Hebert Chitepo School of Law and Business Sciences

Department of Economics

Thesis Title:

A Comparative Analysis of Gender-Based Labour Force Participation and Employment Disparities in Southern Africa

By

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Declaration 1

I, Shynet Chivasa, student number M205757 declare that this work is a result of my effort, and where ideas were taken from others, they are correctly referenced and acknowledged.

Sign and date the document

Signature.  Date. May 2024

Declaration 2

Publications (in print, press and submitted) that constitute this thesis are present here.

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Dedication

I dedicate this thesis to my daughters, Nompumelelo and Langelihle and my lovely grandson Anozivaishe. To God be all the Glory and Honour.

Acknowledgement

Research of this magnitude owes its indebtedness to various facilitators, financial sponsors and well-wishers. Admittedly, I cannot possibly enumerate all of them for gratitude, but let me single out a few distinct ones. I would like to acknowledge supervisors, Doctors. P. G. Kadenge and Doctor G. Makuyana for their experiential mentorship, guidance and sense of direction throughout the thesis writing stages. Special mention goes to the African Economic Research Consortium (AERC) for financial support. Had it not been for their support, this study would not have witnessed the light of day. I would also like to thank my daughters, Nompumelelo and Langelihle for their support, encouragement, and patience with me when I was unavailable for them. My brother, Mufaro is greatly acknowledged for his support throughout my academic journey. I am also acknowledging Doctor Chidoko and Professor Saungweme for constantly checking on my progress and for their unwavering encouragement. Lastly, I would like to acknowledge the embassies of the study countries for providing me with the information necessary for the completion of the study.

Abstract

This study investigated gender labour market disparities with respect to labour force participation and the gender employment gap in the Southern Africa region. The research is predicated 2on South Africa, Namibia, Botswana, and Malawi. Despite various interventions to reduce these disparities, women continue to occupy a suboptimal position in the economic arena, often facing discrimination in the formal labour market. This is a major concern, as these disparities are not sometimes linked to differences in labour productivity, training, skills or education levels between men and women.

Adopting probit functions and the Maximum Likelihood Estimation technique, the study estimated gender labour force participation and employment disparities. Data was obtained from national labour force surveys conducted in 2019 for South Africa, 2018 for Namibia, 2019 for Botswana, and 2013 for Malawi.

The results revealed that women were less likely to participate in the formal labour market than men. Being female reduced the possibility of labour force participation by 1.14%, 1.13%, 1.125%, and 1.62% in South Africa, Malawi, Namibia, and Botswana, respectively. The major drivers of the participation gap were marriage, the presence of children and elderly men, education and the place of residence. Hence, marriage and the presence of dependence presented a labour force participation penalty for women. Gender employment disparities followed a similar trend, except for Botswana. Being female diminished the likelihood of employment for females from South Africa, Namibia, and Malawi by 0.08, 0.14, and 0.034, respectively. In contrast, being female increased the likelihood of employment in Botswana by 0.012, presumably due to increased access to education by women, especially at the tertiary level. Using Yun's (2005) decomposition and Bootstrapping techniques, the study finds a raw gender employment gap of 0.079 for South Africa, 0.129 for Namibia, 0.0118 for Malawi, and 0.125 for Botswana. Gender employment discrimination is detected, with South Africa having the highest level at 7.23% and Botswana the lowest at 1.69%. Namibia and Malawi have discrimination levels of 3.39% and 2.25%, respectively. The findings suggested that the situation needs to be ameliorated to achieve gender parity in the formal labour market in the Southern African region. Recommendations included providing affordable childcare facilities, promoting female education, ensuring generous maternity care, industrialising rural areas and educating males on the need to take up family responsibilities. Addressing these issues is crucial for achieving the Sustainable Development Goals related to poverty reduction (SDG 1), gender equality (SDG 5), and reduced inequalities (SDG 10) in the region and promoting inclusive economic growth.

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List of Abbreviations

AfDB	African Development Bank
ASGISA	Accelerated and Shared Growth Initiative of South Africa
CDF	Cumulative Distribution Function
DTDA	Danish Trade Union Development Agent
EEA	Employment Equity Act
FAP	Financial Assistance Policy
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GII	Gender Inequality index
HDI	Human Development Index
ILO	International Labour Organisation
ILOSTAT	International Labour Organisation Statistics
VIF	Variance Inflation Factor
LFP	Labour Force Participation
LMDS	Labour Market Dynamics Survey
MEMs	Marginal Effect at Means
MLE	Maximum Likelihood Estimation
MLFS	Malawi Labour Force Survey
NLFS	Namibia Labour Force Survey
NSO	National Statistics Office
OLS	Ordinary Least Squares
RDP	Reconstruction and Development Programme
SADC	Southern African Development Community
SARDC	South African Research Document Centre
SDGs	Sustainable Development Goals
SME	Small to Medium Enterprises
STATsSA	Statistics South Africa
UNDP	United Nations Development Programme
WBL	Women Business and Law
YES	Youth Employment Scheme

Chapter 1: Introduction and Background to the Study

1.1 Introduction

Gender inequality is rampant in the world in general and in labour markets in particular. In 2018, the gender inequality index (GII) ranged from 0.38 to 0.6 for Europe and Central Asia and Sub-Saharan Africa respectively (UNDP, 2019); with some Southern African countries' GII surpassing this regional level. These inequalities are reinforced by customary laws that segregate women in property rights such as the right to land ownership (Cherchi, et al., 2019). Human capital endowment (Becker, 1975), access to education and labour market segmentation (Borrowman & Klasen, 2020) and geographical location. Marital status and availability of dependants in a household, contribute to the disparities. However, the effect is ambiguous as these have been found to have both positive and negative effects on women's participation in the labour market, (Xiao, 2020).

Though many females have progressed in labour market participation, the bulk of females in Southern Africa experience obstacles that have hindered them from realising economic independence and guaranteeing sustainable sources of income for themselves and their dependents. Several developing countries (Southern Africa included) are in a predicament of women's stubbornly inferior place in the labour market concerning employment and occupational status relative to men; regardless of several interventions (Matandire, 2018; Borrowman & Klasen, 2020; Bhorat & Khan, 2018; Mufume, 2013). These inequalities lead to financial loss and reduced innovation, thus stifling the country's growth prospects and international competitiveness (Triana, et al., 2018). Thus, inequality has unequivocally led these women onto a sub-optimal economic development path as implied by the United Nations' Sustainable Development Goals (SDGs 1, 5 and 10).

Notably, gender equity is a key element of the SDGs because the notion of a 'male breadwinner' which has resulted in most societies focusing on men and ignoring the role played by women in family poverty eradication. The positive association between gender equality and family poverty is clear as revealed in the literature (Ekbrand & Hallenod, 2018; Prettener & Strulik, 2017; Chant, 2016). The association is through demographic transition quantity-quality preferences thereby reducing family poverty as women divert their efforts from childbearing

to formal labour force participation (Prettner & Struik, 2017). Even though women are vaunted as weapons against poverty, their role as economic agents for poverty eradication continues to be overlooked especially in the labour market. However, once women are empowered to receive decent employment, family poverty could be reduced because it is through the labour market that equitable distribution of income and poverty eradication may be achieved (Ncube, as cited in Chivasa, 2018). This makes the labour market one of the most important gateways from female poverty and necessitates the assimilation of gender parity in the formulation of macroeconomic policies at national and regional levels. This notion makes gender discrimination and inequality in the labour market a global concern as enshrined in the SDGs. In turn, the mainstreaming of gender equality in macroeconomic policies should be founded on a clear understanding of the sources of gender differentials in particular countries.

1.2 Background to the Study

Globally, women work more than men but their effort is concentrated on economically unrecognised activities such as subsistence farming, child-rearing, and home maintenance (Gabriel, David & Valodia, 2019; Burger & Fourie, 2019; UNDP, 2019; ILOSTAT, 2021). The global work distribution is tilted towards women, yet their participation in the formal labour market is lower than that of their male counterparts. This means that women are likely to participate less in the labour market than men as shown in Table 1.1 below:

Table 1.1 Global work distribution in percentages

Measure	**Women**	**Men**
Global work	52+	Less than 50
Formal Labour force participation	52	70
Share of paid work outside the home	38	77
Unpaid work performance	31	10
Leadership position	22	76
Employed working age (15-64 years)	47	72

Source: United Nations Development Programme Data (2019)

Gender inequality is pronounced in the Sub-Saharan Africa (Southern African region) which is also characterised by high poverty levels, low income per capita, low Human Development

Indices (HDI), and low life expectancy (UNDP Human Development Index Data, 2019). The disparities in gender labour force participation are shown in Table 1.2 with women dominating the service and agricultural sector.

Table 1.2 Labour participation by gender in percentages

	Women			Men		
Region	**Agriculture**	**Industry**	**Service**	**Agriculture**	**Industry**	**Service**
North Africa	42	16	41	21	25	47
Southern Africa	19	11	70	26	25	49
CIS Asia	48	7	45	41	23	36
Eastern Europe	12	22	66	14	41	45
West Europe	3	12	85	4	36	60
South America	10	12	78	21	27	51

Source: United Nations (2019: 84)

The unequal participation of women in the labour market accompanied by high national poverty levels, low per capita income, and occupational segregation has left many women exposed to poverty (International Labour Organisation (ILO), 2017), and it has been the norm that certain jobs are earmarked for men.

Discrimination by gender, which is the most common one in the labour market, has also resulted in wage differentials where women employees are paid less than their male counterparts (Ntuli & Kwenda, 2020). This could be driven by the reduced chance of females participating in the labour market. The differentials are also attributed to the position held by women in the division of labour, the packages that accompany the position as well as gender discrimination resulting in female labour being crowded in low-paying “bad" jobs such as informal jobs and part-time employment (Borrowman & Klasen, 2020). The presence of gender differential in the labour market is recognised and acknowledged by leaders across all facets as evidenced by international, regional, and national gender equity policies such as the Beijing Declaration (1995), SADC Protocol on Gender and Development (2016) and the International Labour Organisation Conventions on wage and employment equity that advocate for the empowerment of women, their participation in the economic domain with special reference to the labour market and equal education policies among others.

Despite the conventions and national gender policies and milestones achieved in promoting female education, formal female unemployment has generally remained higher in the Southern African region. The disparities in male-female labour force participation and low leadership position participation are illustrated in Table 1.3 below:

Table 1.3 Percentage of gender participation in top leadership in the Southern African region

	Gender	
Sector	Female	Male
Private sector	33	67
Board Directors	18	82
Parastatal	21	79
Parastatal Board Director	29	71
Public Sector	27	73

Source: African Development Bank (AfDB) (2015)

The unequal representation of females in various positions exposes them to low average wages and a high incidence of female poverty.

Where females are employed, the majority participate in the service sector. Evidence suggests that the service sector commands a lower wage rate compared to other sectors such as manufacturing and mining which are dominated by males (Hedija, 2017; Valodia, Francis & Espi 2019). As a result, this presents sectorial women segregation in the labour market (Borrowman & Klasen, 2020). Sectors with high wage rates absorb the lowest percentage of women in the world, a phenomenon that manifests in gender gaps and inequalities in the labour market. The participation of women in various sectors of the economy is shown in Table 1.4 below:

Table 1.4 Percentage of men and women labour force participation by sector and region

	Women			Men		
Region	**Agriculture**	**Industry**	**Service**	**Agriculture**	**Industry**	**Service**
North Africa	42	16	41	21	25	47
Southern Africa	19	11	70	26	25	49
CIS Asia	48	7	45	41	23	36
Eastern Europe	12	22	66	14	41	45
West Europe	3	12	85	4	36	60
South America	10	12	78	21	27	51

Source: United Nations (2019: 84)

Table 1.4 reveals that a greater share of women is in the agriculture and services sectors which are characterised by low earnings as compared to other sectors. This presents employment and wage differentials and this exposes females to poverty.

To achieve growth and improved gender equity at national and regional levels, explicit interventions which are tailored to address specific disadvantages are required. The regional approach to labour market differentials is expected to minimise cross-border illegal activities thus improving regional labour market stability and growth. At the national level, addressing gender differentials would reduce government expenditure on non-productive activities such as child support grants and other social supports.

This study, thus sought to investigate sources of employment differentials to inform medium to long-term policies that aim to improve the plight of women in the society and labour market, particularly in the Southern African region. The study concentrated on the labour market which is the channel of transmission for both internal and external policy shocks that foster economic growth and economic development.

1.3 Problem Statement

Despite efforts that have been made by nations to promote gender equity through various interventions such as increased access to education by the girl child, ratification of International Labour Market Conventions and statutes that promote equal employment of men and women,

the labour market is still mired in gender inequalities (SADC Protocol on Gender and Development, 2016; Discrimination (Employment and Occupation) Convention, 1958 (No. 111). Studies reveal the continual unequal participation between females and males in the labour market which could signify the existence of insistent and long-standing forms of discrimination in the labour market (Matandire, 2018; Gabriel. et.al., 2019; UNDP, 2019; ILO, 2019). The continual inequality in the labour market is an obstruction to achieving sustainable development goals. The problem of the perpetual gender disparities in employment which has resulted in low income and increased poverty in several Southern African countries, is a cause for concern (Nosu & Ndinda, 2018).

This is a concern when the disparities in employment are not linked to labour productivity and training and education levels, thus suggesting the presence of formal and informal normative discrimination of females in the labour market. These disparities cannot be accounted for by simply focusing on abstract data. They require a robust approach that can only be applied if factors driving labour market inequalities are fully understood. The limited literature on the subject in selected countries has the potential to give rise to inefficiencies in the labour market with additional risks that females are socially and economically excluded, and ultimately exposed to poverty.

The problem of labour market employment disparities can only be addressed if the correct inequality drivers are identified. Thus, the study sought to unearth sources of perpetual gender inequality in the selected Southern African countries.

1.4 Objectives of the study

The primary goal of the study was to conduct a comparative analysis of gender disparities in the labour market, focusing on labour force participation, employment rates, and the sources of employment gaps. Specific objectives were to:

i. Assess how gender labour force participation differs across selected Southern African countries.
ii. Analyse employment differentials between males and females across selected Southern African countries.
iii. Investigate the presence and extent of gender employment discrimination in the selected African Countries.

1.5 Research Questions

The study addressed the following research questions:

i. How significantly different is the labour force participation between females and males in selected Southern African countries?
ii. How significantly different is the formal labour market employment between females and males in selected Southern African countries?
iii. Is gender employment discrimination prevalent in the selected Southern African countries?

1.6 Significance of the study

The study is significant as it addresses the equity question in the labour market as enshrined in the Sustainable Development Goals 1, 5, and 10. The study brought out the sources of gender labour market disparities in selected Southern African countries. A lot of developments have taken place in the labour market and it would be remiss not to assess the impact of such developments in the labour market. Firstly, there is a lot of literature on gender disparities in the labour market (Matandire, 2018; Jauch, Edward & Cupido., 2012; Bhorat & Khan, 2018; Chivasa, 2018) inter alia in the Southern African region. These studies are however carried out at country levels, and this study focused on comparative analysis of labour market disparities concerning labour force participation, employment and discrimination in the formal labour market. In some cases, labour market disparities were analysed using a descriptive approach (Jauch, 2013). Chivasa (2018) focused on a province within Zimbabwe that did not reveal the national position concerning labour market disparities. Matandure (2018) used descriptive statistics to assess labour market inequalities without decomposing the employment function to unearth sources of such disparities. Ntuli & Kwenda (2020) focused on the review of the labour markets in Sub-Saharan Africa, while Bhorat & Kan (2018) focused on South Africa only.

This study, other than focusing on a comparative analysis of formal labour disparities, further decomposed the employment function and identified the sources of gender formal employment disparities in the selected countries, something that was not covered by the previous research. The regional approach to the question of gender labour market disparities was appropriate for it would assist in coming up with harmonised policies to address the disparities in the labour market. The closure of gender labour market gaps is crucial if countries are to effectively eradicate poverty and realise inclusive economic growth and development.

1.7 Delimitation of the study

Given the above background and the highlighted problem, this study focused on gender labour market disparities concerning labour force participation, employment and discrimination in Southern Africa by focusing on South Africa, Namibia, Malawi, and Botswana. These countries were selected based on varied colonial history and their proximity, language, varied levels of economic growth, varied industry mix and the availability of national survey data. These countries were also selected on the basis of varied poverty levels and different categories of economic development as measured by the GDP/per capita and the Human Development Index (UNDP, 2019), as shown in Table 1.5.

Table 1.5 Varied poverty indicators in the selected countries

					Labour force participation (%)	
Country	**Human Development Index**	**Life expectancy (years)**	**Gender Inequality Index**	**Gross National Income per capita (USDs)**	**Female**	**Male**
Botswana	0.728	69.3	0.464	15.951	66.2	73.6
South Africa	0.705	63.9	0.422	11.756	48	62.6
Namibia	0.645	63.4	0.46	9.683	56.2	65.9
Malawi	0.485	63.8	0.615	1.782	72.9	82

Source: UNDP 2019 Human Development data base

Using the gross national income per capita, Table 1.5 shows that these countries are at different levels of development with Botswana having a per capita income of almost 16 dollars a day while Malawi's per capita income is slightly below 2 dollars a day. Other than varying poverty and development levels, these countries are closely crocheted through trade business partnerships, infrastructure grid and labour markets interlaced and they are members of SADC. To the best of our knowledge, there are no employment decomposition studies that have been carried out so far for Botswana, Malawi, and Namibia. South Africa was included because it is the economic giant of Southern Africa and it was of interest to analyse South Africa's performance in the formal labour market when it comes to gender disparities and labour market equity.

Chapter 2: Southern Africa Labour Markets Perspectives

2.1 Introduction

This chapter focuses on labour market development in Southern Africa with special reference to Botswana, Malawi, Namibia, and South Africa. The chapter starts with a general overview of Southern African labour markets and is then followed by a country-specific labour market.

2.2 Southern Africa Labour Market Overview

The Southern African region is faced with a continued growth of the working population, which is poised to create both opportunities and challenges in the region (Lam, Leibbrandt & Allan., 2019). Through the Southern African region, there has been an increase in unemployment as the labour force growth rate surpasses the region's ability to absorb the increased labour force. The growth in the working-age population may attract investment opportunities which would create employment in the region. On the other hand, the growth in the working-age population may create a problem of unemployment if economic and labour policies in the region fail to create a requisite number of jobs required to absorb the working-age population growth.

The working-age population is expected to grow by an annual average of 3% by 2025, which is higher than most countries' anticipated economic annual growth rate averaging 2.5% (UN, 2019; WorldBank, 2023). Of the anticipated growth, more than 50% of the growth is expected to be in rural areas where most females are residents and this reinforces the current sub-optimal position occupied by females in the labour market globally, Southern Africa included.

Gender inequalities in accessing the market have been increasing. This is because of the shrinking formal labour market in many countries. This has left many people in the labour force with no option but to take up informal sector employment, which is unregulated and exposes individuals to adverse working conditions.

The quest to fight poverty and drudgery in rural living conditions has seen an increase in male rural-urban migration. This has resulted in the urban working-age population growing at a faster rate than the rate of employment creation, thereby leading to high urban unemployment.

High urban unemployment rates have in turn led to the mushrooming of the informal sector which is largely survivalist in nature.

South Africa has been receiving migrant labour from the Southern African region because of its highly developed industry including the agriculture sector. Most Southern African countries are mainly agrarian economies with the majority of people being employed in small sectors or subsistence farming, particularly with special reference to Malawi, have been suppliers of migrant labour to South Africa.

The increase in the movement of people from rural to urban areas has left rural areas underdeveloped, where the majority of people in Southern Africa live. The rural labour markets are predominantly agricultural and have a higher concentration of females whose production is mainly for subsistence use. This leaves females at the bottom end of the labour market ladder as the majority of females are not able to access more modern formal labour markets which are in urban areas (Klasen, 2019; Ntuli & Kwenda, 2020).

In contrast to rural markets, urban markets are modernised and comprise various sectors such as manufacturing, construction, and services. These sectors, except the services sector, are male-dominated, thereby congesting females in the services sector which is not capable of absorbing all urban female labour force participants.

Southern Africa has, however, made significant progress towards gender equity. The regional average score is 73.8 compared to 37.3 in the 1970s (Worldbank, 2022). This score, though above the Sub-Saharan regional score, is below the global score of 76.1. Though there has been marked progress, more still needs to be done as the region is still lagging behind other regions as shown in Table 2.1 below:

Table 2.1 Equity Index Score

Region	**Equity Index Score**
Southern Africa	74
OECD High income Countries	95
Europe	84
Sub-Saharan Region	72
Global	76

Source (Worldbank, 2022)

From Table 2.1, it can be noted that the region still has more work to do to promote gender equity.

This sub-section looked at the overview of the Southern African Labour market. The next sub-sections focus on country-specific labour market perspectives which are South Africa, Botswana, Namibia and Malawi.

2.2.1 South Africa Labour Market Perspectives

South Africa is a highly developed country in the Southern African region. It is a significantly diversified economy with a well-developed manufacturing sector and is the giant of Africa. Like any other country in Southern Africa, South Africa is battling labour market inequalities. Despite labour market inequalities, the labour market in South Africa is characterised by a high unemployment rate and a lack of artisan and technical skills due to skill mismatch (Worku, 2014; Leibbrandt, Woolard, McEwen & Koep., 2020). Most of the unemployed in South Africa are unskilled and semi-skilled individuals with very low levels of education required to be formally absorbed in formal employment.

Predominantly under white rule from the landing of Jan Van Riebeck at the Cape in 1652, through the advent of Apartheid in 1948, to the dawn of democracy in 1994, South Africa has failed to address issues of gender, labour and market forces, especially with regard to black people. . Empirical evidence has shown that South Africa has been battling labour market inequalities which range from racial to gender labour market inequalities concerning employment and wages (Mehembe, 2021).

The post-Apartheid era saw several positive developments in the labour market in South Africa. The labour force participation rate increased from 49% to 55% between 1994 and 2005 (StatsSA, 2021). This rapid increase in labour supply led to a sharp increase in unemployment as the job creation rate lagged behind the labour force participation rate. The problem of unemployment was worsened by skills deficiency among the South African labour force (StatsSA, 2021; Leibbrandt, et al., 2020). The labour market demanded a skilled and productive workforce, which worsened the plight of the apartheid labour market victims.

After the end of the Apartheid government, the new government of South Africa's first economic policy to address rising unemployment and address inequalities that were brought about by the long legacy of colonial rule and Apartheid structures was the Reconstruction and Development Programme (RDP) in 1994. The Policy focused on redistribution and stimulation of sustainable employment. However, the policy lacked numerical targets since it did not specify the number of jobs to be stimulated and redistributed.

Since RDP was not growth-focused, it was replaced by the Growth, Employment, and Redistribution (GEAR) Strategy in 1996. The strategy had both redistribution and growth objectives. It targeted to create 400000 jobs by the year 2000 and economic growth of 6% in the same period. The GEAR Strategy however failed to achieve its objectives as the economy experienced massive job losses between 1996 and 2001. The realised economic growth for the same period was only 2.7%. This was because the government focused on employment creation by the private sector (Mehembe, 2021). Again, the GEAR strategy opened up the economy to global completion which resulted in job losses in industries such as the clothing industry (Yu, 2020).

As unemployment continued to rise, the government was forced to craft new strategies to reverse unemployment and promote economic growth. In 2006, the Accelerated and Shared Growth Initiative of South Africa (ASGISA) was introduced. ASGISA, unlike its predecessors, registered a considerable success and the economy picked up by 5% and unemployment reduced from 31% to 23% in 2003 and 2007 respectively. These gains were, however, short-lived as the economy was hit hard by the global financial crisis, and over 2 million jobs were lost (Mehembe, 2021). At the same time, the Expanded Public Works Programme (EPWP) which has its origin in the Growth and Development Summit of 2003 was introduced to cater

for the unskilled, the poor, and the vulnerable groups and generated over 8 million jobs by 2021. The majority of the participants in this programme were females which accounts for 65% (StatsSA, 2021), thus attesting to labour market gender inequalities in South Africa.

In 2010, the restructuring of the economy was done with the main focus on job drivers as guided by the New Growth Path (NGP) policy. Despite focusing on the job drivers, unemployment remained high in South Africa, with females accounting for the greater percentage of the unemployed in the country while males account for a greater part of the employed (StatsSA, 2021).

Other than job creation policies, the post-Apartheid government has been making efforts to redress gender labour market inequalities and promote female labour force participation. In 1997, the Basic Conditions of Employment Act was designed to promote fair labour practices such as annual leave, sick leave, and written contracts. Though the act promoted fairness, it did not address the inequality challenges. To address inequalities, the government adopted the Affirmative Action which is enshrined in the Employment Equity Act No 55 of 1998. The Employment Equity Act was meant to promote equal and fair treatment in employment through the elimination of unfair discrimination and the implementation of affirmative action measures to redress the disadvantages in employment experienced by previously disadvantaged groups such as females. Affirmative action was designed to ensure that qualified individuals from the previously disadvantaged groups (females included) have equal employment opportunities and are equally represented in the workforce of the employers at all levels of occupational categories and sections.

To ensure effective implementation of the affirmative Action Plan, employers were expected to come up with an employment Equity Plan, which details the actions to be taken by the employer to ensure equal representation of the previously disadvantaged group. To enforce the Affirmative Action Act, the Employment Commission (EC) was formed in 1999. The mandate of the commission was to promote the development of an enabling environment for the smooth implementation of the Affirmative Action Act, such as the provision of incentives for employers who would have successfully implemented the Affirmative Action Plan.

However, the effectiveness of the Affirmative Action Act is hindered by resistance as it is sometimes viewed as discriminatory, especially by individuals who are from a background that

enjoyed the benefits of Apartheid (Sheptone & Wylie, 2024). This view has slowed down the implementation of Affirmative action, which could probably be one of the reasons why the gender gap in employment still exists. Again, given that affirmative action, excluded individuals employed based on the inherent requirements of the job, some employers are taking advantage of such provision by crafting job requirements targeted at certain groups of individuals (Matambo & Ndubusi, 2015). Younger generations of previously Apartheid-advantaged groups believe that they benefited from their forefathers' hard work and thus feel discriminated against by the Affirmative Action Policy.

