has been slightly altered to meet the needs of the country.

Ethiopian law defines "cost sharing" as a method by which the government and students attending public higher education institutions (HEIs) share the cost of their tuition and other expenses. A beneficiary is a student who has agreed to pay for future education, training, and other services while enrolled in a higher education program at a public institution (FDRE, 2008; Yizengaw, 2007).

Yizengaw (2005) described the Ethiopian HES as an elite system with an enrollment rate of 0.8%. Ethiopia's relatively high primary and secondary school completion rates and population growth that has surpassed that of Nigeria to become the second most populous country on the continent have gradually increased the pressure on the country's limited educational capacity. Even by the standards of sub-Saharan Africa, Ethiopia's participation rate is still extremely low, despite the fact that its higher education institutions are enrolling more students every year. Public spending on tertiary education increases every year as the cost per student increases, but the budget cannot support access for all students. In many of the poorest nations in sub-Saharan Africa, there are also other conflicting public interests that call for public funding. To generate the highly skilled human capital needed for growth and poverty reduction, Ethiopia needs to scale up its HES. Therefore, it makes sense to diversify funding for higher education using non-governmental revenue generated through cost sharing (Woldegiorgis, 2008).

The establishment of an income-based loan system in Ethiopia seems more appropriate for the following reasons, even though cost-sharing can take many different forms, including upfront tuition, grants, and student loans:

- Unlike other forms of cost-sharing, the income-contingent loan waives tuition for students when they enrol in classes. In this situation, the student will either need to have the cash up front or be able to secure a loan by providing collateral or a guarantor. Students with weak family backgrounds may be less

likely to participate because they lack the funds to make an upfront payment or provide collateral for a bank loan. However, this is not an issue with income-contingent loans because the government is the guarantor and students only have to pay back the loan once they have a job.

- Another alternative mechanism used in some countries is a means-tested loan program, also known as a "dual track" loan program. In this situation, a method for figuring out which students qualify for grants or loans is required. Usually, family income is the criterion used to separate them (Woldegiorgis, 2008; Dang, 2021).

In Ethiopia, the government covers all costs associated with food, housing, and health insurance, while students are responsible for 15% of the tuition fee. In Ethiopia, those who benefit from public higher education must contribute at least 15% of the agreed-upon tuition and other living costs, such as food. The cost of food is essentially just the price of the food itself, excluding any costs associated with hiring staff or other expenses (Yizengaw, 2007; Teferra et al., 2018).

Graduate tax, which is a flat tax paid as part of a salary over a lifetime or a predetermined period of 15 years, is a way for students to give back to society. During the academic year 2003/2004, a graduate tax program introduced a variation on a system of deferred payments based on income. The following characteristics of the Ethiopian graduate tax's repayment are listed by Chapman (2005, p. 45):

- Automatic deductions from salaries to be made on the basis of a formula to collect payments from beneficiaries. The percentage that will be used is proposed to be 10% of annual income.
- Those students who are teachers or other professionals deemed to be in the public interest, which accounts for about 35% of students, would not be subject to the tax; and
- A 5% discount will be given to those who are able to pay in full during the grace period.

Although the Ethiopian graduate tax plan has received generally positive reviews from the World Bank, it also includes some insightful criticism, such as:

- Considering their income level, Ethiopian graduates seem to have a very high minimum return rate of 10%.
- It is debatable whether graduates should be exempt from any debt obligations.
- It appears that the 5% discount for upfront payments is insufficient to inspire them.

This last statement is certainly true, especially in the case of a scheme where the collection method is untested and could allow many borrowers to escape payments. To ensure effective and widespread reimbursement, the following reforms are beginning to be implemented:

- The establishment of a collection mechanism is proposed within the Social Security Authority (SSA), whose main task to date has been to collect contributions from central and provincial employers to fund the retirement benefits of public employees. This mechanism will use special digital identifiers that the Authority has allotted to public sector employees;
- Adding SSA registration requirements to the licensing regulations governing foreign private companies so that they must do so to collect reimbursement from Ethiopian graduates;
- formalise and actively promote the expansion of the SSA to incorporate privatized government agencies and assets as well as other parts of the private sector, such as NGOs, on a voluntary but strongly encouraged basis;;
- Exit visa restrictions require graduates to settle student loans before leaving the country (Chapman, 2005).

It is still uncertain whether it will be possible to develop a system that will keep records accurate enough to track each former student's repayments and rising debt. It is advantageous to be able to predict a person's income, as the majority of graduates are employed in the public sector. Another benefit of the plan is that it eliminates the need to identify and track each graduate's payments and outstanding debts, although the proceeds from each graduate will be based on their income. However, implementation is still a big

deal. The case of Ethiopia highlights the importance of data collection and the need for simple administrative procedures(Chapman, 2005).

Regulation No. 154 of the Council of Ministers on Higher Education Cost Sharing (FDRE, 2008), which gives the Department of Education the power to fix a discount on the initial tuition payment, has been published in Ethiopia in response to a 5% discount. In its guidance, the Department of Education has established the following discounts for recipients who will pay their initial share of the cost over time:

(a) 10% discount on any prepayment made upon registration;
(b) a 5% annual discount for payments made in advance while enrolled in school; and
(c) a 3% reduction for payments made in advance during the grace period (MoE, 2009b).

Comparing these discounts with those offered for similar payments in other countries, they are still not enough to convince parents of students to pay in advance. According to Johnstone & Marcucci (2010), the Australian Education Contribution Scheme, for instance, offers a 20% discount for upfront tuition payments.

However, there are definitely obstacles to overcome in order to implement the income-contingent scheme. According to theory, the objectives of cost-sharing are to increase participation, promote equity, make higher education more accessible, and increase tax revenue. It's hard to say whether Ethiopia's income-based loan system is working or not right now, but given the country's socioeconomic situation and theoretical expectations, it is possible to pinpoint some fundamental problems the system is currently facing.

2.15.3. Austerity in Ethiopian HES

The idea of cost-sharing first appeared in Ethiopia in 1994 ETP, which was enacted by the Ethiopian government as a component of a comprehensive plan to reform higher education. Cost-sharing was first introduced in Ethiopia in 1994 ETP, when the Ethiopian government implemented it as a component of a broad plan to reform higher education. Diversifying higher education funding was encouraged by the need to expand

and increase access with participation rates from 0.8% to a higher level, at least in comparison to the average level of countries in sub-Saharan Africa (4%) (*Education and training policy.*, 1994),

Both developed and developing nations are impacted by financial austerity for a variety of reasons, but the impact varies according to each nation's socioeconomic and political climate. Mora and Vila (2003) and Teixeria et al., (2008) explain this primarily from the perspective of developed countries (OECD), in contrast to Johnstone (2006) who does so from that of developing countries. In this thesis, financial austerity in Ethiopian higher education will be examined from both perspectives.

1. The Demand Pressure: Ethiopia, after Nigeria, has the second-highest population in sub-Saharan Africa, with an estimated 110 million people. The population is rapidly growing, adding two million people annually, or 2.1% to 2.5% of the total population. According to the 2003 population study, 44% of people in the country were under the age of 15; 53% of people were between the ages of 16 and 64, and only about 3% of people were over the age of 65. It demonstrates that a sizeable segment of the population is young and desires access to all levels of education. Ethiopia's higher education system is under significant pressure due to a high birth rate and an increase in the number of citizens enrolling in post-secondary institutions after graduating from high school.

However, the rise in the amount of youth in Ethiopia is related to more students enrolling in primary and secondary schools, indicating that more young people in the country are interested in pursuing higher education.

In Ethiopia, a number of factors, including the increasing completion rate of lower secondary education and the rising number of students pursuing higher education as a result of higher enrolment rates, are putting pressure on demand. College enrolment is on the rise. The pressure on demand grows harder in today's more globally integrated economy as more people try to make the transition to higher education. Due to the high demand and limited access, Ethiopia's higher educational institutions have been criticized for being overcrowded, of poor quality, and exclusive (Woldegiorgis, 2008, p. 79).

2. High Per-Student Cost: Up until 2003, the government of Ethiopia was in charge of covering higher education expenses. Furthermore, the only alternative for higher education funding up until 1991 was public funding. Due to this, students received free housing, meals, and other services up until the cost-sharing system was implemented in 2003. Thus, there were no tuition fees prior to 2003, and students were also given free housing, meals, and a few other perks. As more students enrol, the government has continued to support this sector. Housing and food are thought to account for 15% of recurrent expenses, according to the World Bank (2003) and Teferra et al., (2018).

Generally, tertiary education is expensive worldwide due to the high input of relatively expensive labour, expensive equipment (such as computers and scientific equipment), the cost of student life, etc. For Ethiopia, this scenario is inevitable.

3. The Decline in Available Public Revenue: According to (Johnstone, 2006), tax problems, such as the inability of the government to collect taxes or the ease with which personal income, corporate profits, and revenues are hidden, all help to cut the amount of money allocated to higher education in developing countries. However, the Ethiopian government has increased its total annual budget for higher education.

Even though the cost of higher education, rising inflation, and rising enrolment have caused a significant increase in annual government revenues, the government's commitment to increasing access to higher education has caused higher education to contribute more to GDP each year (Woldegiorgis, 2008, p. 83).

Due to low income, a small tax base, and an increasing number of competing priorities, such as public health, HIV/AIDS, and primary and secondary education, among others, it is difficult to get a higher education and receiving additional tax funding. The government of Ethiopia needs to address many economic and social problems that Ethiopia faces. It will be more difficult in these cases to increase the amount that the government spends annually from the general fund for higher education, which is believed to provide more private benefit than public benefit (Woldegiorgis, 2008).

Ethiopia's higher education institutions are often forced to tighten their belts due to fierce competition for the few available public funds, such as funds for public health, primary and secondary education, access to clean water, and infrastructure are all in need of funding because of rising participation rates, high birth rates, and enrolment pressures that could become explosive.

Policymakers began to realise Ethiopia's HES needed reform in light of austerity measures like those described earlier and other pending problems. Ethiopia adopted a comprehensive ETP in 1994 in an effort to strengthen the educational system as a vital component of the country's socioeconomic development. Yizengaw (2007) asserts that the policy gives high priority to issues such as the quality and relevance of the curriculum, the competence of teachers, learning process enhancement, the development of management and leadership, revenue diversification, and the development of effective evaluation, monitoring, autonomy, and accountability systems.

2.15.4. Rationales for Cost-Sharing in Ethiopia

Ethiopia's cost-sharing is justified because it reduces the unit cost per student and prioritizes education. The Ethiopian government prioritizes primary schools (grades 1–8) and secondary schools (grades 9–12) when allocating funds for education. According to the Education Policy of Ethiopia (*Education and training policy.*, 1994), completion of upper secondary school and related training (grade 10) will receive preferential financial support from the government; higher education and training require increased cost-sharing (*Education and training policy.*, 1994).

In addition, the Education Sector Development Program III (ESDP III) encourages cost sharing as a potential tactic to lower the unit cost of education, as this expense is anticipated to rise for university students from 2005/2006 to 2009/2010, from 31.11 to 123.30 million birr (MoE, 2005).

To boost student participation and enrolment in higher education, cost sharing was put into place. Due to this decision, enrolment in undergrad programs at government HEIs increased from 173,901 in 2005/2006 to 420,387 in 2009/2010 (MoE, 2010b,p. 57). Cost sharing in HEIs can be used to generate the funds needed for such massive expansion.

Ethiopia's cost-sharing policy, as seen in the previous literature reviews and as is the case in many other nations, has highlighted these rationales in addition to the main reasons for recommending introducing cost sharing in Ethiopia. These justifications represent the broad goals that the policy is meant to achieve once it has been implemented. The following are some of the main justifications and objectives of Ethiopia's cost-sharing policy:

1. Supplementary Revenue as an Alternative Non-Governmental Source: It is clear that Ethiopia has not been able to meet the growing demand for higher education due to the austerity measures implemented by Ethiopia's HES. Despite government increases for higher education, the increasing demand requires non-governmental sources of revenue. Consequently, the government cannot sustainably invest exclusively in higher education, as it did for many years. Additionally, other compelling and competing needs are requiring the government to focus its revenues immediately, which makes it impossible to depend solely on government funding for higher education in Ethiopia. Cost-sharing and income-generating activities are therefore required to supplement government revenue (Woldegiorgis, 2008).

2. Maintaining and Enhancing Access to Higher Education: Expanding access to higher education would make more sense if funding for it came from sources other than government taxes. If cost sharing is not implemented, no additional funding will be provided for higher education during this time. A new approach to funding higher education in Ethiopia is needed due to the growing number of eligible students each year and limited government funding to increase accessibility. Barr (2003), Johnstone (2006), and Chapman (1999) all provided explanations of why those who benefited must share the costs. They also note that additional funds from cost-sharing could be used to improve access and accessibility to educational opportunities in the classroom and at home, which would increase access to participation (Woldegiorgis, 2008).

3. Addressing Equity in Terms of Opportunity in Higher Education: Higher education institutions in Ethiopia enrol a significant proportion of “elite” students. College students make up a small portion of the student population compared to the general population of taxpayers who need similar services from the government. The participation

rate has fallen short of the 5% requirement for sub-Saharan Africa, as has been repeatedly stated. Even though taxes are paid to fund higher education, only a small portion of Ethiopians actually benefit from it. As a result, minorities who receive free higher education are supported by both the general public and those who do not attend college.

Yizengaw's 2007 analysis of information from the 1999 National Household Consumption and Expenditure Survey revealed that at least 71% of Ethiopian university students come from families with higher incomes in the whole country. This group consists of students from Addis Ababa, Adama, and other urban areas. Many of these students attend prestigious and pricey private schools to get ready for the Ethiopian Secondary School Leaving Certificate Exam (Woldegiorgis, 2008).

Therefore, it is unfair that some of Ethiopian society's most socioeconomically advantaged citizens receive free higher education, while many others who receive little to no aid experience extreme poverty and privation despite paying taxes. It is therefore fair, appropriate, and consistent with policy that those pursuing higher education contribute in some way at the expense of the additional personal benefits they receive.

4. Making Students "Customer-like": The ability to use services responsibly is promoted through cost sharing, according to Council of Ministers Regulation No. 154/2008 on Higher Education Cost Sharing (FDRE, 2008). Students call for and contribute to improved instruction and learning, as well as more effective institutional administration. Furthermore, students will take greater ownership of their education. Students are more likely to expect faculty and institutions to be transparent and accountable when it comes to value for money (Johnstone, 2006). Universities would be more receptive to people, society, and the labour market if tuition and other fees were shared among all students (Teixeria et al., 2008).

This idea was included in the cost-sharing policy's policy document in Ethiopia. To make efficient and effective use of available resources, educational institutions will need to put effective management systems in place (Woldegiorgis, 2008). Additionally, they must develop and promote initiatives that will broaden their revenue streams while

keeping students at the forefront of everything they do. By sharing costs, students will take the initiative in higher education activities and strategies.

2.15.5. Perception toward Cost Sharing Policy in Ethiopia

Studies on cost sharing that have been done thus far reveal very little about how stakeholders feel about cost sharing laws. Obasi & Eboh (2002) conducted a study on the attitudes and perceptions of cost-sharing among Nigerian students. They said the students were aware of the severe financial shortages at the universities, the inadequate study environment, and therefore the need for immediate financial attention. However, they were unable to accept the idea that they and other stakeholders should share the financial burden.

Yizengaw's (2005) findings describe stakeholders' perspectives on cost-sharing in Ethiopian HEIs. According to Yizengaw (2007), there were differing views, perceptions, and reactions from the general public as well as students regarding the cost-sharing program's implementation in Ethiopia. This information is based on accounts of discussions that took place in universities and in public during radio and newspaper debates in the years 2002 and 2003. Although many people generally supported the idea of cost sharing being implemented, the author noted that they questioned why it should be done at that specific time (Yizengaw, 2007, p. 185).

According to Obasi and Eboh (2002), the financing of education influences how students and parents perceive the benefits and costs of education, which in turn influences private demand for education and options for cost-sharing. They came to the conclusion that in Nigeria, willingness to pay is a perceived quality that arises from the interaction between a person's worldview and their experience in higher education. This was the finding of their investigation into parents' and students' perspectives on cost-sharing.

According to Yizengaw (2007), Ethiopian students and the general public view cost-sharing as follows:

- Some of the expenses related to higher education and other services are covered in part by the beneficiaries.

- In order to ensure that taxpayer funds are distributed fairly, beneficiaries should pay for their own higher education.
- Graduate taxes will make sure that everyone has an equal chance to share costs.
- The repayments would increase the Treasury's resources, which could then be used to increase access and opportunity by growing and expanding the higher education market.
- Cost-sharing eases the government's financial restraint and enables it to deliver fundamental social services like health care and education.

2.15.6. Recovery of Cost Sharing in Ethiopian Higher Education

Ethiopian students are required to reimburse their share of costs through the graduation tax upon graduation. The success of the cost-sharing recovery program is legally the responsibility of the Ethiopian Revenue Authority, employer organizations, and beneficiaries (FDRE, 2008). The legally binding contract the beneficiary signs with the institutions at the beginning of each academic year serves as the basis for reimbursement or cost recovery. By accepting the terms of this agreement, the beneficiary has acknowledged that the debt will be paid off from future earnings in the form of tax deductions in accordance with applicable legal norms (Yizengaw, 2007).

According to Johnstone and Aemero (2001), Ethiopia's graduate tax will not generate a significant amount of non-governmental alternative revenue. In addition to housing subsidies, they also propose small upfront tuition fees. The claims made in this passage are supported by Yizengaw (2007) assertion that "the revenue generated by graduate tax programs may be negligible, especially considering the huge budgets and investments required to expand access, maintain quality, and ensure relevance." It is expected that the recovery rate could reach 10% in the first year and 20% in the 20 years after 2015, with a default rate of 30% (ibid.).

The following drawbacks of the graduate tax in Ethiopia are listed by Yizengaw (2007, p. 184):

- Being unable to get money back for years. After the scheme has been in place for four to five years, recovery or tax revenue starts to flow in. Before the system properly recovers its costs or achieves a break-even point, it will most likely take ten years or longer. Considering the discounted present value and likely default rates, it is still uncertain whether the payments will be enough to pay off the new loans;
- There is no assurance that the additional funds raised will be given to the universities, aside from the relatively small upfront payments;
- The possibility that beneficiaries will forego repayment, rendering the program unattractive and inefficient as a secondary source of income. There is inadequate central or local documentation of the beneficiaries' whereabouts;
- To keep up with the growing number of graduates, modern and efficient tax mechanisms as well as improved government bureaucracy are needed in countries such as Ethiopia, where such a system is not currently in place.
- In addition, beneficiaries' failure to disclose their full income for graduate tax repayment, which will be challenging given that most people tend to avoid disclosing their taxable income. These issues could render the cost-sharing plan for higher education ineffective. Tightening the collection system is essential for cost recovery to be successful, but from my observations, this is not yet well established. This motivated me to research Ethiopia's repayment practices.

Some defaults are anticipated under Ethiopia's graduated tax system. Lack of information about the beneficiary's place of residence after graduation, less controlled travel abroad by the beneficiaries, flaws in the tax collection mechanism, etc. are potential causes of default (Yizengaw, 2007).

The Government of Ethiopia, the Ethiopian Revenue and Customs Authority (ERCA), Ethiopian higher education institutions, and employers share responsibility for implementing cost sharing in higher education institutions, which makes cost sharing recovery more difficult (FDRE, 2008). The inability to adequately track students or graduates due to poor record-keeping is another issue that makes cost-sharing recovery difficult. Beneficiaries' records are hard to find in Ethiopia, mainly because they don't give accurate details about their current situation.

2.16. Chapter Summary

This chapter reviewed the literature relevant to the study. The review of this literature provided a thorough understanding of how cost-sharing policies are implemented in higher education from both national and international perspectives. It was crucial for the current study to examine both domestic and foreign studies on the implementation and use of cost-sharing programs and other higher education financing policies in HEIs. It was helpful in assessing the state of the Ethiopian HES, with a particular focus on cost-sharing schemes for higher education. The following chapter provides an overview of the theoretical framework of the research.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1. Introduction and Background

A theory is a set of interconnected ideas or a set of rules that can be used to give a systematic picture of a topic. A theory doesn't just explain facts; it also allows people to predict what will happen if specific conditions are met. This study will examine the Human Capital Theory (HCT) in light of cost-sharing and investing in one's own education in the Ethiopian HES.

The philosophical basis or justification is that human capital theory (HCT) is a popular economic theory that has been adopted in higher education cost sharing studies. HCT assumes that education is an investment in human capital, that is, the stock of knowledge, skills and abilities that individuals possess Gillies, D. (2015). The theory suggests that education increases individual productivity, which in turn leads to higher income and economic growth.

HCT has become one of the strongest foundations of educational policy discourse worldwide Gillies, D. (2015). It is used to justify the cost of higher education by portraying it as an investment in human capital that will produce returns in the future Gillies, D. (2015). The theory is also used to promote the idea that individuals should bear the costs of their education and not the state Tight, M. (2018).

However, HCT has been criticized for its narrow focus on economic goals and its reductionist view of education. Critics argue that education has broader goals and purposes that go beyond economic growth, such as personal development, socialization and citizenship. They also argue that the theory ignores the social and cultural factors that influence educational outcomes Gillies, D. (2015).

The importance of higher education manifests itself in many areas of life, from the personal fulfilment that comes from learning to the financial advantages for the student's

family and the economy as a whole. A return on investment for "human capital" is the capacity to earn more money, which benefits both the individual and society as a whole. So, if a nation wants to grow economically, it must invest in higher education. The most valuable capital, according to Marshall Marshall (1920, p. 564), is that invested in people.

Education has the power to change people's perspectives and build a more knowledgeable population capable of addressing the challenges to a country's economic development (Oluoch, 2006). Education is therefore seen as the basis of growth in social, cultural and economic capital and is, therefore, a proven investment in both the personal and the collective, which results in both national and global growth (Galabawa, 2004; Oseni et al., 2020; Oluwaleyimu et al., 2020). An investment in any aspect of education, such as training or on-going professional development is a worthwhile investment in Human Capital (Kang, 2004; Skrbinjek, 2020). Nowadays, it is widely recognised that investing in education is essential for achieving both national and global economic growth, and as a result, more funds are being directed there (Oluoch, 2006; Skrbinjek, 2020).

Most economists agree that a better-educated workforce is a way forward for a country’s development as the more competent and skilled the workforce, the greater the chance of being competitive in the global market. Therefore, we see more recognition of the importance of investment in human resources. Most economists agree that a better-educated workforce is a way forward for a country’s development as the more competent and skilled the workforce, the greater the chance of being a competitive global market. Therefore, we see more recognition of the importance of investment in human resources (Shahar, 2008; Skrbinjek, 2020; Dachi, 2021).

Families start to adopt this way of thinking when they realize that enhancing young people's opportunities for success in life can be done, for example, by choosing a school and obtaining a third-level qualification (Enedy Mlaki, 2014, p. 205). There is debate over the value for the economy of an over-reliance on academic education and the necessity of having a sufficient part of the workforce skilled in the production of quality goods, even though it is acknowledged that education develops human capital to the benefit of the economy and contributes to an overall sense of achievement for the person benefiting and his or her family and wider circle (Machlup, 1982).

In general, then, education is the basis of an improved standard of living, resulting from enhanced employment opportunities and on-going professional development which in turn increases the chances of promotion and decreases the risk of becoming unemployed. As a result, universities and colleges are recognised in human capital theory as contributing to economic growth through knowledge creation and the development of new technologies and processes.

3.2. Human Capital Theory (HCT)

Numerous studies on human capital theory have been done (Becker, 1975; Sweetland, 1996; Picot et al., 2007; Tan, 2014). It is, therefore, necessary to investigate the term "human capital" in order to comprehend the theory. Firstly, it is a very broad term that can include the total sum of a “know-how” in a defined group or community which has been achieved through education, training, experience, and the general nurturing of skills. Despite the fact that human capital encompasses all human resources, which are beneficial to both society and the economy as a whole, literature places a much greater emphasis on the market outcomes than on the social outcomes (Picot et al., 2007; Adejumo et al., 2021). Attention is generally drawn to the “skills” and “knowledge” of people rather than to innate individual resources, which also contribute to one’s productivity (Crocker, 2006; Tan, 2014). A person’s human capital enhances entrepreneurial and economic productivity (Schultz, 1982).

The OECD (2001, p.18) and Osiobe (2019, p. 179) defines human capital as "the knowledge, skills, abilities, and qualities demonstrated by individuals to facilitate the creation of personal, social, and economic value". It can also be used to describe the labour force's skills, which are regarded as resources or assets and have to do with the investments made in workers' productivity, health, and education (Iorgulescu, 2015). People acquire these abilities through the process of vocational and technical education. Such capital is the outcome of carefully thought-out investments that produce income.

By experts like Nafukho et al. (2004), it is called a type of capital, that is, something that people get through education and training and is the result of a targeted investment that produces results. It is simple to see how education contributes to the

growth of knowledge and skills, but it can be more challenging to link this realization to the deliberate choice to invest in education as an economic investment. All definitions of human capital theory are similar in that they put forward investing in all forms of education, from general to vocational and technical qualifications to on-the job and general training, as enhancing productivity and improving wages (Machin & Vignoles, 2004).

Human capital is not a new concept. Spengler (1977) refers to Adam Smith discussing it in his Wealth of Nations, where he considered the abilities, innate or acquired, of human beings should be included alongside land, buildings and machines as “fixed capital”. While acknowledging that education was one important source of human capital, Smith, however, questioned whether it should be the state or the individual that should pay for it. He believed that there were three reasons why the price of human capital was "excessive":

- The length of time needed to finish an apprenticeship was excessive.
- The length of time that apprentices had to wait before receiving their training served as a deterrent to employment.
- It diminished the value of the person's own skills and labour.

Friedrich List and Johann von Thunen, among others, included people in the concept of capital because raising and educating people costs the economy “money” but also produces productivity that increases the country's wealth (Kiker, 1966). As well as the scholars already mentioned, Theodore W. Schultz and Harry S. Becker also considered human capital. Schultz considered that any expenditure on education, scientific research or health care that added to the bank of human knowledge, skills or abilities that added value to the economy, should be considered a capital investment like all other capital investments such as fixed assets and financial investment. Therefore, he was putting human resources on a par, as an investment in the economy, with all other forms of investment (Trifu A., 2012).