Matambo & Ndubusi (2015) posit that a laxity approach to education and jobs has delayed the achievement of equity as the beneficiaries of the Affirmative Action Policy approach these with a sense of entitlement to better jobs and better education without putting an effort and taking advantage of the Affirmative Action.

In 2018, the National Minimum Wage Bill (NMWB) was passed. The bill proposed a minimum wage which was meant to reduce the opportunity cost of employment and promote female labour force participation, as the minimum wage could afford female employees to pay for child care services.

Despite the presence of the perpetual gender employment gap in South Africa, a noticeable achievement has been registered in promoting gender equity. The female labour force participation rate increased significantly since the end of Apartheid as shown in Figure 2.1. However, the female employment rate has shown an opposite trajectory, where the employment rate decreases from 34% in 1995 to 24% in 2022 as shown in Figure 2.1. This means that females might be facing employment discrimination in South Africa.

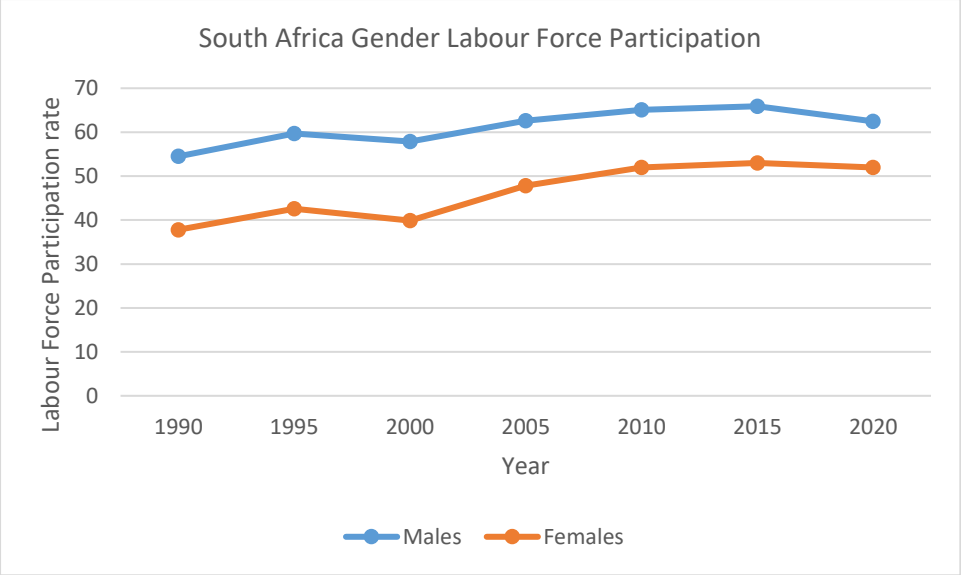

Figure 2.1 South Africa gender labour force participation rate

Source: (Worldbank, 2023)

From Figure 2.1, labour force participation for both males and females has been increasing, though the female participation rate has been lower than their male counterparts. Male labour force participation has been increasing with a marginal decline in 2015. At the end of apartheid, female labour force participation increased and declined in 2005. Thereafter, it increased again though at a slower rate. This coincided with the after-effect of Affirmative Action, which gave preferential treatment to the previously disadvantaged group in access to education and the labour market.

However, the employment rate for both males and females declined from 2005 to 2010. The decline in employment is argued to be a result of skills mismatch (Matambo & Ndubusi, 2015; Leibbrandt, et al., 2020; StatsSA, 2021). South Africa's employment trend is shown in Figure 2.2.

Figure 2.2 South Africa employment rate by gender.

Source: (Worldbank, 2023)

From Figure 2.2, the employment rate for females has been lower than that of males, which might suggest the presence of female employment discrimination in the labour market. This means that Affirmative Action has not resulted in much development in addressing gender labour market disparities because of its inability to push individuals into employment, especially those from poor households (Gouzouis, Constantine & Ajefu., 2023). Thus, "the long legacy of colonial era and apartheid structures continue to cast its dark shadow on South Africa's progress and development" (UNDP, 2022: xii).

Despite being a highly industrialised country in the Southern African region and ranked in the upper middle quintile, South Africa is failing to fully address the gender employment gap. This calls for a better and deeper understanding of sources of gender labour market disparities which the current study sought to address for better policy formulation.

2.2.2 Botswana Labour Market Perspectives

At the time of independence in 1966, Botswana was among the poorest countries in Southern Africa. The country has been experiencing an upward economic trajectory. Formal employment, like the gross domestic product, assumed a positive growth until 1991 (Matthew, 2021). In the 1990s, employment started to lag behind economic growth (Morapedi, 2016).

At Independence, Botswana's unemployment rate was around 20%. It, however, started to fall and in 2005, it reached 17.6%. The impressive growth rates recorded by Botswana between 1966 and 2005 were mainly driven by the mining sector, especially the diamond sector which was followed by the agriculture sector mainly the beef market. The industrial sector base was very weak. This scenario, given the volatility of the mining sector left the labour market at threat of high unemployment. The discovery of diamonds did not solve the unemployment problem in Botswana as the sector failed to absorb several unemployed individuals in Botswana, especially the unskilled (Morapedi, 2016). This is because the mining sector was heavily capital-intensive and thus failed to absorb the workforce. The largest employer was the government which absorbed 33.4% of the employed labour force followed by agriculture which employed 14.1%. In 2005, the share of the mining sector fell to about 3%. This showed the limited capacity of the mining sector to create more employment. This means that tackling Botswana's unemployment challenge required a focus shift from mining to other sectors of the economy. As the employment rate fell, unemployment increased and the majority of the unemployed were females accounting for 55.5% of the unemployed in Botswana. The female unemployment rate was 19.9% while that of males was 15.3%. Female unemployment was mainly concentrated among female youth which had an unemployment rate of 31.8% while male youth unemployment was 23.3%. Thus, the unemployment rate was higher for females despite the low female labour force participation rate, as shown in Figure 2.3.

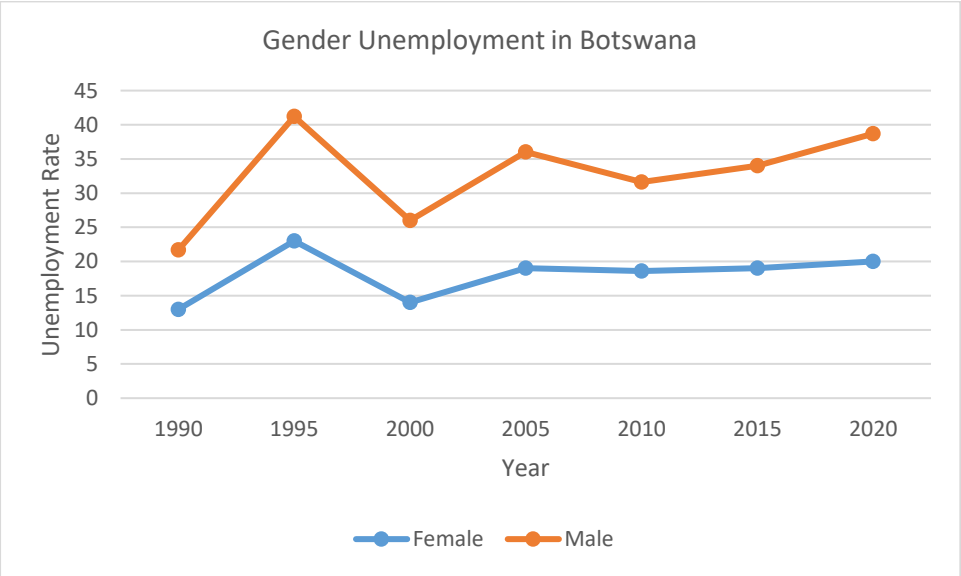

Figure 2.3 Botswana gender unemployment rate.

Source: (Worldbank, 2023)

The gender unemployment rate maintained an upward trajectory until 1995. There was a significant decline from 1995 to 2000 in response to a basket of measures that were taken by the government of Botswana such as increased access to education and training. After 2000, both male and female unemployment rates began to rise though at a lower rate than the rates before 2000. The female unemployment rate has been ahead of the male unemployment rate throughout the period under review. Between 2005 and 2010, there was a slight decrease in unemployment rate. Since 2010, the unemployment rate has been increasing despite several measures implemented to curb gender unemployment. The continual increase in female unemployment in Botswana is a reflection of the economy's failure to address gender labour market inequalities. Unemployment is higher in urban areas which attests to the poorly developed manufacturing sector in Botswana and high rural-urban migration (StatsBots, 2018). The level of female unemployment was made worse by generous social safety net programmes. The social grant was large enough to accord individuals certain luxuries without going to work. High reservation wages also assisted in keeping some people out of employment.

Despite high levels of gender unemployment, Botswana has seen tremendous progress in the female labour participation rate. The improvement in female labour participation is shown in Figure 2.4.

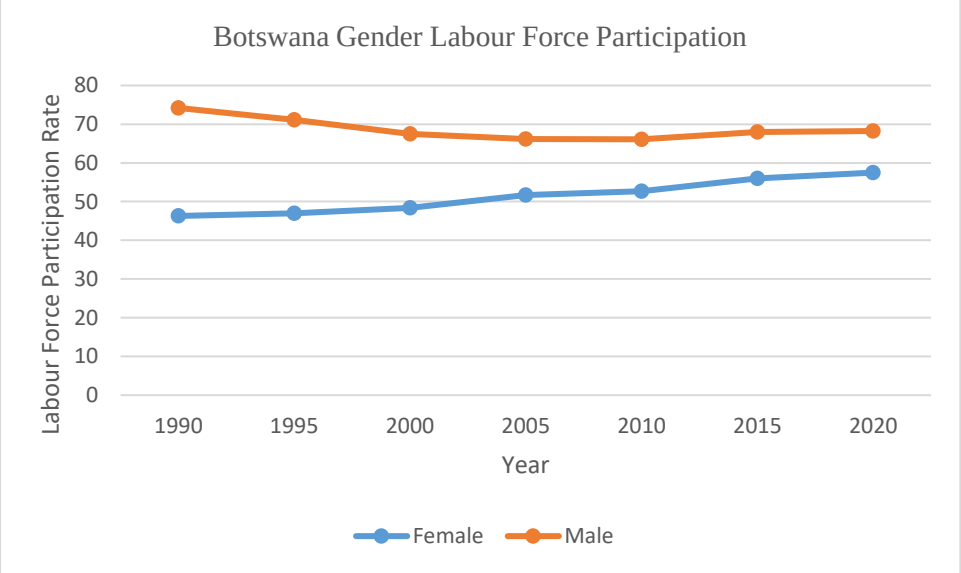

Figure 2.4 Botswana labour force participation rate by gender

Source: (Worldbank, 2023)

The male labour force participation rate has been declining while the female labour force participation rate has been steadily increasing since 1990. Since 2015, the gender labour force participation gap has been relatively constant. The increase in female labour force participation rate was attributed to increased access to education and increased gender awareness through national policies such as the National Policy on Gender and Development which is discussed in detail later.

The steady increase in female labour force participation has not been large enough to offset the decrease in male labour force participation. Thus, there still exists a disparity with respect to labour force participation in Botswana. This means that more still needs to be done to bring gender equity into the labour market and close the gender gap.

Other than the gender labour force participation gap, the employment gap has been a challenge in Botswana. The gap has refused to give in to a basket of measures that are in place to close it. The female employment rate has been tracking behind the male employment rate. Between 1990 and 1995, gender employment declined. There was a marginal increase in the female employment rate between 1995 and 2000. Since 2010, there has been a relatively constant gender employment gap in Botswana as shown in Figure 2.5.

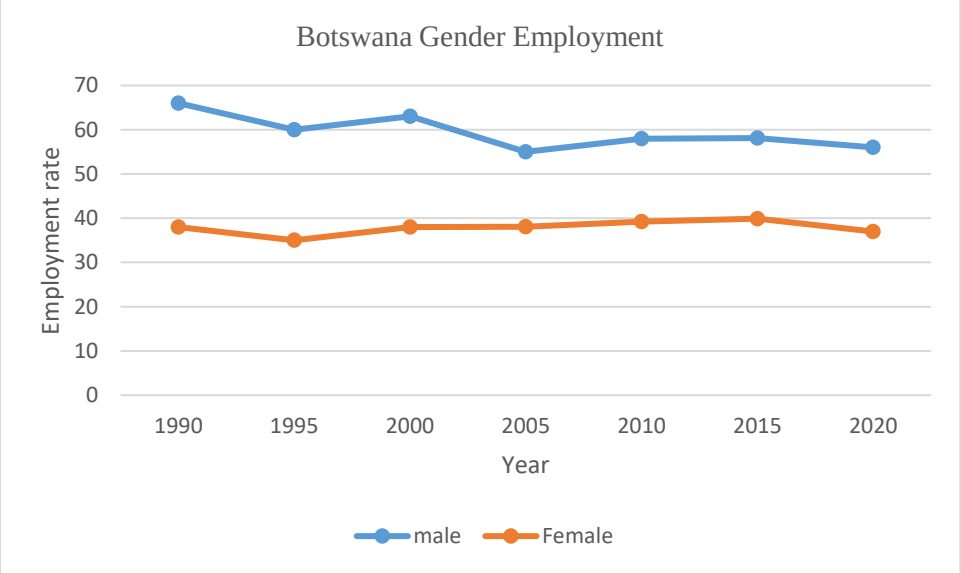

Figure 2.5 Botswana employment rate by gender

Source: (Worldbank, 2023)

Since 2000, female employment has been gradually increasing, while male employment dropped in 2000 and assumed a steady rise between 2005 and 2015. From 2010, the female and male employment rates have had similar trends with female employment lower than male employment.

Several measures were taken by the Botswana government to address the challenge of unemployment and gender labour market disparities. After the diamond sector failed to create the desired level of employment, the government of Botswana took it upon itself to create employment. Several parastatals were established in the 1970s. Government expenditure was increased to boost human capital through education. The Financial Assistance Policy (FAP) was put in place in May 1982, to boost employment by subsidising labour for businesses that were involved in production. To provide sustainable employment, the Arable Lands Development Programme and Accelerated Arable Rain Fed Programme were also introduced in the agriculture sector in the late 1970s (Morapedi, 2016). These programmes did not yield a much-anticipated decline in unemployment because of poor monitoring as the intended beneficiaries abused them (Standard, 2015). In 2001, FAP was replaced by Citizen Economic Development Agent. This programme was different from FAP for it provided financial assistance at a subsidised interest rate to Batswana entrepreneurs. The objective was to promote entrepreneurship and reduce unemployment in Botswana. This programme had a marginal effect on unemployment. Male employment decreased and female employment increased between 2001 and 2005.

Given the high youth unemployment rate that Botswana was faced with during the same period 2001 to 2005, the government introduced the Young Farmer's Fund to avert youth unemployment in 2006. The fund provided funding for citizens between the age of 18 and 40 years. The programme did not yield the intended results as youths failed to take advantage of it (Standard, 2015). As a way of promoting sustainable entrepreneurship, the Local Enterprise Authority was set up and mandated to provide support services such as training to Small and Medium Enterprises (SMEs) on skills required for business growth to ensure sustainability and employment creation.

To promote the employment of unskilled Batswana, the Ipeleng programme was launched in 2006. Ipeleng programme was a labour-intensive programme designed to use simple tools and

machinery. The Youth Employment Scheme (YES) was introduced in 2012 after the Young Farmer's Fund failed to alleviate youth employment in the country. The YES programme supported several initiatives such as youth entrepreneurship and employment creation and was targeting Batswana between the ages of 18 and 35.

To address gender labour market inequalities, Botswana has taken many initiatives to address the plight of women in the labour market. The initiatives included the ratification of the historical Beijing Declaration of 1995 and the promulgation of the National Policy on Women in Development of 1997. This policy aimed at eliminating negative economic and socio-cultural norms and laws that promoted gender inequality. The National Policy on Women in Development advocated for the promotion of female education and training. To further strengthen her commitment to fighting gender inequalities, Botswana in 1996 ratified the United Nations Convention on the Elimination of all Forms of Discrimination against Women. The convention's emphasis was the review of laws and customs that promoted female discrimination. In response to the convention's provision, Botswana established the National Women's Machinery which was later upgraded to a fully-fledged government department. To ensure adequate handling of female discrimination, the Botswana government established gender focal points in all government ministries. This action resulted in a significant improvement in women's position in the economy. These measures resulted in reduced female unemployment, increased female employment, and female labour force participation.

In 2008, Botswana signed the SADC protocol on gender which was revised in 2015. Part 5 of Article 19 of the Protocol aims at promoting equal access to employment by enacting laws and policies that ensure men and women have equal access to employment and wages in all sectors of the economy irrespective of their social and marital status (SARDC, 2017). The protocol is aligned with the Beijing Declaration and Platform of Action of 1995. Other than being a signatory of the SADC protocol on gender, Botswana is also a signatory to the Sustainable Development Goals, which emphasise equity and equality (SDGs 5, 8 and 10).

To ensure equal participation of females in the labour market and other sectors of the economy, Botswana crafted and adopted the National Policy on Gender and Development in 2015. In 2016, the National Gender Commission was set to monitor the implementation of the National Policy on Gender and Development. The gender policy targets the empowerment of women in all facets of life including the labour market. To date, several measures have been put in place

such as capacity building for women in executive positions within the public sector. These measures have resulted in increased access to employment by females and also an increased number of females in management positions. However, the gender employment gap has remained a challenge as females are still lagging behind their male counterparts. This calls for more effort to eliminate gender market disparities.

2.2.3 Namibia Labour Market Perspectives

Namibia is a small developing economy which heavily depends on international trade. Like most Southern African countries, Namibia is battling gender inequalities and high unemployment which is coupled with a critical shortage of skilled labour. The unemployment rate is currently at 40%. This is because of employers shunning away from employing Namibians due to low labour productivity and skills deficiency (Shimpanda, Shilong, Shofotoka., 2019).

At independence in 1990 from South Africa, the Namibian labour market was characterised by gross inequalities in the socio-political and economic sphere, which were worsened by the Apartheid regime. As a result, the labour market was male-dominated thereby leaving females railing against the effects of discrimination as they failed to access the formal labour market. Given the high levels of gender inequalities that were inherited by the government of Namibia at independence, more needed to be done to address the inequalities and the general populace to enjoy the benefits of independence. Several policies and legislations were put in place to address the injustices.

To address inequalities, the Namibian government started by restructuring the civil service. The Public Service Commission was put in place in 1990 to ensure equitable and balanced employment in civil service. The Commission gave preference to the previously marginalised groups including females when appointments and promotions were done. Employers in the private sector were required to come up with programmes and strategies that would promote the employment of females among the disadvantaged groups. This resulted in a marginal improvement in female employment in Namibia.

In 1997, the government of Namibia put in place the National Gender Policy with the sole aim of addressing gender inequalities in various sectors. To ensure full implantation of the National

Gender Policy, the National Gender Plan was launched in 1998. The National Gender Plan detailed actions to be taken to address gender disparities in various areas including the labour market.

In the same year, 1998, the Affirmative Action Act was passed to address inequalities. It provided guidelines and informative action programmes on the employment of groups (women included) that were affected by discriminatory laws before Namibia's independence. The Affirmative Action Act also provided for preferential treatment for previously disadvantaged groups and various sectors of the economy. The implementation of the Affirmative Action Act saw the birthing of a fully-fledged Ministry of Women and Child Welfare in 2000, which was later rebranded to the Ministry of Gender Equality and Child Welfare in 2005.

The Labour Act was amended in 2007 to provide an enabling environment for the full implementation of the Affirmative Action Act of 1998. The Affirmative Action was meant to promote fair employment practices in hiring, training, and remuneration. Thus acting as the vehicle to achieve equity as enshrined in the Namibian Constitution articles 10 and 14. This resulted in increased labour force participation by females from 45% to around 47.5% (Worldbank, 2023).

To foresee the implementation of the Affirmative Action Act, the Employment Equity Commission (EEC) was formed in 2000. The mandate of the EEC was to guide employers on the implementation of the Affirmative Action Act by assisting in designing programmes and policies that were compliant with the Affirmative Action Act.

Other than domestic acts and policies, Namibia demonstrated its commitment to gender equity by ratifying several international declarations and conventions such as the ground-breaking Beijing Declaration of 1995 and the Sustainable Development Goals (SDGs).

The ratification of the SADC Gender and Development Declaration in 1997, which was repealed by the Protocol on Gender and Development in 2008 and the International Labour Convention on Elimination of all Forms of Discrimination against Women testified to the government of Namibia's commitment to reducing gender inequalities. These conventions and protocols are aimed at women's empowerment, elimination of discrimination, and achievement

of gender equity through the development and implementation of gender-sensitive legislation, programmes, and policies.

Several pre-labour market policies were also put in place to promote skills development among females and to improve their participation in the labour market. Affirmative Action was also applied in education. There has been heavy investment in education by sponsoring tertiary education through student grants and loans. This resulted in increased access to education by Namibians, females included. Primary and secondary education were made free between 2000 and 2016 respectively. The heavy investment in education was meant to address skills mismatch and huge inequalities in the economy including the labour market. Namibian Training Authority was introduced in 2014 to facilitate, promote, and encourage vocational training and entrepreneurship training. Vocational training was meant to create employment and improve the employability of Namibian citizens given that the Namibian labour force has been growing over the period. These measures yielded positive results as female labour force participation and employment improved. However, it is worth noting that the labour market disparities in Namibia still exist and are still a cause for concern.

Female employment and labour force participation trends are highlighted in Figure 2.6.

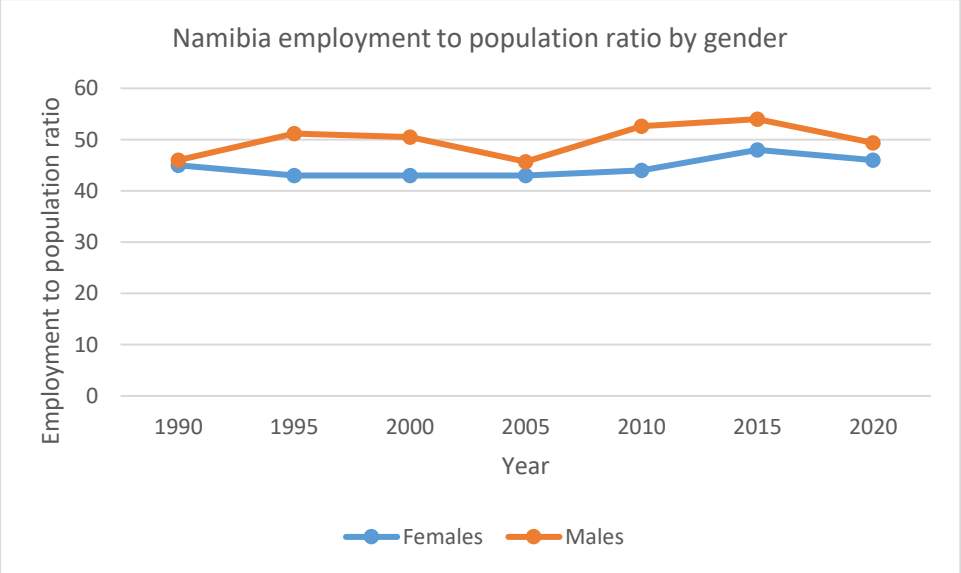

Figure 2.6 Namibia employment to population ratio by gender.

Source (Worldbank, Gender Data, 2023)

From Figure 2.6, it can be noted that since independence, the ratio of female employment witnessed a steady increase from 1995 to 2015. This has served to reduce the employment gap between females and males. Male employment has been fluctuating with a sharp decline in 2005 and later picked up in 2010. Despite these fluctuations, the male employment ratio however remained higher than female employment. Thus, the presence of the gender employment gap in Namibia despite various measures that are being implemented by the government.

The labour force participation rate has been fluctuating in Namibia. The highest participation rate was recorded in 1990 and the lowest in 2005 for both males and females as shown in Figure 2.7.

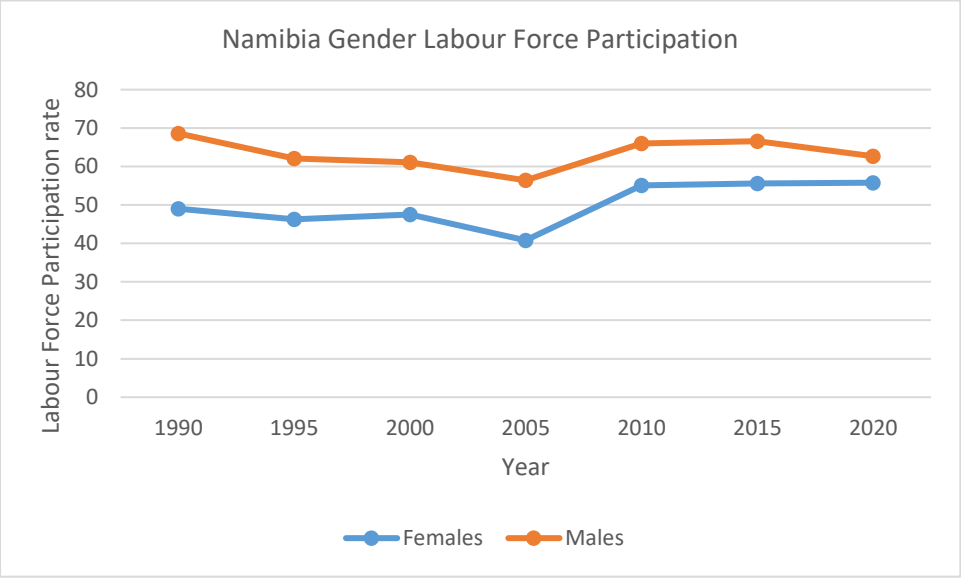

Figure 2.7 Namibia labour force participation by gender

Source: (Worldbank, 2023)

The labour force participation for both males and females followed a similar trend. At independence, the labour force participation for both males and females declined and continued on a downward trend till 2005. There was a rise in labour force participation between 2005 and 2010. After 2010, female labour force participation remained relatively stable, while that of males witnessed minor fluctuations with female participation being lower than that of males.

From the overview, it can be noted that policies, and legislations enacted to address inequalities have not yet managed to completely eradicate the gender labour market disparities in Namibia.

This trajectory calls for more to be done to eradicate the gender gap in the Namibian labour market if Namibia is to achieve inclusive and sustainable development.

2.2.4 Malawi Labour Market Perspectives

Malawi is one of the least developed countries in the Southern African region with a population of over 15 million. This makes Malawi one of the most densely populated nations in Southern Africa. Malawi is landlocked with very few mineral resources and relies heavily on agriculture. It is important to note that employment statistics are limited in Malawi and thus, this limitation hampers our ability to put together a comprehensive review of the Malawi labour market.

At independence in 1964, Malawi embarked on parastatal business to create employment and the parastatals only absorbed 10% of the labour force. The development did not last as it depended heavily on donor funding which pulled out financial support (DTDA, 2023). Like most countries in the region, Malawi is battling high unemployment and gender labour market inequalities. In Malawi, most of the employed individuals are in the agricultural sector and this has been the case since Malawi gained her independence in 1964. This is because of the slow urbanisation rate, and poorly developed manufacturing sector. However, since 2010, the contribution of agriculture to Malawi's GDP has been declining and that of service has been increasing. The industry sector has not been fully developed and its contribution to GDP has been below 20%. The slow growth of the industry sector and the declining performance of agriculture have resulted in the job creation rate lagging behind population growth (DTDA, 2023). The informal sector has been growing, but it has a limited capacity to absorb the ballooning labour force given that the sector is survivalist in nature and employs mainly the owner of the business. Of late there has been a shift from crop to livestock production. This has resulted in widening gender labour market inequalities, as few females are employed in livestock production.

Malawi ratified several international laws that promote gender equity in the labour market. However, the effectiveness of these laws is overshadowed by patriarchal beliefs that are deeply rooted in socio-cultural beliefs which hinder females from gainfully participating in the formal labour market. This is worsened by poorly developed technical and vocational training institutions.

In response to international equity laws and guidelines, the government of Malawi has lined up many policies and regulations to promote gender equity and create decent jobs both for males and females in Malawi. These policies regulate and set standards for the Malawi labour market. The national employment policies cover a variety of areas such as decent employment, youth employment, skills development, gender labour market equity, and development of entrepreneurship skills as well as the development of the informal sector. These laws and policies include the Employment (Amendment) Act of 2021, the Minimum Wage Act of 2019, the Review Labour Relations Act of 2021, the Gender Equity Act of 2013 and the Education (Amendment) Act of 2013. The Labour Relations Act of 1996 and the Employment Act of 2000 were reviewed to align Malawi's labour market laws with the international labour market laws and conventions.

Other than these laws, the constitution of Malawi of 1994 recognises an individual's right to work, fair labour practices, and equal pay and access to employment regardless of one's gender and social status. The Employment Act of 2000 provides for anti-discrimination, equal payment for similar work, weekly rest and leave. The Employment Act (Amendment) Act of 2017 provides for special working conditions for example, expecting mothers and paternity leave (MalawiGovt, 2017). The provisions of the act were meant to create an enabling environment for work-social life balance, thereby promoting female labour force participation, which is anticipated to reduce the gender employment gap in Malawi.

The Labour Relations Act of 1996 provides guidelines on employee-employer relations such as the formation of trade unions, an individual's right to join a trade union and the right to collective bargaining. The provisions of the Labour Relations Act were meant to reduce stigmatisation and minimise incidences of gender discrimination in the workplace as employees are collectively represented.

Malawi ratified the SADC Protocol on gender in 2008. As earlier alluded, the protocol provides and prioritises women's empowerment which includes access to education, training, and the designing of special programmes for women's empowerment. The ratification of the Convention on the Elimination of all Forms of Discrimination against Women by Malawi is a testimony of Malawi's commitment to eradicating gender discrimination in the labour market.

To create decent jobs and reduce unemployment, the government of Malawi further enacted more policies such as the National Labour and Employment Policy and the Malawi Decent Work Country Programme. This is because about 89% of Malawi's employment is in the informal sector.

These laws have failed to achieve some of the desired outcomes as the country is still mired by several challenges. The ability to enforce laws is affected by a lack of technical skills and human capital which is worsened by the widespread of the informal sector (Ronconi, 2019). The unemployment rate remains high with urban unemployment being higher than rural unemployment due to poorly developed industry sector. Urban unemployment is higher among the labour force with intermediate and higher levels of education due to a low industry base and high reservation wage (NSO, 2020).

Though the country has been battling unemployment, the unemployment rate is lower than the regional average, with females having a higher unemployment rate than their male counterparts. The national unemployment rate also presents the same trajectory where more females were unemployed compared to their male counterparts. Female unemployment was 26% and that of males was 14% in 2020 (MalawiGovernment, 2022).

The successful elimination of discrimination against females is hindered by socio-cultural-economic beliefs. These beliefs are inborn in society's patriarchal structures and beliefs which view females as passive participants in a formal economic atmosphere (Afridi, Dinkelman, Mahajan., 2018). Thus, further reinforcing the females' suboptimal position in the market. These beliefs perpetuate gender inequality and thus more needs to be done to change the socio-cultural norms in Malawi. The beliefs have resulted in unequal distribution of work and have led to females carrying the burden of unpaid work in Malawi and widening the gender inequality gap with the global gender inequality index of 0.63 (Worldbank, 2023). The distribution of the Malawi workforce by gender and activity is shown in Table 2.2;

Table 2.2 Malawi workforce distribution by economic status and gender

Category	**Female**	**Male**
Employed	68	77
Unemployed	1.6	1.0
Employers	31	44
Vulnerable	68	54

Source: (MalawiGovernment, 2022)

Males dominated the employed. From Table 2.2, 77% of males are employed as compared to 68% of females. This scenario is the same with employers. There were more male employers than female employers. Females dominated the unemployed and the vulnerable employment group. Other than unemployment, qualification mismatch remained a headache for Malawi. The workforce has skills that are not required by the industry (DTDA, 2023). The qualification mismatch was more pronounced in the manufacturing, construction, mining, and tourism sectors. Qualification mismatch is reflected in the low employment rate of individuals with higher qualifications. The employment qualification statistics by gender are presented in Table 2.3 below.

Table 2.3 Percentage of employment by education level and gender in 2020

Education Level	**Gender**	
	Male	**Female**
Less than Basic	8.3	16
Basic	74	75
Intermediate	15	8.2
Advanced	2.7	1.5

Source: (NSO, 2020)

At lower levels of education, there are more females employed while employed males with intermediate and advanced levels were more than females. This could testify to unequal access to education between males and females.

In 2021, the government of Malawi developed a National Job Creation strategy. The strategy did not create a sizeable number of jobs. Only 11% of the created jobs were in the formal sector.

Of the created jobs, 55.3% were taken by males and females had only 44.65%. The majority of the created jobs were in the public sector which accounted for 80% of the jobs. Only 0.05% of jobs were created in the manufacturing sector. It is important to note that a sizeable number of jobs were lost during the same period. Females were more affected with 56% of the lost jobs (MalawiGovernment, 2022). Thus, sending more females into the street and increasing female employment gap.

Though the constitution of Malawi provides for gender equity, Malawi has largely remained a traditional society and the representation of women in employment has remained low (UNDP, 2019). The formation of the Ministry of Gender and Community Development in 2003 did not yield the much-desired results. Females in Malawi are still underrepresented in the labour market. This is because of lower literacy levels and pervasive discrimination which have seen females being crowded in non-formal and traditional employment such as subsistence farming (Anon., 2023). Despite all the efforts made by the Malawi government, the gender labour force participation gap is not closing up. Rather, the gap is widening as shown on Figure 2.8.

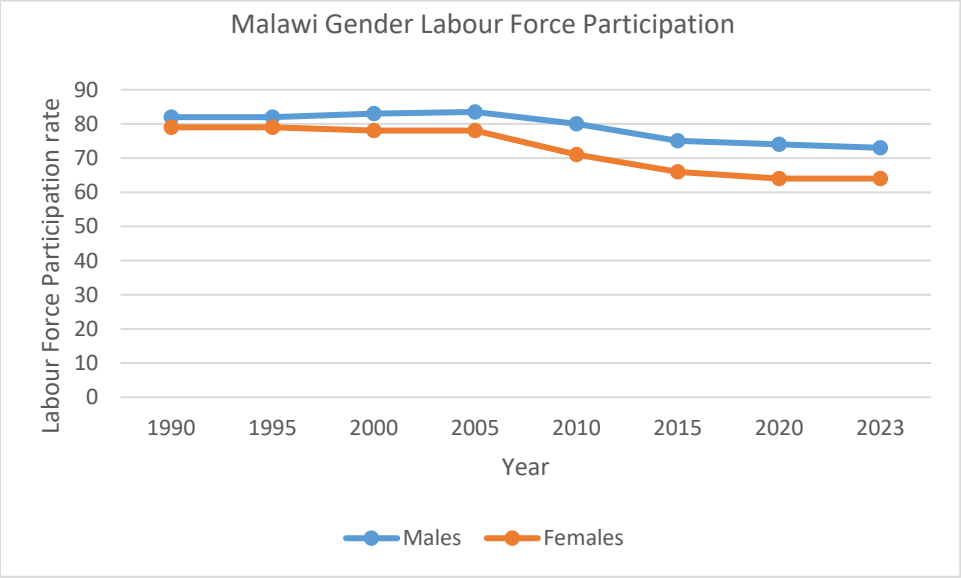

Figure 2.8 Malawi labour force participation by gender.

Source: (Worldbank, data.worldbank.org, 2023)

Figure 2.8 above shows that in the 1990s, female and male labour force participation was almost at the same level. This was because of Malawi's heavy dependency on crop production which absorbs a sizeable percentage of female employees. As the economy diversified, such

as broadening of the manufacturing and construction, the gender labour force participation gap started to widen in 2000. Before 2000, gender labour force participation increased marginally and significantly dropped between 2005 and 2015. Though both male and female labour force participation rates took a negative trajectory, female labour force participation remained below the male participation rate.

Like labour force participation rate, gender employment in Malawi has been declining as shown in Figure 2.9 below:

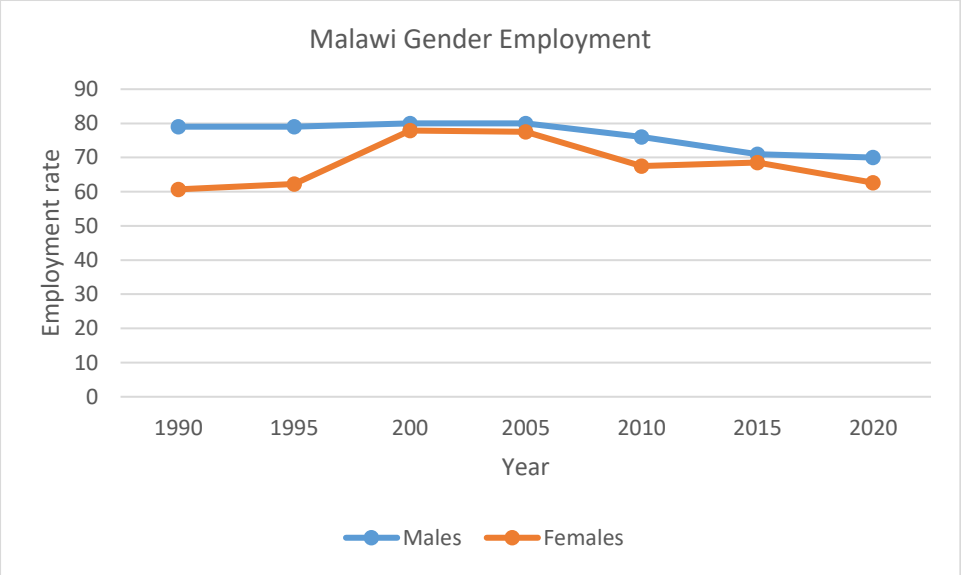

Figure 2.9. Malawi employment rate by gender

Source: (Worldbank, 2023)

The female employment rate rose sharply between 1995 and 2000 to levels slightly below male employment. The employment rate was relatively constant between 2000 and 2005. Thereafter, a steady decline in the employment rate was recorded. The male employment rate was relatively constant between 1990 and 2005. Thereafter, there was a steady decline in the employment rate. The gender employment gap significantly reduced between 1995 and 2000, which later widened from 2005 to 2023. This means that the policies and strategies adopted by the Malawian government, though they have improved female labour force participation and female employment, they have failed to close the labour market gap between males and females. This calls for action to promote the employment of females and close the gender employment gap in the country.

2.3 Conclusion

From the review of the labour markets in the selected countries, it can be concluded that, though these countries have made tremendous progress in industrial, and infrastructural developments, they are still faced with paradoxical issues of gender labour market disparities with female labour force participation and employment lagging behind males. Unemployment in these countries predominantly affects females which is worsened by sluggish economic growth which cripples job creation. These selected countries have tackled differently their gender labour inequalities and they can learn from each other especially those that have significantly reduced the gender employment gap.

This chapter highlighted the developments in the selected Southern African countries' labour markets with special reference to laws and policies to create employment and reduce labour market inequalities. The following chapter focuses on a theoretical and empirical literature review.

Chapter 3: Literature Review

3.1 Introduction

This section reviews both theoretical and empirical literature on gender labour force participation followed by the review of literature on gender employment and gender employment discrimination.

3.2. Gender labour force participation disparities

This section discusses theories that explain gender disparities in labour market participation and draws implications for employment discrimination. It starts with a theoretical literature review and ends with an empirical literature review.

3.2.1 Theoretical Literature Review on Gender Labour Force Participation

This section discusses theories that explain gender disparities in labour market participation and draw implications of female labour force participation.

3.2.1.1 Labour Supply Theories

Labour supply theories focus on factors that influence an individual's decision to participate in the labour force. These theories postulate that labour force participation, which is a measure of one's willingness to supply labour is a function of human aspiration and personal preferences (Afridi, et al., 2018). In a competitive labour market, the decision to participate in the labour market depends on an individual's work-leisure preferences as measured by the perceived utility of each activity. Leisure is described as non-labour market activities and work as labour market activities that earn income. If the expected utility from work is perceived to be lower than that from leisure, the individual would withhold his or her labour supply (McConnel, Brue & Macpherson., 2017). It is worth noting that though subjective goals (work-leisure preference) are important in labour supply decisions, the objective goals (budget constraint) are of critical value. The individual's budget, which can either be financed by labour or non-labour income drives the individual either into or out of the labour market. Combining individual preference and budget constraints faced by an individual, the overall decision is dependent on the net expected utility of the goals.

In some cases, individuals are indifferent between work and leisure. In this case, such individuals participate in sectors that bring such a balance, such as the service sectors, or seek part-time employment. Given that both work and leisure are sources of utility, the perceived

income from work influences the participation level. The actual relationship between labour force participation and the level of income is debatable, as an individual's drive is argued to be instrumental (McConnel, et al., 2017; Gregory, 2018). These authors posit that workaholics do not factor in expected income in their decision to participate in the labour market. In this case, it can be inferred that labour force participation is driven more by passion rather than perceived income. On the other side, leisure lovers place a premium on income as their key determinant to participate in the labour market since work is considered to yield a substantive disutility. Thus, it can be inferred that labour force participation by individuals is deep-rooted in personality rather than in other motivations related to age and level of education.

Literature has shown that an individual's circumstances may have a direct impact on the decision to participate in the labour market (Ntuli & Kwenda, 2020). In situations where there are young children, individuals may consider leisure rather than work to be able to take care of the young ones (Ntuli & Kwenda, 2020; Klasen, 2019), which then reduces the likelihood of females participating in the labour force. On the other hand, the presence of small children in the family may imply a bigger financial need and this increases the chances of participating in the labour market. It can be concluded that the presence of small children in the family can either increase or decrease labour force participation of an individual thereby presenting a bidirectional relationship between labour force participation and the children's age.
From the theory highlighted above, it can be inferred that differences in personal circumstances and preferences might be driving the gender labour force participation disparities.

3.2.1.2 Hedonic Theory of Labour Supply

This theory explains the heterogeneity of workers with respect to wage and risk preferences. It gives prominence to people's avoidance of hazards and discomfort that come with labour market activities. It postulates that individuals participate in the labour market when there is an opportunity to trade off hazard with something that produces positive utility, and income (Majudar & Madheswarani, 2018). Workers participate in the labour market if marginal benefits are greater than zero and also greater than marginal cost. Thus, typical workers participate in the labour market if labour income plus nonwage amenities of the job are positive. This means an individual would find the level of consumption and workplace dis-amenity that yields maximum utility as measured by the budget constraint. The utility function for a worker is given by: $U = U(c, z, \propto)$ where U is the utility index; U= (.) is the worker's utility function;

c is consumption, z is the workplace attribute and α is a parameter for workers' preferences. Marginal utilities are given by:

$\frac{\partial U}{\partial C} > 0 \; and \; \frac{\partial U}{\partial z} < 0$. The optimal level of work characteristics is reached when:

$z = \frac{\partial U}{\partial c} w^1 = -\frac{\partial U}{\partial z}$. This means that the worker weighs the marginal benefit ($\frac{\partial U}{\partial c} w^1$) of higher workplace hazards against the marginal cost ($\frac{\partial U}{\partial z}$) which is the measure of direct loss of utility due to job hazards.

It can be noted that interpersonal hazard preferences are a fundamental factor in labour market participation. Workers with a strong distaste for z, if they participate in the labour market, they would do so in low workplace hazards. Should such individuals choose to participate in a high workplace hazard, they are likely to do so at a high wage rate (Kihang & Osman, 2020).

Other than job hazard preference, the theory also highlights that individuals have different time risk preferences as reflected by their preferences for present and future gains of participating in the labour market (Marginson, 2019). Highly futuristic individuals would delay their participation in the labour market as they seek to pursue other goals such as self-development (Heath & Jayachandran, 2017; Phelan, 2019). This implies that there is a reduced likelihood of current participation in the labour market. Highly present individuals believe that the future is uncertain and thus would not risk deferring their participation and this has an effect of increasing the likelihood of labour force participation. From the hedonic theory, we can infer the low labour market participation rate for females could be emanating from their preferences for low-hazard jobs and their perception of time.

3.2.1.3 Keynesian Theory

Keynesian theories advocate government intervention as a stimulus for increased labour force participation. These theories posit that government policies affect labour force participation. Some of these policies are:

3.2.1.3.1 The Minimum Wage Policy

The minimum wage is meant to promote equality and encourage individuals to participate in the labour market and develop low-level skills which are essential in the economy. The theory hypothesizes that, in a competitive labour market, a minimum wage that is set above the equilibrium wage increases the labour force participation rate, especially for individuals whose

reservation wage is above the current equilibrium wage. Evidence has shown that a minimum wage increase has the effect of increasing labour supply, though up to a certain level before it triggers unemployment (Dube, 2019; Jensen, 2017). The increase in minimum wage increases the opportunity cost of not participating in the labour market.

Using the basic supply and demand theory (McConnel, et al., 2017), when the wage rate is high, more labour is supplied. However, when it comes to actual employment, the minimum wage has the effect of making labour more costly, which results in fewer people being hired. This is because increased production costs undermine the dividends of enterprises. It is important to note that the extent of job loss depends on the elasticity of substitution of labour and other factors of production and how easy it is to transfer labour costs to consumers of goods and services (Hohberg & Lay, 2015). The effects of the minimum wage have been found to have more effect in relatively more developed countries than in less developed countries where there is plenty of unskilled labour, and thus might not induce the same effect as that in developed countries (UNDP, 2019). Hohberg & Lay (2015) argue that minimum wage might increase the level of labour force participation by low-skilled labour. This is because minimum wage as a structural intervention is meant to transform the labour market as it is set above the equilibrium wage. The minimum wage has a twin effect on female labour force participation. Firstly, as a reward for labour, it has a positive effect on labour force participation. Secondly, it may compel employers to train their employees to improve productivity to match minimum wage-induced labour costs. Training further increases labour force participation due to enhanced labour skills.

Where employers are reluctant to train their employees, the job queuing theory in Hohberg & Lay, (2015), argues that uncovered employees in the informal sector may leave their jobs and queue for formal jobs which are covered by minimum wage, thereby increasing formal labour market participation rate.

3.2.1.3.2 Tax and Welfare policies

These policies are meant to redistribute income in society, and present life-changing opportunities using grants, welfare services, and taxation policies. Generous maternity, paternity, and parental leave schemes give women an opportunity to remain active in the labour market as they can balance labour market demands and family nurturing (Jensen, 2017).

Tax policy is argued to have an impact on the individual's decision to participate in the labour market. The level of income after tax has a huge impact on labour force participation (Brown, 2020). If taxes are high, they eat away utility of working and rational individuals are likely to reduce their level of participation in the labour market. This is more prevalent in societies where social welfare benefits are higher than after-tax income (Krist, 2015). In cases where females are married, joint taxation works to discourage labour force participation. On the other hand, a progressive tax regime encourages labour force participation. Child protection grant received by caregivers improves the bargaining power of women as grants improve the ability of women to hire childminders. Receiving child support grants improves women's confidence in their ability to control their income. This, in turn, boosts women's confidence to handle their labour income and thus increases their desire to participate in the labour market (van Biljol, et al., 2018).

3.2.1.4 Human Capital Theories

Human capital theory by Becker (2009) defines human capital as any stock of knowledge or characteristics that an individual has either innate or acquired that contribute to her or his productivity. Research has shown that human capital increases the chance of participating in the labour market through greater education and skills training (Watson, 2013; Goldin, 2013; Fadwah & Yu, 2018). This is because education increases an individual's confidence in their productivity (Marginson, 2019; Tseng, Wang, & Yen., 2014). Education and training are perceived to increase innovativeness and creativity. Once individuals attain a certain level of education and training, they tend to build up confidence in their ability to create and innovate and thus they participate more in the labour market. Again, education and training may equip individuals with skills and abilities that are most sought after. Employers and labour market participation remain the only means of marketing the gained skills and talents.

Though Becker (2009) mainly focused on education and training as measures of education, the gardener view in Thai (2021) explains human capital as multidimensional which includes physical abilities and one's ability to work in a hierarchical environment with well-established lines of authority. In this case, the school's role in human capital is that of instilling a mind-set that can take instructions and observe authority (Dow, 2018). This means that, human capital

is not only schooling and training, but includes other qualities such as life skills, personal and interpersonal skills and attitude (Marginson, 2019).

In cases where prospective employers have expressed no interest in training their employees, queuing theories in Dube, (2019), contend that the labour force shuns such sectors especially the informal sector and queues for formal sectors where there is a likelihood of personal development and professional growth. From the queuing theory, it can be insinuated that lack of on-the-job training discourages labour force participation while on-the-job training encourages labour force participation.

The multi-dimensional view of human capital explains the diverse sector preferences of individual players in the labour market and individuals who are finding it hard to observe authority will not participate in the labour market. Though human capital has diverse features, empirical studies have been focusing on years of schooling and level of education as other attributes are hard to observe.

3.2.1.5 Theory of Feminisation U

The theory is premised on the assumption of a U shaped relationship between female labour force participation and economic growth. The stage of economic development is argued to affect the level of female labour force participation. The theory postulates that as the economy moves from an agrarian society to a more industrial and service-based economy, female labour force participation drops due to the income effect. This is because industrial jobs have high rewards as compared to the rewards from the agriculture sector (Heath & Jayachandran, 2017). Better-paying jobs have a negative income effect on the female labour supply. The shift towards an industrial economy is argued to restrict women's participation in the labour force. This is because the industrial sector is more formal thus making it difficult for women to simultaneously perform their dual role as homemakers and employees (Santos-Silva, Klaven &Welzel., 2017). As the economy progresses into a more service economy, female labour force participation increases as service improvement is argued to promote flexible working environments such as virtual work and part-time employment. This then results in more women participating in the labour force (Klasen, 2019). The feminisation U theory might explain the relatively low levels of female labour participation in Southern Africa since the region is developing is moving from being mainly agro-based.

3.2.1.6 Other theories

Household composition is also an important component in labour force participation, especially by females. The composition of a household is bound to affect labour force participation as it has a bearing on work time patterns. In this case, labour force participation might be influenced by an individual's marital status, the age of the family, and the husband's income. Married women with high-income spouses are more likely to shun labour market participation as compared to women with low-income spouses. Again, with female-headed households, women are likely to participate in the labour market as they are the family breadwinners (Hohberg & Lay, 2015).

The theory of working spouse premium posits that spouses tend to complement each other in the market. This means that highly productive men may encourage their female partners to participate more in the labour market, thereby promoting associative coupling (Cha & Bucca, 2016). Female autonomy has a bearing on the level of labour force participation by women (van Biljol, Atika & Dietor., 2018). Independent women, who have no spousal income, participate more in the labour force. This is because these females are breadwinners and heads of the family at the same time. Women's autonomy y is further buttressed by financial inclusion which promotes women's participation in the labour market.

The structural model puts more emphasis on the availability of jobs in geographic labour markets and the traditional segmentation of the labour market. These structures affect employment opportunities for women. Where the industry is more developed there are opportunities for women, hence individuals in more developed geographical areas are more likely to participate in the labour market than their counterparts in less developed areas (Gabriel, et al., 2019). Geographical conditions have a bearing on female labour force participation. Urban environments are generally known to be more supportive of women's participation in the labour market due to a high likelihood of securing employment because of the concentration of industries (Jensen, 2017).

However, Todaro and Harris (1970) have a different view on the availability of employment opportunities in urban areas (Sugata & Reza, 2020). Their argument is premised on the massive movement of people from rural to urban areas in cases where there is a rural-urban wage differential between rural and urban areas. In this case, it is argued that the movement of people from rural to urban results in increased urban unemployment, especially in underdeveloped

economies, a development which is likely to reduce female labour force participation (Busso & Chauvin, 2021; Sugata & Reza, 2020).