Becker concurs that all forms of education that added to a person’s future chances of earning an income added value to the economy fall under the term ‘human capital’ (Becker, 1993a). Trifu referenced Becker agreeing that investment in this form of capital is necessary for economies and society (Trifu, 2012). According to Coleman (Coleman,

1988), investing in technology and tools creates physical capital, just as investing in education and training creates human capital. So, we can conclude that anything that further enables people to be more productive can be considered human capital. The Chicago School and Jacob Mincer, who saw it as being equivalent to investing in other forms of capital and further stated that people's achievements depended on monetary and non-monetary investment in their self-development, strengthened the idea of education, training, medical care, and other types of assistance as an investment in human capital. Human capital, like other capital, is, as he says, substitutable but unlike other forms of capital, is not transferable (Trifu A., 2012).

The main reasons people invest in higher education are to increase their income through education certifications: the difference in earnings between people with specialisations and professional qualifications and those without, points to the cost of education being expected and accepted as a necessary forerunner to the financial gain-in a shortened time frame that will accrue to the beneficiaries. This increased earning capacity resulting from higher education is, therefore, a basic consideration in the analysis of human capital theory (Shahar, 2008). As a result, the case for investing in education can be made on the basis of expected future income growth.

The concept of human capital as a worthwhile investment comes from the recognition that improving people's capabilities leads to high productivity and future higher earnings for individuals and firms. Investments in education and training are therefore chosen on the same grounds as all other investments: the promise of a return for money invested, albeit that the return on investment in education in terms of highly qualified and better trained workers being more productive may be delayed relative to investment in other forms of capital (Blundell et al., 1999; Adejumo et al., 2021).

Accumulating human capital is understood as an investment involving short-term sacrifice in return for the expectation of long-term gain: education will cost money and earnings will drop for the duration of training, but productivity levels and earning capacities of better educated and skilled workers will, in the longer term, yield returns (Blundell et al., 1999).

When measured by the economic yardstick, people decide to spend money directly on education costs or indirectly by foregoing immediate earnings based on the expectation of reward in the form of a higher salary once they have gained their qualifications (Urbánek & Maršíková-Nepolská, 2005).

According to Clark et al. (2009), students' and their parents' expectations of more opportunities for career choice and advancement are the primary cause of the increase in applications for enrolment in higher education programs. This turns learning and education into an investment rather than a pursuit of knowledge for its own intrinsic value. It is therefore opined that if third level education is so beneficial economically to individuals, then those individuals should pay for it (Holborow, 2012).

As one would expect, a rise in the cost of anything has the effect of making that commodity more desirable and education is no different. According to evidence provided by Arum and Roksa (2011), the idea that education should be seen as an investment has led to a sharp increase in costs in the United States. Shela Slaughter and Gary Rhodes have further opined that rising fees have raised expectations of both students and parents of greater returns from investing in education or human capital. Due to the perception that the benefits are most beneficial to the individual, it also led to a shift from subsidies to loans as a means of financing private higher education (Arum & Roksa, 2011; Slaughter & Rhoades, 2004).

By using Canada as an example, Clark et al. (2009) support the hypothesis that higher salaries are correlated with higher levels of education. They further show that higher education leads to people being in permanent employment, year round (Clark et al., 2009). Scholars like Livingstone (1997) and Côté & Allahar (2011) support the correlation between higher education attainment and higher salaries and lower unemployment rates.

Bowles and Gintis (1975) posit there is evidence that students apply for third level courses based on market trends: they choose courses which will qualify them in specialisations most likely to be in demand when they graduate. The decisions they make affect third-level institutions' decisions regarding which courses to offer at a particular time because supply and demand are always correlated. The supply of human capital is therefore predicated on demand in the market (ibid).

Advocating for Human Capital Theory, according to Schultz (1971) and Sakamoto and Powers (1995), society and the economy benefit from investing in people. According to Almendarez (2013), it is based on the notion that formal education not only affects but also significantly contributes to increasing population productivity levels.

According to human capital theory, spending money on education increases both lifetime income and labour productivity. Additionally, it highlights how investing in education increases workers' innate abilities and investments in them, which in turn increases their level of cognitive stock and increases productivity and efficiency (Worku, 2020; Adejumo et al., 2021). Because people are considered a form of capital for development, the human capital theory aims to explain the advantages of investing in human resources through education and training (Aliaga, 2001; Becker, 1993). This viewpoint holds that strategic investments in education and training increase people's employability, their own and their organizations' productivity, and support global growth and development (Nafukho et al., 2004).

Investing in human capital through education is widely recognized as a way of passing on new information to the next generation. But he also emphasizes the importance of applying this more ancient knowledge to new production methodologies, leading to the creation of new services and incomes (Becker, 1993b).

There is on-going debate over whether an individual or society benefits more from education, despite the fact that academics generally agree that it increases human capital. People pursue advanced degrees in the hopes and anticipation that they will ultimately result in higher incomes. Some commentators, including the World Bank and others, express the view that because individuals gain most, it is reasonable to expect they bear a commensurate share of the cost.

Large investments made by individuals or families are justified by the high returns on investment in higher education, to be borne through immediate or deferred cost sharing (World Bank, 1994; Ziderman & Albrecht 1992). According to human capital theory as it applies to education, paying for one's own education on the basis of private returns is acceptable (Eicher, 2000). It is clear, therefore, that when measured by this yardstick,

individual investment in education is very rewarding and therefore, the expectation that the individual bear a share of the cost is wholly justified.

Based on this idea, when applying to higher education institutions, students decide which courses to choose by analysing cost-effectiveness. Cultural as well as monetary gains over a period of time are considered when investing in education (Becker, 1993a).

Becker (1993a) looked at the financial and social returns to men, women, blacks, and other groups on time invested in and expenditure on education before moving on to examine the correlation between education investment and the theory of human capital. Based on human capital theory, he first explored the idea that people invest in education until the additional income return equals the cost of admission. The benefits, which come in the form of increased productivity brought about by a suitable level of education, benefit both the individual and society (Nafukho et al., 2004).

According to Becker (1993a), people with higher education earn more than the average citizen, so investing in education and training is the best use of human capital. He did not, however, limit his consideration of human capital investment to formal education; he also included all forms of self-development, anything that enhanced one's lifetime appreciation of culture or improved one's health. He argues that the main concern of proponents of human capital theory is how people build human capital, including on-going professional development.

Becker (1975) defines "human capital investments" as "activities that affect future financial and psychological returns by increasing human resources". People increase their earnings by investing in the acquisition of skills and in improving their general knowledge and health (Becker, 1975). It follows then that cost sharing in higher education is an investment which will lead to higher individual incomes and non-material gains.

Crocker (2006) concurs that by acquiring human capital, a person will gain a better job and increase income (Sweetland, 1996; Riddell, 2006; Tan, 2014) and add weight to the concept that human capital benefits society. The justification for this is the idea that since society is made up of individuals, any improvements in education and training made

by those individuals increase the stock of human capital, which in turn raises the level of output and other economic variables in general.

According to Côté (2014), this is relatively true for all levels of education and training. The rate of wages that apply to each individual depends on the rise in productivity brought on by their relevant level of education. Any given economy will thrive to a greater extent as a direct result of increased productivity and services (Tan, 2014).

Thus, human capital theory assumes that educated people are more likely to find employment, need less government assistance, are more entrepreneurial, and are better able to adapt to adverse economic conditions.

Therefore, investing in one's own education allows individuals to benefit from investments in human capital. "People can increase their options by investing in themselves." It is one method by which free folks might improve their lot in life (Schultz, 1961). It is of course widely acknowledged that investment in education necessitates a certain level of sacrifice in the short term for the individual, as has been referenced already. It is also accepted that governments, like individuals, will consider the likely profitability of investing in particular programs through higher productivity. As a result, it is anticipated that wage variation will reflect productivity variation and serve as a benchmark for wages and salaries paid by both public and private organizations globally.

As a result, extensive research supports the hypothesis that education and training enhance human capital and economic sustainability potential in the future increase with the amount of money one and their families spend on education generally and on specialized training in fields like computer skills, for example (Becker, 1993a).

Harmon (2011) expanded the body of literature on human capital by referring to the "advantages," both financial and non-financial, that people receive from investing in postsecondary education, as well as the advantages that accrue to their families in terms of health, partner preference, fertility, life expectancy, higher saving rates, social opportunities, such as the choice of activities they can engage in, and their general well-being and happiness.

Furthermore, according to Friedman (1982), investing in education and training will yield a higher return than investing in other types of capital. Therefore, there is the suggestion that there is a relative under investment in human capital. Unlike other scholars, such as Becker, Friedman (1982) distinguished between general education and vocational or professional training. Because training raises productivity and in a free enterprise society, this results in extra earnings for work done and services supplied, there is an incentive for people to invest in such human capital (Hakemy, 2017). The person must balance the costs of the training with the benefits when deciding whether to make this investment. According to Friedman (1982), the main costs are the income lost during the training period, the profit lost due to the delay in the income initiation period, and the special costs associated with training, such as learning costs and expenses for purchasing books and materials.

Tan also makes this point that people's investment in education is based on the returns being positive or at least equal to the cost of pursuing the education (Tan, 2014). Because an investment in education pays off for the person, it is reasonable to be of the opinion that individuals should share in the cost of education. As already cited, many studies show how students can afford to do this.

The costs can be borne by students in different ways: some may be working part-time; others may choose to take a loan to be repaid, in the normal monthly way, after graduation, if that option is available to them. It may be possible to have an arrangement with the loan institution that will allow employers deduct the amount from salary; it may be possible to get a loan where the repayments will be set at a certain percentage of salary; or if the loan is from government, it and the agreed interest rate may be paid back, as surtax or some such tax on income after graduation, until the amount of the loan is cleared (Chapman, 1999).

Because of the benefits that graduate students enjoy, more and more scholars are advocating for students to pay a portion of the cost of higher education. Bloom et al., (2006), in explaining human capital theory, argue for cost sharing based on the fact that education increases the productivity of graduates, which in turn leads to better job

prospects and higher salary prospects. This elevating of human capital means higher salaries as well as a lower chance of unemployment (Mora & Vila, 2003).

The World Bank and other organizations have both recognised the benefits of higher education for students, including better job prospects, higher earnings, higher savings, wiser spending decisions, more opportunities to move around for professional advancement, and non-financial benefits like better working conditions, greater job satisfaction, better health, longer life expectancy, more choice in leisure activities more personal development, etc. (JongbLoed & Vossensteyn 2002; World Bank, 2002).

Another scholar, Woodhall (2007), argues that cost-sharing in higher education benefits students both financially and non-financially. Although the intangible benefits are difficult to quantify, studies generally agree that a third-level education has greater returns to the individual than to society, which supports the notion that those who benefit should contribute to the cost of the service's provision.

Many students today have to work to cover living expenses, as well as sometimes tuition fees, to partially fund their college education. As a result, many countries have established lending programs (World Bank, 1994).

Banks, however, do not find students who lack collateral very attractive borrowers because they consider them bad risks or they have to wait for long periods for loans to be repaid. As a result, the majority of students with bank loans tend to come from wealthy families and receive financial support from their parents or other family members (Woodhall, 1983).

According to Marginson (1993), the basic principle of human capital theory is that an individual acquires expertise and talent through education and training, which together constitute human capital. His work productivity will increase with these skills and knowledge. In an ideal labour market, an individual's wages are determined by his or her productivity, so increased productivity will result in higher individual wages. As long as the return on private investment is greater than the private cost, people will continue to invest in education. With these basic assumptions, the logic of human capital theory is made clear. Education and training promote human capital, leading to a higher rate of

productivity, which increases an individual's wages. According to this statement, since income and education are positively correlated, education and training should be encouraged (Tan, 2014).

3.3. Chapter Summary

In this theoretical literature review, the main principles of human capital theory were discussed, along with their relation to education. According to human capital theory, individuals act rationally and self-interestedly to maximize their self-interest. To become more useful, people participate in the development of their human capital. One thing people can do to develop their human capital is educate themselves. Education creates economic benefits for individuals and society as a whole by increasing economic productivity and entrepreneurial capacity. Therefore, cost sharing in higher education represents the financial investment of students in improving their human capital.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction and Background

Research methodology is the main topic of this chapter. It begins by framing the research paradigm and design. The second part specifies the data sources used for the study. Sample sizes and sampling techniques were presented in the third section, while the instruments and procedures of data collection, including validity and reliability issues were discussed in part four. The chapter concludes by outlining the techniques for data analysis combined with the operationalization of the variables incorporated in the conceptualisation of the study.

4.2 Research Design

This study evaluated the cost-sharing practices in the Ethiopian HES in light of policy and strategy directions as well as competing global perspectives on cost-sharing schemes, according to its intended purpose. Besides a realistic description of the prevailing contexts and trends in the practice of cost-sharing, it tried to build up knowledge and understanding in the cost-sharing system. The study employed a cross-sectional descriptive as well as analytical survey design (Cohen, Manion & Morrison, 2007; 2018; John W. Creswell & Creswell, 2018; Hancock et al., 2018; Grønmo, 2020; Leavy, 2017; Stockemer, 2019), along with a pragmatic mixed-methods approach to data collection and analysis. The descriptive survey was used to evaluate what had happened and been established in the cost-sharing practice by looking at the attitudes and opinions of study participants. The analytical method, on the other hand, was important to explore and examine the deductive association between cost-sharing and repayment practices. That is, it attempted to assess cost-sharing performance by looking at the status of repayment practices and describing challenges, trends, and practices based on answers to sub-questions.

On the basis of two presumptions, the study aimed to show how complementary it is to use explanatory quantitative and qualitative methods (Creswell, 2012; Edmonds & Kennedy, 2017; Cohen et al., 2018). First, studying the practices of cost-sharing from a policy perspective was an intricate process that needs involving different "data sources" and garnering the perspectives of different actors. Second, using quantitative or qualitative methods to investigate this question may limit the breadth and depth of the data and the applicability and accuracy of the conclusions. According to Cohen et al. (2007,2018), while quantitative data from survey methods helps clarify the overall picture of a study, deeper insights are obtained through individual interviews, often conducted on a one-on-one basis, providing comprehensive data on questions. Besides, Cohen, et al. (2007, 2018) buttress that combining quantitative methods of data collection with that of the qualitative one is so essential because it gives an opportunity to probe beneath the surface and examine the less overt aspects of an organisation under study and to complement comparatively superficial information gathered through the quantitative survey method alone. Collins, Onwuegbuzie and Jiao (2007), in favour of this, expound that the mixed methods design is so broad and ideal because it triangulates, complements, initiates, develops, or expands results of different methods. In this regard, Creswell (2012) and John W. Creswell & Creswell (2018) finds that a mixed-method approach, as opposed to a quantitative or qualitative approach, helps to better understand the current problem. Usually, mixed-methods design is preferred to create a deeper understanding of the topic being studied.

To take advantage of the benefits of mixed method design, I used it in this study. For example, combining qualitative and quantitative research methods well-suited to the research questions will help overcome the weaknesses of both methods and leverage their strengths in a single study (Johnson & Onwuegbuzie, 2004); acquire a "deep and broad understanding of the context" (Schram, 2014); and gain a deep understanding of the topic under study by gathering information from a variety of sources (Lodico, Spaulding, & Voegtle, 2006).

A mixed approach also gives the researcher flexibility in the methods they choose for gathering data and presenting their findings (Roest et al., 2015). Borrego, Douglas, and Amelink (2009); Edmonds & Kennedy (2017)state that it also "improves data

accuracy and helps avoid biases stemming from single approaches" and "gives the best chance of getting useful answers from bigger data" (Denscombe, 2008). In this study, based on the above reasons, data from both quantitative and qualitative sources was collected and analysed.

It is necessary to choose and make a decision regarding which mixed-methods research design to use because there are various types of them. According to Creswell (2012) and Gay, Mills and Airasian (2009, 2012), the two crucial considerations when deciding which mixed method to use are time order (concurrent versus sequential) and paradigm (equal status versus dominant status). According to Creswell, Clark, Gutmann, and Hanson (2003), Asenahabi (2019) the type of mixed approach used in a given study will vary according to "the implementation of the data collection, the priority of the study in quantitative or qualitative research, the stage of the research process in which the integration of quantitative and qualitative research takes place, and the possibility of using a transformative value or an action-oriented perspective. The explanatory sequential design (QUAN-Qual model) was chosen because the nature of this study leaned towards the quantitative type in its implementation. Using this template, the researcher can collect quantitative data first, which helps me interpret or elaborate on the quantitative findings, and then qualitative data (Toyon, 2021). This model is "perhaps the most common form of mixed methods design in educational research", according to Creswell (2012, p. 542); Asenahabi, 2019, p.85). Using this model, Creswell continues, "more analysis, especially following the trend of qualitative data collection, has been necessary to refine, expand, or interpret the big picture" (Creswell, 2012, p. 542). The quantitative data and findings "present a broad overview of the research problem."

The rationale for this position was for the participants to express their opinions and perceptions about the implementation of cost-sharing and reimbursement practices in the Ethiopian HES and the difficulties encountered. The study's design also aims to fully collaborate with the participants to elicit as much information as possible.

4.3 The Research Paradigm

A paradigm, to put it simply, is a set of beliefs (or theories) that govern how we act, or, to put it more formally, creates a set of practices. This can involve both behaviour and thought processes. According to Kuhn (1962), a paradigm is "an accepted pattern or model", "an organizational framework", or Kivunja & Kuyini (2017), "a deeper philosophical view of the nature of social phenomena and the structure of society." The definition of a paradigm given Teddlie and Tashakkori (2009) is "a view of the world, as well as the various philosophical assumptions associated with this view".

Thus, this study was related to the philosophical foundations of pragmatists. The works of Peirce, James, Mead, and Dewey formed the basis of the pragmatic school of thought (Cherryholms, 1992). The pragmatism paradigm, according to Johnson and Onwuegbuzie (2004), Maarouf (2019), seeks to put an end to "metaphysical disputes" or "paradigm wars." Pragmatism views thinking as a tool or instrument for action, problem-solving, and prediction. Pragmatism emphasizes the practical application of concepts by putting ideas into practice and testing them in real-world situations (Leavy, 2017), Asenahabi (2019), Maarouf (2019).

According to the pragmatist school of thought, the best research methodology should be used to solve the current research problem. Furthermore, using any of the techniques and procedures related to quantitative and qualitative research is allowed when using the pragmatic research approach. The fact that both qualitative and quantitative data are collected, consistent with the pragmatists' idea of using both methods, means that the research lies within this philosophical idea of the pragmatists. Additionally, pragmatics understand the social reality of study units as it is without manipulating it (Tashakkori, Teddlie & Teddlie, 1998); instead, they do not manipulate individual study units to obtain pertinent information to meet research objectives.

Johnson, Onwuegbuzie, and Turner (2007) argue that pragmatic thinking suggests using an 'eclectic approach' when choosing a method. By combining quantitative and qualitative methods in a single study, mixed-methods design is supported as a third option among different research paradigms (Denscombe, 2008) . To support the use of different

approaches to answering research questions, mixed-methods research uses pragmatic models (Johnson, Onwuegbuzie, & Turner, 2007; leavy, 2017; Asenahabi, 2019). According to Pragmatism, research methods should be combined (Johnson & Onwuegbuzie, 2004; Asenahabi (2019), and it is important to use a variety of methods and different types of data collection and analysis when working with social context, like the one in this study (Sharp et al., 2012; Fuyane, 2021).

In its most basic sense, the term "pragmatism," which is closely related to mixed-methods research, refers to a methodical approach to a problem. Pragmatism can be thought of as a link between paradigm and methodology, or what Greene and Caracelli (2003) call a particular position at the intersection of philosophy and methodology. Increasingly pragmatic researchers are using mixed methods (Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Morgan, 2007; Maarouf, 2019). Feilzer (2010), and Kelly & Cordeiro, (2020), asserts that it is more interested in finding solutions to real-world problems than it is in making broad statements about the nature of knowledge.

According to Onwuegbuzie & Johnson (2006), pragmatism is result-oriented and interested in figuring out what things mean. According to Biesta (2010), it also focuses on the research's end result. It sets itself apart from other approaches by emphasizing conversation and building meaning in groups to generate practical answers to social issues. It gives priority to the research question (Teddlie & Tashakkori, 2003). The foundation of pragmatics is the idea that theories can be generalized and contextualized by examining how well they "translate" into various contexts. This study was therefore attached to the philosophical underpinnings of pragmatism.

4.4 Data Source

The study used both primary and secondary data sources. To collect primary data, questionnaires and personal interviews were used. Since cost sharing in HES was a very broad concept that involves various stakeholders, the target population of the study included four distinct participant categories: employed public university graduates; revenue offices personnel; public service and human resource development offices personnel’s;

and university cost sharing officers. Each category has its own roles that in no way could be substituted by the other as outlined hereunder:

- The employed graduates were the key and useful data sources who explicitly know every aspect of the repayment process, and provide the information required by the study. They were so indispensable in delivering the necessary information about their cost sharing practice and challenges faced during implementation. Since graduate students were expected to have adequate repayment experiences, they delivered valuable information not only about the repayment "practice" but also about that of the general policy environment.
- Personnel from the Revenue offices were crucial for providing information about what was actually occurring at the grassroots level. The concerned revenue collection process officers provided highly important data regarding the leadership and implementation of the entire cost sharing repayment practice and the challenges in the process in their respective *Woreda*[1] offices.
- Personnel from public service and human resource development offices were also so essential for delivering data regarding what were actually happening at the grassroots level. Because they were the ones who hire individual graduate students for each public sector, they were expected to know issues related to the cost sharing agreements. Therefore, they were expected to provide highly important data regarding the hiring process and implementation of the cost sharing related to the agreement and some challenges and repayment practices in their respective *Woreda* offices.
- University cost sharing officers were included in the study because they are accountable for the cost sharing agreement which was done between students and the government when students first join the university for their study. They were expected to have adequate and relevant information on the overall implementation process.

Regarding the secondary sources of data, documents that were related to cost sharing regulations and directives, cost-sharing agreements, and repayment reports were reviewed in this study.

[1]Districts or woreda (Amharic: ወረዳ) (also spelled wereda) are the third-level administrative divisions of Ethiopia.

4.5 Population, sampling and sample size

The portion of the target population that the researcher will examine in order to draw generalisations about the entire target population is known as a sample. A sample, in the words of Creswell (2012), Gravetter & Forzano (2018) Cohen et al,, (2007,2018), as well as Sapsford and Jupp (2006), Privitera & Ahlgrim-Delzell (2019), Paul Cozby and Scott Bates (2018) is "the set of elements selected in some manner from a population to which most research activities are subdivided. They underline that the suitability of a sampling strategy is one of the key elements that determines the quality of the research activity and its output. In the same way, Bethlehem (2009), Dattalo (2009), and Somekh and Lewin, (2005) Cohen, Manion, and Morrison (2018), assert early decision on a sample size and sampling strategy is an important step in a survey method. Onwuegbuzie and Collins (2007) and Charles Teddlie and Yu (2007) also emphasise paying adequate attention to the research design while deciding on the sampling method to be implemented.

Onwuegbuzie and Collins (2007) and (Cohen et al., 2018) state that in research projects such as the one described here, it is important to use mixed-method sampling designs because data triangulation is one of the objectives of mixed-method designs. This means that in such designs, both the information-rich and the representative sampling paradigms are crucial, because the information-rich paradigm helps to gather a great deal of data from individuals to respond to the inquiry effectively and adequately and create an in-depth understanding than empirical generalisations. Conversely, the representative sample paradigm made it crucial to gather information from a variety of participants so that results could be applied to a larger population. According to Cohen, et al. (2007, 2018), several parameters must be considered when determining a sampling strategy and sample size for a study. These parameters include the sample size, the sample's representativeness, the possibility of accessing the sample, and the proposed sampling method.

It's important to determine the necessary sample size before selecting study participants. As a general rule, a large sample of the population should be chosen. As the sample size increases, the sample is less likely to deviate from the population (Creswell,

2012). In general, larger samples are preferable because they provide greater reliability and allow for the use of more complex statistics (Cohen, et al., 2007, 2018).

As a result, using a simple random sampling technique, two national regional states, one city administration, and nine national regional states were selected for this study. Then, from these two National Regional States and one City Administration 35 *Woredas* and different public sector offices were selected through the same sampling method from these *woredas*.

Then, individual graduate employed participants from these 35 *woredas* and different public sector offices were selected with the same technique. An effort has been made to include as many different professions as possible to fully understand this phenomenon in the fields of studies, public sector offices, and the woredas. To ensure diversity, stratified and cluster sampling techniques were used. After grouping graduate employees into clusters of public sector offices, participants were chosen proportionately from each office occupation and integrated under each sector using a stratified technique.

The personnel from *woreda* Revenue offices and public service and human resource development offices were selected from the above 35 *woredas* which employed graduates was hired and university cost sharing officers were selected purposefully. That is done with the belief that these people are the most appropriate to have adequate information to the inquiry.

Although the best solution to the sample size problem is to use a large sample size, researchers have found that 350 to 400 people may be sufficient to accurately estimate the characteristics of any significant population size when conducting a survey study (e.g. Cohen, et al., 2007, pp.103-104; Cohen et al., 2018, pp. 203-205; Dattalo, 2008; Scott & Morrison, 2006; Creswell, 2012,pp. 146-147). Sampling techniques used in survey studies with sample size formulas lend support to this estimation as well. For example, Scott and Morrison (2006), Cohen et al. (2007, 2018), Creswell (2012), Gay Mills and Airasian (2009), Cozby (2008), and O'Leary (2004) advise using the formula at 5% margins of error and 95% confidence level with a 384 sample size to represent as much of the population as possible. Additionally, the larger the sample size, the more likely the study's results are to be generalisable outside of the study across the entire population.

Therefore, 384 is the ideal sample size for survey design research in education, regardless of population size.

However, a maximum of 650 participants were aimed to be selected from graduate employee groups in this study for the sake of convenience. A sample size of 650 was in fact greater than what was needed for the study for these groups because, according to the MoE's annual abstract for education, there were 294,965 graduate students enrolled in regular programs at the 33 public universities between 2003, when the cost-sharing scheme was implemented, and 2011 (MoE, 2009a; 2010a, 2010b; 2011; 2012; 2013; 2015). This was intentionally maximised. I made this choice because each randomly selected participant was given a questionnaire to complete on their own and then return once finished. In such cases Cohen, et al. (2007,p. 101) advise that using up to twice the actually required sample size avoids the risks of losing questionnaires owing to failure to return them at all or return of wrongly filled out questionnaires that would be thrown away by the time of data cleaning.

In order to lessen any sampling error that might be caused by the disproportionality of population size, the populations of the public sector offices in each woreda were taken into account (Gay et al., 2012; Cohen et al., 2018). Additionally, graduate employees from various woreda public sector offices, fields of study, or departments were included as much as possible.