The Marxist theory traces male-female inequalities to private ownership of means of production. This theory implies that females' inferior position in labour force participation is driven by the patriarchal philosophy which is still deeply engraved in the society where females are placed in reproductive work and males in productive work (Armstrong, 2020; Rowan, 2020).

3.2.2 Conclusion

From the analysis of theories of labour force participation, it can be established that individual characteristics such as age, health, education, risk preferences, marital status, and government welfare policies impinge on an individual's decision to participate in the labour market. Women with low-income spouses are more inclined to participate in the labour market than those with high-income spouses. Minimum wage and other sources of income such as welfare grants influence an individual's decision to participate in the labour market. Social norms and cultural practices that place household chores as an exclusive responsibility of females in society have also contributed to the labour force participation gap between males and females. However, social and cultural practices are a challenge to measure scientifically and objectively. Thus, the study is focused on measurable attributes as such age, education, geographical location, and marital status among other measurable attributes.

3.2.3 Gender Labour Force Participation Empirical Literature Review.

This section highlights the past and present positions on female labour force participation. The section starts with a general overview of female-male labour force participation and then the Sub-Saharan Africa literature review, focusing mainly on the Southern African region.

3.2.3.1 Overview of gender labour force participation.

The involvement of females in the labour market back dates to the 1890s with the advent of the Industrial Revolution. Those involved were mainly the young and unmarried and were engaged at piece work level in the manufacturing sector (Klasen & Pieter, 2015) and a handful were professionals. Since then, the percentage of women's participation in the labour force has been on an increasing trend as highlighted in Figure 3.1 below:

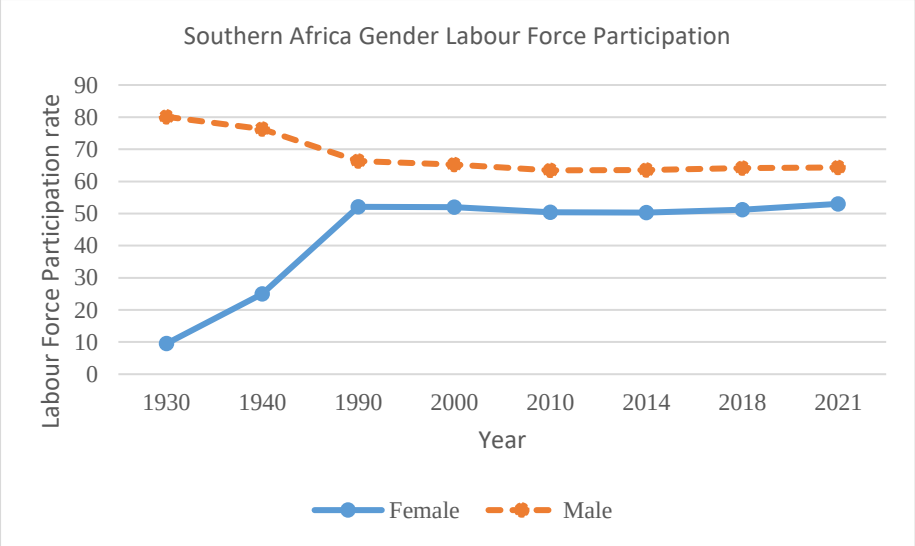

Figure 3.10 Female-male labour force participation growth and gap

Source: (ILOSTAT, 2021)

From Figure 3.1, it can be noted that female labour force involvement has expressively increased since the beginning of the 20th century, contracting the gap between women and men. This is due to the changing perception of the role of females in the economic frontier (Bary, 2016) and the effect of economic development (Klasen & Gaddis, 2014). The marked improvements could be attributed to increased access to education, the need for females to have their income, and the improvements in technology that have given a sizeable number of female opportunities to work in the comfort of their homes. This is because, given the dual role of females in most societies, working from home makes it easier for females to execute their tasks as nurturers and at the same time be gainfully employed. However, since the onset of the 21st Century, the gender gap with respect to labour force participation has not significantly reduced as shown in Figure 3.1.

The involvement of women in the labour market and in the economy at large was the most renowned development that has ever taken place, both in the developed and in the developing world. This has seen the narrowing of the female–male labour force participation gap in all economic sectors including the manufacturing and mining sectors, which were predominantly male territories. This is a result of policymakers' involvement at national, regional, and international levels through policies, conventions and declarations such as the SADC Protocol on Gender (2016), Africa Union Gender Policy (2009), Beijing Declaration (1995), International Labour Organisation Conversions-Discrimination-Employment and Occupation (1958) and the Sustainable Development Goals (2016).

The improvement, though remarkable, has not been able to eliminate the stubbornly inferior position of females in the labour market both in developed and developing economies (Espi, et al., 2019; Makgetla, 2014; Jauch & Katjiuongua, 2020; Ntuli & Wittenberg, 2013). The increased participation of females in the labour market has resulted in desirable outcomes which assist nations in moving towards achieving equity goals, thus eliminating the skewed resource distribution against females and improving the tax revenue base (Jensen, 2017). Though there has been a significant increase in female participation in the labour market, the participation of males still maintains a superior position as compared to that of their female counterparts.

The problem of gender labour market inequalities is not peculiar to Sub-Saharan Africa only, but it's a global challenge. Qian and Fuller, (2020) using the labour force survey data and the logistic regression, found a gender labour force participation and employment gap in Canada which was driven the presence of children in the household. The findings testified of to the employment disadvantage of women due social and family responsibilities. The COVID 19 pandemic was also found to exacerbate gender labour market inequalities among individuals with children. Bue, Ngo Le Manuel & Sen argue that gender discrimination embedded in legislation affects women's labour market activities. They came up with this conclusion after they assessed gender and vulnerable employment in developing countries using time series data and the linear probability model and the International Labour Organisation vulnerability employment indicator.

3.2.3.2 Empirical Literature Review

This section summarises extant literature about gender disparities in labour force participation with special reference to Southern Africa. This serves to shed light on the contribution of the study to labour market literature in general and in Southern Africa in particular.

Since the 1960s, the gender labour force disparities debate has solicited numerous studies into factors underlying the gendered labour market outcomes and opportunities. However, the relative importance of the factors varies over time and space, and hence a need to constantly monitor the developments about female labour force participation and update the literature. This is useful for initiatives to close gender gaps in society which are known to mute

socioeconomic development. The relevant literature for the study objectives is discussed below.

The fact that females' labour force participation in Southern Africa has increased since the attainment of independence is undisputable (World Bank, 2019). This is due to the expansion of female education and favourable economic conditions that most countries experienced after independence (Klasen, 2019). The gains of education and favourable economic conditions have always been weighed down by females' continually inferior position in employment propensity (Merotto, 2017; Bhorat & Khan, 2018). Several factors contribute to the inferior position of females' participation in the labour force. Research has attributed social and cultural positioning as one of the key drivers of females' suboptimal position in the labour market. The presence of children and elderly people in the family was found to hurt the participation of women in the labour market (Filbe, N, 2018; Clark, et al., 2017; Omowumim & Owege, 2019). In other societies, the presence of social stigma associated with educated and working men having their wives work has also contributed to the low participation of women in the labour force (Afridi, et al., 2018). The notion of a working wife is viewed as a reflection of a man's inability to provide for the family. To preserve their social dignity, married men, in this case, would not approve of their wives working, thereby negatively impacting the labour force participation rate by females. The participation rate has been heterogeneous across the Southern African Region as shown in Table 3.1 below:

Table 3.1 Female Labour Force Participation by Country

South Africa	**Malawi**	**Botswana**	**Namibia**
44.8	48.7	49.1	48.9

Source: (ILO, 2021)

The heterogeneous levels of female labour force participation rates across the Southern African region could be attributed to differences in economic development and structures which are linked to colonial masters' economic and social ideology.

In South Africa, there has been a significant movement in labour force participation by women (Mosomi & Wittenberg, 2020). Using trend analysis, they found a significant improvement in female labour force participation, with education being the major driver of improved female

labour participation rate. It was, however, noted that, though there has been a significant movement in labour force participation, female labour force participation is still lagging with a participation rate of 64% which is 15.3 % lower than their male counterparts. This gap in labour force participation feeds into the gender employment gap which, if not addressed, would catapult and propel gender poverty disparities. This gap is attributed to low education which is a common characteristic of the labour market in the Southern African region (Ntuli & Kwenda, 2020). Using document analysis and review, Ntuli &Kwenda, (2020) concluded that women's labour force participation was lagging male participation rate owing to low education levels and gender labour market discrimination.

Like any other country in Southern Africa, Malawi is experiencing gender disparities with respect to female labour force participation. Not much has been researched on gendered labour force participation disparities in Malawi. Despite the progression that has been made about female labour force participation, the Malawi labour market is characterised by the under-representation of women in the formal labour market (Nsanja, 2022). This is attributed to the high girl child school dropout rate at the primary level and varying access to education. It can be inferred that the lack of human capital which is a key determinant of participation in the labour force (Becker, 1975) is behind the unequal labour market representation of males and females in Malawi. Thus, the importance of education in the formal labour market cannot be ignored if gender employment disparities are to be addressed (Lara et al., 2019; Klasen, 2019). Kreibaum & Klaven (2015) stressed the significance of education in labour force participation. They argued that it causes females to develop a lasting and strong attachment to the labour market. This therefore implies that further educational expansion would serve to boost female labour force participation in Malawi.

In Namibia, literature has revealed the continual existence of gender disparities with respect to labour force participation twenty-six (26) years after independence. Mufune (2013), using a case study, contended that education is a key factor for the labour force to participate in the labour market. Like (Becker, 1975), Mufune (2013) using logit estimates found education and labour force participation to be positively correlated. In the analysis, Mufune (2013) using highlighted a significant difference in education attainment between male and female labour force with females having less education attainment. Using the Auto Regressive Distributive Model (ARDM), education attained was found instrumental in labour force participation rate estimates in Southern Africa (Omowumim & Owege, 2019). Education attainment by the

female labour force is attributed to cultural norms where women are viewed as more of homemakers than active players in the labour market (Omowumim & Owege, 2019).

Despite being among one of the best-performing economies in the Southern region, Botswana is equally battling gender disparities in labour force participation. There is a dearth of information on labour market inequalities in Botswana. (Matandire, 2018) using descriptive statistics revealed the existence of gender labour force participation disparities with only 48.9% of females participating in the labour force.

Zimbabwe is not an exception when it comes to labour market disparities. ZIMSTAT (2014) and ILO (2021) in their labour force survey revealed that females are unequally represented in the labour market with a labour force participation of 51.1 %. Chivasa (2018), through case study research, revealed that women are less likely to participate in the labour market compared to their male counterparts. Kurehwa (2018), using descriptive statistic, revealed that in Zimbabwe women are more concentrated in the informal sector. The age of women and the presence of working spouses and their income levels were found to have a bearing on the labour force participation rate by women (Chikwanha & Ncube, 2014).

Generally, there are rampant labour market inequalities in Southern Africa with women being excluded from highly productive jobs (Dinno, 2017). This is because in Southern Africa, the majority of women are in rural areas with very limited opportunities of being employed since rural areas are not developed as compared to urban areas with industries (Swidroski, et al., 2021). Pre-labour market characteristics such as education also serve to disadvantage women in Southern Africa since women face discrimination during their learning years (Chivasa, 2018; Swidroski, et al., 2021; Ntuli & Kwenda, 2020; Ewemooje, et al., 2023).

ILO (2020) using time series data, analysed labour force participation across different countries in Africa using data collected by national statistics offices. The findings revealed that labour force participation rate was slightly increased from the previous period. The findings indicated a significant gender gap with male participation rate being notably higher than those of females, thus reflecting broader socio-economic challenge challenges in Africa, Southern Africa included.

Using logistic regression analysis, Dunn & Maharaj (2024), assessed the determinants of female labour force participation across different provinces in South Africa. Education and age were found to significantly affect labour force participation. Larger households were associated with decreased female labour force participation rates. Thus, the findings suggest that domestic responsibilities may hinder labour force participation for women which in turn affect their employment likelihood.

Ruiters & Charters (2020) investigated gender equity in labour force participation in South Africa using the Autoregressive Distributed lag models, highlighted the positive effect of economic development of female labour force participation in the long run. Their findings supported the theory of Feminisation U shape. This means that economic development creates opportunities for females to access education, child care services which improves their participation rate. Masuku & Cletus (2022), applied dynamic autoregressive distributed lag panel model, explored the relationship between female labour force participation and trade openness and economic growth in the SADC region. They concluded that short term economic growth impacted female labour force participation in the short run.

The study by Petrongolo & Rhonchi (2020), using log linear model for United Kingdom data found most of the gender employment disparities stem from women's roles in family responsibilities. Their findings on family responsibilities are similar to the findings by Bue, et al., (2022) despite them using the Canadian data and the linear probability model. Other than family responsibilities, the study also found differences in commuting preferences between males and females to be a driver of gender employment disparities in the United Kingdom. These findings reveal a global problem of gender labour market inequalities, therefore, more needs to be done to ensure equity in gender employment across the globe.

3.2.3.3 Conclusion

Most studies reviewed either used case studies (Chivasa, 2018; Mufume, 2013) or descriptive analysis (Kurebwa, 2018). Other studies reviewed focused on the country specifics using trend analysis (Mosomi & Wittenberg, 2020) to analyse the movement of female labour force participation in South Africa. The studies above, however, focused on individual country analysis of female labour force participation. Omowumim & Owege (2019) analysed the participation rate in Southern African countries. However, the Auto Regressive Distributive

Model (ARDM) uses time series data and this study utilised cross sectional national survey data. The logit model used by Qian &Fuller, 2020 used the logit regression and focused mainly on the presence of children's impact on women's labour market activities and like other studies focused on a single labour market. The current study focused on a comparative analysis of female labour force participation in Southern Africa. The study utilised cross-sectional data using probability regression (Probit regression).

This study extended the analysis to a comparative context. In particular, it utilised the probability regression and the maximum likelihood technique to analyse factors influencing labour force participation in selected southern African countries, viz. Namibia, Botswana, Malawi, and South Africa using cross-sectional data. This approach would allow us to assist in strategies to reduce the gender employment gap in Southern African countries based on outcomes for selected countries.

3.3 **Comparative Gender Employment Disparities Literature Review**

Female-male employment disparities explain the extent of women's involvement in formal economic activities such as the labour market. The difference between female and male labour market participation has a bearing on employment which stems from the socialisation process (Beaman, et al., 2018), the nature of jobs (Roberts & Shoer, 2021), and time spent at work (Maundeni, 2015). Socialisation has a bearing on how females and males pick their career routes. From tender ages, boys and girls are taught to execute gendered roles in the household which shapes their career selections and thus might have contributed to low female employment as compared to their male counterparts (Beaman, et al., 2018).

Despite the existing gender employment disparities, there has been a marked improvement in female employment in most countries, though there are persistent barriers that keep women out of employment (Jauch & Katjiuongua, 2020). The identification and quantification of these hurdles is critical for the development of suitable policy measures to promote female employment and close the gender employment gap. Closing the gender employment gap is not only beneficial to females and their families, but it is for the good of the global economy (Masedi, 2020; Ntuli & Kwenda, 2020).

Generally, women in the Southern African region are commonly employed in the new forms of labour such as temporary workers, just-in-time and part-time workers, piece-rate and home-based workers, self-employed workers in the informal sector and small-scale entrepreneurs

supported by micro-credit or family reserves which are generally regarded as inferior jobs (Ntuli & Kwenda, 2020; Espi, et al., 2019; Masedi, 2020). In contrast, males are disposed to superior recognised formal wage employment. In both advanced and emerging countries, females are inclined to work fewer hours per day in salaried work and more hours on unpaid household labour (Posel & Casale, 2019; Fink, 2018).

The inferior position of women in the labour market is aggravated by the multi-interaction of economic, social, political, and cultural forces that are present at work. Females are assumed to be less intellectual, acquiescent, partner dependent, and expressive, and consequently cannot be delegated with labour market tasks (UNDP, 2019). The position can only be corrected by policymakers if they take a holistic approach to reducing the gender employment gap. This could be possible if sources of gender employment gap are understood and thus this present study seeks to highlight the sources of gender employment gap in the selected Southern African countries.

The section starts by discussing theories of gender employment, followed by discrimination theories, and ends with an empirical literature review on gender employment gap.

3.3.1 Theoretical Literature Review on Gender Employment Disparities

This section discusses theories that explain gender disparities in the labour market and draws implications for employment. These include human capital, labour market discrimination and segmentation theories, and utility maximisation theories.

3.3.1.1 Human Capital Theories

The human capital theory presumes that individuals with high endowments of human capital – education, experience, and skills - are more productive. In consequence, individuals with high endowments of human capital face high demand (Becker, 1984) and thus are more likely to be employed than individuals with low skills endowment (Espi, et al., 2019; Gradin, 2021; Lesetedi, 2018; Nyagadza, et al., 2022; Roberts & Shoer, 2021). This is based on a perfectly competitive labour market such that equally productive individuals face similar chances of being employed. From this, we infer that women's inferior status in employment opportunities could be an outcome of inferior human capital endowments to men's which is perpetuated by patriarchal beliefs which are well-rooted in societal norms (Fink, 2018). In turn, the higher human capital deficit among women potentially exposes them to a higher likelihood of not being employed in economically recognised sections of the economy such as the formal sector (Buribayev & Khazamzina, 2019; Kim, 2020).

Moreover, the human capital theory assumes that an individual's position in the labour market is an outcome of self-selection that is premised on capabilities and preferences (Roberts & Shoer, 2021). Thus, attributing the position of women in the labour market as an outcome of individual preferences rather than labour market prejudice.

Though human capital theories place greater emphasis on an individual's skills endowment as a key determinant of employment, they disregard factors that are not linked to skill endowment. These factors are not only associated with labour market forces but non-labour market forces such as socio-cultural factors. These pose a high opportunity cost of employment for women which would then push them out of the labour market, thereby presenting a gap in employment. For instance, employment trajectories of equally productive males and females may differ due to women's preference for safe rather than risky jobs or women's disproportionate burden in parenthood (Ntuli & Kwenda, 2020; Gradin, 2021). To some extent, the latter drives women into occupations or employment sectors which are favourable to motherhood such as part-time jobs or the informal sector while men can opt for full-time jobs (UNDP, 2015; Dieterich & Thomas, 2016). This, therefore, contributes to the gender employment differentials as some females who are in occupations where the penalty of parenthood is punitive opt to quit the job market. From this, we postulate that family attachment and responsibilities (e.g. marriage, child care, child-bearing, and social responsibilities) partly drive the wedge between male and female employment prospects.

3.3.1.2 Duopolistic and Utility Maximisation Theories

In some cases, the females' decision to participate in the labour market is highly linked to their spouses' share of family income which is not related to labour market earnings (Kreibaum & Klaven, 2015; McConnel, et al., 2017). This notion is highly linked with utility maximisation by an individual, subject to family income. Given the conventional role played by males and females in a family setup, a female usually and severally conforms her preferences to those of her husband who is presumably a family head. In this case, females might withdraw their services from the labour market since their utility as an individual is not being maximised thus presenting a lower female labour employment as compared to male employment.

Duopolistic analysis posits that each family member maximises utility, but their behaviour affects other members' utility maximisation conduct because of resource pooling. Resource pooling might pose an indirect negative income substitution effect through family consumption on the decision by female spouses to supply labour as tradition prescribes males as bread-

winners. Where family income is pooled together, utility maximisation is reached when both males and females work all the available hours. Even if the wage rate is the same for both male and female, female would devote more time to non-market work than male. As a result, a female is presumed better at providing non-market work than their male counterparts (Motswapeng, 2020; Mosomi & Wittenberg, 2020; Afridi, et al., 2018). This situation is worse if the female wage is less than the male wage. Such views distinguish the role played by women where they are viewed as the major producers of family labour such as child minding and tendering to socio-economic family matters. In this case, the trade-off between paid formal work and the women's traditional role in the family greatly influences women's decision to take up employment.

The dynamic models elucidate that the women's desire for non-labour market accomplishments may rise at first and then decline over time due to sociocultural and biological factors (Xiao, 2020). During the childbearing and childrearing ages, leisure would be higher and employment would be predictably defined to be inferior to other stages in the life cycle (Laun & Wallenius, 2017). Laun & Wallenius (2017) further highlight that at this stage women are linked with low levels of human capital investment as the childbearing and childrearing age compete for a limited time and financial resources. This can deny females the opportunity to develop their human capital which then results in a low labour supply. Low labour supply reduces the females' probability of being formally employed. At this point we can infer that ideologies that expect females to find their identity and recognition through domestic duties and roles have resulted in low female employment uptake (Klasen & Pieter, 2015). This has resulted in many policymakers neglecting the plight of women in fighting the gender employment gap.

3.3.1.3 Labour Market Segmentation Theories

While the human capital theory maintains that equally productive males and females should face similar chances of employment, this is not always the case (Espi, et al., 2019; ILOSTAT, 2021; Gradin, 2021). There are imperfections and institutionalised frictions that hinder equal participation and employment for men and women in the labour market (Annalena, 2021). For instance, there are theories that underpin these gender gaps to labour market segmentation and discrimination.

The theory of labour market segmentation by Doeringer & Piore (1971) in (Srivastava, 2019) distinguishes between primary and secondary labour market sectors. It postulates that individuals are 'assigned' to these sectors by an unknown function (Fink, 2018). The primary

segment of the labour market is characterised by good jobs, prospects for promotion, and higher wages while the reverse is the case for the secondary segment. In this case, the gender employment gap arises in some primary sectors as relatively more females are employed in the secondary sector than males. The testable hypothesis from this theory is that job characteristics such as the employment sector have a bearing on gender employment (McConnel, et al., 2017). Thus, job heterogeneity has resulted in different employment rates between females and males (Roberts & Shoer, 2021).

In some cases, the classification of employees may result in a gender employment gap. The stratification of employees has resulted in dominant employees pursuing their privilege positions to authenticate imbalanced treatment. This has resulted in people forming groupings which makes it difficult at times for outgroup members to get equal treatment as the in-group members. This typifies unionism of which most women do not claim membership (Brun, 2019; Lalanae & Seabright, 2016). Given men's dominance in unionism and at workplace in general, we infer that women's status as an out-group probably contributes to their "inferior" position thus diminishing their chances of being employed in certain jobs.

3.3.2 Theories of Employment Discrimination

In this section, the major theories of discrimination are discussed. Theories of discrimination also explain gender employment differentials.

3.3.2.1 Statistical Discrimination Theory

This is discrimination based on average information an individual has about certain individuals or group of people. In this case, decisions on individuals are made based on the average characteristics of a group (Borrowman & Klasen, 2020). Statistical discrimination theories of Phelps (1972) and Arrow (1973) propound that discrimination arises due to imperfect information in the labour market. This type of discrimination is due to stereotyping (Beaman, Keleher & Magrder., 2018) which can be either descriptive or prescriptive. Prospective employees have perfect information about their productivity while employers do not have all information. This raises the problem of adverse selection in the employment process. Hence, employers try to minimise the associated costs by screening potential recruits based on their indicators of productivity and the average productivity of their demographic groups. This implies that a woman who has similar endowments of productive characteristics to a male may face a lower chance of employment if females' average productivity is perceived lower than

that of men. Lack of interest by employers to solicit labour from females has resulted in females feeling unappreciated and unrecognised.

The feeling of being an outer group is argued to have caused females to opt out of professional employment (Fink, 2018), which reinforces female discrimination in the labour market. Those who opt to take up professional employment may end up being unproductive because of being side-lined thereby ending up reinforcing the notion of women's inferiority at work (Sabona, 2020; Xiao, 2020). Notwithstanding, statistical discrimination can be reduced if the gender gap in productivity-enhancing characteristics such as education and labour market experience is reduced over time. Measures to reduce information asymmetry to the employment process can also help mitigate this type of discrimination as individuals would be evaluated based on their actual characteristics.

3.3.2.2 Taste-Based Discrimination Theory

This type of discrimination is subjective and is based on an individual's preference (McConnel, et al., 2017). The taste-based discrimination model of Gary Becker (1957) presumes that employers have a distaste for hiring female workers (Guryan & Charles, 2013; Neilson & Yin, 2016; Koopmans, et al., 2019). This is because of the generalised belief (prescriptive stereotyping) of how female employees are. This belief guides how the employers evaluate female employees. The taste for discrimination can also be practised by customers which are referred to as market discrimination (Koopmans, et al., 2019). Some customers might have a distaste for being served by females thereby reducing the chance of females being employed in certain professions, industries, and occupations. Some male employees may also distaste having female co-workers, which might reduce their productivity. Again, females employed in a male-dominated occupation may invade male's masculine individualities and result in a deterioration in job-related prestige, this has caused males in masculine-dominated professions to repel the entrance of females in 'their' profession as they regard women employees as pollution (Goldin, 2013). Male workers discriminate against potential female workforce as a means of shielding their prestige in an unequal information situation (Fink, 2018). This lack of objectivity in the labour market imposes a glass ceiling on women. The artificial barriers then pull down the wage rate for females which might lower the female employment rate. This is because some women would opt out of employment as they fail to maximise their utility given their objective function as opined by neo-classical economists (McConnel, et al., 2017). It is worth noting that an individual partakes in the labour market if the anticipated market wage

deal is superior to the reservation wage. If the market wage is low, it might present a higher opportunity cost which would result in a reduction in female employment, thereby presenting a gender employment gap.

From the discrimination theories, we can deduce that discrimination might have contributed to low human capital growth among females and low female formal employment. This is because human capital grows during employment because of on-the-job training and continuous development of employees (Xiao, 2020).