The collection of qualitative data from the revenue offices was, however, limited only to four woreda offices from the two regions and one woreda office from the one city administration, as well as the cost-sharing officers from the five universities to see whether their perceptions of key cost-sharing implementation issues and repayment practices diverge from or converge with those of the graduate employees. This was chosen on purpose because it would take too much time and effort to conduct in-depth interviews with every participant category in the two National Regional States and one City Administration study area in order to collect qualitative data.

Table 4: Target Populations and Estimated Sample Size

No	Participant category		Size		
		Graduation Year	Population /woreda/ University	Sample	Remarks
1	Graduate Employees	2003	5,594		
		2004	8,341		
		2005	24,542		
		2006	27,444		
		2007	31,575		
		2008	38,057		
		2009	46,216		
		2010	53,829		
		2011	59,367		
		Total	**294,965**	**650**	
2	From *Woreda* Revenue Office	Amhara Region	168	**17**	
		Tigray Region	54	**6**	
		AA City Admin.	117	**12**	
3	From the Office of Public Service and Human Resource Development in Woreda	Amhara Region	168	**17**	
		Tigray Region	54	**6**	
		AA City Admin.	117	**12**	
4	From University Cost Sharing Officers	Amhara Region	7	**3**	
		Tigray Region	3	**1**	
		AA City Admin	3	**1**	
5	Total			**725**	

Source: MoE Education Statistics Annual Abstracts of 2003-2011.

4.6 Instrumentation and Data Collection Techniques

I used a variety of data collection techniques in this study to reduce the possibility of bias and increase the validity and quality of the study. This improved both my understanding of the important issues at hand as well as my level of confidence in the data's accuracy and quality (Maxwell, 2012). Overall, the ability to triangulate data sources has been made possible by the use of multiple instruments, which will increase the results' accuracy (Gall, Gall & Borg, 2007). I used the following data collection techniques keeping these advantages in mind.

A self-made questionnaire and interview technique were used to collect the primary data for this study. The literature review and national cost-sharing policies and strategies served as the basis for instrument design. The study's primary data sources were participant perceptions, which were heavily weighted. The study therefore concentrated on gathering the opinions and viewpoints of study participants. To cross-check or complement the data with one another, the data triangulation method was used. To further fine-tune individual perceptions and utilize the benefits of data triangulation, heterogeneity in the instruments and participants was necessary (Gay et al., 2012; Cohen et al., 2018; Paul Cozby and Scott Bates, 2018; Edlund & Nichols, 2019).

The data collection for this cross sectional mixed study has its own appropriate approach and methods. I used those methods, which were powerful enough to provide actual events related to the implementation and repayment practices of cost sharing. The following instruments were used for data collection:

4.6.1 Questionnaires

The questionnaire items were all closed-ended, with the exception of a few demographic questions. It was designed for graduates and staff members of woreda revenue, public service, and human resource development offices. Except for demographic variables (which are categorical), all variables in this study were measured using two types of attitude scales (Likert and rating scales), with scores ranging from 1 to 5. The use of attitude scales is important not only because they are easier to score but also because it is rarely difficult to complete as many items as possible (Best & Kahn, 2006; Cohen, et al., 2007, 2018; Gay, Mills & Airasian, 2009). As much as possible, the questionnaires which are set were designed in a way which would not create fatigue and turn off respondents from providing the required responses.

According to Cohen et al. (2007, p. 524), a factor's reliability increases with the number of items used to measure it. This was considered when designing the instrument used to collect quantitative data for the present study, and it was confirmed by performing a reliability test. The survey questionnaires for both participants have two major parts. The first focuses on the essential profiles of participants and their respective regions. Data regarding the repayment status of the graduate employees, the employees' service, their

qualification levels, etc. were incorporated into this profile section. These data were useful to inform the quantitative and qualitative status of the individual employee graduates in the study areas because they do have their own roles in affecting the implementation and repayment practices of cost sharing. The status of the employee, for example, implicitly informs the repayment practice, which, in turn, has its own role in the implementation and repayment process and the challenges of cost sharing.

The second section of the survey's participant questionnaire focused on subject-matter information. The sub-questions were developed using the guiding principles of the cost-sharing regulation strategy and the existing literature review, and the instruments were developed thematically based on these sub-questions.

Advantages and Disadvantages of a Questionnaire

Advantages	Disadvantages
□ Questionnaires can be used to quickly collect information from large numbers of individuals. □ If conducted in person, response rates can be high. □ Electronic or online surveys can save time and costs with data entry, and they can improve data quality by reducing data entry errors	□ Cannot ask additional probing questions. □ Response rates of mail and electronic surveys can be low. □ If questions are confusing or unclear, resulting data may be unusable.

Source: Source: Sources: IES (Institute of Educational Sciences) (Information, n.d.)

Instrument Validity and Reliability: These are crucial aspects of measurement because they significantly affect the reliability of the study's findings and the accuracy of the data. They save researchers from committing errors of asking irrelevant or wrong questions and skipping relevant or right questions (Cohen, et al., 2007, 2018; Creswell, 2012). These experts define validity as whether all the data support the purported interpretation of measurement results for the intended purpose. Validity simply refers to whether the items measure the variables that the researcher is trying to identify (Bethlehem, 2009; Nha, 2021). The following dimensions of validity were, therefore, taken care in this study. Content validity was considered to see whether the instruments are fair and comprehensive enough to address the domain or items that it is intended to cover.

Internal validity, a type of construct validity that emphasizes on whether the scores generated by a test of an instrument match with its supposed use, was also considered. In addition, consideration was given to the research results' external validity, or their ability to be applied to a larger population.

Besides taking care of implementing relevant and appropriate sampling and statistical treatment, a handful of mechanisms were applied to maintain those dimensions of validity. First, an effort was made to make the instruments as fair and exhaustive as possible. The questionnaires were then reviewed by pertinent, reflective, and critical colleagues currently working in the HES, and their input was highly utilised to ensure that no crucial questions were left out or irrelevant items were included. Based on the feedback obtained, I took note of the comments and suggestions of my colleagues. Therefore, some questions were rephrased; some were split, merged, or added, while irrelevant questions were excluded. Secondly, heterogeneous participant groups and instruments (triangulation) were utilised to gather as deeper and wider data as possible and address the purpose of the study more completely and appropriately. Thirdly, problems emanating from language barriers were resolved through administering the questionnaires after they are translated into Amharic.

The other aspect of data quality and trustworthiness took into account in this study is reliability. It focused on the issues of consistency, stability, replication, and dependability of results (Nha, 2021). Since reliability is bound up with validity to the extent that the two sometimes overlap (Cohen, et al., 2007, 2018; Creswell, 2012), the mechanisms applied for improving validity also address reliability concerns. In addition, the questionnaires were pilot tested to check the internal consistency of items because testing for internal consistency is so essential to determining whether the individual items could measure the intended constructs and correlate with each other. The statistical method Cronbach's alpha (alpha coefficient) is applied for this purpose because it is a more frequently implemented method of measuring internal consistency among items (Creswell, 2012; Gay, et al., 2009).

To this effect, the instruments were tested for internal consistency not only during the pilot test but during the main study period as well. The pilot study was self-administered at the Sekota Woreda Public Sector Offices of Amhara National Regional

State. It involved 90 participants (80 graduate employees from different public sector offices and 10 personnel from the Woreda Public Service and Human Resource Development Office and from the Woreda Revenue Office). This woreda was selected because it is convenient to the researcher. That way, the researcher can collect data easily and take the necessary measures in the shortest time possible. The collection of the pilot data in this woreda had its own procedures. First, the researcher communicated with each public sector office head and made them aware of my mission. After they warmly accepted and informed the researcher that they welcomed my mission, the head of the office helped to select participants using purposive sampling techniques to draw participants.

The purposive sampling on both graduate employees and personnel was preferred with the intention of limiting participants to those who have five and more years of service and benefit from the information they have accumulated so far. After participants were selected with their consent and assistance, then they collected the participants and introduced me to them. Then I made them aware that the administration of the questionnaires was sought for a purpose of a pilot study. After they were orally informed to comment on items that are wrongly or inconveniently set or are ambiguous for them to understand, the questionnaires were distributed among them and each of them have filled it out and returned it to the researcher. The questionnaires were administered in one room with my personal presence. This has made it possible to identify questions that respondents may have misunderstood or incorrectly answered. The clarification of questions they raised and the ambiguities they faced during instrument administration greatly assisted me in improving the items eventually.

Generally, feedbacks that improved both the content and clarity of the questionnaires were secured from participants in the pilot stage. Some of them have informed me by writing down their comments and by underlining concepts that confused them while they were filling out the items. Some have raised different clarification questions right during instrument administration, from which the researcher indirectly learned what to remove or modify and improve the questionnaires that were implemented. I took the measure depending not only on the comments and suggestions of participants but also on my observation during instrument administration in the pilot test, where I

understood that there were questions that needed modification, was similar, and repeatedly written.

The pilot study has involved participants with diverse backgrounds from different fields of study. With respect to graduate employees and woreda personnel, employees who had more than five years of experience were the dominant participants in a sample drawn through a purposive approach. The pilot study has also incorporated diverse woreda public sector offices as much as possible from their backgrounds point of view so that different social groups were represented.

Table 5: Background variables of the pilot study participants

Participant Category	Participants' profile by field of study	Responses	
		Frequency	Proportion
Graduate Employees (N=80)	Business & economics	19	23.75
	Education & Behavioral studies	4	5
	Engineering & Technology	11	13.75
	Language Studies, Journalism & Communication	16	20
	Natural Science	9	11.25
	Social Science	13	16.25
	Agriculture & veterinary medicine	8	10
Woreda Personnel (N=10)	Business & economics	6	60
	Education & Behavioral studies	1	10
	Social Science	3	20

To make the data easier to manage and analyse for reliability, they were cleaned, coded, and entered into the SPSS 23 program. Table 6 presents the reliability alpha coefficient results.

Table 6: Test of the pilot study's reliability using Cronbach's

Participants category	Variables	Number of Items	Cronbach's alpha
Graduate Employee (N=80)	Forms of cost sharing	4	.851
	Facilities/services supplied	9	.888
	Factors that affect repayment	12	.762
	Challenges	11	.739
	Perceptions and Views	13	.877
Woreda Personnel (N = 10)	Forms of cost sharing	4	.917
	Facilities/services supplied	9	.821
	Factors that affect repayment	12	.887
	Challenges	11	.780
	Perceptions and Views	13	.854

In principle, the higher the Cronbach's alpha value, the higher the reliability. According to Larson-Hall (2010) and Meyers et al. (2013), it is impossible to set a general rule that determines a universally acceptable minimum level of Cronbach's alpha without considering different factors (for example, the quantity of items, the quantity of available alternatives, the quantity of data dimensions, etc.) that are reported to affect its magnitude significantly. If the researcher wants to measure individual perceptions, interests, opinions, or information delivered, Blaikie (2003) and Creswell (2012), claim that 0.60 can be taken as the lowest acceptable level of coefficient alpha for determining whether the scale under consideration has internal consistency. Other sources of literature (e.g., Larson-Hall, 2010; Muijs, 2004) in fact suggest 0.70 as a reasonable "minimum" acceptable level of reliability if the items are set for research purposes and are adequate (not less than 20) in number.

4.6.2 Interviews

It was a one-on-one interview. This is because the semi-structured interview guide lays out topics or areas that the interviewer is free to explore, inquire about, and pose inquiries that might help to clarify and illuminate that specific subject. It, therefore, helped me to share the perceptions, feelings, and beliefs of participants more completely and clearly than could have been done through the structured interview method. Since it is the sequential design that was implemented, the content of interview items sometimes may overlap with that of the questionnaires.

One-on-one (face-to-face) interviews were used to collect qualitative data from participants, including four university cost-sharing officers and five revenue office heads. Both the administration of the questionnaires and all of the interview sessions were done in the local language in order to improve communication and understanding. Therefore, having a direct line of communication with the participants during the interviews was helpful for gathering information that is directly related to the study. That is why I conducted interviews with university cost sharing officers who are responsible for cost sharing agreement with student and, the heads from revenue office that directly have relations with revenue collection.

Advantages and disadvantages of an Interview

Advantages	Disadvantages
Can be used to explore new ideas or issues. Follow-up questions can be used to obtain more detail about interviewees' responses, when needed. Follow-up probes can be used to determine how interviewees are interpreting questions. Nonverbal communication during in-person interviews aids in response interpretation. Interviewees might be more Comfortable in a one-on-one setting.	Time-consuming to conduct. Time-consuming to analyze data. Limited number of participants.

Source: Sources: IES (Institute of Educational Sciences) (Information, n.d.)

4.6.3 Documentary Examinations

Document analysis is a valuable research method that has been used for many years. This method consists of analysing various types of documents including books, newspaper articles, academic journal articles, and institutional reports. Any document containing text is a potential source for qualitative analysis (Patton, 2015). Document is a term used to refer to a wide variety of material including visual sources, such as photographs, video, and film (Merriam & Tisdell, 2016). Like documents consisting of texts, those that consist of visual material can be a source for qualitative analysis (Flick, 2022).

Such sources are reliable, repeatable, and indeed address the subject of the investigation (Yin, 2009). As a result, the researcher used relevant and official documents to gather data. Specifically, cost sharing regulations and directives, cost sharing agreement forms done by students and the university, and administrative reports related to repayment collection practices by revenue offices, which are relevant sources to this study, were carefully reviewed. Therefore, this was executed to collect data that would provide a contextual understanding of policies, strategies, and their implementation.

Advantages and disadvantages of Document Analysis

Advantages	Disadvantages
Document analysis is less time-consuming and therefore more efficient than other research methods. It requires data selection, instead of data collection. Many documents are in the public domain, especially since the advent of the Internet, and are obtainable without the authors' permission. Document analysis is less costly than other research methods and is often the method of choice when the collection of new data is not feasible. As a corollary to being non-reactive, documents are stable. The inclusion of exact names, references, and details of events makes documents advantageous in the research process Documents provide broad coverage; they cover a long span of time, many events, and many settings	Documents are produced for some purpose other than research; they are created independent of a research agenda. Documentation is sometimes not retrievable, or retrievability is difficult An incomplete collection of documents suggests 'biased selectivity'

Source: Bowen, Glenn A., (2009) 'Document Analysis as a Qualitative Research Method'

4.7 Data collection procedure

The data collection process consists of two phases. Primarily, quantitative data were self-administered through survey questionnaires. Immediately after completing the collection, quantitative data were coded, entered and analysed using SPSS software. It enabled me to determine the type of qualitative data to be gathered. Then, using a self-administered method, qualitative data was gathered by interviewing participants and looking over documentary sources. Throughout the data collection procedure in the woreda public sector offices, I can say that I faced no challenges, starting with the gatekeeper. However, most of the office heads, team leaders, and graduate employees were hospitable and welcoming, probably because I am a student.

However, I must admit that my qualitative data collection process demanded strain and endurance. This was because when I went to universities, it was difficult to meet with the vice presidents because of meetings and other reasons. Even when I got the chance to meet them face-to-face to ask for the interview, most of them told and send me to go to the cost-sharing officers who work under them and are the ones that are responsible for cost sharing. Because of this, I was forced to change my data sources from vice presidents to cost sharing officers. Concerning the problem with the heads of the woreda

revenue offices, they are usually out in the field or in meetings. Therefore, because of these, it took an unnecessarily long time.

Documentary examination was also conducted subsequently. This was the most difficult time I faced in my data collection process. In particular, obtaining the official report letters from woredas was so difficult to get and required me to go back and forth owing to several appointments.

4.8 Data analysis and Interpretation

Since the QUAN-Qual model of mixed methods design was used in this study, data collection and analysis were performed sequentially. Quantitative data were collected and cleaned up first. The data cleaning process was executed to discard unusable data. Once the data are cleaned, they were coded and entered to reduce or condense and simplify it for the required analysis. Then, using descriptive and inferential statistics that were adjusted using the SPSS computer program, the data were thematically analysed, and the null hypotheses were tested.

When presenting the results of data analysis, items that address similar issues were clustered together, and total scores across items were developed instead of item-by-item response rates. This was done to avoid an excess of information and the consequent difficulty to squeeze and pave the way for easy understanding. Finally, exploratory thematic analysis was used to manipulate qualitative data collected through interview guides and documentary examinations. These include the transcription of local language notes into English text data, sorting and locating the data manually. Manual analysis was implemented because Creswell (2012) suggests that hand analysis is preferable for a smaller volume of data that does not exceed 500 pages.

The profile of participants was the initial data displayed in the process of the analysis. Before analysing the important variables that the fundamental questions had framed, descriptive analysis was used to make sense of the data.

Descriptive statistical measures and binary logistic regression were applied to the data analysis. The qualitative data that were acquired from interviews and documentary

review, on the other hand, was analysed qualitatively using narrative descriptions. To make the gathered information more manageable and less overwhelming, it was filtered and listed on note cards. As a result, the researcher organized the chronologically collected data, filtered it, and organized and made it manageable.

As much as possible, a deeper discussion was conducted and responses were sought through one-on-one interview. This was done with the intention of gathering in-depth information and grasping the very nature of a specific problem. Thematic data display, based on topics generated by the basic questions, is commonly used to examine both quantitative and qualitative data. The analysis of quantitative data was displayed first after which the qualitative data were embedded either in the form of texts or quotes to triangulate (supplement or diverge) the analyses of quantitative data. Just like the analysis, the discussion (interpretation) of findings was treated through the integration of the two data types.

4.9 Credibility and Trustworthiness

A logical sequence of steps is followed in a research design. The logical steps also contain the logical arguments that prove the accuracy of the study. As a result, a number of logical steps are suggested to evaluate the reliability of a research. Thus, the study's credibility, dependability, and transferability are the next topics of discussion.

a. Credibility: Credibility is the degree to which one has faith that the data and interpretations made from it are accurate. To increase my confidence and make sure the data were accurate; I used triangulation to compare the data from different sources. The research findings' credibility determines whether or not they accurately reflect the participants' original viewpoints and represent information that is logically derived from their original data (Anney, 2014; Othman et al., 2020). As a result, all the various sources that would take part in the study were used to evaluate credibility.

b. Dependability: This term describes the consistency or dependability of data over time and in various environments. By keeping a fairly thorough record of the process, the study would show that reliable procedures and reasonable decisions could be evaluated by other researchers. Because of this, the study was sufficiently open to give anyone the

chance to verify any data it used, and any kind of decision is also open to being assessed by researchers and all parties involved.

c. Transferability: This explains the efficiency with which the results of qualitative research can be used in different situations, environments, or groups. According to Schultz (1971), in order for a study's findings to be transferable, all of the specific findings must be presented for comparison alongside the "thick descriptions of the phenomenon." Anney (2014) asserts that a comprehensive description helps assess the relevance of a research context to other contexts. Thus, all of the specific findings were presented in a clear manner for comparison. Additionally, a thorough description of the nature and challenges of cost-sharing implementation has been provided by the study.

4.10 Research Ethics

Researchers have obligations to both the subjects they are studying and to their profession as a whole. A researcher must follow particular ethical guidelines, ethical principles, or ethical standards in order to successfully complete the research objective (Bogdan & Biklen, 2007). “Get consent from participants, protect them from harm and ensure confidentiality” are the three most crucial ethical considerations for researchers to bear in mind when collecting data (Lodico et al., 2006, p. 147). All study participants must provide their informed consent. To achieve this, it is necessary for participants to be aware of the study's overall objective, purpose, methodology, anticipated duration, and participant expectations. Therefore, the researcher's task is to provide the subjects with relevant information. Providing them with enough information will improve their ability to understand the nature of the study and to participate voluntarily.

Additionally, any research inquiry requires the disclosure of not only a comprehensive description of the phenomenon being studied but also individual viewpoints and emotions. This may require being trustful and confidential from the researcher side. The type of the problem to be investigated and the methods of acquiring valid and reliable data for the study therefore, require abiding by not only a set of pervasive rules and “regulations” but also respecting indigenous social, moral, and cultural norms and ethics. This inevitably necessitates being trustful and hence generates ethical questions. Particularly in educational researches that incorporate policy and programme

evaluation, just like the one under consideration, it obliges sticking to the principles of benefit maximisation (generating more and better benefits for the target population) and equal respect for all, considering all people free and rational entitled to the rights of human beings (Cohen, et al., 2007; Creswell, 2012).

In addition, subjects should be informed that participation in the study is completely voluntary and that they have the right to withdraw at any time. This is what informed consent means (Lodico et al., 2006; Neuman, 2007, 2012). In addition, it is the researcher's primary duty to safeguard “participants” both during and after the research project against any kind of physical or mental harm. A researcher is also required to maintain their identity in order to protect the respondents' anonymity. To achieve this, it is necessary to protect the privacy of the data provided by participants (Giordano et al., 2007; Bogdan & Biklen, 2007).

In order to follow these ethical guidelines, I first obtained a letter from the UNISA Addis Ababa Learning Centre introducing myself to the appropriate woreda officials and stating that I am a UNISA student majoring in educational leadership and conducting research on the implementation of cost-sharing in Ethiopian higher education. This has made it easier for me to contact the appropriate woreda sector office heads, department heads, team leaders, and graduate employees in the office and obtain permission from the woreda authorities to conduct the research in the various public sector offices. Throughout the data collection process, respect was shown for the research site, the target population in general, and the participants in particular. To that end, I primarily entered each study site with the approval and permission of the heads of the public sector offices, also known as the office managers (or gatekeepers). Second, I assured participants in advance, via the cover letter of the questionnaire, that I would keep the confidentiality of their answers in addition to abstaining from and avoiding any misleading practices or information in any matter pertaining to the study. Thirdly, the researcher practically upheld the values of honesty, sincerity, and transparency in communicating with participants, ensuring that they have a clear understanding of the research objectives and my role in the study.

Most significantly, nobody was forced to take part in the study. Lastly, the researcher was completely honest in reporting the data properly because there was no

interesting power that forced me to satisfy its special interests and make changes to the findings. In general, upholding participants' rights and avoiding lying and betrayal helped me significantly gain participants' cooperation and willingness to not only take part in filling out a questionnaire but also to have active interview discussions (Cohen et al., 2007, p. 63; Creswell, 2012, p. 24). This is true regardless of the ethical dilemmas that can arise in various research paradigms.

4.11 Chapter Summary

This chapter has primarily concentrated on the study's methodology. It focuses on research and design paradigms. The study was therefore grounded in the school of thought known as pragmatism, which sees thought as a tool or instrument for action, problem-solving, and prediction. The mixed-methods approach has proven to be the most effective strategy to promote a better understanding of the topic under study. A pragmatic research approach allows the use of any research methodology or procedure, both quantitative and qualitative. Given that both qualitative and quantitative data were gathered, which is consistent with the pragmatists' idea of using both methods, the study thus fits into this philosophical idea of pragmatists.

In addition, the study used a cross-sectional survey design that is both descriptive and analytical, as well as a mixed-method approach to data collection and analysis. Therefore, it attempted to assess cost-sharing performance by examining the status of reimbursement activities and describing challenges, trends, and practices. The explanatory sequence design (QUAN-Qual Model) was chosen because the nature of this study leaned towards the quantitative type in its implementation. This model made it possible for the researcher to first gather quantitative data, which helped explain or elaborate on the quantitative results, and then gather qualitative data. Pragmatism is founded on the notion that theories can be generalized and contextualized by looking at how well they "translate" to various contexts. Therefore, this study was attached to the philosophical foundation of pragmatism.

CHAPTER FIVE

DISCUSSION AND PRESENTATION OF RESULTS

5.1 Introduction and Background

This chapter focuses on presenting and analysing the data to understand the details provided by the study participants. Quantitative and qualitative data collected from different sources at different times are, therefore, analysed using both statistical tools and narrative descriptions, which demonstrates the type of cost sharing scheme adapted to the Ethiopian HES, facilities provided by universities to students, on factors that affect the repayment process, the challenges that affect the repayment practices, and the respondents' view and perception on the rationale and objective of cost sharing schemes. The chapter consists of two sections. It begins with a description of the socio-demographic characteristics of the respondents. The second part deals with the research questions posed at the outset. That is, they present data analysis on the type of cost sharing scheme adapted to Ethiopian HES, the status of facilities/services provided by universities to students in relation to cost sharing implementation, the factors that affect the repayment process about the challenges that affect the repayment practices, and about the respondents view and perception on the rationale and objective of cost sharing schemes presented sequentially. Summary of findings, the last section, concludes the chapter.

5.2 Presentation of results

5.2.1 Demographic description of the participants

A total of 674 participants, including 611 graduate employees, 33 administrative and human resources staff, and 30 Wearda revenue office personnel, responded to the invitation to participate in this study, therefore, making the participation rate 94.3 %. However, 26 questionnaires were incomplete and were found to be irrelevant and excluded from this study. As a result, only 648 participants, including 586 graduate employees, 32 administrative and human resources staff, and 30 Wearda revenue office personnel, correctly responded to the invitation to participate in this study.

In the first section of the survey, there were question items asking for the participants' personal information. The following demographic data was requested on the questionnaire: name of the Region they are working, sex, name of the Woreda public sector in which they are working; total service of years as a public servant in years, name of the university attended their education, the field of study (profession) they studied, their monthly salary, qualification, and status of cost sharing repayment (see Table 8).

Therefore, presented in this sub-section are the socio-demographic characteristics of participants from whom data were obtained. As a preliminary step, it provides relevant and essential background information to the subsequent analysis. It presents a description of the major features of the samples utilised. Since there are two categories of participants involved in the quantitative data collection, the analysis of background data is conducted by presenting the two participant groups. The first group encompassed the graduate employees who are employed in different woreda public sector offices, and the second group encompassed woreda public service & human resource development office as well as woreda Revenue office personnel who were both requested to inform about the type of cost sharing scheme adapted to the Ethiopian HES, about the facilities/services provided by universities, the factors that affect the repayment practice on the challenges encountered in the implementation and repayment practice and about their personal views and perceptions on the rationale and objective of the policy statement regarding cost sharing. As was intended from the outset, proportional numbers of graduate employee participants were drawn from 35 woreda different public sector offices and the personnel from woreda public service and human resource office and woreda revenue offices. Table 8 provides the distribution of participants involved in the study. It is, therefore, possible to say that the generalisations to be reached and the conclusions thereafter are representative enough to both graduate employees and personnel of woreda public service and human resource offices and woreda revenue offices.