3.3.3 Empirical Literature Review on Gender Employment and Discrimination

In this section, we discuss existing literature on employment and employment discrimination in the Southern African region and in the world in general. The literature reviewed includes studies by (Gradin, 2021; Ntuli & Kwenda, 2020; Kim, 2020; Motswapeng, 2020; Posel & Casale, 2019; Ntuli & Wittenberg, 2013). These studies revealed the presence of gender employment inequalities. Female employment discrimination takes place at various levels such as the entry and promotion levels. The study focused on employed individuals and this provided a robust analysis of the labour market employment discrimination (Gradin, 2021). His study (Gradin, 2021) focused only on South Africa and the analysis of occupational segregation with special reference to gender and race. Using the Gini segregation and concentration indices, education and race effects were found to be significantly different between men and women. Education was found to have a positive effect on reducing occupational segregation. This means that the gender employment gap might be driven by pre-labour market factors. (Gradin, 2021)'s study is partial as it concentrated on South Africa only with a special orientation to occupational segregation which might not fully expose female discrimination in the labour market. Other than the focus on occupational segregation, the results might be misleading if they are to be generalised to the rest of Southern Africa region. The Southern African Region has diverse characteristics and history, such that it becomes a challenge to oversimplify the conclusions to other countries. This calls for a cross-comparative study of sources of gender employment discrimination if we are to craft regional policies that are intended to improve a stubbornly inferior female position in employment and to achieve the SGDs. Thus, our study bridges the gap, where to the best of our knowledge are the first to do a comparative decomposition analysis of sources of gender employment differential.

Though the study tries to provide a holistic analysis of gender employment discrimination, it is limited by the non-availability of information on non-reported information such as cultural

beliefs that influence the decision to participate in the labour force. Again, the fact that employment and labour force were defined differently posed a challenge as these two are influenced by different factors that are not separated in the labour force survey data used in the study.

The current study was done at the regional level focusing on different forms of employment among others, both part-time, full-time and temporary employees. Ntuli & Kwenda (2020) focused on the review of labour markets in Sub-Saharan Africa. Their study mainly reviewed gender gaps in employment and wages without investigating the presence of gender employment discrimination.

A common finding in studies of gender differentials in employment opportunities in selected Southern African countries is that males have a higher likelihood of employment than women (Espi, et al., 2019; Gradin, 2021; Jauch & Katjiuongua, 2020; Motswapeng, 2020; Ntuli & Kwenda, 2020). The extent of the differential varies by employment sector, geographic location, marital status, and human capital endowments among other factors (Espi, et al., 2019; Gradin, 2021; Jauch & Katjiuongua, 2020; Motswapeng, 2020; Ntuli & Kwenda, 2020). Worth noting is that women's lower prevalence in higher levels of education stifles their employment prospects; especially in the formal sector which is more gainful when compared to the informal sector (Mufume, 2013). As such, females are more likely to work in survivalist jobs (domestic work, informal sector, unpaid family work, and subsistence agriculture) than males to the disadvantage of families that rely mostly on females' income (Roberts & Shoer, 2021; Ntuli & Kwenda, 2020).

Ntuli & Wittenberg (2013), using the South African labour force surveys of 1994 and 1995 and the logit modelling, unveiled that education has a positive effect on women's employment as highlighted by Becker's (1953) human capital theories. Other than education having a positive effect on women's employment, their study also discovered that marriage and fertility diminish the prospects of women being employed which can be presented as some form of employment discrimination against women. Widows and divorcees were found to have a higher probability of partaking in the labour market. This is because they maximise their utility subject to their objective function given the absence of the spouse's income. Though their study applied detailed decomposition on the sources of employment discrimination, they applied the Oaxaca Decomposition technique. Like the studies reviewed above, it might be misleading to generalise their findings to other countries as they are limited to a single country (South Africa).

In terms of methodology, most gender employment gap studies in selected Southern African countries utilised methodologies that only highlight the gap without delving deep into its sources. For instance, Mufume (2013) used a descriptive approach to unearth the gender employment gap in Namibia. Their methodology does not provide a robust analysis of sources of women's employment discrimination. This is because their study merely provides aggregate statistics on gender employment differential, which poses challenges when crafting policies that are meant to reduce female employment discrimination. Chikwanha & Ncube (2014) investigated female labour force participation trends in Zimbabwe using binomial logit regression. Their study found that more women entered into labour force. However, the study does not assess the presence of the gender employment gap and discrimination. If the region is to fight women's employment discrimination, there is a need for a robust study of the sources of women's employment discrimination at the regional level, which is addressed by the study. Given the extant studies on the gender employment differential in selected Southern African countries used different methods and estimation models for different countries, it is, therefore, difficult to conclude whether the findings can be generalised to the Southern African region. Yet a comparative, study with a homogeneous methodology is crucial for strategies to improve females' labour market position in the region if the region is to achieve inclusive growth. Hence, our study focuses on a comparative analysis of the sources of the gender employment differential in the selected Southern African countries to make a regional conclusion.

The analysis is based on Yun's (2005) detailed decomposition method for binary outcomes after controlling worker selection bias. This allowed for a comprehensive analysis of the underpinnings of the employment differential. That is, it distinguishes key underlying variables and identifies their impact on work through the characteristic effect (gender differences in observable characteristics) or the price effect (returns to characteristics that also capture hiring discrimination). This analysis possibly brings more insights for policy purposes in the countries of study and the Southern African Region at large.

Female employment discrimination is not a problem peculiar to Southern African region only, but is a global problem (World Bank, 2015). The problem should not be viewed as a personal foible but as result of socio-economic structures in which the role of a female is observed as the helper of a male (ILO, 2021). Young (2021) using logistic regression, found that women employment discrimination is rampant in the USA, with race as the main basis for

discrimination (Pan, 2015). In Israel, using Israeli corporations, (Roberts & Shoer, 2021) utilised a linear hierarchical rank approach, found the presence of female discrimination when placing employees in ranks. The methodology used analysed the process that is used to place employees on ranks based on the vector of ranking. This has explained the little presence of women in managerial positions. Given that promotion is not subject to negotiation, there is a high likelihood of the presence of taste and statistics discrimination as influenced by various factors such as socio-cultural beliefs. Using a scientific analysis of legislation, (Buribayev & Khazamzina, 2019) found that women suffer employment discrimination in Kazakhstan. The document analysis method used does not reflect the distributional effect on employment as the analysis is based on descriptive and qualitative data. Their study revealed that while males are judged heavily for being out of employment, their human capital is taken seriously upon employment. On the contrary, the study highlighted that while women are not judged harshly for not being employed their human capital is not taken seriously upon employment. The inability to judge harshly women for not being employed presents a notation that is socially, morally, and economically correct for women to be out of employment. This has made policymakers reluctant to enforce policies that promote equal employment opportunities between men and women; thus, the presence of a stubbornly inferior position of women in the labour market (ILO, 2021) (Friedland & Robertson, 2019). Using the European Union data from twenty-five countries, Tomei (nd) highlighted the existence of gender discrimination in Europe. Though the study provided insight into labour market discrimination, the study used qualitative descriptions. This has a problem in informing policy as it does not highlight the sources and extent of such differences in employment participation between females and their male counterparts.

3.4 Theoretical Predictions

From the reviewed literature, both theoretical and empirical, theoretical predictions of variables as they influence participation and employment of females in the formal labour market are discussed below:

3.4.1 Wages

The wage as explained by the income and substitution effect influences the individual's decision to supply labour. The overall effects of wages on women's participation in the labour force are indeterminate (McConnel, et al., 2017). Where the income effect is greater than the substitution effect, the supply of labour decreases. This means that as income increases, an

individual finds it less costly to increase leisure demand and reduce labour supply (Klasen & Pieter, 2015; McConnel, et al., 2017). The substitution effect would force women to increase their labour supply as the wage rate increases. This means that the effect of wages on the decision by women to participate in the labour market is dependent upon the strength of the substitution and income effect of the wage rate. In principle, wages are to affect the labour supply. Since the wage rate is only observed for individuals who are currently employed, therefore in this study, the wage variable is not instrumental since the study focus is on female labour force participation which is visible at the labour market entry point.

3.4.2 Education

The human capital theories by Becker (year) posit that education increases an individual's probability of participating in the labour market. High education attainment increases an individual's labour demand as education is assumed to increase labour productivity (Dieter van, 2017; Heath & Jayachandran, 2017). Individuals who have less education are assumed to be having low skills and this diminishes their chance of being sought after by employers, thus reducing their chance of participating in the labour markets. Females, because of their commitment to non-labour market activities such as family obligations, are bound to have lower education as compared to their male counterparts and thus are less likely to be in the labour market. This implies that more males than females are employed given that there are more men with higher education than women (ILO, 2021; Ntuli & Kwenda, 2020). Thus, education and employment are expected to be positively related.

3.4.3. Non-labour income

This variable hypothesises a negative relationship between non-labour income and women's labour force participation. This is because of the income effect. A reduction in non-labour income makes women fail to afford a high demand for goods and services, leisure included. This makes the opportunity cost of not being employed very high. Under such a case, women opt to work rather than stay home because they would be failing to meet their objective function. Where non-labour income is high, the rate at which women participate in the labour market diminishes because of the income effect (Chikwanha & Ncube, 2014; Kihang & Osman, 2020). On the other hand, high non-wage income may have a positive relationship with female labour force participation. Since non-wage income can be a proxy for wealth, it may imply that individuals with high non-wage income have access to education which increases their participation in the labour force (Vuluku, Wambugu and Moyi, 2013). From the analysis above, we can infer that the total effect of non-wage is ambiguous. In this study, the coverage

for non-labour income was support grants in various forms. This is because other sources of non-labour income such as the spouse's income and family assets and wealth were difficult to observe.

3.4.4 Number of children

The number of children and their ages can either have a positive or negative effect on women's labour supply. This is because child-bearing and nurturing require a lot of time and financial resources. High financial requirements in rearing children would force women to participate in the labour market, especially in female-headed households (Klasen, 2019). On the other hand, women with children are generally worse off than those without children as their time devoted to formal employment is limited as they balance work and child care. They work fewer hours thus reducing their level of labour market participation (Lundborg et al., 2014).

It is noteworthy that the child effect on female labour supply depends on the institutional and economic circumstances (Kreibaum & Klaven, 2015; Dieter van, 2017; Omowumim & Owege, 2019). In countries with generous provisions for child care, the presence of children has a less negative impact on the female labour supply. From the analysis above, it can be inferred that the presence of children in a household has an ambiguous effect on female labour force participation.

3.4.5 Age

There is an inverted U profile between age and labour force participation. The participation of women in the labour force is dictated by changes in the women's requirements and responsibilities such as education, and leisure child-bearing as explained by life cycle theories (Friedland & Robertson, 2019). Given the fixed time available to meet these requirements, it means that there exists a trade-off relationship between the labour market and non-labour market activities (McConnel, et al., 2017). For instance, when one reaches marriage and childbearing age, non-labour market activities might be preferred because of family responsibilities. On the contrary, an individual might increase the supply of labour because of an increase in financial obligations, given that an individual would now require more financial resources to meet the requirements of the children, which were not there when one was of a school-going age. Age and preferences are argued by Heckman et al., (nd) to influence the timing of labour supply and not the volume of labour supply. In cases where a female has reached an age that requires them to balance between labour market activities and family

responsibilities, age might affect both the timing of labour supply and the quantity of labour supplied to the labour market.

The life cycle theory by Modigliani and Brumberg (1954) in (Lesetedi, 2018), posits that an individual increases their supply of labour given a certain wage level, to accumulate wealth that they would use to smoothen their consumption when they are out of employment. This harms labour supply. This means as an individual grows old, they increase their supply of labour up to a certain age and thereafter, the labour supply will start to decrease. Therefore, labour supply has both a negative and positive relationship with age depending on the stage at which one is in the life cycle (Heckaman & Marcurdy, nd.). In cases where women have reached an age that requires them to balance between labour market activities and family responsibilities, age might affect both the timing of labour supply and the quantity of labour supplied to the labour market. Age is also used as a proxy for experience. This means that old people are assumed to be more experienced and are thus more likely to be employed compared to the young ones (Kim, 2020).

3.4.6 Marital Status

Marital status has both negative and positive relationships through the income effect. If we assume intra-household income transfer, if a woman is married and there is an increase in the spouse's income, it means an increase in non-labour income and this might lead to a reduction in women's labour force participation rate (Chikwanha & Ncube, 2014). The income effect of non-labour income might mean that women in lower-income families are likely to participate in the labour market (Kreibaum & Klaven, 2015; McConnel, et al., 2017; van Biljol, et al., 2018). Where families are headed by women such as the case of widows, divorcees and single mothers, females are more likely to participate in the labour market given that their non-labour income might be too low to meet their financial obligations. From this observation, we can infer that marital status has an impact on female labour force participation, with married women less likely to participate in the labour market as compared to widows, divorcees, and single mothers. The participation rate has a bearing on employment as well.

3.4.7 Place of Residence (Urban/Rural areas)

Urbanisation has resulted in most jobs being located in urban areas. This is because most companies are concentrated in urban areas where there are facilities that enable them to do business easily given the availability of infrastructure. The concentration of employers in urban areas improves the probability of formal employment for urban dwellers, which in turn

increases the female labour force participation rate (Ntuli & Kwenda, 2020; Mosomi & Wittenberg, 2020). It can be concluded that the place of residence has an influence on the labour force participation rate by women, with urban areas having a positive influence on labour force participation.

3.4.8 Gender

The distribution of family non-labour market activities is skewed towards women (UNDP, 2015). This presents an unfair advantage to men and therefore increases their chance of being formally employed. Women are likely not to participate in the labour market if their participation does not promote the execution of their family responsibilities, thus reducing the women's participation in the labour force as compared to their male counterparts (Santos-Silva, et al., 2017; Dieter van, 2017).

3.5 Conclusion

This chapter focused on the review of both theoretical and empirical literature. The reviewed literature highlighted the factors that influence female labour force participation and female employment. These factors are personal circumstance, human capital endowment, age and marital status among other factors. This Chapter focused on the literature review and the subsequent chapter delves into the methodology used in the study.

Chapter 4: Methodology

4.1 Introduction

This chapter highlights the methodology used in analysing the sources of gender labour market disparities. The chapter starts by foregrounding the research paradigm, estimation procedures, and study data and then discusses sample selection issues at the end of the chapter.

4.2 Research paradigm

A paradigm is a general viewpoint or ideology (Perera, 2018). There are several paradigms and their use is determined by the nature of research and type of results required. These paradigms are positivism and post-positivism. Positivism measures reality from an objective point of view. This means that reality can be obtained using scientific methods, thus arguing that reality is objectively given and measured (Creswell &Creswell, 2018).

There is an interpretivism research paradigm. This focuses on reality based on people's subjective view of the environment around them (Kumatongo and Kapalu, 2021). This paradigm subsumes various routes to knowledge. The constructs are, therefore, derived from an in-depth examination of a situation of a situation of interest. Access to reality is assumed to be through social interaction, hence justifying the use of focus groups as a data collection method. This paradigm was therefore not the best since the study was using secondary data which could be scientifically and objectively analysed.

The constructivism paradigm is premised on the belief that economic beings seek to understand the environment by developing the subjective meaning of their environment. This means that an individual's view of the environment is critical. This approach is more appropriate when using qualitative research design, and thus could not be used since the study adopted the quantitative approach (Yeboah & Ankrah, 2016).

There are situations where both qualitative and quantitative methods are used in research. In this situation, the researcher would be using the pragmatism paradigm. This is a pluralist approach as it focuses on more than one system and this is more appropriate in applied research.

Having analysed different paradigms and circumstances under which they could be used, the most appropriate paradigm was the positivist research paradigm. This is because the literature reviewed has shown the existence of unequal participation between females and males in the labour market. Thus, given the extant literature on the labour market gender disparities, the study investigated the possible causes of such disparities and how these disparities vary across the selected Southern African countries, thus applying the post-positivism paradigm. A quantitative research paradigm was used because the ontology was based on the realities of gender employment disparities in the selected countries as evidenced by national and global statistics (ILO, 2019; Stats SA, 2018; National Statistics Office).

4.3 Research Design

Research design is a systematic process which is guided by theory. Thus, research design is a process of data collection, analysis and interpretation to provide answers to some real-life situations. A number of research designs are available and the choice of the design depends on the question to be addressed. Some of the research designs are;

Experimental research design which is true or quasi-experiment (Mildner, 2019). This design is more appropriate in intervention evaluation. It was not appropriate for the study since there was no intervention involved and the study was focused on the data at the time and point of collection. Observational research design as one of the research designs involves observing the research participants in their most natural state. The observations are usually done with the knowledge of the participant. This research design is hailed for giving unbiased data, it does not allow the researcher to understand the reasons behind certain behaviours (Creswell & Creswell, 2018). The design was not well suited for the study since the study utilised already collected data.

One of the most used designs is the prospective research design. This design is future-oriented and it involves tracking the research participant over a given period to ascertain the effects of an intervention, such as tracking an individual's employment probability before and after attaining a certain level of education. This design was not appropriate for the study since it was tracking participants and analysed already at the time of data collection.

The other research design analysed is the retrospective design. This design uses pre-existing data to make new analyses and conclusions about the outcome interest. The design uses current information to come up with possible future interventions. Though the uses of pre-existing

data, the design was not appropriate as the study focused on the status of the research subjects at the point of data collection without extrapolating the findings.

The study utilised a cross-sectional research design which employs one-time data and is not time-bound thus, allowing the use of data which was collected at different times across different countries. The design is appropriate because the selected countries collect their labour market data at different times and at different intervals. Therefore, the analysis relied on existing differences at the time of data collection. The study did not investigate causation but focused on the association between variables at specific periods. Given that the study used national statistics survey data which were huge data sets, cross-sectional survey design was desired and deemed the most appropriate design to handle such sizes of the data sets. Though the design might raise ethical concerns, it is scientifically and statically ethical.

4.4 Population and sample

The Household and Labour Force Survey data was used in the research and was sourced from the statistical offices of the selected countries. The national statistics offices used multiple-stage stratified sampling procedures. This is where the data were first grouped into enumeration areas and then clusters from which households were randomly selected. The sample comprised labour force participants (16 to 65 years) across gender and sectors and the individuals with full information were considered for the study. Thus, the study sample was chosen based on information availability. The sample sizes used by national statistics agents to collect their survey data are shown in Table 4.1.

Table 4.1 National Survey Sample Statistics

Country	**Sampled Households**	**Total Households**
Botswana	10 000	382 778
Namibia	10 296	521 488
Malawi	11 000	46 196
South Africa	30 000	14 500 000

Source: Country Labour Force Surveys

For the purpose of the study, only individuals with full information on the study variables constituted the sample size for data analysis.

4.5 Data Source Reliability

The study utilised data sourced from selected countries' national statistics offices' survey data, which is STATsSA; National Statistics of Malawi's Labour Force Survey; Namibia Statistics Agency's National Labour Force Survey; and Botswana Multi-topic Household Survey. These are national survey data sets and they are deemed reliable and valid. The variation in the time frame for different countries is not very material in cross-sectional studies for they are not time-bound and time-sensitive.

4.6 Ethical considerations

Given that the data used was from national surveys, it was believed that all ethical considerations were observed during the data collection process. Again, to ensure ethical compilation of the thesis, all sources of information were acknowledged and properly referenced. The thesis was also subjected to plagiarism verification using the Turnitin anti-plagiarism software. The funder of the studies and individuals who assisted in the successful completion of the thesis was acknowledged. Comparing data sets that were collected from different countries at different times, might be considered unethical. However, such approaches to data analysis are permissible in statistics and, thus could not be considered unethical.

4.7 Data Analysis

The estimation procedure was carried out in stages. For gender labour force participation and gender employment the non-linear Probit functions were estimated using the Maximum Likelihood Estimation (MLE) technique and to ascertain the presence of female employment discrimination in the selected countries the (Yun, 2005) decomposition technique was applied as further highlighted in the subsequent sections.

4.7.1 Comparative Gender Labour Force Participation

Labour force participation is a dichotomous variable that was observed by noting the participation of individuals of which participation takes the value of 1 if one was participating in the labour market and 0 if not participating in the labour market, thereby resulting in a binary dependent variable in the study. Participation was 1 if an individual was working or and had been actively looking for employment and 0 otherwise.

To uncover gender labour force participation disparities in selected countries, the Probit function was estimated. Probit and Logit regressions are both theoretically accurate. The Probit functional form constrains the predicted value values to the unit interval that enables the expected values to be interpreted as probabilities. Thus, this makes the Probit function superior to the Logit. The Maximum Likelihood Estimation (MLE) technique was applied to estimate labour force participation. The MLE is more appropriate given that the dependent variable was dichotomous (0, 1). MLE estimates are consistent with the probability interpretation, thus making it much easier to understand the model estimates. MLE solves the problem of non-linearity and n, thereby making standard significance tests irrelevant in binary values (Solberg, et al., n.d.; Pesaran, 2021). The standard ordinary least squares (OLS) are inappropriate because the error term is usually heteroskedastic, thus the error term is not constant as it is systematically related to predictor variables. Generalised least squares are argued to solve the problem of heteroscedasticity, but it is unreliable when interpreting the expected value of the probability of occurring (Gunderson, 1986; Singh & Mukherjee, 2022).

The option of using weighted least squares could not be considered because the technique takes the predicted values from the OLS estimates which are inside the unit intervals only thereby causing a loss of observations and undependable evaluations of female labour force participation. The OLS being a linear model has a challenge of predicted probabilities which can be either above 1 or below 0, thereby violating a critical rule of probability where $0 \leq P(r) \leq 1$ and it has error terms that are heteroskedastic thus making it inefficient (Stock & Watson, 2018). These challenges made the MLE an ideal method for estimates that are consistent, asymptotically unbiased efficient, and invariant. The estimated probit function was:

$$f(y_{iz}|X_{iz}), \beta = PrP[y_{iz}|X_{iz}^{I} * \beta] = \Phi\left[(y_{iz} - 1) * X_{iz\beta j}^{I}\right] \dots\dots\dots\dots (1)$$

$$where\ y_{iz}\ is\ 1\ if\ participating\ in\ the\ labour\ force\ and\ 0\ otherwise$$

$$y_{iz}\ is\ the\ dependent\ variable\ \ and\ X_{iz}\ is\ the\ independent\ variable:\ \ z \in \{male\ female\}$$

The estimated MLE function estimated is given as

$$\Pr = \Phi(Y_{i1}, .. Y_{iz}) = \Phi(\beta_0 + \beta_1 X_{iz} + \cdots \beta_{iz} X_{nz} \dots\dots\dots\dots (2)$$

$$= \sum_{i=1}^{n} Y_{iz} \, ln[\Phi(\beta_0 + \beta_1 X_{iz} + \cdots + \beta_z X_{nz})] + \sum_{i=1}^{n} (1 - Y_{iz}) \ln[1 - \Phi(\beta_0 + \beta_{iz} X_{iz} \ldots + \beta_{iz} X_{nz})] \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . (3)$$

Equation three was estimated for each country and the likelihood of female participation in the labour market was analysed per country and across countries.

4.7.2 Comparative analysis of gender employment disparities

The study utilised the non-linear probit function and the maximum likelihood estimation technique was used to assess gender employment disparities in the selected countries. The nonlinear probit function was appropriate as the results of the probit estimates were used in the Yun decomposition to analyse the sources of gender employment differential in the selected countries (Yun, 2005).

The estimation entails estimating the probit models of employment for each sex $z \in \{\text{male} \;\; \text{female}\}$ and predicting the probability of employment for each individual *i* in the sample.

$$f(y_{iz}|X_{iz}), \beta = PrE[y_{iz}|X_{iz}^{I} * \beta] = \Phi\left[(y_{iz} - 1) * X_{iz\beta j}^{I}\right] \ldots \ldots \ldots \ldots . . (4)$$

The probit models control for sample selection from the labour force into employment using the inverse Mills ratio (discussed in Section 4.8); the high levels of unemployment in our selected countries suggest that individuals are potentially selected from the labour force into employment. Hence, employed men and women may be a non-random component of the labour force. Nonetheless, this is followed by an averaging of the predicted probabilities to obtain the percentage of sex *z* workers that are employed $(\hat{E}_z)$. This is computed as follows:

$$\hat{E}_z = n_z^{-1} \sum_{i=1}^{n_z} \Phi(X_{iz} \hat{\beta}_z) \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . (5)$$

where $\mathbf{x}_{iz}$ is a vector of observed characteristics defining individual *i* of sex *z*, $\hat{\beta}_z$ are the estimated probit coefficients, and Φ is the standard normal cumulative density function.

In the second stage, the procedure predicted a counterfactual employment probability for females $(\hat{E}_f^m)$ i.e. based on their sample characteristics and men's coefficients:

$$\hat{E}_f^m = n_f^{-1} \sum_{i=1}^{n_z} \Phi\left(X_{if} \hat{\beta}_m\right) \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . (6)$$

From equation 6 we can predict the probability of females being employed if they were male. The coefficients then help explain the difference in employment between males and females which then assists in assessing the sources of gender employment disparities in the selected Southern African countries in section 4.7.3 below.

4.7.3 Comparative Analysis of sources of gender employment disparities

To uncover sources of the gender differential in employment we used Yun's (2005) detailed decomposition method which is an extension of Oaxaca's decomposition technique. The study could not use Oaxaca's decomposition technique as it is based on linear regression models. The utilisation of the non-linear probit model and the maximum likelihood estimation technique made Yun's decomposition an appropriate model as compared to Oaxaca's model (Yun, 2005). Again, Yun's (2005) decomposition technique is not invariant to the choice of reference groups where dummy variables could have been utilised and it is free from path dependency. The identification difficulty which is a problem with Oaxaca's decomposition model disappears when using Yun's decomposition technique (Jann, 2017). This is because Yun's decomposition model identifies the dummies and constant's contributions to the regression equation (Yun, 2005). The contribution of unobservable factors can be picked through the constant when using Yun's decomposition techniques. We implemented the procedure independently for each country under study. Using results from equations 4 and 5 in the previous sections, we estimate the difference between males' and females' average predicted employment probabilities $(EGAP)$ as shown in (6):

$$\underbrace{\hat{E}_m - \hat{E}_f}_{Egap} = \left(\underbrace{\hat{E}_m - \hat{E}_f^m}_{Expalined\ gap} \right) + \left(\underbrace{\hat{E}_f^m - \hat{E}_f}_{Unexplained\ gap} \right) \qquad (7)$$

In Equation 6, the explained gap *(EXP)* denotes the portion of $EGAP$ that is due to differences in men's and women's observed characteristics. The equation shows the gap between men's employment probability and the employment probability that they would have had if they had female sample characteristics. The unexplained component of $EGAP$ *(UNEXP)* results from gender differences in estimated coefficients at given characteristics – it gives the difference between women's actual and counterfactual employment probabilities. *UNEXP* could be an outcome of gender differences in demand for employment, employment discrimination, or gender differences in unobservable factors which affect demand for employment.

The last step entails decomposing *EXP* and *UNEXP* into portions attributable to disparities in the j^{th} explanatory variable (using normalised regression coefficients as per Yun (2005) as follows:

$$EXP_j = [EXP]\left[\frac{(\bar{X}_m^j - \bar{X}_f^j)\hat{\beta}_m^j}{(\bar{X}_m - \bar{X}_f)\hat{\beta}_m}\right] \; and \; UNEXP_j = [UNEXP]\left[\frac{(\hat{\beta}_m^j - \hat{\beta}_f^j)\bar{X}_f^j}{(\hat{\beta}_m - \hat{\beta}_f)\bar{X}_f}\right] \ldots\ldots\ldots\ldots (8)$$

The decomposition in equation (8) explains the presence or absence of gender employment discrimination in the selected Southern African Countries.

The highlighted procedures were performed in each country individually.

4.8 Key variables

The variables used in the study are shown in Tables 4.2 and 4.3 below:

Table 4.2 Study variables for labour force participation

Table 4.2 Study variables

Variables	Description
Labour force participant (dependent variable)	Dummy variable: 1 for participating Individual, 0 otherwise.
Age	Dummy variables for age category
Marital status	Dummy variable: 1 if married, 0 otherwise.
Gender	Dummy Variables for male and female 1 if female, 0 otherwise
Education	Dummy variables for no schooling, primary, secondary and tertiary education
Province	Dummy variables for provinces
Residence	Dummy variable: 1 if residing in the urban area, 0 otherwise
Gender	Dummy variable: 1 if female, 0 otherwise
Presence of Children (Exclusion restriction/instrumental variable)	Dummy variable: 1 if present, 0 otherwise
Presence of elderly people (Exclusion restriction/ instrumental variable)	Dummy variable: 1 if present, 0 otherwise

Table 4.3 Study Variables for Gender Employment

Variables	Description
Employment status (dependent variable)	Dummy variable: 1 for an employed individual, 0 otherwise.
Age	Dummy Variables for age categories
Marital status	Dummy variable: 1 if Married, 0 otherwise.
Education	Dummy variables for no schooling, primary, Secondary, and tertiary education
Province	Dummy variables for provinces
Residence	Dummy variable: 1 if residing in the urban area, 0 otherwise
Gender	Dummy variable: 1 if female, 0 otherwise
The proportion of working adults in the household (exclusion restriction/ instrumental variable)	

Source: Author’s compilation

4.9 Selection Bias and Endogeneity

It is imperative to note that individuals observed in employment are not a random sample of the labour force. This is because of high unemployment levels in the selected countries which might imply the existence of an allocating mechanism in allotting scarcely available jobs. Joblessness in Southern Africa is mostly unintentional, hence estimating employment probability based on individual characteristics without first tackling the problem of selection bias would yield results that may not be generalised to the entire labour force. Thus, the need to capture involuntary unemployment which is controlling for selection bias. Heckman’s (1979) two-step estimation procedure was used because the study utilised probit modelling. The first step involved estimating the probit model to estimate labour force participation.

$$Probit\ (P_1) = \beta_i X_i + e \ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.. (9)$$

where P_1 is a labour force participation dummy variable which takes the value of one (1) if an individual is a labour force participant and zero (0) otherwise.

The estimations from labour force participation were used to estimate the inverse Mills ratio (λ) for selection into employment.

$$E(X|X>\propto) = \mu + \sigma \frac{\emptyset\left(\frac{\alpha-\mu}{\sigma}\right)}{1-\Phi\left(\frac{\propto-\mu}{\sigma}\right)} = \lambda \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (9)$$

where $\propto$ is a reserved chance of being in the labour force, and the probability of being employed is observed when $X >\propto$.

The inverse Mills ratio was then included as one of the explanatory variables in the employment equation.

$$\hat{E}_z = n_z^{-1} \sum_{i=1}^{n_z} \Phi\left(X_{iz}\hat{\beta}_z\right) \beta_\lambda \lambda \ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (10)$$

To counter the problem of inflated standard errors because of multicollinearity which is introduced by Heckman's correlation factor and endogeneity, appropriate exclusion restrictions were included in the estimation (Schmidheiny, 2022). In the study, the proportion of employed individuals was used as an exclusion restriction in estimating employment probabilities. This is because high job scarcity in selected Southern African countries might imply that well-networked individuals are more likely to be in employment than those whose network is poor. Thus, the proportion of employed individuals in a household can be a proxy for a good network. Other than the exclusion restriction, bootstrapping was also used in modelling the employment probabilities. Bootstrapping was used to correct for multicollinearity and high standard errors (Horowitz, 2019).

Other than sample selection bias, labour models usually suffer the problem of endogeneity. This problem occurs when the independent variable correlates with the residual value. Endogeneity is pernicious because the bias cannot be predicted with methods alone and the coefficients are likely to be under or overstated, thus endogeneity is viewed as one of the greatest challenges in labour market research (Wolfolds & Siegel, 2019). To counter the problem of endogeneity, appropriate instrumental variables (exclusion restrictions) were used. The labour force participation adopted "the presence of children, the elderly" and employment adopted "other working adults in the household" as the instrumental variables/ exclusion restrictions.

4.10 The Data

The data utilised for the empirical analysis came from the South Africa Labour Market Dynamic Survey (LMDS) (2019), the Namibia Labour Force Survey (NLFS) (2018), the Malawi Labour Force Survey (MLFS) (2013), the Botswana Multi-Topic Survey (2019),

These countries are chosen based on data availability for the variables of interest in the study. The sampling procedures by national statistics offices are highlighted in Table 4.5 below:

Table 4.4 Sampling Procedures for National Surveys

Country	Stratification	Cluster	Census from which the clusters and strata are based on
Namibia	Urban (High, Middle and Low) -Rural (Commercial, Communal and Proclaimed area) by Region or geographically	- 506 Primary Sampling Units - 18 households per enumeration area were randomly selected	2011 Population and Housing Census
South Africa	Provincial level (metro/non metro) strata; Geographical area (Urban informal, urban formal, farms and tribal)	-80787 Enumeration Areas - 3080 sampling units	2001 Population census
Malawi	Rural-Urban region strategy	550 Clusters 20 Households were systematically selected per cluster	2008 population and household census
Botswana	Village-district, rural-urban levels	4143 Enumeration areas 9760 Households	2001 population and housing census

Source: Compiled from Labour Force Survey reports of our selected countries

The total sample comprised individuals aged between 16 and 65 years who were employed or unemployed using expanded and strict definitions of employment to ensure the robustness of findings.

Weights were used to correct for over or under-sampling of some households and make the data more representative of the population. However, the data had some challenges as some of the variables for the study were not directly defined and measured in the survey data such as the presence of children. The presence of such was captured using dummies which do not shed more light on how the variable may impact an individual's labour market decisions. Again, the fact that the variables had no values, posed a challenge of assuming equal presence in sampled

households which might not be the case. However, literature has shown that such variables affect gender employment disparities in selected countries (Klasen, 2019; Lundberg et al, 2014).

4.11 Estimation Techniques

The estimation issues are highlighted in this section. As highlighted above, the process estimated labour force participation using the probit model techniques in Stata 14.1. It is well-known that in employment models the results are likely to be biased because they are based on non-random samples of potentially employable individuals (Kone, et al., 2019). Given the selection bias issues highlighted above, sample selection bias was controlled. To control for selection bias labour force participation probit function was first estimated. The results of the participation probit were then used to calculate the inverse Mills ratio for inclusion into the employment probability. The use of the inverse Mills ratio reflected a selection into employment based on an individual's attributes.

Decomposition techniques from Yun (2005) were used to decompose employment in selected countries based on estimations from the probit models. Sensitivity and endogeneity checks were done using various exclusion restrictions and the proportion of working individuals in a household was found to be appropriate and therefore was used as an exclusion restriction in the study. The proportion of individuals working in a household represents a network that is crucial in situations of high unemployment. The network effect increases an individual's probability of employment (Posel, 2013). The challenges of sample selection for employment may give a biased employment probability as it is assumed that everybody in the labour force is a labour force participant. The inclusion of lambda (λ) as a way of remedying the sample selection bias may introduce the problem of inflated variance inflation factor (IVF). Appropriate exclusions and bootstrapping techniques were used as a remedy to IVF.

The use of national survey data though advantageous in reliability and representativeness, posed a challenge of data cleaning which might influence data reliability as some variables were redefined and estimated since they were not clearly captured in the survey data. This might distort the original meaning of data though we tried our best to be guided by each country's survey guidelines.

4.12 Conclusion

This Chapter focused on the methodology used to unearth gender employment disparities in selected Southern African Countries. The chapter focused on the estimation techniques and the

models to be estimated. The estimation techniques discussed were the probit regression analysis and the Yun (2005) decomposition techniques. The sample selection bias and its remedies were discussed. The next chapter concentrates on estimation result presentation and analysis.

Chapter 5: Data Estimation and Results Analysis

5.1 Introduction

This section reports the estimation results and presents a comparative analysis of the results. We started by examining the descriptive statistics, followed by a probit estimation of labour force participation and gender employment, and ended the analysis with Yun's (2005) decomposition of gender employment disparities in the selected countries.

5.2 Descriptive data

The study sample was based on individuals aged between 16 and 65 years who had full economic status information and data for the study variables. To check the robustness of the study, both strict and expanded definitions of labour force participation and employment were used. An individual was considered a strict labour force participant if they were of working age, willing and able to work, and were actively looking for employment. An expanded labour force participant was an individual who was of working age, willing and able to work but was either actively looking for employment or not actively looking for employment. The two definitions of labour force participation were used because they give a better analysis of the employment situation in the selected countries given the high rate of unemployment in the Southern African region (ILOSTATS, 2020). Due to the high rate of unemployment, individuals might give up looking for employment and thus such individuals were accounted for by the expanded definition of labour force participation. The composition of the labour force was identified by gender for both strict and expanded definitions. The labour force and labour force participation rate and employment rates for the selected countries are summarised in Tables 5.1 and 5.2 below:

Table 5.1 Sample analysis for Namibia and South Africa

Age :16-65 years	**Unweighted**				**Unweighted difference (male-female)**		**Weighted**				**Weighted difference (Male-Female)**	
	Namibia		**South Africa**		**Namibia**	**South Africa**	**Namibia**		**South Africa**		**Namibia**	**South Africa**
	Male	**Female**	**Male**	**Female**			**Male**	**Female**	**Male**	**Female**		
Working age population	4513	5601	65598	74893	-1088	-9295	270189	319809	13,359,824	14,009,724	-49620	-649,900
Expanded labour force	3777	4211	46,817	46,931	-434	-114	228000	244797	9,752,084	8,874,030	-16797	878,054
Strict labour force	3235	3196	41007	38324	39	38324	197853	189957	8,557,886	7,260,569	7896	1,297,317
Employed	2483	2161	29809	26133	322	3676	148640	127969	6,241,643	4,976,268	20671	1,265,375
Strict employment rate	76.74%	67.61%	72.69%	68.19%	9.14%	4.50%	75.13%	67.37%	72.93%	68.54%	7.76%	4.40%
Expanded employment rate	65.74%	52.32%	63.67%	55.68%	14.42%	7.99%	65.19%	52.28%	64.00%	56.08%	12.91%	7.92%
Expanded LFP rate	83.69%	75.18%	71.37%	62.66%	8.51%	8.71%	84.39%	76.34%	72.99%	63.34%	7.85%	9.65%
Strict LFP rate	71.68%	57.06%	62.51%	51.17%	14.62%	11.34%	73.23%	59.40%	64.05%	51.82%	13.83%	12.23%
LFP rate by gender	44.6%	55.4%	46.7%	53.3%								

Table 5.2 Sample analysis for Malawi and Botswana

Age :16-65 years	**Unweighted**				**Unweighted difference (male-female)**		**Weighted**				**Weighted difference (Male-Female)**	
	Malawi		**Botswana**		**Malawi**	**Botswana**	**Malawi**		**Botswana**		**Malawi**	**Botswana**
	Male	**Female**	**Male**	**Female**			**Male**	**Female**	**Male**	**Female**		
Working age population	10,355	11,602	7,605	9,335	-1,247	-1730	3,432,670	4,037,888	423,876	523,256	-605,218	-99,380
Expanded labour force	9,452	10,218	6,198	7,025	-766	-827	3,175,731	3,597,244	344,696	392,790	-421,513	-48,094
Strict labour force	8,676	8.224	5,464	5,415	452	49	2,892,574	2,907,924	304,362	303,062	-15,350	1,300
Employed	8,209	7,415	4,542	4,250	794	292	2,739,762	2,674,848	254,059	240,070	64,914	13,989
Strict employment rate	94.62%	90.16%	83.13%	78.49%	4.46%	4.64%	94,72%	91,98%	83.47%	79.21%	2.74%	4.26%
Expanded employment rate	86.85%	72.5%	73.28%	60.50%	14.28%	12.78%	86.27%	74.36%	73.71%	61.12%	11.91%	12.59%
Expanded LFP rate	91.28%	88.07%	81.50%	75.25%	3.21%	6.25%	92.51%	89.09%	81.32%	75.07%	3.42%	6.25%
Strict LFP rate	83.79%	70.88%	71.85%	58.01%	12,91%	13.84%	84.27%	72.01%	71.80%	57.92%	12.26%	13.88%
LFP Rate by Gender	47.2%	52.8%	44.9%	55.1%								

Source: Own calculations from Malawi Labour Force Survey (2013), Botswana Labour Survey; Multi-Topic Survey (2019), South Africa Labour Market Dynamics (2019) and Namibia Labour Force Survey (2018).

Inspection of the statistics in Tables 5.1 and 5.2 shows that there are more females of working age than males in all four countries. Females constituted more than 50% of the total labour force in the selected countries. Females constituted 53.3%, 55.4%, 52.8%, and 55.1% of the labour force in South Africa, Namibia, Malawi, and Botswana respectively. Despite females constituting a greater percentage of the working population in all countries, their labour force participation rate is less than that of their male counterparts. Females' participation rates were 11%, 14.6%, 12.9%and 13.84% points less than that of males for respective countries when using the strict labour force. Concerning employment, there was a gender raw employment gap of 4.5% for South Africa, 9.14% for Namibia, 4.46% for Malawi, and 4.6%% for Botswana when using strict definitions. The employment gap of 7.99%, 12.92%, 14.28%, and 12.78% was observed for the same countries when using the expanded definition respectively. Using the strict definition, Namibia had the widest employment gap of 9.14% while Malawi had the smallest gap of 4.46%. When using the expanded definition, Malawi had the largest employment gap of 14.28% while South Africa had the smallest employment gap of 7.99%. It could be noted that though females outnumbered males in labour force in the selected countries, female representation in the labour market was not proportionate, and represented a skewed distribution of labour market participation in favour of males. These findings were consistent with the other studies that were done by Ntuli (2013), Bhorat (2013), Espi (2019), Jauch & Katjiuongua (2020) and Ntuli & Wittenberg (2013) which noted the continual existence of a gender labour force participation and employment gap in favour of males.

The data was subjected to more robust statistical analysis to validate the summary statistics in Tables 5.1and 5.2.

5.3 Comparative Gender Labour Force Participation Analysis.

Labour force participation was defined as individuals who were working and those currently seeking employment between the ages of 16 to 65 years in the selected countries. These are economically active individuals. An individual was considered to be participating in the labour force if they were economically active by the time of data collection. The probit estimates of the labour force participation are shown in Tables 5.3 to 5.6 in the Appendix:

Tables 5.3 to 5.6 denote the results of an average female from the selected Southern African country's participation decision in the labour market using both strict and expanded definitions of labour force participation.

Ceteris paribus, the likelihood of labour participation for females in South Africa, Namibia, Malawi, and Botswana was lower and statistically significant as compared to their male counterparts. Being female reduced the likelihood of being a labour force participant by 1.14% for South Africa, 1.13% for Namibia, 1.25% for Malawi, and 1.62% for Botswana when using a strict definition of labour force. This concurs with the findings by Clark et. al (2017), Afridi et.al (2018) and ILOSTATS (2021) who found a reduced participation of women in the labour market. The expanded definition revealed the same trajectory for female labour force participation in all four countries, though the likelihood of females being labour force participants was lower than that of the strict definition. Thus, the overall female participation in the labour market was found to be lower than their male counterparts in all the studied countries for both definitions.

Dwelling in an urban area increased the likelihood of both males' and females' participation in the labour market in all countries when using pooled results except for Malawi. The difference in Malawi could be because of the dominance of farming in the Malawian economy. Compared to their male counterparts in urban areas, females in Malawi were found to be less likely to participate in the labour force. When using the strict definition, the participation gap for urban dwellers was 0.0181, 0.599, -0.0822 and -0.0556 for South Africa, Namibia, Malawi, and Botswana, respectively. This shows that females in Botswana and Malawi were more likely to participate in the labour force compared to South Africa and Namibia. In Malawi, the economy is mainly agriculture driven, a sector which is known to absorb more females than males. The high prevalence of female headed households could explain the high female labour force participation rate in Botswana (Lesetedi, 2018).

Being married had a positive bearing on an average man participating in the labour force and the opposite was true for an average female from the selected countries participating in the labour market. Thus, being married significantly reduced the likelihood of females being labour market participants with the likelihood of -0.06, -0.16, and -0.04 for South Africa, Namibia, and Malawi, respectively. This presents a marriage penalty for women while being married increases the likelihood of being a labour force participant for males. These results were a

stunning contrast of associative coupling (Cha & Bacca, 2016) and they are similar to the findings by Afridi et. al., (2018). This could be ascribed to socialisation where men are deemed to be providers for the family, thus the bread 'winner' philosophy. Only in Botswana, marriage has a positive effect (0.042) on female labour force participation. This is because in Botswana, married or cohabiting women are mainly the breadwinners (Van Klavern, et al., 2019).

Educational attainment is crucial in determining whether an individual participates in the labour market or not. In contrast to no schooling, ceteris paribus, primary, secondary, and tertiary schooling influences positively the likelihood of participating in the labour market for both males and females in all countries. The likelihood of being a labour force participant is positively correlated to the level of education in all countries. In South Africa, the likelihood increased from 0.078 to 0.464, in Namibia, it increased from 0.04 to 0.32, in Malawi the increase was from -0.02 to 0.165, and in Botswana the increase was from 0.07 to 0.443 when one attained tertiary education compared to primary education. Thus, the likelihood of both males' and females' participation in the labour market is an increasing function of education levels. Strict and expanded definitions of labour force participation revealed that females with tertiary education have a higher likelihood of participation in all the countries as compared to their male counterparts. This could be attributed to the higher reservation wage which would make women able to pay for domestic services which they would normally provide if they were not employed, such as child care services and general household upkeep. The findings supported the human capital theory by Becker (1985) and the findings of Kreinbaum and Klaven (2015).

The age cohort effects were found to be all statistically significant. This suggests that for both males and females in the age cohorts: 26-35, 36-45, and 46-55 years, the likelihood of participating in the labour market increased relative to the youngest cohort aged between 16 and 25 years in the study countries. On the other hand, for males in the age cohort 56-65 years the probability of labour participation declines relative to the youngest cohort aged between 16 and 25 years while for females in the same age cohort, the probability of labour participation increased though it was less than the 46-55 years age cohort in South Africa, Namibia, and Malawi. Both males and females in the 56-65 years age cohort had a lower chance of being a participant in the labour market as compared to the 16-25 years cohort. The probability of participation increased at the beginning of the age group and declined when an individual was advancing in age. Thus, age proved to be an important determinant of labour force participation across the gender divide and countries of study. Participation increases with age and later

decreases as one approaches retirement age, thus supporting the life cycle theory of labour force participation.

The Household block of variables, which included 'number of children variables', 'number of adults' variables, and household income variables were all statistically significant. The likely gender bias about child rearing seemed to be captured by females in all countries as the probability of labour participation declined, ceteris paribus except for Malawi where the impact of kids did not negatively affect the likelihood of participation by females. This could be because of the need for financial resources to meet the family budget and the absence of child support grant in Malawi. However, the greater the number of children between the ages of 7 and 15, the less the probability of both male and female participation in the labour market in all the countries of study. As the number of adults including pensioners within the household increased, the likelihood of both males and females participating in the labour market was found to be increasing in Namibia and South Africa, while it reduced in Malawi and Botswana. This indicates that the presence of a greater number of adults in the household acts as an incentive to participate in the labour market for both females and males. The presence of older men in the household, however, reduced the chance of females participating in the labour market while older women increased the chance of participating in the labour market in all countries when using the strict definition. These results supported the findings Dunn & Maharaj, (2024).

This could be because the presence of adult members of households, especially female adults may provide child-caring services that would encourage female labour force participation. In contrast, the presence of older men acted as a deterrent to the likelihood of female labour force participation in South Africa, Malawi and Botswana, the opposite being true for Namibia. This is could be because of the need to offer social support and care for the elderly men in the household.

The household income variables were both significant across genders and countries, with negative signs. It is evident that the greater the value of other household income available to an individual in a household the less is the likelihood of that individual to participate in the labour market. Consequently, access to income within a household is an important determinant in an individual's decision to participate in the labour market. In all the countries, non-labour income was found to reduce the likelihood of one being a labour force participant, which was a contrast to the theory of working spouse premium, where spouses are expected to complement

each other and promote associative coupling (Ntuli & Kwenda, 2022). However, the findings support the income effect on labour supply (McConnel, et al., 2017).

This section analysed the labour force participation of women in selected countries. The analysis found that the education, urban residency and presents of elderly women had a positive and significant effect on female labour force participation in all countries of study. Marriage was found to have varying effect, with a significant positive effect on Batswana female labour force participation, while all other countries reported a significant negative effect. The succeeding section focuses on comparative employment probabilities by gender in the countries of study.

5.4 Comparative Gender Employment Disparities Analysis

After estimating the labour force participation in the previous section, the participation probit output was used to estimate the inverse Mills ratio, which was used to correct for sample selection bias in gender employment probit estimates. The employment probit estimations results are shown in Tables 5.7 to 5.10 in the Appendix;

An analysis of Tables 5.7 to 5.10 reveals that females were less likely to be employed as compared to their male counterparts. Thus, being female reduced the likelihood of being employed, with the likelihood of -0.080, -0.14, and -0.034 for South Africa, Namibia, and Malawi respectively, while being female increased the employment likelihood for Batswana females by 0.0212 when using the strict definition. When using the expanded definition, a Motswana female had a lower chance of being employed as compared to their male counterparts. For all the other countries, Namibia, South Africa, and Malawi, the trend is the same for both definitions. Being female from the selected countries generally reduced the likelihood of being employed. These results were consistent with other studies by Ntuli & Kwenda (2020), Gradin (2021), and Jauch & Katjiuongua (2020).

Urban dwellers were found to be more likely to be employed compared to their rural counterparts across definitions and all countries except for Malawi. This trend for Malawi was consistent with the labour force participation for an average female Malawian. In all the other countries, high prospects of employment could be because of the proximity to employment opportunities by urban dwellers compared to rural dwellers. Though urban dwellers were more likely to be employed, males had a higher likelihood than females for both definitions in all the countries. Both males and females have almost the same likelihood of being employed. The small difference between male and female employment is a testimony of narrowing the gender employment gap and the implementation of affirmative action laws. However, it is important to note that the likelihood of an urban dweller being employed was higher when using an expanded definition as compared to a strict definition across all countries. The narrow gender employment gap was consistent with the findings by ILOSTATS (2020).

Being married increased the likelihood of being employed for males while it reduced for females in all selected countries except for Botswana. When using strict definition, married females had a likelihood of -0.0252, -0.0609, -0.12, and 0.1 for South Africa, Namibia, Malawi, and Botswana correspondingly. Expanded definition unveiled the same trajectory. These results revealed the presence of a marriage penalty for females except in Botswana. This could be because of the skewed distribution of household gender roles where females are entrusted with the responsibility of nurturing children and the general family upkeep.

Education was generally positively related to employment in all countries except for Malawi where tertiary education holders were less likely to be employed. This could be because of the underdeveloped industry in Malawi, thus presenting less employment opportunities for highly

educated individuals. Males with primary education were less likely to be employed as compared to the females in the same education cohort. This could be because women were mostly employed in sectors that do not require higher skill levels such as the domestic and agriculture sectors. In Namibia, South Africa, Malawi, and Botswana individuals with primary education were more likely to be employed than those without schooling. As the level of education increased, the likelihood of being employed increased with tertiary education having the highest likelihood for both males and females in both countries. However, at the tertiary level of education, comparing males and females in the study countries, females were more likely to be employed. Females with tertiary education had a likelihood of 0.208 while males with a similar qualification had 0.053 in South Africa, in Namibia females had 0.832 while males had 0.395, in Malawi, females had -0.00771 while males had -0.0189 and in Botswana, females had 0.0814 while males had 0.0417 when using the strict definition. The same trajectory prevailed with the expanded definition across the countries of study. The nature of female employment and changes in social–value scale preferences related to female tertiary education and employment may account for the increased probability of being employed for female tertiary education holders. This is consistent with the labour force participation arguments presented earlier in the labour force participation section (Bhorat & Khan, 2018; Cherchi, et al., 2019).

As an individual's age progresses, the likelihood of being employed increases. This could be due to the experience and skill levels individuals could have acquired through on-the-job training and education. Age could be a proxy for the experience if we assume that an individual entered the labour market at 16 years. Across the age cohorts, females were more likely to be employed as compared to their male counterparts in all countries. This could be because of changes in social perception about women's position and roles in society (Kreinbaun & Klaven, 2015) and empowerment laws.[1] Family responsibilities in the face of increased divorce rates and single parenthood and rising male unemployment might be the key drivers of increased female employment in the selected countries (Kabeer, 2012).