Table 7 Characteristics of Graduate Employee and woreda Personnel

No	Character		Respondents: Graduate Employee (n=586)		Public Service and Human resource Personnel (n=32)		Woreda revenue Office personnel (n=30)	
			n	%	n	%	N	%
1	Regions	Amhara	286	48.8	16	50	15	50
		Addis Ababa City A	202	34.5	11	34.4	10	33.3
		Tigray	98	16.7	5	15.6	5	16.7
2	Sex	Male	433	73.9	25	78.1	28	93.3
		Female	153	26.1	7	21.9	2	6.7
3	Experience	5 to 10 years of experience	560	95.6	32	100	30	100
		More than 10 years of experience	26	4.4				
4	Field of study	Business & economics	121	20.6	24	75	29	96.7
		Education & Behavioral studies	42	7.2	3	9.4		
		Engineering & Technology	88	15.0				
		Language Studies, Journalism & Communication	93	15.9				
		Natural Science	82	14.0				
		Social Science	107	18.3	5	15.6	1	3.3
		Agriculture & veterinary medicine	53	9.0				
5	Woreda public sector	Economic Sectors	313	53.4	1	3.12	29	96.7
		Social sectors	216	36.9	31	96.88	1	3.33
		Good Governance Sectors	57	9.7				
6	Qualification	BA/BSc Degree	552	94.2	32	100	28	93.3
		MA/MSc Degree	34	5.8			2	6.7
7	Repayment status	Completed Repayment	51	8.7	5	15.63	7	23.3
		Started Repayment	145	24.7	9	28.12	4	13.3
		Dropped Repayment	22	3.8	1	3.12		
		Do Not Started Repayment	368	62.8	17	53.12	19	63.3

The personal information of the employed graduates shows that 48.8% of the respondents are from the Amhara region, 34.5% were from Addis Ababa City Administration, and 16.7% were from Tigray Region, respectively. This implies that the Amhara Region is the one that attracts a large number of graduates. On the other hand, 73.9% of employed graduate respondents were male, and 26.1% of them were female, implying that female graduate employees are by far low in number compared to males

(Teferra et al., 2018). Under-representation of women in this study naturally follows similar patterns as there is low female representation in higher education in Ethiopia, which also leads to low employment rates in each of the public sectors. This shows a significant gender gap in higher education and various jobs in the public sector.

As far as participants' experience and field of study is concerned, the vast majority of graduate employees (95.6%) have 5-10 years of experience whereas, it is only (4.4%) of the graduate employees that have more than ten years of experience. Since repayment is expected to be started after one year grace time after employment, it was assumed that participants could provide adequate information about the study's topic because it implied that they are well-qualified to comprehend the issue at hand and have some experience with the repayment process (see Table 8). Similar to that, when we compare their field of study, the majority (20.6%) of them were found to be in the business and economics field of study.

The diversity of the field of the study[2] and type of the woreda public sectors was taken purposefully to get representative participants from different fields of study and from different woreda public sector offices in which graduates are employed. The responses of graduate employees from different professions have been incorporated into one code (e.g. business and economics). This was simply for the sake of manageability and convenience for data analysis. As can be seen from the table, most of the major fields of study or professions in which the studies of graduate employees at universities are included. This was done to demonstrate that the data were gathered from various disciplines. The respondents came from a range of academic faculties, colleges, and disciplines, as shown in Table 8. The largest group is from business and economics (20.6%) followed by social sciences (18.3%). The third group comes from language studies, journalism and communication (15.9) followed by engineering and technology and natural science (14.0%). Finally, agriculture and veterinary medicine make up (9.0%) and education and behavioural science (7.2%).

[2] Field of study represents the aggregated name of professions of similar families. If we take business and economics field of study, for instance, it incorporates different professions grouped under it such as management, economics, accounting, business administration, and others.

Besides, adequate attention is paid to the width of woreda public sectors offices during sampling. For the sake of convenience, woreda public sectors are categorised as economic sectors, social sectors and good governance sectors (53.4%), (36.9%) and (9.7%) respectively based on the service which they provide for the general public. Based on the number of participants involved in each woreda public sector, it can be justified that there is more or less a fair representation of the field of studies for the reliability of the generalisations to be reached at the end of the day.

Table 8 also demonstrates the level of qualification of graduate employees. It can be understood from the table that the qualification of employees is highly inclined toward first degree holders or BA/BSc levels which is 94.2% and 5.8% of the participants were second degree holders or MA/MSc level. This implies that unless graduate employees finished their repayment obligation of cost sharing, they are not allowed to continue their second degrees. The table also demonstrates the repayment status of graduate employees. From the table, it can be seen that out of 586 respondents, only 51 people (8.7%) answered that they have repaid or completed their cost sharing payments, while 145 (24.7%) have responded that they have started and are now paying the cost sharing payment owed. But, 22 (3.8%) of them have responded that they have dropped the repayment and 368 (62.8%) of them have responded that until now they did not start repayment owed at all. This implied that the cost sharing implementation process in Ethiopia is not going smoothly as expected as it was designed at the beginning.

On the other hand, for analytical analysis, binary logistic regression was employed by taking repayment status as the dependent variable and comparison were done with the status of repayment condition of regions and found that regions were found to be statistically significant with repayment status. When we compare the repayment status of graduate employees of Tigray Region with that of Amhara Region, graduate employees in Tigray Region have with the odds ratio of 3.042 times more likely repaid or already started paying their cost sharing obligation from graduate employees found in Amhara Region with a significant level of p= 0.000 and with the odds ratio of 5.001 times more likely repaid or already started paying their cost sharing obligation from graduate employees found in Addis Ababa City Administration with a significant level of p= 0.000 (see Appendix C).

When we compare the repayment status by sex, out of 433 male graduate employees, only 159 (36.72%) males have repaid or are now repaying their cost sharing repayment obligation, while out of 153 female graduate employees, it is only 37 (24.18%) graduate employees who have repaid or are now repaying their cost sharing repayment obligation. Using logistic regression analysis was done for sex, and the result showed that it has an inverse relationship. When we compare the repayment status of male graduate employees with that of females, female graduate employees were with the odds ratio of 0.448 times less likely repaid or already started repaying their cost sharing repayment obligation from male graduate employees with a significant level of p= 0.002.

The analysis was also done for the field of study, and the result showed that it has a relationship. When we compare the repayment status of veterinary medicine and agriculture graduate employees with that of language studies, journalism and communication graduate employees, the former were with the odds ratio of 4.300 times more likely repaid or started repaying their cost sharing repayment obligation from language studies, journalism and communication graduate employees with a significant level of p= 0.006 (see Appendix C).

Employees of the Office of Public Services and Human Resource Development and the Woreda Office of Revenue form the second group of participants. In each woreda, one representative from the public service and human resource development office and the woreda revenue office has participated for a related purpose. Table 8 also includes a list of the fundamental characteristics that respondents from the woreda revenue office and the public service and human resource development office sought in study participants.

According to the respondents' personal information, 50% of them were from the Amhara Region, 33.9% were from the Addis Abeba City Administration, and 16.1% were from the Tigray Region. On the other hand, 85.5% of Wearda personnel respondents are male and 14.5% are female. This implied that female graduate employees in these woreda public sector offices are by far low in number compared with that of males. Here too, it is clear that, given Ethiopia's low female representation rate in higher education, the proportion of women represented in this study inevitably followed the same pattern as their low participation in higher education and employment in various public sector offices. This

demonstrates that there is a significant gender gap in higher education and various positions in the public sector.

As far as woreda personnel participants' experience and field of study were concerned, all of woreda personnel, (100%) of them have 5 to 10 years of experience, while none of them have more than 10 years of experience. Similarly, when we compare their field of study, the vast majority (85.5%) of them were found to be in the business and economics fields, whereas it is only (9.7%) were from social science and (4.8%) were from education and behavioral science.

Table 8 also demonstrates the level of qualification of woreda personnel. It can be understood from the table that the qualification of woreda personnel too is highly inclined toward first-degree holders or BA/BSc levels, which is 96.8% and 2.8% of the participants were second-degree holders or MA/MSc level. The table also demonstrates the repayment status of woreda officers. As it can be seen from Table 8, out of 62, only 12 (19.4%) respondents reported that they have repaid or completed their cost sharing payments, while 13 (20.9%) have responded that they have started and are now paying the cost sharing payment owed. But 1 (1.6%) of them have responded that they have dropped the repayment and 36 (58.1%) of them have responded that until now they did not start repayment owed at all. This implied that those who are expected to enforce the regulation too are not repaying their cost sharing obligation and as there is a loose or weak enforcement mechanism by the government officials.

The distribution of the field of study on the two sample groups, however, provides some interesting differences. For instance, while it was from almost all fields of study that the majority of graduate employees were pulled, it is only in the area of business and economics, social sciences and education and behavioural studies that the personnel were found and selected. This reflected that there are graduate employees with different fields of study for the different occupations in different woreda public sector offices that in turn imply there could be some proficiency in woreda public sectors and incompetence in woreda public service and human resource development offices and woreda revenue offices concerning employee utilisation.

For analytical analysis, binary logistic regression was employed by taking repayment status as the dependent variable, and a comparison was made for the status of repayment conditions of woreda personnel. It was found that for debt repayment status, only wages were statistically significant. When we compare the repayment status of woreda personnel with a monthly salary of more than birr 9056 with that of monthly salary of less than birr 3933 and between birr 3934-9056, woreda personnel who have a monthly salary of more than birr 9056, have with odds ratio of 119.936 times more likely repaid or started repaying their cost sharing repayment obligation from woreda personnel who have a monthly salary of less than birr 3933 and between birr 3934-9056 with a significant level of 0.001 (see Appendix C).

To have a complete understanding of all participants of the study, the backgrounds of participants interviewed are also worth an explanation. Table 9 describes the interview groups along with their important and relevant features for the study. Roughly speaking, the proportion of university cost sharing officers and woreda revenue heads in terms of number, experience, qualification, and sex is more or less proportional. In general, although they were drawn through the purposive sampling technique, the proportion of participants in all the descriptors indicated is also acceptable.

Table 8 Profile of Interview Participants

Participants Category	Code	Name of Occupation	Qualification	Service	Sex	Date Interviewed
University	*UOp1*	*University Cost sharing officer*	*BA*	*7 years*	*Male*	*31-12-19*
	UOp2	*University Cost sharing officer*	*BA*	*9 years*	*Male*	*07-01-20*
	UOp3	*University Cost sharing officer*	*BA*	*8 years*	*Male*	*13-01-20*
	UOp4	*University Cost sharing officer*	*BA*	*7 years*	*Male*	*09-01-20*
Woreda	*WHp1*	*Woreda Revenue office head*	*BA*	*8 years*	*Male*	*17-01-20*
	WHp2	*Woreda Revenue office head*	*BA*	*9 years*	*Female*	*22-01-20*
	WHp3	*Woreda Revenue office head*	*BA*	*10 years*	*Male*	*22-12-19*
	WHp4	*Woreda Revenue office head*	*BA*	*8 years*	*Female*	*25-01-20*
	WHp5	*Woreda Revenue office head*	*BA*	*7years*	*Male*	*29-01-20*

5.2 Examination of Assumptions

As was previously stated, the main objective of this study was to look into and determine how cost-sharing and repayment practices were used in the Ethiopian HES. To this effect, the repayment conditions of graduate employees and woreda personnel, which are the major actors in delivering quantitative data for the study, were compared and contrasted through descriptive statistics and binary logistic regression. Therefore, before moving on to actual data analysis, the data were checked to see if the required assumptions were satisfied. In addition to implementing random sampling techniques, as discussed in the methodology section, the sample sizes of the two groups of participants were appropriate and comparable. The scale reliability (alpha coefficient) of each variable considered in the study was also examined and excluded. This helps validate our assumptions. What remains is to check the normality of the score distribution and avoid errors due to outliers. Outliers are often identified using skewness and kurtosis ratios.

Table 9: ***Measures of item scale reliability, skewness, and kurtosis ratios***

Participants	Variables	Number of items	Cronbach's Alpha	Skewness	Kurtosis
Graduate Employee (N=586)	Forms of cost sharing	4	0.818	-.825	-.964
	Facilities/services supplied	9	0.918	-.825	-.964
	Factors that affect repayment	12	0.703	-.825	-.964
	Challenges	11	0.766	-.825	-.964
	Perceptions and Views	13	0.864	-.825	-.964
Woreda Personnel (N = 62)	Forms of cost sharing	4	0.842	-.648	-1.362
	Facilities/services supplied	9	0.789	-.648	-1.362
	Factors that affect repayment	12	0.746	-.648	-1.362
	Challenges	11	0.728	-.648	-1.362
	Perceptions and Views	13	0.845	-.648	-1.362

Table 10 reveals the status of normality in the distribution of scores as well as the item reliability of each variable. The table demonstrates that, although each variable has a slight negative skewness, the skewness and kurtosis values for all items used are within a reasonable normal range (ignoring negative signs). This is because, according to Larson-Hall (2010) or other liberal interpretations (Blaikie, 2003; Kline, 2005), normality is not violated as long as the absolute value of the deviation rate is below 2.0 or less than 3.0. Similarly, Kline (2005) asserts that kurtosis below 10 does not represent a significant

deviation from normality; therefore, this study uses 10 as the cut-off point. According to Table 10, all of the study items (each described under its respective variable) had lower and higher scores for both skewness and kurtosis that fell within the acceptable range of values. This shows that the values of skewness and kurtosis are appropriate to avoid the influence of outliers and to perform the test of the intended parameter in the study.

In terms of cost sharing implementation, the objective of this section is to assess participants' knowledge of and familiarity with the cost sharing models applied by the Ethiopian HES. This is done with the understanding that graduate employees are already acquainted with and capable of correctly identifying the type of cost-sharing scheme used in Ethiopia.

Finally, a chi-square test using SPSS was used to determine if there was a statistically significant relationship between the different cost-sharing models adopted in Ethiopia and the repayment practices used in the Ethiopian HES. It was discovered that there is no such relationship.

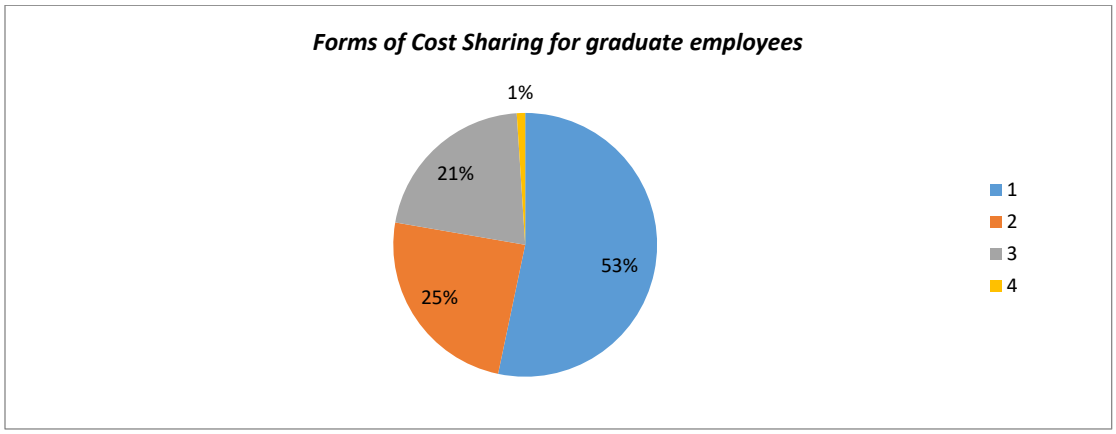
5.3 Variables related to forms of cost sharing

The purpose of this section is to examine whether the participants identify and describe the cost-sharing forms applicable in the Ethiopian HES in relation to the implementation of cost-sharing. This is done with the understanding that graduate employees are already acquainted with and capable of correctly identifying the type of cost-sharing scheme used in Ethiopia.

In this respect, fundamental indicators that measure the forms of cost-sharing were filtered out from the literature reviewed. It is useful to look into whether or not graduate employees are aware of the cost-sharing models used in Ethiopia. The items set were filled out by both graduate employees and woreda personnel and analysed descriptively. The majority of participants identified and described the Ethiopian HES's form of cost-sharing as a graduate tax in the form of the imposition of user charges to recoup the costs of services that were previously provided by the government or institutions, as well as a tuition fee, which is a mandatory fee assessed for all students and/or their parents and covers a portion of the cost. This conclusion is supported by a closer look at the results shown in Table 11.

Table 10: Descriptive Statistics on the forms of Cost Sharing for graduate employees

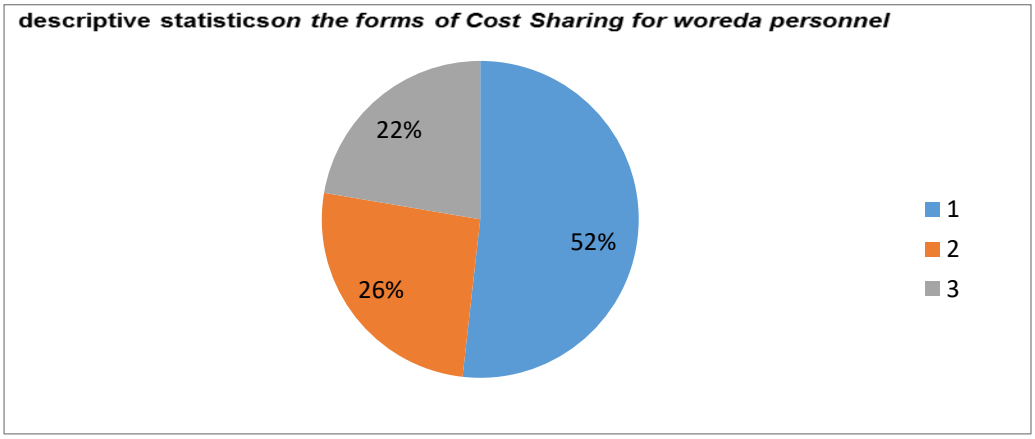
Statistics	Graduate Tax	Student Loan	Scholarship and bursaries	Sponsorship
Mean	3.77	1.96	2.71	2.49
SD	1.338	0.595	1.282	1.123



When the types of cost sharing used in the Ethiopian HES were asked, 53%, 25%, 21%, and 1% of graduate employees named graduate tax, scholarship, sponsorship, and student loans, respectively. This implies that graduates are knowledgeable about the cost-sharing system used in Ethiopia's HES.

Table 11: Descriptive Statistics on the forms of Cost Sharing for woreda personnel

Statistics	Graduate Tax	Student Loan	Scholarship and bursaries	Sponsorship
Mean	3.73	1.85	2.65	2.50
SD	1.345	0.474	1.294	1.156



Also here, a close examination of the results indicates that 52%, 26%, and 22% of the woreda personnel identified that the cost-sharing form adopted in Ethiopia's HES is a graduate tax, scholarship, and sponsorship, respectively. This implies that Wearda personnel are also aware of the cost-sharing form adopted in Ethiopia's HES. All of these indicate that there are not many differences between graduate employees and woreda staff in terms of how they view the cost-sharing models used by the Ethiopian HES.

This result is consistent with research by Yizengaw (2007) and Leka and Chalchisa (2012), which discovered that in Ethiopian HES, those who enter into agreements must share all expenses for lodging and food in addition to at least 15% of the tuition cost. Graduates pay their share of the cost through the graduate tax. Graduate Tax in Ethiopia refers to the imposition of a single tax on graduates paid as a percentage of their salary over a period of 15 years (Teferra et al., 2018).

Again, these findings are in agreement with the results of Johnstone (2003, 2007) and Marcucci and Johnstone (2007) and Smolentseva (2020), who argued that user fees cover most of the accommodation and living costs that previously existed and were largely paid for by the government. Graduate taxes are one of the cost-sharing arrangements in which the graduate is required to pay income surtax in exchange for the government funding of their higher education through reduced or free tuition.

To crosscheck the findings of quantitative data based on graduate employees' responses from another dimension, university cost sharing officers and woreda Revenue office heads were interviewed about the forms of cost sharing adopted in the Ethiopian HES. According to four of the woreda revenue office heads and every university cost-sharing officer interviewed, the graduate tax was the main cost-sharing strategy used in the Ethiopian HES. But, one of the woreda Revenue office head was not sure and is unfamiliar about the forms of cost sharing adopted in the of Ethiopian HES.

In addition, these Wearda revenue office managers question graduates' perceptions of the adopted cost-sharing forms. The other most important issue that the heads of Wearda's revenue office complain about is the execution or implementation process. They claim that the lack of clarity regarding cost sharing in some endeavours is a common phenomenon in the system. The regulation stated unequivocally that graduate

tax would be the primary type of cost sharing used in the future. However, as a form of cost sharing in Ethiopia's HES, a number of government organizations and other public sector offices also offer sponsorships and scholarships to their employees in addition to the graduate tax.

According to woreda Revenue office heads, in addition, the unpopularity of all the forms of cost sharing among the graduate employees is a question of relevance on the forms of cost sharing. Accordingly, the heads suggested that the adoption or introduction of new models should be preceded by contextualising with peculiarities (adaptation) and practices of implementing so that popularity and efficiency are maintained effectively.

5.4 Evaluation of the provision of facilities

Higher education participants in the cost-sharing program enter into agreements with their respective universities as the beneficiaries. They have a right to the institutions' services as soon as they sign the contract. These services are anticipated to satisfy the students' needs. Higher education in Ethiopia implements a graduate tax in the form of the imposition of user charges to recover the costs of what was previously provided by the government or institutions. Therefore, it is important to evaluate the provision of facilities and services to university students based on the implementation of cost sharing.

Therefore, one of the objectives of this study is to assess whether the facilities and services provided to students are satisfactory in relation to the implementation of cost sharing in universities. Table 13 was developed to examine the level of facilities and services that universities provide to students under their cost-sharing system. For the sake of manageability, the responses were categorized as poor, good, and fair, as shown in Table 13.

Table 12: Graduate employee and woreda personnel participants response on the evaluation of type of facilities/ service in the universities

No	Type of Facilities/services		Participants					
			Graduate Employee n=586			woreda personnel n=62		
			Frequency	%	Mean	Frequency	%	Mean
1	Availability of library service and enough reading rooms	Poor	320	54.6	2.62	47	75.8	2.31
		Good	144	24.6		10	16.1	
		Fair	122	20.8		5	8.1	
2	Availability of reference materials and text books	Poor	319	54.4	2.56	36	58.1	2.50
		Good	137	23.4		14	22.6	
		Fair	130	22.2		12	19.4	
3	Availability of different Academic journals	Poor	308	52.6	2.58	41	66.1	2.48
		Good	95	16.2		16	25.8	
		Fair	183	31.1		5	8.1	
4	Availability of computers	Poor	309	52.7	2.57	46	74.2	2.23
		Good	95	16.2		7	11.3	
		Fair	182	31.1		9	14.5	
5	Provision of and access to broad band internet services	Poor	312	53.2	2.59	48	77.4	2.27
		Good	119	20.3		9	14.5	
		Fair	155	26.5		5	8.1	
6	Availability of cafeterias and lounges	Poor	285	48.6	2.60	42	67.7	2.45
		Good	100	17.1		12	19.4	
		Fair	201	34.3		8	12.9	
7	Availability of recreation and sport facilities	Poor	339	57.8	2.51	50	80.6	2.16
		Good	121	20.6		8	12.9	
		Fair	126	21.5		4	6.5	
8	Availability of dormitory services	Poor	323	55.1	2.63	44	71	2.31
		Good	146	24.9		11	17.7	
		Fair	117	20		7	11.3	
9	Availability of health and counselling services	Poor	369	63.0	2.43	48	77.4	2.32
		Good	103	17.6		11	17.7	
		Fair	114	19.5		3	4.8	
Average Mean					**2.56**			**2.34**

As shown in Table 13, the overall evaluation of graduate employees and woreda personnel on the availability of facilities/services in universities with relation to implementation of cost sharing by making various facilities/services available in universities was inclined towards the “poor”.

The graduate employees and woreda personnel response on the availability of facilities/services was that it was poor on the following:

- availability of library service and reading rooms 54.6% and 75.8%;
- availability of reference materials and modules 54.4% and 58.1%;
- availability of different journals 52.6% and 66.1%;
- availability of computers 52.7% and 74.2% provision of and access to broadband internet 53.2% and 77.4%;
- availability of cafeterias and lounges 48.6% and 67.7%;
- availability of recreation and sport facilities 57.8% and 80.6%;
- availability of dormitory service 55.1% and 71.0%; and
- availability of health and counselling services 63% and 77.4% respectively.

On the other hand, besides explaining the phenomena descriptively, for analytical analysis, binary logistic regression was employed by taking the status of repayment as the dependent variable to check whether there is a significant relationship or not on the independent variables of facilities/services provided by universities to students.

The result showed that most of the facilities/services provided by the universities were found to be statistically significant. When we compare the availability of library service and enough reading rooms in universities, graduate employees who responded that the availability of library service and enough reading rooms in universities was being poor were with the odds ratio of 15.012 times more likely to evaluate the availability of library service and enough reading rooms in universities than those who responded on the availability of library service and enough reading rooms in universities was being fair with a significant level of p = 0.028. Furthermore, graduate employees who responded that the availability of library service and enough reading rooms in universities was being good were with the odds ratio of 11.881 times more likely to evaluate the availability of library service and enough reading rooms in universities than those who responded that the availability of library service and enough reading rooms in universities was fair with a significant level of p =0.003 (see Appendix D).

The same analysis was done for woreda personnel and the result showed that some of the facilities/services provided by the universities were found to be statistically significant. When we compare the availability of library service and enough reading rooms in universities; woreda personnel who responded that the availability of library service and

enough reading rooms in universities was poor were with the odds ratio of 60.402 times more likely to evaluate the facilities/services than those who responded the availability of library service and enough reading rooms in universities was fair with a significant level of $p = 0.017$. Moreover, woreda personnel who responded that the availability of library service and enough reading rooms in universities was good were with the odds ratio of 73.391 times more likely to evaluate the facilities/services than those who responded the availability of library service and enough reading rooms in universities was being fair with a significant level of $p = 0.034$ (see Appendix D).

Binary logistic regression was used to compare the accessibility of different textbooks and references across universities, and the results revealed an inverse relationship. Graduate employees who indicated that the availability of various reference materials and textbooks in universities was poor were, on average, 0.056 times less likely than those who indicated that the availability of various reference materials and textbooks in universities was fair, with a significant level of $p = 0.006$. Additionally, graduate employees who indicated that different textbooks and reference materials were readily available in universities were significantly less likely than those who indicated that the availability of different reference materials in universities is fair ($p = 0.006$) to rate the availability of different textbooks and reference materials in universities (with an odds ratio of: 0.172; see Appendix D).

The same binary logistic regression analysis was performed for woreda personnel to compare the accessibility of various textbooks and reference materials in universities. It has an inverse relationship, according to the findings. The odds ratio for woreda personnel who indicated that the availability of various reference materials and textbooks in universities was poor was 0.056 times lower than the odds ratio for those who indicated that the availability of various reference materials and textbooks in universities was fair, which was significant at the level of $p = 0.043$. Graduate employees who reported that the availability of different references and textbooks at universities is good, were 0.022 times less likely to report that the availability of different references and textbooks at universities is quite fair, with significance level $p = 0.028$ (see Appendix D).