The presence of other employed individuals in a household had a positive bearing on the likelihood of one being employed across genders for both strict and expanded definitions in all countries. Other employed people employed from the household can be used as a proxy for

[1] Such as the Employment Act No. 55 of 1998 in South Africa and Namibia Affirmative Action (Employment) Act No. 29 of 1998.

network and it was found to increase the likelihood of females being employed. Given the high levels of unemployment in these countries, it is likely that individuals used their networks to be linked with the prospective employers thus the network effect on employment. Thus, there was a positive network effect on employment. In South Africa, the network effect though it worked to improve the likelihood of being employed, females had a lower likelihood as compared to their male counterparts. In Botswana and Namibia, females were ahead of their male counterparts.

This section highlighted employment by gender as influenced by various covariates such as marital status, age, province of origin, network effect, and education. The analysis revealed the existence of gender employment disparities in South Africa, Namibia, Malawi, and Botswana. However, for Botswana and Namibia, when considering specific characteristics like education and the presence of 'others employed in the family', females were ahead of their male counterparts. This could be attributed to the increase in female-headed families in these countries and increased female enrolment in tertiary education (Motswapeng, 2020).

The inverse Mills ratio was statistically significant in all the selected countries. The significant inverse Mills ratio refutes in general the assumption of the presence of sample selection bias in female employment in the selected countries. Positive inverse ratio suggests that individuals are positively selected from the labour force into employment. The general assumption is that only females are selected into employment. However, in the Southern African Region there is the possibility of both males and females being selected into employment due high unemployment levels. The coefficients of the Mills inverse ratio are summed below.

Table 5.11. Mills Inverse Ratios by Country, Gender and Definition.

Country	Total		Expanded Definition		Strict Definition	
	Strict	Expanded	Male	Female	Male	Female
South Africa	Positive*	Negative*	Negative*	Negative*	Positive*	Negative*
Namibia	Positive*	Positive*	Positive*	Positive*	Positive*	Positive*
Malawi	Positive*	Negative*	Positive*	Negative*	Negative*	Positive*
Botswana	Negative*	Negative*	Negative*	Negative*	Negative*	Positive*

Source: Own summary from Country Employment Probit Estimates
* Statistically Significant

From Table 5.11 above, all countries had a positive significant Mills inverse ratio when using totals except for Botswana. This means that individuals in South Africa, Namibia and Malawi are selected into employment from the labour force. It is only in Botswana where employed individuals are randomly selected into employment from the labour force. In South Africa, the pooled coefficients showed a non-random selection into employment, the results showed that females self-select themselves into employment when using expanded definition. However, with strict definition, females were positively selected into employment. Like South, in Namibia, females are selected into employment when using strict definition. The situation is different for Botswana and Malawi. Females were randomly selected into employment. This was a stun opposite of male selection. The positive coefficients showed that males in Botswana and Malawi were positively selected into employment.

In the subsequent section, we decomposed the gender employment gap to highlight the possible existence and the extent of gender employment discrimination in the selected countries. The decomposition of the employment function also highlighted the key drivers of the gender employment gap in the selected countries.

5.5 Comparative Gender Employment, Gap, and Discrimination

In the preceding section, we analysed the correlates of employment by gender in the selected Southern African countries where the differences in employment probabilities were highlighted across gender and country. In this section, we decomposed the gender employment gap using Yun's (2005) decomposition approach and carried out a comparative analysis of the selected countries.

The analysis of the coefficients from employment probit coefficients provided a general picture and an understanding of the gender employment gap existing in the selected countries. The probit estimates did not provide a detailed understanding of the forces driving the gender employment gap. These disparities in the gender employment gap could be due to sample characteristics variations which could not be assessed when using the employment probit coefficients. Thus, decomposition allowed the separation of variances due to composition and structure effects. The covariates that were responsible for the employment differences between genders in the study countries were separated into gaps due to the composition (coefficient) effect and the gap due to sample characteristics. The decomposition results are shown in Tables 5.12 to 5.15 in the Appendix.

The raw gender employment gap of 0.079, 0.129, 0.118, and 0.125 for South Africa, Namibia, Malawi, and Botswana respectively was revealed when using the expanded definition. The summary gender employment gaps are shown in Table 5.16 below.

Table 5.16 Gender Employment Gap by Country and definition Summary

Country	Raw Gap		Explained Gap		Unexplained Gap	
	Strict Definition	Expanded Definition	Strict Definition	Expanded Definition	Strict Definition	Expanded Definition
South Africa	0.0436	0.0789	-0.00850	0.0191	0.0521	0.0598
Namibia	0.129	0.0775	0.00346	-0.0289	0.126	0.106
Malawi	0.0272	0.118	-0.00775	0.0229	0.349	0.0947
Botswana	0.0424	0.125	0.0825	0.0357	-0.0401	0.0897

Source: Own Summary from Country Employment Decomposition Estimates.
Note: All coefficients were significant.

South Africa had the lowest gender employment gap while Namibia had the largest gap. Of the raw gender employment gap about 0.019, 0.003, 0.023, and 0.036 for South Africa, Namibia, Malawi, and Botswana respectively was due to composition effect. Structure effects for the same countries were found to be 0.06, 0.126, 0.035, and -0.04. In all the countries the employment structure effects had a significant contribution towards the gender employment gap. When using a strict definition for pooled coefficients, the gender employment raw gap was 0.044 for South Africa, 0.078 for Namibia, 0.027 for Malawi, and 0.043 for Botswana. These results concurred with the findings by other researchers ((Fadwah & Yu, 2018; Clark, et al., 2017).

Turning to specific factor contributions, and focusing on composition effects, the results for all countries showed that education increased the chances of females being employed. Thus, education was found to be positively contributing towards reducing the gender employment gap. Urban covariates were found to significantly reduce the gender employment gap in all countries. This could be due to urbanisation that is fast growing in developing countries like

Malawi, Botswana, Namibia, and South Africa. The proportion of other individuals employed in a household was to reduce the gender employment gap as it increased the chance of an individual being employed because of the network effect in all countries except Namibia. This behaviour could be attributed to the apartheid policies which are still influencing the present-day support patterns of blacks and women in Namibia (Annalena, 2021).

Being married was found to narrow the gender employment gap in South Africa and Namibia, while it promotes the gender employment gap in Malawi and Botswana when using female coefficients. When using pooled coefficients, being married was found to widen the gender employment gap in the selected countries, thus, presenting a marriage penalty.

The age cohort of factors was found to narrow the employment gap in South Africa, and Botswana while in Namibia and Malawi, age was found to contribute towards widening the gender employment gap.

Analysing the employment structure effect, the education effect was different in all countries. Education was found to widen the gender employment gap. This could be explained by limited formal employment opportunities in the selected countries given that the Southern African region economies are highly informalised (Burger & Fourie, 2019).

Being in an urban area was found to widen the gender employment gap in South Africa, Malawi and Botswana while being in an urban area reduced the gender employment gap in Namibia only. These findings support Todaro's theory of urban unemployment.

The factors that contributed to the gender employment gap were geographical location (urban), marital status (married), age, network, and education levels. Geographical area and being married were found to increase the gender employment gap in the selected countries when using expanded and strict definitions across countries. The gap is however wider when using expanded definition in all cases. The proportion of other employed (network) was found to reduce the gender employment gap as individuals were selected for employment.

The total unexplained gap highlights the gender employment gap which was not accounted for by either the composition effect (an individual's characteristics) or the structure effect. The unaccounted gap highlighted the presence of female employment discrimination. Using all the coefficients for male, female, and pool, it was revealed that female employment discrimination is rampant in selected Southern African countries. Through the use of the expanded definition, the gap of 0.0615, 0.11, 0.109, and 0.095 was noted for South Africa, Namibia, Malawi, and

Botswana correspondingly. Using the strict definition and pooled coefficients, the unexplained gap of 0.0486 for South Africa, 0.961 for Namibia, and 0.024 for Malawi was revealed. Only Botswana reported male employment discrimination of -0.01.

The constant coefficients measured the presence of "pure discrimination". These coefficients were positive and significant. South Africa recorded the highest level of pure discrimination of while Malawi had the lowest level of 'pure discrimination'. The probabilities of gender employment discrimination as measured by the constant were 6.4%, 3.39%, 0.07%, and 1.42% for South Africa, Namibia, Malawi, and Botswana respectively when using the pooled coefficients and strict definition. However, when using the expanded definition, the magnitude of 'pure discrimination' was highest in Malawi and Namibia, while South Africa had the lowest level. This means being female from the selected countries, an individual was likely to face discrimination despite their labour market characteristics with Namibia and Malawi being ahead of South Africa and Botswana. The presence of the unexplained employment gap measures employment discrimination. This means that all countries evaluated are still battling the gender employment gap despite various policies and acts in place to address gender employment discrimination in the selected countries. These findings are similar to findings by (Afridi, et al., 2018; Chivasa, 2018; Ntuli & Kwenda, 2020; Espi, et al., 2019; Klasen, 2019). These studies though they used different approaches, found that the employment gap was in favour of males. This implies that female employment discrimination is prevalent in the selected Southern African countries and there was a need for continual intervention by policymakers to curb female labour market discrimination, and where possible change the approach to the gender employment equity debate.

5.6 Conclusion

This section presented, reported, and analysed the estimated results which revealed the presence of gender employment gaps due to gender discrimination and characteristics factors in the selected Southern African countries. The next section concludes and presents policy recommendations.

Chapter 6: Conclusion and Recommendations

This chapter wraps up the study. It starts with the conclusion which summarises the key findings from the study, then suggests policy prescriptions from the findings to remedy the problem of gender disparities in labour force participation and employment and employment gap, employment discrimination.

6.1 Conclusion

The main objective of the study was to carry out a comparative analysis of gender labour market disparities concerning labour force participation, employment, and discrimination. The study used survey data from South Africa Labour Market Dynamics Data (2019), the Namibia Labour Force Survey (2018), the Malawi Labour Force Survey (2013), and the Botswana Labour Force; Multi Topic Survey (2019). Employing the probit regression, the Yun (2005) decomposition techniques, MLE and bootstrapping, the study found the presence of gender labour market disparities as highlighted in the subsequent section.

6.1.1 Comparative Gender Labour Force Participation

The study found that, in all the studied countries, women were less likely to partake in the labour. However, in Malawi and Botswana, females were more amenable to participate in the labour force. This was because Malawi's economy relies heavily on agriculture, the sector which employs more females than males. In Botswana, the statistics of female headed families proliferate, thus more and more females taking up the bread winner role. Marriage presented a penalty for females as married women were less likely to participate in the labour market in all the countries, save for Botswana.

Educational attainment was found to increase the likelihood of labour force participation for both males and females. However, the likelihood of female participation was lower than that of their male counterparts, except for Botswana where females with tertiary education had a higher chance of taking part in the labour force. This was due to tertiary education enrolment which had more females than males.

The presence of children and older men in the household presented a labour force participation disadvantage for females. This is because of the skewed distribution of child care (legal discrimination), which places the mother as the primary care giver (legal guardian).

6.1.2 Comparative Gender Employment disparities

Akin to the labour force participation, gender employment probit estimates revealed women 's inferior position with regards to employment across all the countries of study. Being female presented an employment penalty while being male had an employment reward. Urban dwellers were more likely to be employed, except for Malawi. This was because of poorly developed industry to accommodate the increased urban population in Malawi. Being married reduced the likelihood of employment except for Botswana. This is because in Botswana more females than males have tertiary education, hence increasing their likelihood of employment, despite their marital status. Education had a pivotal role in female employment. It was found that the likelihood of being employed increased with the level of education except for Malawi, where tertiary education holders were less likely to be employed due to under developed industrial sector and heavy dependency on agriculture which does not absorb a lot of skilled individuals. The presence of other people working in a household was found to escalate the likelihood of employment for both males and females, in all countries. The Inverse Mills' ratio was positive across all countries which proved that individuals were not randomly selected into employment from the labour force.

6.1.3 Comparative Gender Employment gap

Using the Yun decomposition technique, the study concluded the presence of gender employment gap in the selected countries. The employment gap was attributed to composition effects (explained gender employment gap) where education, marital status, place of residence and age were found to account for the gender employment. Other than the composition effect, the structure effects were found to account for the unexplained gap. The coefficients of the variables for the structure effects reveal the presence of subtle female employment preference. Discrimination of females is attested to by the coefficients of the constant which represented pure discrimination. Positive constant coefficient across all countries was a testimony to the prevalence of female employment discrimination, despite efforts made to combat discrimination against females in the labour market.

6.2 Recommendations

With the study having revealed that the gender gap is still prevalent in the labour market, the research suggested the following to promote labour market gender equity and remedy gender employment in the Southern African Region;

6.2.1 Gender labour force participation disparities

Given that females were found to be lagging behind males in terms of labour force participation, the following recommendations were made;

i. There is need to increase female enrolment in schools especially at tertiary levels in Namibia, Malawi and South Africa. This would help as Botswana has managed to increase the female labour force participation rate by increasing female student enrolment at the tertiary level.
ii. Improved maternity benefits, to promote female involvement.
iii. Improved and affordable child care services and elderly care services. This is because the study has revealed that females' labour force participation is reduced in households with children and elderly people.
iv. It is necessary to relook into childcare laws to lighten females' childcare load as mothers are usually considered primary care givers.

6.2.2 Gender Employment disparities

As in the case of labour force participation, females suffered a gender penalty with regard to employment. The study recommends;

i. Increased access to education by females in the selected countries.
ii. Increased urban industry development, especially in Malawi where urban dwellers were less likely to be employed.
iii. It is imperative to promote decentralised development. This would help decongest urban centres and combat rural-migration which puts pressure on few available job opportunities in urban centres.
iv. It is mandatory to educate males on the desirability to support the employment of their spouses. This is because married people were less likely to be employed.
v. The need to provide flexible working hours for women to accord them an opportunity to balance family-work life is crucial if gender employment gap is to be closed.

6.2.3 Gender employment gap and gender discrimination

i. Considering that females were found to be discriminated against in the selected labour markets, governments of the concerned countries should improve the implementation and enforcement of anti-discrimination laws.
ii. More females need to be enrolled in school to close the gender employment gap driven by low education attainment.

6.3 Further Studies

Having examined the existence of gender labour market disparities in Southern Africa (South Africa, Namibia, Malawi, and Botswana), further studies can be done on the causes of gender labour market disparities, gender poverty and the effect of labour market disparities in the region.

6.4 Weakness of the Study

Though the study managed to compare labour force participation, employment, and the gender employment gap in the selected countries, the study might not reflect the disparities given that the data used was collected at different times and in different macroeconomic conditions. The study results might not be a true reflection of the sources of labour market disparities since unobservable variables were omitted such as socio-political factors. Given these weaknesses, the study findings, however, provide insight into the challenges of gender labour inequalities in Southern Africa.

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8. Appendix. Estimation Results

Table 5.3 South Africa strict and expanded definition probit estimations for labour force participation

Dependent Variable: LFP=1 if economically active, LFP=0 If not economically active Reference Groups: Age; 16-25, Gender; male, Education; No School, Marital status; Single, Residence; Rural.							
		Total		Male		Female	
Variables	Description	Strict	Expanded	Male -Strict	Male Expanded	Female -Strict	Female Expanded
Gender	Female	-0.141***	-0.109***				
		(0.00322)	(0.00286)				
Residence	Urban	0.172***	0.0876***	0.174***	0.0854***	0.156***	0.0802***
		(0.00396)	(0.00351)	(0.00547)	(0.00453)	(0.00550)	(0.00512)
Marital Status	Married	0.0241***	0.00994**	0.168***	0.124***	-0.0611***	-0.0607***
		(0.00425)	(0.00389)	(0.00667)	(0.00576)	(0.00572)	(0.00548)
Education	Primary	0.0671***	0.0672***	0.0535***	0.0502***	0.0784***	0.0842***
		(0.00483)	(0.00422)	(0.00658)	(0.00543)	(0.00689)	(0.00631)
	Secondary	0.220***	0.202***	0.183***	0.161***	0.244***	0.233***
		(0.00565)	(0.00506)	(0.00775)	(0.00660)	(0.00796)	(0.00747)
	Tertiary	0.399***	0.343***	0.286***	0.225***	0.464***	0.426***
		(0.00817)	(0.00763)	(0.0123)	(0.0109)	(0.0106)	(0.0104)
	age_26_35	0.430***	0.424***	0.418***	0.387***	0.418***	0.436***

		(0.00423)	(0.00382)	(0.00574)	(0.00497)	(0.00600)	(0.00565)
Age	age_36_45	0.477***	0.434***	0.434***	0.375***	0.481***	0.458***
		(0.00491)	(0.00443)	(0.00683)	(0.00591)	(0.00681)	(0.00642)
	age_46_55	0.393***	0.326***	0.321***	0.265***	0.411***	0.343***
		(0.00559)	(0.00491)	(0.00804)	(0.00677)	(0.00759)	(0.00698)
	age_56_65	0.0985***	0.0176***	-0.0294***	-0.0581***	0.143***	0.0322***
		(0.00669)	(0.00552)	(0.00941)	(0.00739)	(0.00937)	(0.00817)
Household Variables	Other Household income	-2.34e-06***	-2.44e-06***	-2.38e-06***	-2.54e-06***	-1.86e-06***	-2.05e-06***
		(3.46e-07)	(3.48e-07)	(4.00e-07)	(3.35e-07)	(4.06e-07)	(4.02e-07)
	Children < 6 years	-0.0211***	-0.00991***	-0.0152***	-0.00832***	-0.0262***	-0.0122***
		(0.00184)	(0.00163)	(0.00283)	(0.00239)	(0.00237)	(0.00220)
	Children > 6 years	-0.0293***	-0.0211***	-0.0377***	-0.0239***	-0.0207***	-0.0160***
		(0.00164)	(0.00142)	(0.00249)	(0.00200)	(0.00216)	(0.00198)
	Unemployed old men >65 years	-0.0610***	-0.0456***	-0.0461***	-0.0272***	-0.0550***	-0.0442***
		(0.00811)	(0.00686)	(0.0118)	(0.00942)	(0.0107)	(0.00959)
	Unemployed old women >65 years	-0.121***	-0.0806***	-0.145***	-0.0844***	0.101***	0.0769***
		(0.00478)	(0.00404)	(0.00669)	(0.00537)	(0.00652)	(0.00578)
	Observations	140,491	140,491	65,598	65,598	74,893	74,893

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Own calculations using South Africa Labour Market Dynamics Data (2019).

Table 5.4 Namibia strict and expanded definitions, probit estimations for labour force participation.

Dependent Variable: LFP=1 if economically active, LFP=0 If not economically active Reference Groups: Age; 16-25, Gender; male, Education; No School, Marital status; Single, Residence; Rural.							
		Total		Female		Male	
Variable	Description	Expanded	Pooled -strict	Female -strict	Female – Expanded	Male -Strict	Male - Expanded
Gender	Female	-0.0948***	-0.132***				
		(0.00818)	(0.0107)				
Residence	Urban	0.0208**	0.0702***	-0.0178	0.0924***	0.0421**	0.0284**
		(0.0105)	(0.0132)	(0.0129)	(0.0185)	(0.0180)	(0.0133)
Marital Status	Married	-0.119***	-0.0596***	-0.158***	-0.00474	-0.153***	-0.0859***
		(0.0102)	(0.0124)	(0.0150)	(0.0168)	(0.0187)	(0.0122)
Education	Primary	0.0219**	0.105***	-0.0185	0.154***	0.0448**	0.0460***
		(0.0103)	(0.0134)	(0.0123)	(0.0194)	(0.0178)	(0.0129)
	Secondary	0.149***	0.208***	0.0844***	0.269***	0.127***	0.157***
		(0.0139)	(0.0165)	(0.0175)	(0.0241)	(0.0214)	(0.0178)
	Tertiary	0.260***	0.435***	0.119***	0.515***	0.319***	0.185***
		(0.0237)	(0.0304)	(0.0300)	(0.0429)	(0.0413)	(0.0290)
Age	age_26_35	0.366***	0.198***	0.308***	0.222***	0.153***	0.368***
		(0.0108)	(0.0142)	(0.0138)	(0.0202)	(0.0187)	(0.0137)
	age_36_45	0.386***	0.230***	0.311***	0.246***	0.185***	0.337***
		(0.0128)	(0.0165)	(0.0177)	(0.0228)	(0.0230)	(0.0157)
	age_46_55	0.315***	0.159***	0.207***	0.172***	0.103***	0.242***
		(0.0153)	(0.0190)	(0.0213)	(0.0262)	(0.0274)	(0.0177)
	age_56_65	0.193***	-0.0472**	0.0252	-0.0301	-0.112***	0.0889***
		(0.0174)	(0.0223)	(0.0218)	(0.0324)	(0.0297)	(0.0202)

Household Variables	Other household income	-2.72e-06***	-2.16e-06***	-2.81e-06***	-1.78e-06**	-2.16e-06**	-2.21e-06***
		(5.88e-07)	(6.68e-07)	(7.08e-07)	(8.82e-07)	(9.08e-07)	(6.54e-07)
	Children < 6 years	-0.00806**	-0.0144***	-0.0125**	-0.0161**	-0.0154**	0.0116**
		(0.00390)	(0.00549)	(0.00519)	(0.00750)	(0.00777)	(0.00465)
	Children > 6 years	-0.0315***	-0.0266***	-0.0309***	-0.0184***	-0.0353***	-0.0268***
		(0.00324)	(0.00454)	(0.00395)	(0.00626)	(0.00615)	(0.00385)
	Unemployed Oldmen >65 years	-0.0897***	-0.125***	-0.0142	-0.151***	-0.0647**	-0.0573***
		(0.0145)	(0.0206)	(0.0177)	(0.0283)	(0.0292)	(0.0166)
	Unemployed Oldwomen >65 years	-0.120***	-0.104***	0.104***	-0.0807***	0.119***	-0.0822***
		(0.0114)	(0.0157)	(0.0141)	(0.0220)	(0.0211)	(0.0134)
	Observations	18,798	10,114	4,513	5,601	8,727	10,071
	Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.						

Source: Own calculations using Namibia Labour Force Survey (2018).