Availability of different academic journals in universities was also compared using binary logistic regression and the results showed that graduate employees who responded that the availability of different academic journals in universities was poor were with the odds ratio of 2.535 times more likely to evaluate the availability of the service/facilities than those who responded, availability of different academic journals in universities was fair with a significant level of $p = 0.030$. Furthermore, graduate employees who responded that availability of different academic journals in universities was good were with the odds ratio of 6.563 times more likely to evaluate the availability of the service/facilities than those who responded that the availability of different academic journals in universities was fair with a significant level of $p = 0.001$ (see Appendix D).

When we compare the availability of computers in universities using binary logistic regression, the results showed that it has an inverse relationship. Graduate employees who responded that the availability of computers in universities was good were with the odds ratio of 0.338 times less likely to evaluate the availability of the service/facilities than those who responded that the availability of computers in universities was fair with a significant level of $p = 0.004$. When we compare the provision of and access to broadband internet services in universities using binary logistic regression, the results showed that it has an inverse relationship. Graduate employees responded that the provision and access of broadband Internet services at universities were good, with an odds ratio of 0.187 times less likely to evaluate the provision of the service/facilities than those who responded that the availability of computers in universities was fair with a significant level of $p = 0.020$ (see Appendix D).

When we compare the availability of cafeterias and lounges in universities, graduate employees who responded that the availability of cafeterias and lounges in universities was poor were with the odds ratio of 2.351 times more likely to evaluate the availability of the service/facilities than those who responded that the availability of cafeterias and lounges in universities was fair with a significant level of $p = 0.024$. In addition, graduate employees who responded that the availability of cafeterias and lounges in universities was good were with the odds ratio of 4.685 times more likely to evaluate the availability of the service/facilities than those who responded that the

availability of cafeterias and lounges in universities was fair with a significant level of p = 0.002 (see Appendix D).

When we compare the availability of dormitory services in universities using binary logistic regression, the results showed that it has an inverse relationship. Graduate employees who responded that the availability of dormitory services in universities was poor were with the odds ratio of 0.532 times less likely to evaluate the availability of the service/facilities than those who responded that the availability of dormitory services in universities was fair with a significant level of p = 0.024 and, graduate employees who responded that the availability of dormitory services in universities was good were with the odds ratio of 0.264 or times less likely to evaluate the availability of the service/facilities than those who responded that the availability of dormitory services in universities was fair with a significant level of p = 0.000 (see Appendix D).

This result is consistent with a study by Leka and Chalchisa (2012), which found that students have high expectations for the facilities and services offered by universities when they enrol. However, they discover that the services are subpar when they use them to further their education (Khalil-ur-rehman & Farooq, 2018). Mulyono et al. (2020) also depict that there are several deficiencies, namely the lack of lecturers in mastering teaching materials, lack of lecturers who can communicate well while teaching, lecturers who do not care about students, campuses that are still being collaborated and are less professional, learning facilities and infrastructure that are still in poor condition, lecture rooms that are less conducive to lectures, and poor administrative staff services for the students (Mulyono et al., 2020).

The results are consistent with Yizengaw (2007), who discovered that the Ethiopian government has made significant investments and efforts to develop the higher education sector, but the system is still inefficient. In many instances, university administration is too rigid and crude to meet modern demands. Some seem to lack management, administrative, and work cultures that are in line with contemporary demands.

The results are again consistent with the findings of Saint's (2004), who indicated that students were dissatisfied with cost sharing in higher education programmes because, at the end of the 20th century, Ethiopia finds itself with a bureaucratic HES management

system, an intellectually-oriented tradition, limited autonomy, a lack of experienced teaching staff, and concerns about declining teaching quality and weak research results.

This result is in line with research by Mohamedbhai (2008), who discovered that tight budgets had a negative impact on teaching standards by leading to overcrowding in lecture halls and, occasionally, the abandonment of practical assignments. Most institutions don't have enough computers available for students, and library resources are also scarce. There haven't been many new buildings built, and the vast majority of the ones that already exist are severely dilapidated from lack of maintenance and being unable to hold a lot of students.

The finding is in line with Court (1999), who supports it by stating that the university's physical, teaching, and management capacities are starting to be exceeded by enrolment growth. However, there are still few journal subscriptions, few library purchases, deteriorating lab and workshop capacity, stale tools, restricted computer access, and scant research output.

Johnstone (2002) and (Khalil-ur-rehman & Farooq, 2018), offers another finding that corroborates these findings. He asserts that when austerity affects an organization, it can manifest itself in a decrease in the organization's ability to respond to change, the decline of equipment such as computers, laboratory equipment, and library materials, a decline in facilities, and an inability to increase the ability to handle rising enrolments (Khalil-ur-rehman & Farooq, 2018).

According to Teixeria et al. (2008), despite the importance of universities and other higher education institutions, their austerity has led to problems such as overcrowding, declining teacher-to-student ratios, deteriorating physical facilities, etc. This finding is consistent with Oketch's (2003) observation that low research results, dormitory closures, declines in utilities such as water and electricity, overcrowded lecture halls, teaching reduced to little more than chalk and talk, disgruntled professors working multiple jobs for extra income, libraries whose acquisitions are few, and crowded lecture halls are easy manifestations of this in most African universities.

The findings support those of Areaya (2010), who claims that many new institutions in Ethiopia were established as universities without even meeting some of the requirements set forth by the MoE for achieving university status, such as having robust research initiatives, scholarly publications, and libraries, laboratories, and classrooms. As a result, the majority of public universities established in the last ten years are still struggling to regain the name and status originally conferred upon them. Many of Ethiopia's public "universities", especially those that are relatively new, have been established without actually meeting most of the requirements set forth in Higher Education Proclamation No. 650/2009.

During the interview session held independently, university cost sharing officers and woreda revenue heads unanimously replied that the facilities/services in universities are not satisfactory since the facilities/services vary depending on the university generation and some administration aspects in the universities. They argue that those universities that were established earlier and found in big towns have relatively better or good facilities/services in some aspects than those universities which are established in recent years and are found in remote and rural areas. They also argue that in some administrative aspects, those universities who have more experienced and appropriate leaders as well as sufficient management bodies, have relatively better facilities/services than those who have low experience and insufficient management bodies. Similarly, they also argue that, for example, in building and construction of facilities, those universities who have contractors who are more experienced and have better financial capacity and with better performances of works, the facilities/services are relatively good or fair and those universities who got contractors who are not experienced, with low financial capacity and with low capacity of performance of work, the facilities/services are relatively poor. Generally, they argue that, as Ethiopia is a third world country where there are several socio-economic problems, one can simply witness the inadequacy of the facilities/services provided by universities.

5.5 Evaluation of the factors influencing repayment practices

This sub-question sought to determine the factors influencing graduate employees' repayment practices in Ethiopia. This is done under the assumption that graduate

employees have already agreed to a cost-sharing arrangement while they were students and are aware of the elements that influence how they handle repayment.

Table 13: Graduate employee and woreda personnel participants response on the factors that affect repayment practice of graduate employee

No	Factors	Participants						
		Graduate Employee n=586				woreda personnel n=62		
		Scale	Frequency	%	Mean	Frequency	%	Mean
1	Un employment	Disagree	197	33.6	3.57	22	35.5	3.58
		Agree	389	66.4		40	64.5	
2	Monthly salary	Disagree	218	37.2	3.50	26	41.9	3.37
		Agree	368	62.8		36	58.1	
3	Family income	Disagree	220	37.5	3.42	32	51.6	3.65
		Agree	366	62.5		30	48.4	
4	Residential area	Disagree	351	59.9	3.09	33	53.2	3.16
		Agree	235	40.1		29	46.8	
5	Completion time of payment of amount	Disagree	352	60.1	3.00	36	58.1	2.98
		Agree	234	39.9		26	41.9	
6	The rate of deduction of the payable amount	Disagree	250	42.7	3.49	31	50	3.40
		Agree	336	57.3		31	50	
7	Priority given for post graduate training	Disagree	340	58	3.10	29	46.8	3.47
		Agree	246	42		33	53.2	
8	Graduates and officers awareness on the regulation	Disagree	154	26.3	3.75	19	30.6	3.21
		Agree	432	73.7		43	69.4	
9	Poor follow-up and administrative system of the public sector officials	Disagree	117	20	4.03	13	21	3.95
		Agree	469	80		49	79	
10	Employees willingness for repayment	Disagree	174	29.7	3.69	25	40.3	3.39
		Agree	472	70.3		37	59.7	
11	Lack of strong tax collecting capacity	Disagree	183	31.2	3.63	27	43.5	3.37
		Agree	403	68.8		35	56.5	
12	Poor record keeping	Disagree	249	42.5	3.35	26	41.9	3.52
		Agree	337	57.5		36	58.1	
Average Mean					**3.46**			**3.42**

Ethiopian students will have to pay education taxes upon graduation to offset the cost-sharing. For a cost-share recovery program to be successful, the beneficiary, the recruiting organization, and the Ethiopian Minister of Revenue must comply with the law

(FDRE, 2008). The arrangement that the beneficiary made with the universities serves as the foundation for the cost reimbursement. The beneficiary has agreed, by signing this contract, that the debt will be repaid from future income in the form of tax deductions in accordance with all applicable laws (Yizengaw, 2007; Leka & Chalchisa, 2012).

As shown in Table 14, the overall evaluation of graduate employees and woreda personnel on the factors that affect repayment practice of graduate employees were calculated and was identified an overall average of 3.46 for graduate employees and 3.42 for woreda personnel.

A closer look at the general response, and results displayed in Table 14 revealed that the majority of participants of graduate employee and woreda personnel concur that poor follow-up and administrative system of the public sector officials (80.%) & (79%), graduate employees and woreda personnel awareness on the regulation 73.7% and 69.4%, employees willingness for repayment 70.3% and 59.7%, lack of strong tax collecting capacity 68.8% and 56.5%, unemployment 66.4% and 64.5%, monthly salary 62.8% and 58.1%, family income (62.5%) & (48.4%), poor record keeping 57.5% and 58.1%, rate of deduction of the payable amount 57.3% and 50% were, respectively, the key variables influencing graduate employees' repayment habits.

In addition to describing the phenomenon descriptively, binary logistic regression was used for analytical analysis. The repayment status was used as a dependent variable to see if there was a significant relationship between the independent variables of the factors influencing graduate employees' repayment practices.

The outcome demonstrated that the majority of the factors that influence graduate employees' repayment practices were identified as statistically significant. When we compare unemployment as a factor for repayment, graduate employees who agreed that unemployment was a factor that affects the repayment practice of graduate employee were with the odds ratio of 1.639 times more likely to evaluate the factor than those who disagreed that unemployment was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.024$ (see Appendix E).

The likelihood of obtaining better, higher-paying employment increases with education (Callender & De Gayardon, 2021) and (Mgaiwa & Ishengoma, 2023). Therefore, investing in education now will result in higher returns down the road (Palacios, 2002). When viewed from the perspective of human capital, higher education results in an increase in skills and knowledge, this leads to employment and higher income (Mgaiwa & Ishengoma, 2023). Education-related investments produce better jobs and higher incomes (Worku, 2020; Adejumo et al., 2021). Graduates' higher incomes will help them pay off student loan debt incurred while they were pursuing their education. The primary cause of cost sharing loan repayment default, however, is an inability to make payments because of unemployment or other unanticipated financial hardships. Empirical studies that showed a direct link between unemployment and low wages served as the main evidence for this conclusion.

Other researchers who concur with the conclusion state that unemployment and low pay are the most important factors causing default (Volkwein, Szelest, Cabrera, & Napierski-Prancl, 1998; Demissie et al., 2021). In a study of borrowers who dropped out of post-secondary education between 1976 and 1985, defaulters were questioned about the importance of a variety of factors, many of which were post-college factors, such as unemployment, low income, the existence of other loans that are larger to repay, dissatisfaction with their academic program, and other personal problems. Unemployment and lack of income were cited as major causes of default by 83% of borrowers for proprietary schools and 74% of borrowers for two-year institutions (Dynarski, 2003).

This result is consistent with the World Bank's (2010) study. According to the World Bank, the biggest threat to student loan programs worldwide is the high rate of loan default, which is particularly harmful in sub-Saharan Africa due to a number of factors, including the region's fragile economies and high unemployment rates even after graduating from college or university. The World Bank (2010) also discovered that recent graduates' ability to repay their student loans is threatened by the lack of employment opportunities in African economies. In addition, reimbursements for those starting a first or second job in the private sector, the vast majority of those working for themselves, and virtually all exiles, including university graduates from many developing countries and those in transition, may be weak or completely defaulted (Leka & Chalchisa, 2012).

The study by Woo (2002), which found that unemployment is primarily responsible for the high rate of loan repayment defaults, provides additional evidence in favour of this conclusion. The amount of income will decrease due to unemployment, and more students are choosing to forego loan repayment because their income is insufficient to do so. According to Woo (2002), since loan default has become a problem, numerous earlier studies have looked into its causes. In his opinion, higher unemployment rates are one of these causes. Success in the job market is essential for repaying student loans because unemployment increases the risk of default (Monteverde, 2000). The ability to repay the loan for higher education depends on the graduate's employment opportunities, income level, and self-employment ability. A student who gets some job after graduating and earns a good salary repay back their loan on time. According to Hout (2012), people pursuing higher education get a good job with a higher salary which enables them repay back their loan and enjoy higher quality of life.

This conclusion is also supported by Engede (2015), who maintains that the difficulty in recovering loans from loan beneficiaries is due to their unemployed status. As a result, they find it challenging to repay the loan. For the latter, a person needs to have a reliable source of income that will allow them to make payments and keep them able to do so until the loan is repaid.

Again, the results are consistent with Salmi's (2003) explanation that the success of a student loan program depends on the ability of student loan agencies to recover loans from them. Salmi (2003) asserts that the majority of student loan companies worldwide have trouble recovering student loans. High default rates due to a combination of internal and external factors, such as poor collection management, are a challenge for student loan institutions.

In the interview conducted with woreda personnel and university cost-sharing officers revealed that different factors may affect the repayment practice of graduate employees. According to them, one of the factors was unemployment. This is true because Ethiopia, a developing country with many socioeconomic problems, graduates thousands of students each year from both public and private universities. Nevertheless, the government finds it challenging to offer enough jobs each year to accommodate all of

these graduate students. Therefore, many students after accomplishing their university studies face the challenge of unemployment; which will inevitably make them fail to return their repayment.

On the other hand, some of them said that though the coalition of institutions who are responsible to collect the repayment cooperatively is weak, and there is a poor follow-up and administrative system of the public sector officials. One of the advantages is that most graduates from public universities can find jobs in the public sector, and since their salaries are generally well known, it is not too difficult to track them down using existing government infrastructure. The choice of whether to withhold and send the share to the woreda revenue office, however, was left to the employer. The expansion of private enterprise today makes it difficult to track the repayment histories of former students and locate information about graduate employees, suggesting that the private sector is also growing and becoming one of the major employers of graduates. Since many graduates work for themselves or for the private sector, it is difficult to identify and collect their income. As a result, it is difficult to confirm their incomes and much simpler for them to conceal their true earnings. This is related to the country's poor tax system because the government relies on civil servants for repayment, which makes it difficult to recover costs.

When we see monthly salary as a factor for repayment, the result showed that it has an inverse relationship. Graduate employees who agreed that, monthly salary was a factor that affects the repayment practice of graduate employees were with the odds ratio of 0.504 times less likely to evaluate the factor than those who disagreed that monthly salary was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.010$ (see Appendix E).

This result is consistent with a study on the variables influencing default probability done by Woo in 2002. In the case of student loans in California, it was discovered that the majority of students who default do so because their personal income is insufficient to cover their obligations, and the likelihood of default decreases as post-graduation or departure earnings rise. Graduating students have higher expenses, so they can delay paying those short-term debts until they're in a better financial position to do so. Most students are late to pay because their personal income is not enough (Woo, 2002). Choy

and Li (2006), Lochner & Monge-Naranjo (2004), and Woo (2002), all claim that as post-graduation or departure earnings rise, the risk of default declines. The other finding that supports the thesis is from the study by Volkwein et al. (1998), which asserts that unemployment and low wages are the two primary causes of default.

A study by Dynarski (2003) and (Yannelis & Tracey, 2022) supports the findings of this study, highlighting the importance of many factors (many of which are post-college factors) that may have contributed to default, such as unemployment and low income. It is obvious that the likelihood of repayment will depend on the graduate employees' income. Due to the fact that a portion of their salaries will go toward repaying their loans, students with higher education debt were found to have lower average salaries than those who had not secured loans (Baum & O'Malley, 2003). These implied that the borrower might not repay the loan if their financial situation changed after graduation.

This result is consistent with Palacios (2002) Palacios (2002); (Callender & De Gayardon, 2021) and (Mgaiwa & Ishengoma, 2023) recommendation that more education leads to better skill and knowledge, which leads to employment and higher income. Education expenditure results in a better job and income. Graduates will be able to pay off student loan debt with the help of their higher income. However, the primary reason for cost sharing loan repayment default is inability to pay due to unemployment or other unforeseen financial hardships. Many empirical studies demonstrating a strong correlation between unemployment and low income are key evidence for this conclusion.

Tsegaye (2004) emphasizes that graduate employees are unhappy with the repayment of the cost sharing in higher education programs because, given the current arrangement, there is no specification as to the minimum wage rate on which repayments have to be made. This gives rise to another impression that is related to the finding. With insufficient leftover salaries, the poor will continue to suffer more. Any loan program should carefully examine the relationship between required payments and graduates' likely incomes to make sure that repayment never places an undue burden on them. This is one of the most important considerations.

From the interview conducted with woreda Revenue office heads and university cost-sharing officers, besides unemployment, the other factor revealed by most of them

that affects repayment is monthly salary. According to them, the amount of income restricts and affects the repayment practice of graduate employees. The amount of income received by the graduate employees will determine the likelihood of repayment. A graduate who gets a job after graduating and earns a good salary may have a possibility of repaying their debt and the reverse is true for those who get a job with a low salary. However, most of the time in the case of Ethiopia, graduates earn low wages which is too small to cover all the expenses that make it difficult to repay their loans.

When we compare family income as a factor for repayment of graduate employees, graduate employees who agreed that family income was a factor that affects the repayment practice of graduate employees were with the odds ratio of 1.979 times more likely to evaluate the factor than those who disagreed that family income was not a factor that affects the repayment practice of graduate employees with a significant level of p = 0.001. Furthermore, woreda personnel who agreed that family income was a factor that affects the repayment practice of graduate employees were with the odds ratio of 2.116 times more likely to evaluate the factor than those who disagreed that family income was not a factor that affects the repayment practice of graduate employees with a significant level of p = 0.020 (see Appendix E).

Findings from studies by Woo (2002), Herr and Burt (2005), Steiner and Teszler (2005), (Yannelis & Tracey, 2022) and others support the idea that while unemployment can cause borrowers to default, financial assistance to wealthy families would be another way to increase the default rate. Both Herr and Burt (2005) and Steiner and Teszler (2005) argue that students from low-income families are more indebted than affluent students and will feel pressured to start paying off debt. Students from wealthier backgrounds will be given more financial aid than those from less privileged backgrounds. For this reason, low-income students are more likely to default than high-income students (Woo, 2002; (Dynan, 2020, Callender & De Gayardon, 2021; Souza, 2022).

Compared with their more financially stable peers, students from low-income families are more likely to have student debt (Herr and Burt, 2005; Steiner and Teszler, 2005). Students from low-income backgrounds also claim to feel heavier once their loan repayment obligations start. The likelihood that a student will default decreases generally

with family income (Woo, 2002). Students from higher-income families can access a financial safety net that is not available to those from lower-income families, who are more likely to require it given their higher levels of debt. Students who experience fluctuations in their income can still pay their loans thanks to this safety net.

When we compare the rate of deduction of the payable amount as a factor for repayment of graduate employees, the result showed that it has an inverse relationship. Woreda personnel agreed concurred that the rate of deduction of the payable amount was a factor that affect the repayment practice of graduate employees were with the odds ratio of 0.024 times less likely to evaluate the factor than those who disagreed the rate of deduction of the payable amount was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.006$ (see Appendix E).

The findings support a study by Tsegaye (2004) that focuses on the fact that graduate employees are dissatisfied with the repayment of the cost sharing in higher education programs because, under the current arrangement, where there is no specification as to the minimum wage rate on which repayments have to be made, the poor will continue to suffer more within an adequate leftover salary.

Comparison was also done for graduate employees and public sector officer's awareness on the regulation of cost sharing as a factor for repayment practice. The result showed that graduate employees and public sector officer's awareness on the regulation of cost sharing as a factor for repayment practice were found to be statistically significant. The result showed that it has an inverse relationship with graduate employees. Graduate employees who agreed that awareness on the regulation of cost sharing was a factor for repayment practice, were with the odds ratio of 0.356 times less likely to evaluate the factor than those who disagreed that awareness on the regulation of cost sharing was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.000$. Moreover, woreda personnel who agreed that awareness on the regulation of cost sharing was a factor for repayment practice were with the odds ratio of 15.376 times more likely to evaluate the factor than those who disagreed that awareness on the regulation of cost sharing was not a factor that affects the repayment practice of graduate employees with significant level of $p = 0.036$ (see Appendix E).

One supporting finding is the result obtained by Ayalew (2013), who revealed that the majority of stakeholders' awareness of the regulation of cost sharing policies is poor. It is evident in this situation that the process's success depends on the relevant parties' (students, university administration, and general public) knowledge of the cost-sharing policy. However, according to the study "Higher Education Financing in Ethiopia: Revenue Diversification Strategies" by Abate and Waweru (2008), only 32% of university presidents, vice presidents, and directors responded that they had heard of cost sharing when reading the relevant regulation and proclamation on higher education, 41% of deans, vice-deans, and department heads, and 27% of them from the media. With their proximity and status as stakeholders, the university community should be more aware of the policy, but the survey found that awareness was lower than expected. The principles of the proclamation and other crucial requirements, according to Ayalew, are frequently not fully understood by both graduate employees and woreda staff. Because of this, it is more likely that opportunities are missed, instruction is misunderstood, and roles and responsibilities are misinterpreted when there is lack of basic understanding and awareness of policies that directly affect students. As a result, one of the challenges is overcoming this lack of policy knowledge.

This result is consistent with the research done by Yizengaw (2007), who stressed that the low awareness of income-contingent loans also serves as evidence of the general lack of knowledge about cost sharing. He claimed that some members of the university administration were unaware of it. Contrary to the previous finding, the World Bank (2010) asserts that students will be motivated to weigh the costs and benefits of higher education when their perception of these costs and understanding of their growing debts improve. Therefore, upon completion of their studies, students will feel obliged to repay the loans to give chance to other needy students to attain the same benefits of education.

Likewise, during an interview session with woreda revenue office heads and university cost sharing officers, it was revealed that graduates and public sector personnel awareness of the regulation was another factor that affects the repayment practice of graduate employees. According to them, the majority of stakeholders' awareness of the regulation and directives of cost sharing policy is poor in many cases. The principles and

requirements of the policy and regulation's proclamation are frequently unclear to both graduate employees and woreda staff. Because of this, graduate employees do not fulfil their obligations concerning repayment.

Woreda Revenue office heads argued that they are not aware of the policy because, either the MoE or their organisation does not put more effort to educate and disseminate the information about the cost-sharing policy to them as well as to the general population. In addition, they claimed that these organizations do not adequately gather information and disseminate it to the public via newspapers, magazines, television, radio, and other forms of media, making it challenging for stakeholders to gain sufficient knowledge about the cost-sharing policy and regulations. Two of the cost-sharing officers also said that even they have never seen the regulation concerning cost-sharing, but they said that they got a little information about it when they were a student in the university before and now from their work as a cost-sharing officer at the university. But still, they feel that the information they have was not enough for them to say that they are aware of the policy and the regulation.

A comparison was also done for lack of strong tax collecting capacity as a factor for the repayment practice. The results show that there is a statistically significant relationship. Graduate employees who agreed that lack of strong tax collecting capacity was a factor for repayment practice were with the odds ratio of 2.118 times more likely to evaluate the factor than those who disagreed that lack of strong tax collecting capacity was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.003$. But the result showed that it has an inverse relationship for woreda personnel. Woreda personnel who agreed that lack of strong tax collecting capacity was a factor for repayment practice, were with the odds ratio of 0.069 times less than those who disagreed that lack of strong tax collecting capacity was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.012$ (see Appendix E).

This conclusion is consistent with Ayalew's (2013) analysis of the tax collection system, one of the main problems in revenue generation from cost sharing. He argued that for the income-based cost-sharing system to be effective, viable tax schemes that could

be used to effectively collect tuition based on future income had to be implemented. For the scheme to be successful, this administrative issue is crucial. However, based on the respondents' responses, one of the things that impact the repayment practice is a weak tax collection capacity. This could be because of, Ethiopia's federal state structure, which has a federal government as well as various regions with their own administrative systems. According to the regulation, many governmental organizations take part in the collection of graduate taxes either directly or indirectly. These agencies include the Federal Ministry of Revenue, Regional and City Administrations, tax collection agencies, and the Ministry of Finance and Economic Development. Every employer in Ethiopia, whether in the public or private sector, is required to withhold funds owed by the beneficiary and forward them to the Federal Revenue Authority or its agents in accordance with the national cost-sharing policy (FDRE, 2008).

According to Ayalew (2013), among the problems that need to be addressed are the absence of a tax identification number for all citizens, the lack of audit programs that cover all taxes, including customs duties, and the complete absence of a computerized taxpayer registration system. The effectiveness of income tax collection is hampered by a lack of staff and training, especially in the areas of tax collection, accounting, and auditing. He went on to say that Ethiopia is one of the poorest countries in the world, and there are many political, social, and economic problems there. Contrary to industrialised nations, Ethiopia lacks a well-functioning tax or banking system to monitor and confirm the source of income of all borrowers for the majority of their working lives.

Another encouraging finding is provided by Yizengaw (2007), who argues that some defaults are possible under the graduate tax system in Ethiopia. Lack of knowledge regarding the beneficiary's whereabouts after graduating and flaws in the government's tax collection methods could be some of the causes of defaults.

Again, during the interviews, woreda Revenue office heads revealed that lack of strong tax-collecting capacity is one of the factors that affect the repayment practice. This may be because the salary of an employee is paid by the woreda finance and economic development office. But the woreda finance office may deduct the repayment if the employee organisation and the graduate employees themselves concur to be deducted

from the monthly salary. Therefore, it is difficult for the woreda finance office to deduct the repayment amount unless they got approval from the employee. Another reason for low tax collection could be the lack of information regarding the whereabouts of beneficiaries after graduation. Ethiopia`s cost-sharing policy requires all employers, whether in the public or private sector, to deduct the amount owed by the beneficiary and forward that amount to the revenue office or its representative. However, problems persist, such as a lack of a computerized tax registration system, a lack of a tax identification number for all citizens, and insufficient audit programs for all taxpayers.

Finally, comparison was also done for poor record keeping as a factor for repayment practice. The results show that there is a statistically significant relationship. Graduate employees who agreed that poor record keeping was a factor for repayment practice were with the odds ratio of 3.392 times more likely to evaluate the factor than those who disagreed that poor record keeping was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.000$. But the result showed that it has an inverse relationship for woreda personnel. Woreda personnel who agreed that poor record keeping was a factor for repayment practice were with the odds ratio of 0.095 times less likely to evaluate the factor than those who disagreed that poor record keeping was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.029$ (see Appendix E).

Ayalew (2013) has obtained one of the findings that lend support to the conclusion regarding the lack of proper record keeping. In his conclusion, he makes it abundantly clear that Ethiopia's tax system's inadequate computerized record keeping has made it difficult to obtain up-to-date and accurate statistics on citizens' incomes and tax burdens. Furthermore, the federal government heavily centralizes the tax collection process. The outdated record-keeping system would make it difficult to track down the thousands of graduates who would scatter across the country after completing their higher education. All of these shows that Ethiopia lacks the reliable, efficient, and thorough income tax operations required for the income contingent scheme to successfully recover the loan.

The results are consistent with the previous study by Teixeria et al. (2008), who pointed out that weak administrative systems and labour-intensive manual record-keeping

are common in developing countries. Taxation systems could be dishonest or even unreliable. Both contract law and financial regulation are frequently ineffective.

Yizengaw (2007) also concludes that some defaults are possible under the graduate tax system in place in Ethiopia. Defaults may be caused by flaws in the tax collection processes, the beneficiary's less restricted mobility abroad, and an ignorance of the beneficiary's whereabouts after graduating.

This result supports Ayalew's (2013) finding that there is substantial doubt regarding the feasibility of creating a system that would accurately track repayments made by former students as well as their progression through various levels of debt and mobility. As stated in the policy document, there is currently no administrative framework designed to track data related to the movement of graduates. Repaying the share to the Federal Revenue Office is the responsibility of the employer. A contributing factor in the rising non-payment rate may be the lack of centralized or regionally well-documented information regarding the whereabouts of the beneficiaries. Cost recovery could increase further due to the costly government bureaucracy needed to keep up with the growing number of graduates, although this could eventually develop.

From the interview conducted with woreda revenue office heads and university cost-sharing officers, poor record-keeping was revealed as a factor in the repayment practice of graduate employees. They argue that it is difficult to obtain accurate and up-to-date statistics on people's income and tax burden because the Ethiopian tax system lacks adequate and computerized record-keeping. It was challenging to keep track of the tens of thousands of graduates who dispersed across the nation after graduating from higher education each year due to the outdated system of record-keeping. It will be difficult for the government to collect repayment from graduate employees unless the officers obtain the necessary information about the graduate students, including where they are living, whether they have gotten a job or not, and if they have, how much they earn.

5.6 Examination of major problems and challenges encountered in cost-sharing implementation and repayment practices

This sub-question is intended to examine how participants evaluate the major problems and practical challenges encountered in the implementation and repayment

practices of cost sharing in the Ethiopian HES. That is done with the understanding that graduate employees have already signed a cost sharing agreement when they were studying in universities and are now expected to repay their cost sharing debt owed and therefore, can evaluate the major problems and practical challenges which they face in the implementation and repayment practice.

Table 14: Graduate employee and woreda personnel participants response on the major practical challenges encountered in the implementation and repayment of cost sharing in the Ethiopian HES

No	Major problems and challenges	Participants						
		Graduate Employee n=586				woreda personnel n=62		
		Scale	Frequency	%	Mean	Frequency	%	Mean
1	Loose or weak enforcement mechanism	Disagree	183	31.2	3.58	24	38.7	3.50
		Agree	403	68.8		38	61.3	
2	Vague modality of implementation	Disagree	191	32.6	3.63	25	40.3	3.50
		Agree	395	67.4		37	59.7	
3	Poor promotional activities	Disagree	225	38.4	3.45	20	32.3	3.39
		Agree	361	61.6		42	67.7	
4	Universities have suffered gross under-funding	Disagree	280	47.8	3.29	30	48.4	3.31
		Agree	306	52.2		32	51.6	
5	Universities have Inadequate learning facilities, insufficient number of qualified and experienced academic staff	Disagree	221	37.7	3.56	22	35.5	3.53
		Agree	365	62.3		40	64.5	
6	Beneficiaries failure to discharge their obligations	Disagree	202	34.5	3.69	25	40.3	3.53
		Agree	384	65.5		37	59.7	
7	No adequate public campaigns were taken before any introduction or increase in cost sharing measures.	Disagree	168	28.7	3.55	21	33.9	3.56
		Agree	418	71.3		41	66.1	
8	Students resist cost sharing schemes partly because they perceive that they are not financially capable of paying the tuition fees and charges.	Disagree	135	23	3.94	16	25.8	3.87
		Agree	451	77		46	74.2	
9	Students feel that the government is capable of supporting a heavily subsidized higher education	Disagree	148	25.3	3.99	15	24.2	3.92
		Agree	438	74.7		47	75.8	
10	Students feel that no substantial improvements will occur in institutionally provided services and facilities.	Disagree	205	35	3.69	23	37.1	3.65
		Agree	381	65		39	62.9	
11	Willingness of employee -to-pay	Disagree	202	34.5	3.57	28	45.2	3.45
		Agree	384	65.5		34	54.8	
	Average Mean				**3.63**			**3.56**

As can be seen in Table 15, the overall evaluation of graduates and woreda personnel on the main challenges faced in the implementation and repayment of cost sharing was calculated and found to be 3.63 for graduates and 3.56 for woreda personnel.

A closer examination of the general response and the findings presented in Table 15 revealed that the majority of respondents, including graduate employees and woreda personnel, agree that students resist cost-sharing schemes in part because they believe they are not financially able to pay the tuition fees and charges. 77% and 74.2% of students feel that the government is capable of supporting heavily subsidized higher education 74.7% and 75.8% of them also responded that no adequate public campaigns were taken before any introduction or increase in cost sharing measures. Again, 71.3% and 66.1% of them said that loose enforcement mechanisms (68.8% and 61.3%), vague modalities of implementation (67.4% and 59.7%), beneficiaries' failure to discharge their obligations (65.5% and 59.7%), willingness of employees -to-pay (65.5% and 54.8%), and students feel that no substantial improvements will occur in institutionally provided services and facilities 65.0% and 62.9% of universities have inadequate learning facilities. They also responded that universities have suffered from an insufficient number of qualified and experienced academic staff (62.3% and 64.5%), poor promotional activities (61.6% and 67.7%), and gross underfunding. 52.2% and 51.6% were taken as reasons for the practical challenges encountered in the implementation and repayment of cost sharing in the Ethiopian HES, respectively.

In addition to explaining the phenomena descriptively, binary logistic regression is also used for analytical analysis to test whether there is a significant relationship between the independent variables and the challenges encountered in the implementation and practice of cost-sharing reimbursement in Ethiopia's HES.

The outcome demonstrated that the majority of challenges encountered in the cost-sharing implementation and repayment procedures in the Ethiopian HES were found to be statistically significant. When we compare loose or weak enforcement mechanisms as a challenge for repayment, the result showed it has an inverse relationship. Graduate employees who agreed that loose or weak enforcement mechanisms were being a challenge that affects the repayment practice of graduate employees were with the odds

ratio of 0.418 times less likely to evaluate the challenge than those who disagreed that loose or weak enforcement mechanism was not a challenge that affects the repayment practice of graduate employees with a significant level of $p = 0.014$. Again, the woreda personnel result showed that it has an inverse relationship. Woreda personnel who agreed that loose or weak enforcement mechanism was a challenge that affect the repayment practice of graduate employees were with the odds ratio of 0.235 times less likely to evaluate the challenge than those who disagreed that loose or weak enforcement mechanism was not a challenge that affects the repayment practice of graduate employees with a significant level of $p = 0.046$ (see Appendix F).

This finding is supported by Ayalew (2013), who claimed that one of the issues seen in the Ethiopian case was a relatively lax enforcement mechanism linked to subpar administrative systems, which reduced the effectiveness of income tax collection and recovery. He continued, saying Ethiopia, one of the world's poorest nations with numerous political, social, and economic problems, presented a challenge in this situation.

The results are in agreement with those of Teixeria et al. (2008), who found that in developing countries, administrative systems can be weak and rely on labour-intensive manual record-keeping.. There typically isn't a solid system of unique identifiers for taxation purposes, and taxation systems may be unstable or even corrupt. Both financial regulation and contract law are frequently ineffective. Other observed weaknesses in government organizations include a lack of trained personnel managing these institutions and a carelessness in monitoring loan defaults (Osero, Walter, & Nyaoga, 2013).

Another finding that supports this conclusion is the study by Ayalew (2013), who explained that for revenue-based cost sharing systems to be effective, it is necessary to put in place viable tax systems that could be used to successfully collect tuition fees based on future earnings. The likelihood that the plan will be successful in the long run will be significantly impacted by this important administrative issue. Ethiopia is a federal state, so there is a central government and several regions, each with its own set of rules for running government. According to the policy, some governmental entities directly or indirectly collect the graduate tax. Some of these organizations include the Department of Education, Regional and City administrations, tax collection agencies, the Federal Ministry

of Revenue, and the Ministry of Finance and Economic Development. Every employer in Ethiopia, whether in the public or private sector, is required to withhold the amount owed by the beneficiaries and forward it to the revenue agency or its representative in accordance with the law and cost-sharing policy of the country (FDRE, 2008). However, this reduces the effectiveness of income tax recovery and collection, which is one of the issues seen in Ethiopia, due to the loosened and weak enforcement mechanisms and weak conjugation observed in these institutions.

From interviews conducted with woreda revenue office heads and university cost-sharing officers on the challenges of implementation of cost-sharing and repayment practices by graduate employees, the loose enforcement mechanism observed by the government was confirmed by four woreda revenue office heads and two university cost-sharing officers as one of the challenges observed in the practice of cost-sharing. They claimed that the lack of trained personnel managing these institutions and the absence of a well-organized information channel between these bodies, which manifested itself in carelessness or negligence by the personnel who were appointed to the work of coordination and monitoring of the repayments, were the reasons for the bodies involved in the collection process's poor coordination. This obstacle prevents the cost-sharing scheme from being implemented to its full potential. Therefore, it is difficult to collect repayments without an effective communication structure between these institutions and without the necessary information regarding the status of graduates officially provided by the authoritative agencies.

When we compare poor promotional activities as a challenge for repayment, graduate employees who agreed that, poor promotional activities were a challenge that affect the repayment practice of graduate employee were with the odds ratio of 1.706 times more likely to evaluate the challenge than those who disagreed that poor promotional activities were not a challenge that affects the repayment practice of graduate employees with a significant level of $p = 0.022$ (see Appendix F).

The study by Booij, Leuven, and Oosterbeek (2012), which examined the role of information in influencing students' perceptions of the cost of education in the Netherlands, lends support to this conclusion. A representative sample of college students was used.

Information on loan terms, such as interest rates, the maximum loan amount, the grace period, and the repayment period, is provided to half of these students. The findings show that information significantly increases knowledge and that Dutch students in general lack knowledge about loan conditions. This might suggest that educational campaigns are successful at raising students' knowledge levels, which in turn influences how they perceive loan repayment.

Another finding that supports this one comes from a study by Warue and Ngali (2016), which showed that loan recovery activities can be directly related to loan recovery through advertisements made to raise awareness about repayment, which will lead to an increase in loan recovery. One of the unique collection techniques related to student debt collection is the use of email to notify loan balances and remind loan recipients of their repayment obligations, in addition to phone calls and meeting the recruiter directly.

From the interview conducted with the university cost-sharing officers and woreda revenue office heads, it was revealed that cost-sharing has faced some challenges that arise from problems of implementation. One of the challenges according to them is the poor promotional activities by the side of the government. According to them, in the real world, promotional activities make events to be popular with the public. In the Ethiopian case of cost-sharing, the government should have done different promotional activities using different types of Medias to create awareness and make the scheme clear to the students, their parents and the public in general. But, without announcing the policy when it was first declared by the Ministry of education in 2003, much has not been done by the government to make the cost-sharing scheme clear to the public.

When we compare universities have suffered gross under-funding as a challenge for repayment the result showed that it has an inverse relationship. Graduate employees who agreed that, universities have suffered gross under-funding was a challenge that affects the repayment practice, were with the odds ratio of 0.629 times less likely to evaluate the challenge than those who disagreed that universities have suffered gross under-funding was not a factor that affects the repayment practice of graduate employees with a significant level of $p = 0.016$ (see Appendix F).

Notably, the government provides the majority of funding for Ethiopia's public higher education system. According to Article 62 of the Proclamation of Higher Education (FDRE, 2009), public institutions must receive funding from the federal or state government through a block funding system based on a strategic plan agreement. As a result, the government is the sole source of funding for higher education in the country.

This result is consistent with Woodhall's 2007 findings, which showed that governments and universities all over the world are having a difficult time raising the money needed to meet the steadily rising demand for HES. In other words, the demand for higher education is growing much faster than governments can or will respond (Johnstone, 2004a). Many governments are struggling to maintain levels of public funding through public revenues as demand for higher education grows rapidly. The decline in public funding of higher education has led to the financial difficulties that govern higher education funding globally. Universities are under great pressure to find alternative funding sources due to financial difficulties caused by falling government spending and a continued lack of capital that cannot keep up with the rapid expansion of the education system (Woodhall, 2007; Gambo, 2019; Ayam, 2021; Mgaiwa & Ishengoma, 2023).

It was also confirmed (Yizengaw, 2007) that Ethiopia's public universities generally face financial difficulties. In addition, because of the state's reliance on public funding, funding levels fluctuate with changes in this funding. Despite the fact that public grants are expected to continue to be the main source of funding for higher education in Ethiopia, they are progressively unable to meet HES' growing financial needs due to the country's expanding social demands (Dufera, 2003).

A study by Reisberg and Rumbley (2010) that found that the number of university students in Ethiopia was quickly outpacing the amount of money the government could provide is another source that supports this conclusion. Furthermore, it is said that Ethiopia's HES is expanding faster than the funding available to support it, so a funding gap could exist in the medium term until graduate tax revenue starts to generate significant flow. Due to a lack of public funding, Ethiopian universities are unable to meet the growing public demand for higher education.

This finding is in line with a study by Butare (2004), Gambo (2019) and Ayam (2021) that found the state budget was insufficient to pay for the massive expansion projects being undertaken in many African nations. As a result, the majority of African universities are unable to offer their students enough resources for their higher education. Students were aware that universities were severely underfunded, had inadequate learning facilities, and therefore required urgent financial attention, according to a study by Eboh and Obasi (2002) on students' opinions and perceptions on cost sharing.

The majority of the financial resources needed to operate public higher education are provided by the government, according to an interview with university cost-sharing officers. As a result, the government is the sole source of funding for higher education in the country. However, the government is battling to give colleges the right amount of money, and universities are battling to get the money they need to meet Ethiopia's continuously rising higher education demands. They all agreed that Ethiopia is a developing country with few sources of income, making it difficult for the government to cover all necessary expenditures on its own. It is also difficult to predict how universities will be able to obtain the required funding. For on-going costs as well as other development costs, public universities in Ethiopia have primarily relied on funding from the government budget. However, it has frequently been noted that the public budget for universities is largely insufficient. The government has struggled to sustain public funding through public revenues due to the rapidly increasing demand for higher education. As a result, it has been found that Ethiopia's higher education institutions are mainly in financial trouble. As a result, universities are struggling with capital shortages and are unable to meet the growing demand for higher education.

When we compare graduate employees who agree that universities have inadequate academic facilities and insufficient numbers of qualified and experienced staff as challenges that affects graduate employees' repayment practice were 2.505 times more likely to evaluate the challenge than those who did not, with a significant level of $p = 0.000$ (see Appendix F).

This result was in line with a study by Mohamedbhai (2008), Mulyono et al., (2020) and Ayam (2021), who found that tight budgets had a negative impact on the quality of

instruction by forcing overcrowding in lecture halls and, in some instances, eliminating practical laboratory work. The number of computers available to students at most institutions is insufficient, and library resources are also under pressure. There haven't been many new buildings constructed, and the majority of the ones that already exist are inadequate for housing large student populations due to neglect and significant deterioration.

This result is consistent with the results of Johnstone, Arora, and Experton (1998), Mulyono et al., (2020), Chakrabarti et al., (2021) who found that a lack of funding can also lead to the deterioration of laboratory equipment and other teaching materials, the departure of the best staff, the deterioration of facilities, and the inability to raise the physical capacity to cope with the increased enrolment. Again, the results are consistent with a study by Court (1999), who hypothesized that the university's physical, instructional, and management capacities are starting to be exceeded by enrolment growth because of deteriorating laboratory and workshop capacity, outmoded technology, restricted computer access, and low research output.

This conclusion is supported by the study by Butare (2004), Awotwe et al., (2020); Ayam (2021); and Chakrabarti et al., (2021) showing that the state budget is not sufficient to pay for the large-scale expansion carried out in many African countries. Because of this, most universities in Africa are unable to provide their students with adequate funding for their higher education. The stability of institutions across the continent may be threatened by the effects of these financial pressures. As a result, very few countries consistently achieve high performance (World Bank, 2000). The financial environment described above, which is typical of most African universities, generally applies to Ethiopian universities as well.

The findings of Teixeria et al. (2008) and Mulyono et al., (2020) confirmed that their financial austerity is reflected in issues like overcrowding, declining faculty services, deteriorating physical plants, etc. This is another positive aspect of the results. This finding is consistent with Oketch's (2003) and Gambos' (2019) finding that residence hall closures, a decline in utilities such as water and electricity, crowded lecture halls, less teaching with

chalk and talk, libraries whose acquisitions are minimal, and poor research outputs are conspicuous in most African universities.

Students know that universities are severely underfunded, have poor academic facilities and are in dire need of financial attention, according to research by Eboh and Obasi (2002) on their opinions and perceptions of cost-sharing. This conclusion is supported by their findings. The results are consistent with those of Areaya (2010), who contends that numerous new institutions in Ethiopia were established as universities without even fulfilling some of the criteria outlined by the MoE for achieving university status, such as providing robust research opportunities and scholarly outputs. Because of this, the majority of recently established public universities are still struggling to prove that they are institutions deserving of the name and status that were previously bestowed upon them. Most of the requirements outlined in Higher Education Proclamation No. 650/2009 were not actually met when many Ethiopian public "universities," especially those that are still relatively new, were established.

During an interview session with university cost-sharing officers, they confirmed and disclosed that universities face challenges due to inadequate learning facilities and a lack of qualified and experienced academic staff. They said that as a cost-sharing officer they have observed at least in universities in which they are working that universities have overcrowded lecture rooms, a small number of computers, limited access for internet service, outdated laboratory equipment, insufficient library facilities and services, loss of experienced academic staffs, shortage of water and electricity services and faded buildings etc…But, students sign the cost-sharing agreement to share the cost of these services and are expected to repay the obligation they owed after graduation. Therefore, they said that as they are also graduate students who are expected to repay their obligation, they sense that they are expected to share the cost for the unsatisfactory services which they got while they pursue their education.

When we compare the lack of effective public campaigns before the introduction or expansion of cost-sharing measures as a barrier to repayment, woreda personnel who agreed that, no appropriate public campaign was conducted prior to any introduction or increase of cost-sharing measures, which was a challenge affecting repayment practices

with an odds ratio of 2.862 times more likely to evaluate the challenges than those who disagree that no appropriate public campaign were conducted prior to the introduction or increase of cost-sharing measures as a challenge that does not affect the repayment practice of graduate employees with a significance level of p = 0.013. Furthermore, woreda personnel who agreed that, no adequate public campaigns were taken before any introduction or increase in cost sharing measures was a challenge that affects the repayment practice of graduate employee, were with the odds ratio of 24.699 times more likely to evaluate the challenge than those who disagreed that no adequate public campaigns were taken before any introduction or increase in cost sharing measures that affects the repayment practice of graduate employees with a significant level of $p = 0.003$ (see Appendix F).

Booij et al. (2012) corroborated this view by examining how information affects students' perceptions of the cost of education in the Netherlands. College students who were fairly represented in the sample were used. Half of these students received information about the loan term, including the interest rate, maximum loan amount, grace period, and repayment period. According to the research, Dutch students are generally uninformed about loan terms, and information significantly increases knowledge. This may indicate that educational campaigns are effective in increasing students' knowledge levels, which in turn affects how they view loan repayment.

A study by Warue and Ngali (2016) shows that loan collection activities can be directly linked to debt collection through advertisements made to raise awareness about debt repayment, which, according to reports, have resulted in an increase in debt collection. This finding is supported by another study. One of the unique collection techniques related to student debt collection is the use of email to notify loan balances and remind loan recipients of their repayment obligations, in addition to phone calls and meeting the person directly.

The leaders of the Woreda Revenue Office and university cost-sharing officers were interviewed, and they disclosed that no adequate public campaigns were undertaken prior to the introduction or expansion of cost-sharing measures. Though most of them said that they had first heard about it from friends or members of parents sometime before they

join the university, all of them confirmed that as they were once a student in universities and they only know when they are told to sign the agreement between the university and them. University cost-sharing officers also said that revisions to the amount of cost-sharing have been made and an increment has been made four times up until now. But, university students did not have the opportunity to discuss the revision and increments of the amount; rather the Ministry of Education decides the increment amount and writes a letter to be effective by the universities starting from the academic year which is anticipated to be effective. According to them, for example, the amount allotted for the accommodation services was 1800 Birr a year at the beginning and was then revised to be 2400 Birr, then 3600 Birr, and now it has reached 5000 Birr. In addition, students must cover at least 15% of the annual tuition fee in addition to accommodation costs. And these days the government is thinking of increasing it to 30%. Therefore, no one got a chance to discuss any revision or increment on cost-sharing, and universities are only applying what is told them by the Ministry of Education.

Finally, comparison was done for willingness of employee -to-pay as a challenge for repayment practice. Graduate employees who agreed that willingness of employee -to-pay was a challenge that affects the repayment practice of graduate employees were, with the odds ratio of 1.528 times more likely to evaluate the challenge than those who disagreed that willingness of employee -to-pay as a challenge that affects the repayment practice of graduate employees with a significant level of $p = 0.031$ (see Appendix F).

This conclusion is supported by Abu Bakar et al. (2006) found about student defaults, showing that perception is related to default and remains an important area for further research as “willingness to repay” is more important than “ability to repay debt.” According to research by Kerin (2012), attitude is correlated with unawareness, dissatisfaction, and misconceptions about the possible repercussions of not repaying the loan. Woo (2002) discovered that misbehaviour on the part of borrowers regarding loan repayment or other financial obligations for which payment is still outstanding is related to perception. As the payment deadline approaches, the chances of a borrower defaulting will increase.

Once more, the findings of this study and those of Bertola and Hochguertel (2005) are in agreement. They claim that failures to pay attention or a lack of willingness to pay are two factors that contribute to loan default. Once they get their first job and start earning money, borrowers will be more likely to pay off other debts like credit cards, car loans, or mortgages. A study by Abu Bakar et al. (2006) of 1500 undergraduate students at Putra University, Malaysia, found that many students have a negative attitude towards debt repayment and view student loans as a significant burden.

In a review of the literature on student default by McMillan (2004), perception was identified as one of the causes of default. According to research by Abu Bakar et al. (2006), it was discovered that perceptions and behaviours play a significant role in predicting whether a loan will be repaid or not. Additionally, perception was one of the factors that Gross et al. (2009) identified as being associated with loan default.

In an interview done with revenue office heads and university cost-sharing officers, it was commented that graduate employees are not willing to repay their obligation. According to them, once the graduate students get the job and the salary, they face different problems. One of the problems is mostly the small amount of salary received at the beginning of their work. First, they struggle to sustain a life tied to the inflation of goods and services. Second, with the small amount of remaining salary, as citizens of a poor nation, most of them have families to support and if still there is a possibility of remaining, they prefer to save it for future use instead of paying their obligation. Therefore, one can simply understand that graduates are not willing to pay it easily.

5.7 Examination of participants' opinions and perceptions of the rationale and objectives for the cost-sharing policy statement

This sub-question was designed to examine participants' opinions and perceptions of the rationale and objectives for the policy statement on cost sharing in the HES of Ethiopia.

Table 15 Graduate employee and woreda personnel participants response on personal views and perceptions on the rationale and objectives of the policy statement regarding cost sharing.

No	Views and perceptions	Participants						
		Graduate Employee n=586				woreda personnel n=62		
		Scale	Frequency	%	Mean	Frequency	%	Mean
1	Additional sources of non-governmental revenue	Disagree	171	29.2	3.60	20	32.3	3.42
		Agree	415	70.8		42	67.7	
2	A wish to allocate resources to lower levels of education	Disagree	229	39.1	3.30	32	51.6	3.10
		Agree	357	60.9		30	48.4	
3	To improve the quality in higher education	Disagree	304	51.9	3.10	34	54.8	3.10
		Agree	282	48.1		28	45.2	
4	A more equitable distribution of higher education costs	Disagree	227	38.7	3.42	20	32.3	3.60
		Agree	359	61.3		42	67.7	
5	It enables students to select their programme of study carefully and to complete their study more rapidly	Disagree	250	42.7	3.32	35	56.5	1.55
		Agree	336	57.3		27	43.5	
6	Cost sharing promotes equity	Disagree	207	35.3	3.48	11	17.7	3.90
		Agree	379	64.7		51	82.3	
7	Cost sharing promotes efficiency	Disagree	343	58.5	2.98	40	64.5	2.85
		Agree	243	41.5		22	35.5	
8	Generate additional revenue sources	Disagree	51	8.7	4.36	6	9.7	4.45
		Agree	535	91.3		56	90.3	
9	Rapidly increase access to higher education	Disagree	117	20.0	3.90	10	16.1	4.03
		Agree	469	80.0		52	83.9	
10	Improve the quality of higher education	Disagree	271	46.2	3.28	31	50.0	3.27
		Agree	315	53.8		31	50.0	
11	Rationally utilize the available resources and develop a culture of saving	Disagree	276	47.1	3.21	16	25.8	3.84
		Agree	310	52.9		46	74.2	
12	Mobilize new resource funds to improve teaching and research	Disagree	330	56.3	3.05	36	58.1	3.05
		Agree	256	43.7		26	41.9	
13	Enable the government to sustain the expenditure at the primary and secondary education levels.	Disagree	373	63.7	2.82	41	66.1	2.73
		Agree	213	36.3		21	33.9	
	Average Mean				**3.37**			**3.23**

As shown in Table 16 the overall examination of graduate employees and woreda personnel on their views and perceptions on the rationale and objectives of the policy statement regarding cost sharing in the Ethiopian HES was calculated and was found the overall average to be 3.37 for graduate employees and 3.23 for woreda personnel.

The majority of respondents, including graduate employees and woreda staff, agreed that additional non-governmental revenue sources would promote equity (71.8% and 67.7%), cost sharing would do so (64.7% and 82.3%), higher education costs would be distributed more fairly (61.3% and 67.7%), and resources would be better spent on lower levels of education (60.9% and 48.4%); it allows students to choose their study program carefully and complete courses quickly (57.3% and 42.7%) respectively, are the major rationale for the cost-sharing system to be implemented in the Ethiopian HES.

On the other hand, the majority of graduates and woreda personnel agree that generating additional sources of income (91.3% and 90.3%), rapidly increasing access to higher education (80.0% and 83.9%), improving the quality of higher education (53.8% and 50.0%), making rational use of available resources, and developing a culture of saving (52.9% and 74.2%) are, respectively, the main rationale and objectives of the cost-sharing program implemented in the Ethiopian HES.

In this case as well, in addition to providing a descriptive explanation of the phenomenon, binary logistic regression was also used for analytical analysis to determine whether there is a significant relationship between the independent variables of the graduate employees' and woreda personnel's views and perceptions on the rationale and objectives of the policy statement regarding cost sharing in the Ethiopia HES.

The findings showed that the opinions and perceptions of the majority of graduate employees and woreda staff members regarding the rationale and objectives of the policy statement regarding cost sharing in the HES of Ethiopia were found to be statistically significant. When we compare additional sources of non-governmental revenue as the rationale, graduate employees who agreed it being as one of a rationale were with the odd ratio of 1.857 times more likely to examine it as a rationale than those who disagreed that additional sources of non-governmental revenue were not the rationale with significant level of $p = 0.029$. In contrast, woreda personnel who agreed that additional sources of non-governmental revenue being as the rationale were with the odd ratio of 68.270 times more likely to examine it as a rationale than those who disagreed that additional sources of non-governmental revenue were not the rationale with significant level of $p = 0.018$ (see Appendix G).

This result supports that of Teixeria et al. (2008); Chakrabarti et al., (2021); Ayam, (2021) and Xu, (2023), who show that cost-sharing serves as a source of income for HEIs in a variety of ways and broadens the options for program supply and delivery as well as the HES's capacity. According to Ishengoma (2004), Ayam, (2021) and Xu, (2023) HEIs are being forced to supplement their government funding through cost-sharing and other revenue-diverse activities as a result of the shrinking public resources provided to these institutions, which has been heavily stressed by the high demand for higher education.

Cost-sharing, in the opinion of Woldegiorgis (2008), can aid in financing higher education if it is carefully planned and takes into account the socio-economic situation of the country. Universities and the government are both aware that it is necessary to look into and find alternate or additional sources of funding. Governments have long recognized the importance of implementing a cost-sharing policy (Eboh & Obasi, 2002).

During an interview, the heads of the woreda revenue offices and university cost-sharing officers have agreed that cost-sharing increases non-governmental revenue for higher education funding which in turn lowers public spending. However, university cost-sharing officers explained that since the graduate tax is collected by the revenue authority from graduate employees, no one knows whether all or the portion of it allocated to the universities or not. Woreda revenue office heads also confirmed that they only collect the repaid money from woreda finance and economic development office and send it to regional revenue authorities and they do not know for what purpose the authority uses. In other words, no graduate student makes repayment directly to the university where he/she received their degrees.

When we compare improving the quality in higher education as the rationale, graduate employees who agreed it being as a rationale were with the odds ratio of 1.791 times more likely to evaluate it as a rationale than those who disagreed that improving the quality in higher education was not the rationale of cost sharing with a significant level of $p = 0.044$ (see Appendix G).

There is evidence to support the idea that when there is insufficient public funding and diversification of resources, an increase in student numbers leads to a decline in quality. African governments and organizations have introduced a number of cost-cutting

measures, including paying teachers and hiring them, providing social grants and scholarships to students, reducing spending on books and equipment, and performing basic maintenance and repair work. These actions have decreased the higher education sector's quality without increasing efficiency (World Bank, 2010).

When we compare enabling students to select their program of study carefully and to complete their studies more rapidly as the rationale, the result shows that it has an inverse relationship. Graduate employees who agreed it being as a rationale were with the odds ratio of 0.321 times less likely to examine it as a rationale than those who disagreed that the need to reduce public expenditure was not the rationale with a significant level of $p = 0.000$ (see Appendix G).

One justification is that students will value their education more if they pay for it. As a result, they will be pressured to complete programs as quickly as possible to save money, and they will be less likely to take actions that interfere with their learning or reduce the quality of service they receive (Dufera, 2003). The general consensus is that consumers are more capable than ever of making their own decisions; they increasingly have the resources, knowledge, and skills needed to make decisions that impact their well-being (Teixeria et al., 2008).

Universities must connect student demand for graduates to training requirements. Universities will face pressure from students to respond quickly to changing market conditions and adapt, or risk losing enrolment market share (Dufera, 2003). Students will become aware of the graduate labour market and will demand from universities the right training programs. According to the Human Capital Theory, when students conduct a cost-benefit analysis, they decide to enrol in college because the benefits outweigh the disadvantages. However, prospective students might not always choose their courses of study and careers in a purely logical manner. Instead, they will estimate the costs and advantages of education because it is difficult to predict (Teixeria et al., 2008).

It has been demonstrated that financial factors influence students' choices of colleges and universities, the courses they enrol in, and the degrees they aspire to. Compared with students from more affluent families, disadvantaged students often face these restrictions on their options. Forsyth and Furlong's (2000), for example, in a study of

young people from disadvantaged backgrounds, found that students enrolled in short, low-demand courses at lesser-known colleges because of financial concerns and the desire to reduce loan debt. Knowles (2000) came to a similar conclusion when she discovered that lower-income students preferred shorter, less rigorous sub-degree qualifications to longer, more rigorous academic courses.

The study by Ayalew (2013) which discovered that many students have few options and a lower likelihood of getting into the programmes and institutions they desire, supports the conclusion. This is true even though the placement programme takes merit in general as well as specific subjects into account when attempting to place students in a particular programme and institution. Placement is carried out on the MoE grounds by representatives from each public university under the direction of a centrally coordinated mechanism. Each public university's overall enrolment and the distribution of students among its various programs are heavily influenced by the MoE. Therefore, if students are not permitted to pick where and what to study, and if HEIs are not allowed to recruit their students, it is almost impossible to convert students into consumers and infuse the institution with market values. The market should allow suppliers and customers to freely make decisions based on the information at their disposal to do so.

As mentioned earlier, one of Ethiopia's cost-sharing strategies is to convert students into customers. Teixeria et al. (2008) claim that cost-sharing transforms institutions into cost-conscious service providers who are better able to respond to societal and market demands and turns students into logical consumers. This suggests that both students and institutions should have some discretion in deciding where and what to accept applicants for. From a student's perspective, there are many factors that influence their choice of university and program. These include the student's academic background, the institution's admission standards, and characteristics of the institution itself, such as its location, available space, and the programs it provides. Students paradoxically have no choice in where or what they study because the MoE randomly assigns them to universities across the nation. Additionally, HEIs do not actively recruit students to enrol in their programs. According to Ayalew (2013), he ideal scenario is that each university will admit students according to its own admissions policies and requirements.

In an interview done with university cost-sharing officers, they stated that in principle the assignment of students to universities should be done based on the choice of students, merit or criteria set equally. But they confirmed that in Ethiopia, students are assigned to universities by the MoE. This is due to the existence of a placement mechanism that is centrally coordinated and carried out on the grounds of the MoE by representatives from each public university. The latter is crucial in determining both the total number of students admitted to each university and the number of students distributed among the various programs offered by each institution. Therefore, it is almost impossible to turn students into customers and instill market value in institutions without allowing students to choose where and what to study and without allowing universities to recruit students from other institutions. A document containing a list of the students the MoE designates to their universities each academic year was also given to me by two of the university cost-sharing officers.

When we compare cost sharing promotes equity as the rationale, graduate employees who agreed it as being a rationale were with the odds ratio of 1.734 times more likely to examine the rationale than those who disagreed that cost-sharing promotes equity was not the rationale with a significant level of $p = 0.047$ (see Appendix G).

The research of Teixeria et al. (2008), which contends that children of wealthy families enrol in higher education at a disproportionate rate worldwide, supports this finding. This is not only because they have more disposable income, but also because they have access to more cultural capital from their peers, secondary schools, and families, which influences their academic aspirations and study habits in addition to the actual knowledge.

This conclusion is supported by the findings of Johnstone's (2002) who showed that one of the main arguments in favour of cost sharing is that it promotes equity, efficiency, higher levels of student achievement, and an increase in revenue. Although the existence of means-tested grants and loans can maintain reasonable accessibility for the lower classes, it is fair to argue that the middle and upper classes are disproportionately represented among those who benefit from higher education and have the financial means to pay for it in many countries (Leka, 2004).

However, the idea of equity is based on the observation that although higher education is a right for all citizens, a very disproportionate part of society has benefited from it, including upper-class families who can and will pay at least part of the tuition expense, according to Johnstone (2004b). This would result in the exclusion of some prospective students. In order to increase access to equity in society, equity arguments typically start with the premise that all capable people should have access to higher education, regardless of their financial situation. If the cost of higher education is shared by those who benefit from it, this can be accomplished. The capacity for accommodations and classroom instruction can then be expanded using the extra money from cost-sharing, which will boost participation. If the beneficiaries' generated income is not used to fund higher education, this fact might not always be true (Woldegiorgis, 2008). The claim of equity is the first justification, to summarize the arguments. This assertion is supported by the finding that higher education is generally utilized disproportionately by those who have more privilege, despite the fact that the government's funding for this costly benefit is largely derived from taxes paid by the general populace (Johnstone, 2003, 2004a, 2006).

In an interview done with woreda Revenue office heads and university cost-sharing officers, they remarked that in Ethiopia because of the policy of cost-sharing, no one is left from joining higher education. This is because since Ethiopia has adopted the graduate tax in which graduates are expected to repay after graduation and even after one year grace time, every citizen is treated equally to join the HEIs. Therefore, in this case, it is difficult to raise the question of equity in terms of the disparity between some groups in the graduate tax scheme of Ethiopia. But they questioned why the graduate tax is applied to only those who have the first degree (BA or BSc). Second- and third-degree MA, MSc, and PhD graduates are not responsible for the repayment of cost sharing.

We find an inverse relationship when we compare increasing access to higher education with the objective of a cost-sharing scheme. With a significant level of $p = 0.011$, graduate employees who agreed that the need to reduce public expenditure was not the objective of the cost-sharing scheme were 0.479 times less likely to examine it as the objective than those who disagreed. As opposed to this, woreda staff who agreed that the cost-sharing scheme's goal was to increase access to higher education were 10.897 times

more likely to consider this as the scheme's objective than those who disagreed, with a significant level of p = 0.012 (see Appendix G).

The results are consistent with the study of Vossensteyn et al. (2013), who argue that tuition fees and student loans are perceived as more equitable because they pass some of the costs on to those who would actually benefit from the education rather than the taxpayers.

According to a previous study by Teixeria et al. (2008), the results are consistent with this finding by revealing that students from socioeconomic backgrounds are less likely to invest in higher education because they have less support from their families and are more risk-averse. To secure access, this requires greater financial aid for disadvantaged students.

Contrary to what was previously said, Chapman (2005) argues that the main purpose of cost sharing is to increase student participation and access to higher education in order to better prepare students for higher education and members to succeed in the knowledge economy. The likelihood that income-based repayment will prevent the gifted poor from taking part in this way is much lower. Unlike means-tested scholarship programs, which are free upfront for low-income families, prospective students without a scholarship with a generous parent or partner will face no barriers to direct finance when approaching the system (Woldegiorgis, 2008). The following also shows that the successful implementation of cost-sharing policy depends on achieving policy objectives, including quality improvement, improved accessibility, and NGO fundraising to support those goals (ibid.).

When we compare the mobilization of new resource funds to improve teaching and research as the objective of a cost-sharing system, the result showed that it has an inverse relationship. Graduate employees who agreed with it as being the objective of the cost sharing scheme were with the odds ratio of 0.394 times less likely to examine it as the objective of the cost sharing scheme than those who disagreed that mobilising new resource funds to improve teaching and research was not the objective of the cost sharing scheme with significant level of p = 0.037. In contrast, woreda personnel who agreed that a rapid increase in access to higher education was the objective of the cost sharing

scheme were, with an odds ratio of 117.077, more likely to examine it as the rationale of the cost sharing scheme than those who disagreed that the need to reduce public expenditure was not the rationale, with a significant level of p = 0.020 (see Appendix G).

The results of this study are consistent with those of the World Bank (2010), which argues that cost sharing can introduce new resources into higher education to enhance capacity, improve quality, and even improve accessibility and equity. However, public funding for higher education, as well as financial aid in the form of student loans, parent income-tested grants, and other forms of financial aid (especially from governments in African countries), must continue to achieve these objectives. This funding must be used to supplement rather than to replace or substitute for the potential new income from families and students. Finding out about applicants' and their families' socioeconomic circumstances is part of the means testing process. It is possible to use efficiency and equity arguments to support student fees given that students perform well on the job market and are more likely to come from wealthy backgrounds. Teixeria et al. (2008) assert that a no-fee system would redistribute public funding in a regressive manner, moving low-income taxpayers' share of the burden to (future) high-income taxpayers'.

Cost sharing can bring new resources to higher education, helping to build capacity, improve quality, and even increase access and equity (World Bank, 2010). Cost sharing has the potential to increase funding for higher education if governments, particularly those in Africa, keep up their current support for it while supplementing rather than replacing it with the potential new income from families and students.

As a result, policymakers try to develop more compelling justifications for integrating cost-sharing into a policy paradigm while minimizing objections from different sections of society. The following are the main theoretical bases for cost sharing and revenue diversification in higher education worldwide:

- increased effectiveness (the idea that paying tuition will lead to more discerning consumers among students and families, as well as cost-conscious providers among universities);

- responsiveness (the idea that because universities needs to use tuition fees as a way to supplement government funding, they will become more responsive to individual and societal needs); and
- the need for government revenue for growth, quality, access, and participation may be the most significant and least contentious justification (Johnstone, 2004; World Bank, 2010).

The other supportive result obtained is those of Owino and Abagi (2000), who opines that cost sharing's main objective was to encourage increased cost recovery as a way of mobilising additional resources for teaching and learning.

5.8 Chapter Summary

This chapter focuses on how data is presented and analysed to make sense of the information provided by study participants. Quantitative and qualitative data collected from different sources at different times are, therefore, analysed using both statistical tools and narrative descriptions, which demonstrates the type of cost sharing scheme adapted to the Ethiopian HES, facilities provided by universities to students, on factors that affect the repayment process, the challenges that affect the repayment practices, and the respondents' view and perception on the rationale and objective of cost sharing schemes.

The data for the quantitative research in this study were obtained from graduate students and Woreda personnel. While the data for the qualitative study were drawn from interviews conducted with university cost-sharing officers and Woreda revenue office heads. Based on analyses of the presented quantitative and qualitative data, conclusions are offered for each of the research questions that have been stated.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

An overview of the research is provided in this part of the thesis, and the conclusions drawn regarding the objectives of the study are outlined in the first chapter. Based on the literature review and the empirical studies consulted in this study, these findings have implications for practise, policy, and theory.

6.2 Summary

This study's primary goals and objectives were to examine and ascertain how cost-sharing and repayment practices were being implemented in the HES in Ethiopia. The study's target population was sampled from 35 woredas of the two national regional states that were randomly chosen, as well as from one city administration.

Research questions

The following research questions were created to direct the investigation:

- What are the forms of Cost Sharing in education adopted in the Ethiopian HES?
- How do students rate the provision of facilities and services in the Ethiopian HES compared to the cost-sharing implementation?
- What are factors that affect the repayment practices of higher education graduate employees of Ethiopia?
- What are the main practical challenges faced in the implementation and repayment of cost sharing in Ethiopia's HES?
- What are the views and perceptions of the stakeholders on the rationale and objectives of the policy statement regarding cost sharing?

Employed graduates from public universities, employees from the woreda revenue office, the woreda public service and human resource development office, and university cost-sharing officers were all participants in the study. Self-developed survey questions, interview guidelines, and documentary sources were used to collect information from

these informants. For the quantitative study, a total of 715 survey questions were distributed, including 650 to graduate employees, 35 to the staff of the Woreda public service and human resource development office, and 30 to the staff of the Woreda revenue office. With a return rate of 94.3%, a total of 674 questionnaires were gathered. 611 of them were graduates, 33 were employees of the woreda public service and human resource development office, and 30 were employees of the woreda revenue office. 26 questionnaires, however, were unfinished and not included in the analysis. Thus, only 648 questionnaires in total were collected, of which 586 were from graduate employees, 32 were from staff members of the woreda public service and human resource development office, and 30 were from employees of the woreda revenue office. The analysis of the data was made based on the data gathered from the study participants and the documents reviewed.

This study used mixed research methods. Thanks to the explanatory sequential design, which collects quantitative and qualitative data sequentially, I was able to collect quantitative data first and then qualitative data to further elaborate or explain the quantitative results. The mixed research design, in the opinion of Creswell (2012), and Cohen, et al. (2007) and Cohen, et al. (2018), aids in a deeper understanding of the research questions. The data came from two different sources. Survey questions and interviews served as the main sources of data. The primary data were combined with details obtained from secondary data sources, including the woredas' cost sharing repayment reports, cost sharing regulations, cost sharing agreement forms, and cost sharing agreements with college students.

By utilizing a variety of data sources, systematic bias was less likely to occur (Lune, & Berg, 2017); the study's problems were better understood (Maxwell, 2005); data was triangulated; and the study's findings were strongly supported (Gall, Gall, & Borg, 2007). The data for this study's qualitative research came from interviews with university cost-sharing officers and the heads of the woreda revenue offices, while the data for the quantitative research came from graduate employees and woreda personnel.

Regarding the quantitative data, the questionnaire was filled out by 586 graduate employees, 32 staff members of the Woredas Public Service and Human Development

Office, and 30 staff members of the Woredas Revenue Office in accordance with the research's objectives and literature review. The conclusions are listed below under the research questions that were previously stated, and are based on analyses of both the quantitative and qualitative data presented in the preceding chapter. These research questions are: "on the forms of cost sharing adopted in education in the Ethiopian HES; on the facilities and services provided to students of HEIs; on the factors that affect the repayment practices of higher education graduate employees; on the challenges encountered in the implementation and repayment of higher education loans." The study's results are then briefly summarized.

The first research question in this study sought to determine whether study participants could name and describe the types of cost sharing in education used by the Ethiopian HES. According to the results, the majority of the participants were able to name and describe the kinds of cost sharing used in the Ethiopian HES.

According to their observations and comprehension of the circumstances in the institutions, the second research question looked into the participant's perspective on how they would rate the key facilities and services offered to higher education students. Based on their observations and understanding of the circumstances in the universities, the findings showed that the majority of participants thought the facilities and services provided by the institutions were subpar and were unhappy with the facilities and services provided to them by the institutions. Because, as a beneficiary, students who participate in the cost-sharing program enter into a contract with their universities in order to pursue their higher education. They have access to the facilities and services offered by the universities once they sign the contract. In Ethiopian higher education, graduate tax is utilised as a type of cost sharing to pay for services that were previously offered by the government or a particular school, and these services are considered to be sufficient for the students. However, based on graduate employees' observation and understanding of the situation in the universities, the results showed that the facilities and services provided by the institutions were poor.

The third research question was aimed at assessing participants to evaluate the factors that affect the repayment practices of higher education graduate employees in

Ethiopia regarding the implementation of cost sharing. The results revealed that the following factors, in order of importance, affected graduate employees' repayment practices: poor record-keeping, insufficient follow-up and administrative systems of public sector officials, graduate employees, and woreda personnel awareness of the regulation, employee willingness for repayment, lack of strong tax-collection capacity, unemployment, monthly salary, family income, and rate of deduction of the payable amount.

The fourth research question looked into the difficulties with cost-sharing implementation and repayment procedures in the Ethiopian HES. The results showed that students oppose cost-sharing programs in part because they believe they are unable to afford the tuition and other fees. Additionally, students believe that the government can afford to support highly subsidized higher education. The willingness of employees to pay, a lax enforcement mechanism, ambiguous implementation modalities, beneficiaries' failure to fulfil their obligations, and students' perception that there won't be any significant improvements to institutionally provided services and facilities were all factors that went unaddressed prior to the introduction or expansion of cost sharing measures. Universities have poor promotional efforts, insufficient numbers of qualified and experienced academic staff, inadequate learning facilities, and severe funding shortages. These were cited as the causes of the difficulties in the Ethiopian HES's cost-sharing implementation and repayment, respectively.

The fifth research question sought individual opinions and perceptions of participants regarding the objectives and rationale of the cost-sharing policy statement. The results shown in Table 16 demonstrate that the majority of participants, including graduate employees and woreda staff, agreed that they would like to have an additional non-governmental income source and that cost sharing promotes equity and a more equitable distribution of the costs of higher education. Affirming that it enables students to pick their course of study carefully and finish their studies more quickly, they also support the desire to allocate resources to lower levels of education. Participants ranked increasing access to higher education, enhancing higher education quality, using resources wisely, and fostering a culture of saving in that order as the goals of the cost-sharing plan to be implemented in the Ethiopian HES. Participants evaluated these as the rationale.

6.3 Implication of the Study

It is unexpected that the results of this study show that graduate employees were dissatisfied with the facilities and services supplied by the universities since the graduate tax was placed in place as a form of cost sharing in order to recover the costs of institutionally provided services. Poor follow-up and administrative systems of woreda public sector officials, awareness of participants on the regulation of cost sharing, willingness of employees for repayment, lack of tax-collecting capacity, unemployment, and poor record keeping were some of the factors that affected graduate employees' repayment practice in Ethiopia, according to the study. However, because they believe they are not financially capable of paying tuition, students are resistant to cost-sharing plans. Students believe that the government is capable of supporting a heavily subsidized higher education; prior to the introduction or increase in cost-sharing measures, insufficient public campaigns were conducted; beneficiaries' failure to fulfil their obligations; students believe that there won't be any significant improvements made to institutionally provided services and facilities; universities have implemented cost-sharing measures. Poor promotional efforts and inadequate learning facilities were two of the difficulties encountered during the cost-sharing policy's implementation process. Overall, a lack of coordination among partners responsible for repayment, a lack of commitment from tax collection offices, and a weak collection structure and system also play a role in the poor performance of the repayment practise.

6.4 Conclusion

The following conclusions were reached based on the study's findings:

- It was ascertained that the majority of participants in this study were able to name the forms of cost sharing in education that were used in the Ethiopian HES, despite the fact that a small number of participants appeared to be unable to name and describe the forms of cost sharing adopted.
- Students who sign the cost-sharing agreement are entitled to use the facilities and services that the universities offer. The vast majority of respondents, however, did not find the services the universities offered to them satisfactory.

- The majority of study participants noted that there are some factors that influence graduate employees' repayment practices and that the government in Ethiopia needs to pay close attention to when implementing cost sharing.
- The majority of study participants believe that certain issues are impacting how graduate employees are repaying their loans. This is because Ethiopia, one of the world's poorest nations, has many political, social, and economic problems that affect how cost sharing is carried out. For instance, it is difficult for the nation to recover the intended amount for repayment of graduate employment loans because the country's government institutions find it difficult to establish a well-organized tax and banking system.
- The majority of participants agreed that the rationale for cost sharing should be considered to be reducing public expenditure, promoting equity, equitable distribution of higher education costs, and a desire to allocate resources to lower levels of education. Participants, however, believed that the objectives of the cost-sharing plan put in place in the Ethiopian HES were to generate additional revenue streams, quickly expand access to higher education, improve the quality of higher education, and rationally utilize the resources available.

6.5 Recommendations of the Study

The following are the recommendations that the researcher came up with pertaining to the findings:

6.5.1 Recommendations for Action

There are many gaps that need to be taken into account to enhance and improve the implementation of cost sharing and repayment practices of the Ethiopian HES, as was mentioned in the discussion and conclusion sections above. These factors taken into consideration, the current study has proposed the following recommendations:

- The government should establish a sound legal framework that must put strong accountability for the graduate employee to ensure that recovery is legally enforceable.

- The government should hold those woreda officers accountable who disobey their duties, such as woreda public service and human resource development office staff, who are able to follow graduates in all employment practices, including hiring, firing, training, compensation, advancement, and any other employment-related terms, conditions, or privileges. Since they obtain the necessary information, they can distinguish between those who are employed and are making their debt payments and those who have not begun doing so. They can also enforce the law to help with the recovery.
- Although woreda revenue office is in charge of collecting tax and money from the relevant parties, the woreda finance and economic development offices actually pay salaries on a monthly basis. Therefore, since the woreda revenue office does not pay the graduate employees' monthly salaries, it makes more sense for the government to assign the woreda finance and economic development offices the duty of managing and administering the repayments of the graduate employees.
- The majority of the parties involved in the cost sharing collection and repayment process appear to be lacking the records, coordination, commitment, and ability to keep track of the borrower's whereabouts needed to collect repayments from beneficiary graduate employees. Therefore, in order to improve the implementation and repayment process, the government should raise awareness among these partners, launch public campaigns to ensure that the cost-sharing principles are widely understood and accepted, and provide nationwide education to all stakeholders about the significance of the cost-sharing policy and its objectives. This may aid in raising stakeholders' awareness and fostering a favourable attitude toward the policy.
- The government should start providing cost sharing education at high schools before they join the universities and provide adequate information in the universities while they sign the agreement and before they accomplish their studies. These would help the government and the students by providing timely information and helpful criticism. They would also give students the chance to learn what is anticipated of them after they graduate and how to repay their debts.

6.5.2. Recommendation for Policy

- It is recognized that college graduates receive personal benefits from their education. These advantages include increased output, higher lifetime earnings, increased status and prestige, a wider range of career options, and additional options for living. However, the Ethiopian cost-sharing regulation places the obligation only on those with a first degree, exempting those with a second and third degree. Therefore, policymakers should update the law to include obligations for second- and third-degree graduates who benefit from all of the benefits described above more than those first-degree graduates.
- Graduates who plan to work as physicians and teachers in elementary and secondary schools are exempt from the repayment requirement. This type of legal exemption from graduate tax for some programs (to repay in terms of service years) excludes a large number of graduates each year and significantly lowers the anticipated cost recovery. The government's ability to raise money from the graduate tax is constrained, and exempting these graduates from making a financial contribution may result in inequality.
- To ensure that the implementation of cost sharing is more successful, policymakers should focus on periodic policy formulation. It is necessary to take the appropriate steps to make sure that the public is informed about cost sharing through all available channels, including the media. For cost sharing in Ethiopia to be successful, policymakers and other stakeholders must also play a part in making sure that this is the case.
- The policymakers should revise and improve the cost sharing regulation so that they can provide or consider other alternative forms of cost sharing mechanisms besides graduate tax to create room for those who need other forms of cost sharing.

6.5.3. Recommendation for Further Studies

Based on the results of this study, the following recommendations for further research are made:

- Because only graduate employees from public universities were used in this study, future research must examine the successes and shortcomings of cost-sharing policies as well as related problems affecting graduates from private universities and non-formal systems.
- The policy, as well as regulation directives prepared for cost sharing implementation, says nothing about the repayment condition of unemployed and self-employed graduates. Therefore, the study suggests conducting studies on how the unemployed and self-employed graduates can repay their obligation and, on the challenges, faced when they want to repay their obligation.
- The study also recommends conducting studies covering a large number of national regional states so that a greater number of graduate employees can be covered and adequate information can be reached.

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APPENDICES

APPENDIX A Questionnaire for graduate employees & Woreda Personnel

Dear employee, please note that this questionnaire is intended to gather information about your views on cost-sharing practices in the Ethiopian higher education system. The study will be carried out in **Amhara National Regional State, Tigray National Regional State, and Addis Ababa City Administration**. Being aware that the answers you provide will be used for research purposes only, it is strongly recommended that you complete each item of the questionnaire with high responsibility. I hope you can take the time to complete the questionnaire carefully. Meanwhile, do not forget that the fruitfulness of the study is highly determined by your responsible and sincere response. Finally, please, be sure that the confidentiality of your response is highly guaranteed. For genuinely doing so by devoting your time and effort, I really remain very grateful to you.

With best regards!

I. Participant Profile

Instruction: Read the following items and give your answer by writing complete sentences or circling the letter of your choice, as each item requires. Please do not leave items unanswered.

1. Name of the Region you are working _____

2. Sex_____

3. Name of the public sector where you work _____

4. Total number of years of service/experience/ as a public servant in years _____

5. Name of university you have attended _____

6. Field of Study (profession) you have graduated _____

7. Your monthly salary_____

8. Your level of qualification: A) BA (First degree) B) MA/MSC (Second degree)

9. Your status of repayment: A) completed repayment B) started repayment

C) Interrupted repayment D) not started repayment at all

II. Subject Matter Information

Instruction: In the consecutive tables below put a thick mark ("√") to show your answer for all the items set. Since the items require your personal opinion and perceptions, the answers you provide will be determined based on your particular convictions. Kindly Please check your position on the scale, as the statement impresses you first. Please indicate what you believe, rather than what you think you should believe.

1. **Forms of cost sharing:** Please identify the forms of cost-sharing in education that are adopted in the Ethiopian Higher education system (1 = Strongly disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; and 5 = Strongly agree)

No	Item	1	2	3	4	5
1	Graduate tax in the form of imposing a user charge to recover the cost of previously provided services by a government or institution and tuition fees, which are mandatory for all students and/or their parents, to cover part of the cost of instruction					
2	Student loans which are given to students with the assumption to be paid back after graduation, in cash or in services.					
3	Scholarship and bursaries which are awarded by government to deserving citizens on the basis of merits or in an attempt to encourage educationally backward areas of the country.					
4	Sponsorships which institutions or individuals will cover the education cost of a certain body which otherwise would have to be covered by that certain body.					

2. ***Evaluation of the provision of facilities**:* There are different types of facilities provided to students in universities. Below is information on some of the major facilities and services offered to students at institutions of higher education. Based on your observations and understanding of the situation, please rate the facilities and services available in the Ethiopian higher education system so far based on the statements in the table. (1 = very poor; 2 = poor; 3 = fair; 4 = good; and 5 = very good)

No	Item	1	2	3	4	5
1	Availability of Library service and enough reading rooms					
2	Availability of reference materials and text books					
3	Availability of different Academic journals					
4	Availability of computers					
5	Provision of and access to broad band internet services					
6	Availability of cafeterias and lounges					
7	Availability of recreation and sport facilities					
8	Availability of dormitory services					
9	Availability of health and counselling services					

3. **Factors that affect the repayment practices**:- Please rate the factors affecting the repayment Practices of higher education graduate employees in Ethiopia in relation to the implementation of Cost sharing (1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; and 5 = Strongly Agree).

No	Item	1	2	3	4	5
1	Type of occupation					
2	Monthly salary					
3	Family income					
4	Residential area					
5	Completion time of payment of amount					
6	The rate of deduction of the payable amount					
7	Priority given for post graduate training					
8	Graduates and public sector officers' awareness on the regulation					
9	Poor follow-up and administrative system of the public sector officials					
10	Employees willingness for repayment					
11	Lack of strong tax collecting capacity					
12	Poor record keeping					

4. **Practical challenges encountered:-** Please rate the main practical challenges encountered in the implementation of cost-sharing and repayment practices in the Ethiopian higher education system.
(1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; and 5 = Strongly Agree)

No	Item	1	2	3	4	5
	Students generally share the view that the implementation of cost sharing is difficult for the following reasons					
1	Loose or weak enforcement mechanism					
2	Vague modalities of implementation					
3	Poor promotional activities					
4	Universities have suffered gross under-funding					
5	Universities have inadequate academic facilities and a lack of qualified and experienced academic staff					
6	Beneficiaries failure to discharge their obligations					
7	No adequate public campaign was undertaken prior to the introduction or increase of cost-sharing measures					
8	Students oppose cost-sharing programs in part because they feel they cannot afford to pay tuition and fees					
9	Students resist the introduction of cost-sharing programs in part because they believe the government is capable of supporting heavily subsidised higher education					
10	Students resist the introduction of a cost-sharing system because they perceive that there will be no significant improvement in the services and facilities provided by the universities.					
11	willingness of employee to pay					

5. **Views and perceptions of the respondents:-** Please evaluate your personal views and perceptions on the rationale and objectives of the policy statement regarding cost sharing. (1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; and 5 = Strongly Agree)

No	Item	1	2	3	4	5
The rationale of cost sharing scheme:						
1	Additional sources of non-governmental revenue					
2	A wish to allocate resources to lower levels of education					
3	Improve the quality of higher education					
4	More equitable distribution of higher education costs					
5	It enables students to select their programme of study carefully and to complete their study more rapidly					
6	Cost sharing promotes equity					
7	Cost sharing promotes efficiency					
The objectives of the cost-sharing scheme are:						
8	Generate more revenue streams					
9	Increase access to higher education					
10	Improving the quality of higher education					
11	Rationally utilize the available resources and develop the culture of saving					
12	Mobilize new resource funds to improve teaching and research					
13	Enable the government to sustain the expenditure of primary and secondary education level					

Overall, please list the main challenges and factors that you believe may affect repayment practices:
Major challenges:-
1.----------
2.----------
3.----------
4.----------
5. ----------
Factors that affect the repayment practices:-
6.----------
7.----------
8.----------
9.----------
10. ----------

Many thanks for you have responded with a high concern and consideration.

APPENDIX B Interview questions for university Cost Sharing Officers and Woreda Revenue Office Heads

Interview Questions

Personal information

1. How long have you been doing this job?
2. Are you aware of the educational cost-sharing forms that are in place in the Ethiopian higher education system?
3. Do you think that the facilities/services provided by the university satisfy students? If yes how? And If no Why?
4. What factors do you think influence the repayment practices of graduate employees?
5. In your opinion, what are the challenges encountered in the implementation and practice of cost-sharing repayment?
6. In your opinion, what do you believe to be the rationale and objectives of the policy of cost sharing?
7. Do you have well-established and up-to-date information of the cost sharing agreement or report of repayment done by your university or offices? If yes how? And If no Why?
8. How do you know whether any student have repaid his/her costs or is there any mechanism that enables you to identify those who paid and from those who do not paid?
9. Do you think that the government allocate additional budget for your university to facilitate the quality of education from the revenue collected in the form of cost sharing payments done by graduate employees?
10. Finally, do you have anything to add regarding the implementation of cost sharing in the Ethiopian higher education system?

APPENDICES C Logistic Regression result of graduate employee's & Woreda personnel on socio-economic data

Logistic Regression result of graduate employee's socio-economic data

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Region			29.836	2	.000	
	Region(1)	1.113	.266	17.466	1	.000	3.042
	Region(2)	1.610	.299	28.897	1	.000	5.001
	Sex(1)	-.803	.256	9.863	1	.002	.448
	Woreda sectors1			1.092	2	.579	
	Woreda sectors1(1)	-.277	.458	.366	1	.545	.758
	Woreda sectors1(2)	-.422	.414	1.038	1	.308	.656
	Exprience1(1)	.668	.728	.842	1	.359	1.950
	University1			3.763	2	.152	
	University1(1)	.651	.337	3.732	1	.053	1.917
	University1(2)	.500	.357	1.958	1	.162	1.649
	Field of study			18.561	6	.005	
	Field of study(1)	.242	.395	.376	1	.540	1.273
	Field of study(2)	.046	.558	.007	1	.935	1.047
	Field of study(3)	.420	.410	1.046	1	.306	1.521
	Field of study(4)	1.459	.528	7.635	1	.006	4.300
	Field of study(5)	-.205	.433	.224	1	.636	.815
	Field of study(6)	.033	.480	.005	1	.945	1.033
	Salary1(1)	.143	.329	.190	1	.663	1.154
	Qualification(1)	22.228	6666.870	.000	1	.997	4501071081.097
	Constant	-23.064	6666.870	.000	1	.997	.000

a. Variable(s) entered on step 1: Region, Sex, Woredasectors1, Exprience1, University1, Field of study, Salary1, Qualification.

Logistic Regression result of woreda personnel socio-economic data

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Region			2.884	2	.236	
	Region(1)	-1.432	1.267	1.277	1	.258	.239
	Region(2)	-.137	1.327	.011	1	.918	.872
	Sex(1)	.256	.966	.070	1	.791	1.292
	WoredaSectors(1)	1.129	.836	1.824	1	.177	3.093
	University1			.665	2	.717	
	University1(1)	.890	1.124	.626	1	.429	2.434
	University1(2)	.574	1.299	.195	1	.659	1.775
	Fieldofstudy			1.435	2	.488	
	Fieldofstudy(1)	-.076	1.150	.004	1	.947	.927
	Fieldofstudy(2)	-1.744	1.670	1.091	1	.296	.175
	Salary1(1)	4.787	1.390	11.854	1	.001	119.936
	Qualification(1)	18.434	26997.224	.000	1	.999	101379130.326
	Constant	-22.297	26997.224	.000	1	.999	.000

a. Variable(s) entered on step 1: Region, Sex, Woreda Sectors, University1, Field of study, Salary1, Qualification.

APPENDIX D Logistic regression result of provision of facilities/Services

Logistic regression result for provision of facilities by graduate employees

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Libraryservice1			11.520	2	.003	
	Libraryservice1(1)	2.709	1.232	4.831	1	.028	15.012
	Libraryservice1(2)	2.475	.845	8.576	1	.003	11.881
	Referencematerial1			10.142	2	.006	
	Referencematerial1(1)	-2.878	1.042	7.633	1	.006	.056
	Referencematerial1(2)	-1.759	.637	7.633	1	.006	.172
	Accademicjournal1			13.609	2	.001	
	Accademicjournal1(1)	.930	.430	4.688	1	.030	2.535
	Accademicjournal1(2)	1.881	.546	11.872	1	.001	6.563
	Computers1			8.551	2	.014	
	Computers1(1)	-.324	.345	.884	1	.347	.723
	Computers1(2)	-1.085	.378	8.219	1	.004	.338
	Internet1			6.623	2	.036	
	Internet1(1)	-.971	.803	1.463	1	.226	.379
	Internet1(2)	-1.676	.718	5.453	1	.020	.187
	Cafeteriaandlounge1			10.903	2	.004	
	Cafeteriaandlounge1(1)	.855	.377	5.130	1	.024	2.351
	Cafeteriaandlounge1(2)	1.544	.497	9.653	1	.002	4.685
	Recreationandsport1			3.073	2	.215	
	Recreationandsport1(1)	.622	.560	1.234	1	.267	1.862
	Recreationandsport1(2)	-.563	.614	.842	1	.359	.569
	Dormitoryservice1			16.348	2	.000	
	Dormitoryservice1(1)	-.631	.280	5.071	1	.024	.532
	Dormitoryservice1(2)	-1.332	.334	15.922	1	.000	.264
	Healthandcounseling1			2.424	2	.298	
	Healthandcounseling1(1)	-.109	.332	.108	1	.742	.896
	Healthandcounseling1(2)	.853	.573	2.214	1	.137	2.346
	Constant	.784	.300	6.840	1	.009	2.191

a. Variable(s) entered on step 1: Libraryservice1, Referencematerial1, Accademicjournal1, Computers1, Internet1, Cafeteriaandlounge1, Recreationandsport1, Dormitoryservice1, Health and counseling1.

Logistic regression result for provision of facilities by woreda personnel

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Libraryservice1			5.784	2	.055	
	Libraryservice1(1)	4.101	1.724	5.661	1	.017	60.402
	Libraryservice1(2)	4.296	2.025	4.502	1	.034	73.391
	Referencematerial1			5.077	2	.079	
	Referencematerial1(1)	-2.882	1.426	4.084	1	.043	.056
	Referencematerial1(2)	-3.814	1.741	4.800	1	.028	.022
	Accademicjournal1			3.936	2	.140	
	Accademicjournal1(1)	-4.066	2.515	2.614	1	.106	.017
	Accademicjournal1(2)	-2.372	2.436	.949	1	.330	.093
	Computers1			.741	2	.690	
	Computers1(1)	1.229	1.633	.567	1	.452	3.418
	Computers1(2)	.083	2.786	.001	1	.976	1.087
	Internet1			1.644	2	.440	
	Internet1(1)	-1.545	1.947	.630	1	.427	.213
	Internet1(2)	-3.476	2.721	1.632	1	.201	.031
	Cafeteriaandlounge1			.785	2	.675	
	Cafeteriaandlounge1(1)	-1.040	1.459	.508	1	.476	.353
	Cafeteriaandlounge1(2)	-.355	1.917	.034	1	.853	.701
	Recreationandsport1			.206	2	.902	
	Recreationandsport1(1)	-1.165	2.623	.197	1	.657	.312
	Recreationandsport1(2)	-1.334	3.186	.175	1	.675	.264
	Dormitoryservice1			4.909	2	.086	
	Dormitoryservice1(1)	-1.711	2.269	.569	1	.451	.181
	Dormitoryservice1(2)	2.645	2.686	.970	1	.325	14.077
	Healthandcounseling1			2.489	2	.288	
	Healthandcounseling1(1)	1.581	2.744	.332	1	.565	4.859
	Healthandcounseling1(2)	-1.336	2.973	.202	1	.653	.263
	Constant	5.158	3.580	2.076	1	.150	173.898

a. Variable(s) entered on step 1: Libraryservice1, Referencematerial1, Accademicjournal1, Computers1, Internet1, Cafeteriaandlounge1, Recreationandsport1, Dormitoryservice1, Health and counseling1.

APPENDIX E Logistic Regression result on the Factors that affect cost sharing

Logistic Regression result for graduate employee

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Unemployment1(1)	.494	.218	5.113	1	.024	1.639
	Monthlysalary1	-.685	.265	6.688	1	.010	.504
	Familyincome1(1)	.682	.211	10.412	1	.001	1.979
	Residentialarea1(1)	-.403	.335	1.449	1	.229	.668
	Completiontime1(1)	-.136	.301	.202	1	.653	.873
	Rateofdeduction1(1)	-.093	.229	.165	1	.684	.911
	Priorityforpostgraduate1(1)	.209	.244	.732	1	.392	1.233
	Awareness1(1)	-1.034	.214	23.384	1	.000	.356
	Poorfollowup1(1)	-.039	.308	.016	1	.898	.961
	Willingnesforrepayment1(1)	-.533	.326	2.670	1	.102	.587
	Taxcollectingcapacity1(1)	.751	.249	9.054	1	.003	2.118
	Poorrecoredkeeping1(1)	1.222	.209	34.032	1	.000	3.392
	Constant	1.465	.551	7.080	1	.008	4.330

a. Variable(s) entered on step 1: Occupation1, Monthlysalary1, Familyincome1, Residentialarea1, Completiontime1, Rateofdeduction1, Priorityforpostgraduate1, Awareness1, Poorfollowup1, Willingnesforrepayment1, Taxcollectingcapacity1, Poor record keeping1.

Logistic Regression result for woreda personnel

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Unemployment1(1)	-.523	1.051	.248	1	.619	.593
	Monthlysalary1(1)	.452	.901	.252	1	.616	1.571
	Familyincome1(1)	2.116	.912	5.388	1	.020	8.300
	Residentialarea1(1)	2.929	2.964	.977	1	.323	18.703
	Completiontime1(1)	1.929	2.809	.471	1	.492	6.882
	Rateofdeduction1(1)	-3.747	1.354	7.660	1	.006	.024
	Priorityforpostgraduate1(1)	-1.023	.995	1.056	1	.304	.360
	Awareness1(1)	2.733	1.305	4.382	1	.036	15.376
	Poorfolowup1(1)	-1.445	1.437	1.012	1	.314	.236
	Willingnesforrepayment1(1)	.257	.835	.095	1	.758	1.293
	Taxcollectingcapacity1(1)	-2.677	1.069	6.272	1	.012	.069
	Poorrecoredkeeping1(1)	-2.350	1.073	4.791	1	.029	.095
	Constant	1.099	.775	2.012	1	.156	3.002

a. Variable(s) entered on step 1: Occupation1, Monthlysalary1, Familyincome1, Residentialarea1, Completiontime1, Rateofdeduction1, Priorityforpostgraduate1, Awareness1, Poorfolowup1, Willingnesforrepayment1, Taxcollectingcapacity1, Poor record keeping1.

APPENDIX F Logistic Regression result of graduate employees on the challenges of cost sharing

Logistic Regression result of graduate employees

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Looseorweakenforcementmechanism1(1)	-.873	.356	6.014	1	.014	.418
	vaguemodalityofimplementation1(1)	-.312	.289	1.166	1	.280	.732
	Poorpromotion1(1)	.534	.234	5.219	1	.022	1.706
	Grossunderfunding1(1)	-.463	.192	5.819	1	.016	.629
	Inadequatefacilities1(1)	.918	.223	16.972	1	.000	2.505
	Beneficiariesfailure1(1)	-.335	.275	1.484	1	.223	.716
	Public campaign(1)	1.052	.423	6.189	1	.013	2.862
	Financialcapability1(1)	-.392	.302	1.684	1	.194	.676
	Governmenetscapability1(1)	.472	.353	1.790	1	.181	1.603
	Nosubstantialimprovement1(1)	-.406	.256	2.521	1	.112	.666
	Willingnessofemployee1(1)	.424	.197	4.635	1	.031	1.528
	Constant	.563	.166	11.482	1	.001	1.757

a. Variable(s) entered on step 1: Looseorweakenforcementmechanism1, vaguemodalityofimplementation1, Poorpromotion1, Grossunderfunding1, Inadequatefacilities1, Beneficiariesfailure1, Public campaign, Financialcapability1, Governmenetscapability1, Nosubstantialimprovement1, and Willingnessofemployee1.

Logistic Regression result of Woreda personnel

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Looseenforcementmechanism1(1)	-1.448	.727	3.964	1	.046	.235
	vaguemodalityofimplementation1(1)	.076	.946	.006	1	.936	1.079
	Poorpromotion1(1)	.386	.786	.241	1	.623	1.471
	Grossunderfunding1(1)	-.387	.704	.303	1	.582	.679
	Inadequatefacilities1(1)	-1.449	1.055	1.885	1	.170	.235
	Beneficiariesfailure1(1)	.555	.882	.395	1	.529	1.741
	Public campaign(1)	3.207	1.085	8.729	1	.003	24.699
	Financialcapability1(1)	-.011	.955	.000	1	.990	.989
	Governmenetscapability1(1)	-.185	1.592	.014	1	.907	.831
	Nosubstantialimprovement1(1)	.108	1.180	.008	1	.927	1.114
	Willingnessofemployee1(1)	-.521	.739	.497	1	.481	.594
	Constant	.785	.702	1.250	1	.263	2.191

a. Variable(s) entered on step 1: Looseenforcementmechanism1, vaguemodalityofimplementation1, Poorpromotion1, Grossunderfunding1, Inadequatefacilities1, Beneficiariesfailure1, Public campaign, Financialcapability1, Governmenetscapability1, Nosubstantialimprovement1, and Willingnessofemployee1.

APPENDIX G Logistic Regression result of graduate employees on the rationale and objectives of cost sharing

Logistic Regression result of graduate employees

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Reductionofpublicexpenditure1(1)	.619	.284	4.761	1	.029	1.857
	Awishtoallocateresources1(1)	-.437	.252	3.007	1	.083	.646
	Toimprovequality1(1)	.583	.289	4.061	1	.044	1.791
	Equitabledestribution1(1)	-.034	.270	.016	1	.901	.967
	Carefulselectionofprogrammes1(1	-1.135	.196	33.358	1	.000	.321
	Promotionofequity1(1)	.550	.277	3.935	1	.047	1.734
	Promotionofefficiency1(1)	-.095	.275	.120	1	.729	.909
	Generatingadditionalrevenue1(1)	.227	.392	.335	1	.563	1.254
	Increaseaccess1(1)	-.737	.289	6.486	1	.011	.479
	Improvequality1(1)	.143	.293	.240	1	.624	1.154
	Rationalutilizationofresources1(1)	-.041	.317	.016	1	.898	.960
	Mobilizenewresources1(1)	-.932	.446	4.371	1	.037	.394
	Sustainigexpenditure1(1)	.529	.414	1.631	1	.202	1.697
	Constant	1.066	.185	33.297	1	.000	2.905

a. Variable(s) entered on step 1: Reductionofpublicexpenditure1, Awishtoallocateresources1, Toimprovequality1, Equitabledestribution1, Carefulselectionofprogrammes1, Promotionofequity1, Promotionofefficiency1, Generatingadditionalrevenue1, Increaseaccess1, Improvequality1, Rationalutilizationofresources1, Mobilizenewresources1, Sustaining expenditure1.

Logistic Regression result of graduate employees

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Reductionofpublicexpenditure1(1)	4.223	1.792	5.553	1	.018	68.270
	Awishtoallocateresources1(1)	2.139	1.939	1.218	1	.270	8.493
	Toimprovequality1(1)	-3.252	1.679	3.752	1	.053	.039
	Equitabledestribution1(1)	-2.409	1.444	2.782	1	.095	.090
	Carefulselectionofprogrammes1(1)	.311	1.672	.035	1	.852	1.365
	Promotionofequity1(1)	3.125	1.557	4.025	1	.045	22.749
	Promotionofefficiency1(1)	-4.082	2.771	2.170	1	.141	.017
	Generatingadditionalrevenue1(1)	-3.865	2.539	2.317	1	.128	.021
	Increaseaccess1(1)	2.387	.951	6.297	1	.012	10.879
	Improvequality1(1)	4.825	2.962	2.654	1	.103	124.640
	Rationalutilizationofresources1(1)	.830	1.184	.491	1	.483	2.293
	Mobilizenewresources1(1)	4.763	2.044	5.431	1	.020	117.077
	Sustainigexpenditure1(1)	-.312	2.646	.014	1	.906	.732
	Constant	-1.563	.851	3.377	1	.066	.209

a. Variable(s) entered on step 1: Reductionofpublicexpenditure1, Awishtoallocateresources1, Toimprovequality1, Equitabledestribution1, Carefulselectionofprogrammes1, Promotionofequity1, Promotionofefficiency1, Generatingadditionalrevenue1, Increaseaccess1, Improvequality1, Rationalutilizationofresources1, Mobilizenewresources1, Sustaining expenditure1.

APPENDIX H Ethical Clearance Certificate

UNISA university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2018/04/18

Ref: 2018/04/18/58553711/36/MC
Name: Mr DH Desta
Student: 58553711

Dear Mr Desta

Decision: Ethics Approval from 2018/04/18 to 2023/04/18

Researcher(s): Name: Mr DH Desta
E-mail address: 58553711@mylife.unisa.ac.za
Telephone: +251 91 432 1461

Supervisor(s): Name: Prof VJ Pitsoe
E-mail address: pitsovj@unisa.ac.za
Telephone: +27 12 429 4436

Title of research:

Practices of Cost Sharing in the Higher Education System of Ethiopia: The challenges, retrospections and repercussions

Qualification: PhD in Educational Leadership and Management

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2018/04/18 to 2023/04/18.

*The **Medium risk** application was reviewed by the Ethics Review Committee on 2018/04/18 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

University of South Africa

2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after the expiry date **2023/04/18**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2018/04/18/58553711/36/MC** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

Dr M Claassens
CHAIRPERSON: CEDU RERC
mcdtc@netactive.co.za

Prof V McKay
EXECUTIVE DEAN
Mckayvi@unisa.ac.za

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APPENDIX I Language Editing Certificate

EDITING AND PROOFREADING CERTIFICATE

7542 Galangal Street

Lotus Gardens

Pretoria

0008

06 October 2022

TO WHOM IT MAY CONCERN

This certificate serves to confirm that I have language edited Debashu Haile Desta's thesis entitled, **"Practices of Cost Sharing in the Higher Education System of Ethiopia: The Challenges, Retrospections and Repercussions."**

I found the work easy and intriguing to read. Much of my editing basically dealt with obstructionist technical aspects of language, which could have otherwise compromised smooth reading as well as the sense of the information being conveyed. I hope that the work will be found to be of an acceptable standard. I am a member of Professional Editors' Guild.

Hereunder are my contact details:

Dr Jack Chokwe (PhD)

Contact numbers: 072 214 5489

jackchokwe@gmail.com

Professional EDITORS Guild

Jack Chokwe
Associate Member

Membership number: CHO001
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