Table 5.5 Malawi strict and expanded definition labour force participation probit estimates

Dependent Variable: LFP=1 if labour force participant, LFP=0 If not a labour force participant Reference Groups: Age; 16-25, Gender; male, Education; No School, Marital status; Single, Residence; Rural							
		Total		Male		Female	
Variable	Description	Strict	Expanded	Male - Strict	Expanded	Strict	Expanded
Gender	Female	-0.125***	-0.0335***				
		(0.00924)	(0.00562)				
Residence	Urban	-0.0744***	-0.0319***	-0.0318***	-0.0216***	-0.114***	-0.0384***
		(0.00849)	(0.00489)	(0.0100)	(0.00488)	(0.0130)	(0.00770)
Marital Status	Married	0.0234***	0.0423***	0.0543***	0.0876***	-0.0432***	-0.0546***
		(0.00453)	(0.00123)	(0.00760)	(0.00345)	(0.0065)	(0.00876)
Education	Primary	-0.0210**	-0.0153***	-0.0197*	-0.0184***	-0.0273*	-0.00937
		(0.0101)	(0.00581)	(0.0113)	(0.00547)	(0.0159)	(0.00947)
	Secondary	-0.00572	-0.00991	-0.00924	-0.00430	-0.0200	-0.0278**
		(0.0140)	(0.00843)	(0.0147)	(0.00774)	(0.0235)	(0.0141)
	Tertiary	0.152***	0.0140	0.110***	0.0319**	0.165***	-0.0288
		(0.0296)	(0.0178)	(0.0292)	(0.0152)	(0.0541)	(0.0311)
	age_26_35	0.176***	0.120***	0.198***	0.104***	0.140***	0.113***
		(0.0111)	(0.00737)	(0.0134)	(0.00832)	(0.0167)	(0.0113)
	age_36_45	0.182***	0.111***	0.202***	0.126***	0.143***	0.0887***

Age		(0.0134)	(0.00930)	(0.0160)	(0.0104)	(0.0207)	(0.0140)
	age_46_55	0.141***	0.0909***	0.150***	0.0637***	0.116***	0.0960***
		(0.0194)	(0.0105)	(0.0192)	(0.0111)	(0.0313)	(0.0158)
	age_56_65	0.0300*	0.0190*	0.0388**	0.0175*	0.0128	0.0103
		(0.0176)	(0.00972)	(0.0195)	(0.00980)	(0.0267)	(0.0145)
Household Variables	Other household income	-8.11e-07***	-2.43e-07**	-1.10e-06***	-3.93e-07***	-2.69e-07	8.28e-08
		(2.08e-07)	(1.14e-07)	(2.57e-07)	(1.21e-07)	(2.91e-07)	(1.36e-07)
	Children < 6 years	0.0165***	0.00649***	0.0153***	0.00379*	0.0162***	0.00808***
		(0.00341)	(0.00201)	(0.00403)	(0.00214)	(0.00513)	(0.00296)
	Children > 6 years	0.00860	0.00127	0.00852	-0.00154	0.0124	0.00530
		(0.0114)	(0.00608)	(0.0121)	(0.00576)	(0.0178)	(0.00955)
	Unemployed Old men>65	-0.0418**	-0.00778	-0.0136	-0.00709	-0.0615**	-0.00766
		(0.0212)	(0.0118)	(0.0273)	(0.0136)	(0.0300)	(0.0169)
	Unemployed Old women >65	0.000393	-0.0153	0.0182	0.00327	0.0205	-0.0277
		(0.0202)	(0.0132)	(0.0218)	(0.0127)	(0.0302)	(0.0193)
	Observations	21,957	21,957	10,355	10,355	11,602	11,602
Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1							

Source: Own Calculations from Malawi Labour Force Survey 2013

Table 5.6 Botswana strict and expanded definitions, probit labour force participation estimates

Dependent Variable: LFP=1 if labour force participant, LFP=0 If not a labour force participant Reference Groups: Age: 15-25, Gender: Male; Education: No School, Geo Location: Rural; Marital Status: Not Married;							
		Total		Males		Female	
Variable	Description	Pooled-Strict	Expanded	Male Strict	Male - Expanded	Female - Strict	Female - Expanded
Gender	Female	-0.162***	-0.0869***				
		(0.00842)	(0.00670)				
Residence	Urban	0.0154	-0.0558***	-0.0134	-0.063***	0.0422*	-0.0443**
		(0.0171)	(0.0139)	(0.0236)	(0.0180)	(0.0239)	(0.0201)
Marital Status	Married	0.0157	0.00301	0.113***	0.057***	-0.042***	-0.0317**
		(0.0124)	(0.0107)	(0.0192)	(0.0160)	(0.0165)	(0.0144)
Education	Primary school	0.0106	0.00216	-0.044***	-0.035***	0.0748***	0.047***
		(0.0130)	(0.00992)	(0.0171)	(0.0125)	(0.0192)	(0.0151)
	Secondary school	0.291***	0.310***	0.199***	0.232***	0.376***	0.374***
		(0.0198)	(0.0170)	(0.0260)	(0.0219)	(0.0284)	(0.0247)
	Tertiary school	0.299***	0.182***	0.134***	0.078***	0.443***	0.274***
		(0.0202)	(0.0161)	(0.0252)	(0.0195)	(0.0295)	(0.0244)
Age	age_26_35	0.315***	0.284***	0.308***	0.272***	0.308***	0.282***
		(0.0109)	(0.00936)	(0.0152)	(0.0129)	(0.0151)	(0.0133)
	age_36_45	0.390***	0.335***	0.339***	0.275***	0.414***	0.365***
		(0.0137)	(0.0115)	(0.0197)	(0.0159)	(0.0186)	(0.0162)
	age_46_55	0.341***	0.281***	0.271***	0.231***	0.371***	0.302***

		(0.0154)	(0.0124)	(0.0220)	(0.0177)	(0.0210)	(0.0173)
	age_56_65	0.216***	0.154***	0.169***	0.137***	0.220***	0.145***
		(0.0188)	(0.0142)	(0.0263)	(0.0197)	(0.0265)	(0.0205)
Household Variables	Other household income	-1.00e-06***	-7.86e-07***	-1.40e-06***	-9.09e-07**	-7.56e-07	-7.72e-07**
		(3.68e-07)	(2.72e-07)	(5.32e-07)	(4.24e-07)	(4.85e-07)	(3.63e-07)
	Children < 6 years	-0.0203***	-0.00233	-0.0120**	0.000852	-0.0225***	-0.00188
		(0.00366)	(0.00293)	(0.0054)	(0.00417)	(0.0048)	(0.00401)
	Children > 6 years	-0.0179***	-0.0102***	-0.030***	-0.022***	-0.0091*	-0.000780
		(0.00363)	(0.00276)	(0.0052)	(0.00368)	(0.0048)	(0.00385)
	Unemployed Old men > 65 years	0.0216	-0.0255*	-0.0112	0.00641	-0.00252	-0.0260
		(0.0170)	(0.0131)	(0.0248)	(0.0186)	(0.0230)	(0.0184)
	Unemployed Old women< 65 years	-0.0758***	0.0383***	0.0910***	-0.043***	0.0569***	0.0363**
		(0.0145)	(0.0111)	(0.0192)	(0.0138)	(0.0204)	(0.0164)
Observations		16,940	16,940	7,605	7,605	9,335	9,335
Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1							

Source: Botswana Labour Survey; Multi-Topic Survey (2019)

Table 5.7 South Africa employment probit estimates with sample selection

Reference groups: Gender: Male, Education: No school, Age: 16-24, Marital Status: Single, Residence: Rural Employed =1 if employed, 0 Otherwise							
		Total		Male		Female	
Variable	Description	Strict	Expanded	Male Strict	Female Expanded	Female Strict	Female Expanded
Gender	Female	-0.0803***	-0.0975***				
		(0.00459)	(0.00461)				
Residence	Urban	0.0719***	0.136***	0.0670***	0.133***	0.0587***	0.116***
		(0.00640)	(0.00533)	(0.00847)	(0.00732)	(0.00966)	(0.00775)
Marital Status	Married	0.0677***	0.0642***	0.151***	0.156***	-0.0252***	-0.0331***
		(0.00448)	(0.00456)	(0.00699)	(0.00730)	(0.00681)	(0.00690)
Education	Primary	-0.0262***	-0.0207***	-0.0334***	-0.0334***	-0.0184*	-0.00870
		(0.00633)	(0.00625)	(0.00793)	(0.00806)	(0.0103)	(0.00984)
	Secondary	0.0146*	0.0264***	-0.0198**	-0.0218**	0.0565***	0.0723***
		(0.00789)	(0.00827)	(0.00951)	(0.0101)	(0.0134)	(0.0137)
	Tertiary	0.131***	0.161***	0.0534***	0.0723***	0.208***	0.238***

		(0.0106)	(0.0110)	(0.0124)	(0.0131)	(0.0183)	(0.0187)
Age	age_26_35	0.203***	0.155***	0.131***	0.0512***	0.266***	0.213***
		(0.0105)	(0.0131)	(0.0134)	(0.0173)	(0.0168)	(0.0204)
	age_36_45	0.311***	0.281***	0.199***	0.134***	0.415***	0.383***
		(0.0114)	(0.0135)	(0.0140)	(0.0173)	(0.0189)	(0.0215)
	age_46_55	0.372***	0.358***	0.200***	0.145***	0.532***	0.517***
		(0.0112)	(0.0123)	(0.0133)	(0.0158)	(0.0186)	(0.0191)
	age_56_65	0.444***	0.507***	0.260***	0.308***	0.636***	0.698***
		(0.0105)	(0.0103)	(0.0133)	(0.0138)	(0.0175)	(0.0158)
	Inverse Mills Ratio	0.0467***	-0.114***	-0.0341*	-0.248***	0.103***	-0.0558*
		(0.0154)	(0.0202)	(0.0195)	(0.0266)	(0.0249)	(0.0319)
Network	Proportion of other Employed	0.214***	0.278***	0.194***	0.250***	0.264***	0.340***
		(0.00438)	(0.00489)	(0.00581)	(0.00652)	(0.00685)	(0.00757)
	Observations	79,331	93,748	41,007	46,817	38,324	46,931

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source; Own Calculations from South Africa Labour Dynamics Survey Data (2019

Table 5.8 Namibia employment probit estimations with sample selection

Reference groups: Gender: Male, Education: No school, Age: 16-24, Marital Status: Single, Residence: Rural. Employed =1 if employed, 0 Otherwise							
		Total		Male		Female	
Variable	Description	Pooled Strict	Expanded	Male Strict	Male Expanded	Female Strict	Female Expanded
Gender	Female	-0.141***	-0.157***				
		(0.0149)	(0.0146)				
Residence	Urban	-0.0475***	-0.0218	-0.0640***	-0.0466**	-0.00906	0.00638
		(0.0170)	(0.0166)	(0.0215)	(0.0225)	(0.0265)	(0.0238)
Marital Status	married	-0.0545***	-0.0498***	0.182***	0.208***	-0.0609***	-0.0679***
		(0.0143)	(0.0154)	(0.0214)	(0.0241)	(0.0204)	(0.0208)
Education	primary	0.0950***	0.0948***	0.0572***	0.0494**	0.154***	0.141***
		(0.0176)	(0.0188)	(0.0207)	(0.0236)	(0.0302)	(0.0292)
	secondary	0.262***	0.278***	0.182***	0.208***	0.371***	0.345***
		(0.0223)	(0.0224)	(0.0250)	(0.0278)	(0.0389)	(0.0352)
	Tertiary	0.583***	0.661***	0.398***	0.485***	0.832***	0.828***
		(0.0400)	(0.0419)	(0.0435)	(0.0503)	(0.0683)	(0.0651)
	age_26_35	0.263***	0.274***	0.190***	0.222***	0.352***	0.320***

Age		(0.0195)	(0.0195)	(0.0232)	(0.0259)	(0.0315)	(0.0283)
	age_36_45	0.391***	0.414***	0.239***	0.282***	0.544***	0.504***
		(0.0229)	(0.0220)	(0.0279)	(0.0306)	(0.0363)	(0.0307)
	age_46_55	0.464***	0.484***	0.286***	0.325***	0.618***	0.571***
		(0.0256)	(0.0247)	(0.0330)	(0.0355)	(0.0391)	(0.0344)
	age_56_65	0.425***	0.478***	0.253***	0.280***	0.555***	0.583***
		(0.0375)	(0.0432)	(0.0486)	(0.0562)	(0.0594)	(0.0658)
	Inverse Mills Ratio	0.313***	0.174***	0.232***	0.176**	0.442***	0.206**
		(0.0431)	(0.0590)	(0.0519)	(0.0763)	(0.0673)	(0.0868)
Network	Prop. Other Employ	0.265***	0.351***	0.245***	0.342***	0.311***	0.376***
		(0.0155)	(0.0179)	(0.0196)	(0.0231)	(0.0244)	(0.0275)
	Observations	7,988	7,988	3,235	3,777	3,196	4,211
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

Source; Own Calculations from Namibia Labour Force Survey Data (2018)

Table 5.9 Malawi employment probit estimations with sample selection

Reference Groups: Gender; Male, Education: No school, Age;16-25, Marital Status; Single, residence; rural Employed =1 if employed, 0 Otherwise							
		Total		Male		Female	
Variables	Description	Strict	Expanded	Male Strict	Male Expanded	Female Strict	Female Expanded
Gender	Female	-0.034***	-0.113***				
		(0.00848)	(0.0113)				
Residence	Urban	-0.026***	-0.044***	-0.0111*	0.0138	-0.033***	-0.128***
		(0.00606)	(0.0102)	(0.00586)	(0.0105)	(0.0130)	(0.0176)
Marital Status	Married	0.0452***	0.0564***	0.0234***	0.0321**	-0.0122**	-0.3421***
		(0.00021)	(0.0123)	(0.00564)	(0.00345)	(0.0654)	(0.0012)
Education	Primary	0.000193	0.00338	0.00874	0.0286**	-0.00719	-0.0220
		(0.00546)	(0.00996)	(0.00682)	(0.0115)	(0.00878)	(0.0154)
	Secondary	-0.0107	-0.00189	-0.00764	-0.00711	-0.0125	-0.0151
		(0.00691)	(0.0130)	(0.00724)	(0.0123)	(0.0132)	(0.0259)
	Tertiary	-0.0113	0.0678***	-0.0189	-0.00619	-0.00771	0.168***
		(0.0120)	(0.0233)	(0.0123)	(0.0214)	(0.0199)	(0.0351)
	age_26_35	0.0235**	0.0418	0.0266	-0.00112	0.000867	0.119***
		(0.0116)	(0.0275)	(0.0184)	(0.0245)	(0.0154)	(0.0439)

Age	age_36_45	0.0491***	0.0837***	0.0410**	0.00932	0.0382**	0.171***
		(0.0129)	(0.0271)	(0.0194)	(0.0256)	(0.0175)	(0.0399)
	age_46_55	0.0518***	0.0688**	0.0492***	0.0326	0.0372*	0.139***
		(0.0131)	(0.0292)	(0.0182)	(0.0231)	(0.0193)	(0.0523)
	age_56_65	0.0285**	0.0329*	0.0103	-0.00406	0.0504***	0.0594**
		(0.0130)	(0.0190)	(0.0157)	(0.0207)	(0.0177)	(0.0293)
	Inverse Mills Ratio	0.0292	-0.156	0.0113	-0.356***	-0.0296	0.334*
		(0.0368)	(0.108)	(0.0487)	(0.0795)	(0.0627)	(0.203)
Network	Prop. Other Employed	0.0786***	0.253***	0.0617***	0.175***	0.0955***	0.330***
		(0.00439)	(0.00820)	(0.00549)	(0.00928)	(0.00660)	(0.0136)
	Observations	16,900	19,670	8,676	9,452	8,224	10,218
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

Source: Own Calculations from Malawi Labour Force Survey 2013

Table 5.10 Botswana employment probit estimations with sample selection.

Reference Groups: Gender; Male, Education: No school, Age;16-25, Marital Status; Single, residence; rural Employed =1 if employed, 0 Otherwise							
		Total		Male		Female	
Variable	Description	Strict	Expanded	Male Strict	Male Expanded	Female Strict	Female Expanded
Gender	Female	0.0212*	-0.114***				
		(0.0119)	(0.0116)				
Residence	Urban	-0.00962	0.0682***	0.0238	0.0794***	-0.0202	0.0453*
		(0.0144)	(0.0184)	(0.0193)	(0.0246)	(0.0222)	(0.0270)
Marital	Married	0.0380***	0.0330***	0.0399**	0.100***	0.0301*	-0.0261
		(0.0115)	(0.0128)	(0.0170)	(0.0188)	(0.0165)	(0.0187)
Education	Primary school	0.000944	0.0171	0.0172	0.00299	-0.00223	0.0696***
		(0.0134)	(0.0150)	(0.0172)	(0.0203)	(0.0228)	(0.0245)
	Secondary school	-0.156***	-0.0823**	-0.16***	-0.175***	-0.0516	0.228***
		(0.0230)	(0.0327)	(0.0249)	(0.0321)	(0.0423)	(0.0721)
	Tertiary school	0.0108	0.229***	0.0417	0.133***	0.0814*	0.477***
		(0.0232)	(0.0266)	(0.0254)	(0.0287)	(0.0443)	(0.0571)
Age	age_26_35	-0.0162	0.105***	-0.0485*	0.0528*	0.0771**	0.294***
		(0.0200)	(0.0268)	(0.0253)	(0.0286)	(0.0312)	(0.0511)
	age_36_45	0.00808	0.168***	-0.058**	0.0540	0.158***	0.462***
		(0.0247)	(0.0328)	(0.0292)	(0.0331)	(0.0404)	(0.0666)
	age_46_55	0.0475*	0.191***	-0.0434	0.0352	0.224***	0.489***

		(0.0250)	(0.0315)	(0.0286)	(0.0334)	(0.0403)	(0.0610)
	age_56_65	0.146***	0.246***	0.0478	0.0912***	0.309***	0.438***
		(0.0251)	(0.0267)	(0.0299)	(0.0333)	(0.0412)	(0.0408)
	Inverse Mills Ratio	-0.267***	-0.164***	-0.307***	-0.229***	-0.0900	0.256**
		(0.0398)	(0.0602)	(0.0473)	(0.0569)	(0.0626)	(0.123)
Network	Proportion of other employed	0.157***	0.244***	0.137***	0.196***	0.177***	0.286***
		(0.00830)	(0.0117)	(0.0110)	(0.0136)	(0.0124)	(0.0190)
	Observations	10,879	13,223	5,464	6,198	5,415	7,025
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

Source: Calculations from the Botswana Labour Force Survey Multi-Topic Survey 2018

Table 5.12 South Africa gender employment, gap and discrimination.

South Africa Employment, Gap and Discrimination: Yun Decomposition						
Reference Group:	**Using Male Coefficients**		**Using Female Coefficients**		**Using Pooled Coefficients**	
	Strict	**Expanded**	**Strict**	**Expanded**	**Strict**	**Expanded**
Unadjusted employment probability gap: $E[Employ_m] - E[Employ_f]$	0.0436*** **(0.0033)**	**0.0789*** (0.0032)**	0.0436*** **(0.0033)**	**0.0789*** (0.0032)**	**0.0436*** (0.0033)**	**0.0789*** (0.0032)**
Composition effects (Explained Gap) attributable to						
Residence: urban	0.00155	0.00367***	0.00110***	0.00340***	0.00079	0.00293***
	(0.0011)	(0.0004)	(0.0003)	(0.0004)	(0.0009)	(0.0003)
Marital Status: married	0.00458	0.00195***	-0.000618***	-0.000442***	0.0022	0.000708***
	(0.0035)	(0.0004)	(0.0002)	(0.0001)	(0.0028)	(0.0002)
Education: (no school,… , Tertiary)	-0.00489	-0.00336***	-0.0119***	-0.00985***	-0.0069	-0.00414***
	(0.003)	(0.0004)	(0.0008)	(0.0007)	(0.0084)	(0.0004)
Age: (16-25) … (56-65)	-0.00528	-0.00247***	-0.0116***	-0.00787***	-0.0102	-0.00431***
	(0.0034)	(0.0004)	(0.0012)	(0.0011)	(0.0124)	(0.0007)
Inverse Mills Ratio	0.00726	0.0293***	-0.0176***	0.00704*	0.0258	0.0331***
	(0.0098)	(0.0036)	(0.0032)	(0.0038)	(0.0383)	(0.0024)
Network (Proportion Of Other Employed)	-0.0108	-0.00762***	-0.0119***	-0.0111***	-0.0144	-0.00838***

	(0.0069)	(0.0005)	(0.0009)	(0.0008)	(0.0181)	(0.0006)
Total Explained by model	-0.00850***	0.0191***	-0.0550***	-0.0217***	-0.00490**	0.0174***
	(0.0032)	(0.0036)	(0.004)	(0.0042)	(0.0025)	(0.0025)
Employment structure effects attributable to:						
Residence: Urban	0.0109	0.0173***	0.0105	0.0175***	0.012	0.0181***
	(0.0086)	(0.0064)	(0.0084)	(0.0065)	(0.0089)	(0.0066)
Marital Status: married	0.0519***	0.0457***	0.0535***	0.0468***	0.0554***	0.0471***
	(0.0025)	(0.0022)	(0.0026)	(0.0023)	(0.0029)	(0.0023)
Education: no school,… , Tertiary	0.00628***	0.00696***	0.0138***	0.0126***	0.00716***	0.00793***
	(0.0022)	(0.0021)	(0.0023)	(0.0023)	(0.0024)	(0.0022)
Age: (16-25) … (56-65)	0.0327***	0.0324***	0.0380***	0.0363***	0.0363***	0.0347***
	(0.0041)	(0.0049)	(0.0041)	(0.0048)	(0.0046)	(0.005)
Inverse Mills Ratio	-0.0878***	-0.0892***	-0.0573***	-0.0600***	-0.103***	-0.0942***
	(0.0179)	(0.0181)	(0.0109)	(0.012)	(0.0151)	(0.0155)
Proportion Of Other Employed	-0.0186***	-0.0197***	-0.0148***	-0.0167***	-0.0177***	-0.0187***
	(0.0033)	(0.0029)	(0.0025)	(0.0024)	(0.0031)	(0.0027)
Constant	0.0632**	0.0723***	0.0593**	0.0698***	0.0641**	0.0723***
	(0.026)	(0.0237)	(0.0238)	(0.0226)	(0.0258)	(0.0235)
Total Unexplained employment status gap	**0.0521*** **	0.0598***	**0.0985*** **	0.101***	**0.0485*** **	0.0615***
	(0.004)	(0.0045)	**(0.0052)**	(0.0052)	**(0.0036)**	(0.0039)
Number Of Observations	**79331**	**93748**	**79331**	**93748**	**79331**	**93748**

*** p<0.01, ** p<0.05, * p<0.1. The Bootstrapped standard errors are in parentheses with **200** replications conducted.

Table 5.13 Namibia gender employment, gap and discrimination.

Namibia Employment, Gap : Yun Decomposition						
Reference Group:	**Using Male Coefficients**		**Using Female Coefficients**		**Using Pooled Coefficients**	
	Expanded	**Strict**	**Expanded**	**Strict**	**Expanded**	**Strict**
Unadjusted employment probability gap: $E[Employ_m] - E[Employ_f]$	**0.129*** **	**0.0775*** **	**0.129*** **	**0.0775*** **	**0.129*** **	**0.0775*** **
	(0.0117)	**(0.0116)**	**(0.0117)**	**(0.011)**	**(0.0117)**	**(0.0116)**
Composition effects attributable to						
Residence: urban	-0.001	-0.00109	-0.00028	-0.00016	-0.000845*	-0.00143
	(0.0033)	(0.0125)	(0.002)	(0.0005)	(0.0005)	(0.0095)
Marital Status: married	-0.00241	-0.000184	-0.00161	0.0000718	-0.000433	-0.0000473
	(0.008)	(0.0039)	(0.0081)	(0.0008)	(0.0003)	(0.0007)
Education: noschool,… , Tertiary	0.00407	-0.000934**	-0.00864	-0.00453	0.00506*	-0.00113
	(0.01)	(0.0098)	(0.0422)	(0.006)	(0.0028)	(0.0207)
Age: (16-25) … (56-65)	0.00333	0.00204	-0.0137	0.00531	0.00676**	0.00506
	(0.008)	(0.0048)	(0.081)	(0.0053)	(0.003)	(0.0261)
Inverse Mills Ratio	-0.0112	-0.0396	0.0268	-0.E190787***	0.00236	-0.0263
	(0.0381)	(0.0695)	(0.148)	(0.0116)	(0.0036)	(0.0646)
Proportion Of Other Employed	0.00234	0.00166	-0.00525	0.0022	0.00277	0.00213
	(0.0058)	(0.0199)	(0.0115)	(0.003)	(0.0021)	(0.0101)
Total Explained by model	0.00346	-0.0287***	-0.00085	-0.0805***	0.0196***	-0.0187**

	(0.0082)	(0.0099)	(0.0099)	(0.0144)	(0.0071)	(0.0085)
Employment structure effects attributable to:						
Residence: urban	-0.0314**	-0.0415**	-0.0330**	-0.0465**	-0.0326**	-0.0443**
	(0.0149)	(0.0207)	(0.0156)	(0.023)	(0.0156)	(0.0223)
Marital Status: married	-0.130***	-0.128***	-0.135***	-0.140***	-0.136***	-0.137***
	(0.0137)	(0.0139)	(0.0148)	(0.015)	(0.0148)	(0.0159)
Education: no school,… , Tertiary	0.0183**	0.0203**	0.0188**	0.0253***	0.0186**	0.0216**
	(0.0091)	(0.0088)	(0.0084)	(0.0089)	(0.009)	(0.009)
Age: (16-25) … (56-65)	0.0340***	0.0235**	0.0303***	0.0231**	0.0314**	0.0227**
	(0.0124)	(0.0093)	(0.0115)	(0.0096)	(0.0124)	(0.01)
Inverse Mills Ratio	-0.00094	-0.0702*	-0.00064	-0.0499*	-0.0207	-0.0980***
	(0.0307)	(0.0415)	(0.0212)	(0.0284)	(0.0268)	(0.037)
Proportion Of Other Employed	0.00509	-0.00288	0.00523	-0.00321	0.0053	-0.00308
	(0.0106)	(0.0106)	(0.0109)	(0.0116)	(0.011)	(0.0114)
Constant	0.234***	0.318***	0.234***	0.347***	0.239***	0.339***
	(0.0403)	(0.0512)	(0.0391)	(0.0516)	(0.04)	(0.0513)
Total Unexplained employment status gap	0.126***	0.106***	0.130***	0.158***	0.110***	0.0961***
	(0.0115)	(0.0119)	(0.012)	(0.0156)	(0.0111)	(0.0113)
Number Of Observations	**7988**	**6431**	**7988**	**6431**	**7988**	**6431**

*** p<0.01, ** p<0.05, * p<0.1. The Bootstrapped standard errors are in parentheses with **200** replications conducted.

Note: The data is extracted from the Namibia Labour Force Survey (2018).

Table 5.14 Malawi employment, gap and discrimination.

Malawi Gender Employment, Gap: Yun Decomposition						
Reference Group:	**Using Male Coefficients**		**Using Female Coefficients**		**Using Pooled Coefficient**	
	Strict Definition	**Expanded Definition**	**Strict Definition**	**Expanded Definition**	**Strict Definition**	**Expanded Definition**
Unadjusted employment probability gap:						
$E[Employ_m] - E[Employ_f]$	0.0272***	0.118***	0.0272***	0.118***	0.0272***	0.118***
	(0.00598)	(0.00920)	(0.00598)	(0.00920)	(0.00598)	(0.00920)
Composition effects attributable to						
Residence: Urban	-0.000505	0.118***	-0.00207	-0.00297	-0.000482	-0.000468*
	(0.000781)	(0.00920)	(0.00127)	(0.00205)	(0.00918)	(0.000279)
Marital Status: married	0.000102	0.000231	0.00018	0.000131	0.000132	0.000321
	(0.00634)	-0.00831	(0.00507)	(-0.00111)	(0.00560)	(0.00123)
Education: no school,…, Tertiary	-0.000624	0.000914	-0.00264	0.00287	-0.000892	0.00127
	(0.00589)	(0.00115)	(0.00167)	(0.00607)	(0.0107)	(0.00110)
Age: (16-25) … (56-65)	0.00143	2.33e-05	0.00121	0.00465	0.000417	0.000903
	(0.00587)	(0.000627)	(0.00135)	(0.00400)	(0.00440)	(0.000737)
Inverse Mills Ratio	-0.00302	0.0246***	0.0108	-0.0249*	0.00834	0.00936*
	(0.0179)	(0.00591)	(0.0160)	(0.0129)	(0.0852)	(0.00541)
Proportion Of Other Employed	-0.00481	-0.00342	-0.0101*	-0.00694	-0.00383	-0.00277
	(0.0166)	(0.00222)	(0.00546)	(0.00619)	(0.0648)	(0.00461)
Total Explained by model	-0.00775	0.0229***	-0.00317	-0.0279**	0.00348	0.00860*
	(0.00687)	(0.00601)	(0.0157)	(0.0135)	(0.00623)	(0.00461)
Employment structure effects (Unexplained Gap) attributable to:						
Residence: urban	0.00180	0.0155***	0.00253	0.0177***	0.00209	0.0163***

	(0.00161)	(0.00244)	(0.00228)	(0.00297)	(0.00193)	(0.00251)
Marital Status: married	0.0001**	0.00578*	0.00234***	0.0012	0.00307**	0.00065*
	(0.00151)	(0.00345)	(0.00071)	(0.00637)	(0.00654)	(0.00405)
Education: no school,… , Tertiary	0.00180	0.0327***	0.00468	0.0309***	0.00454	0.0308***
	(0.00161)	(0.00981)	(0.00498)	(0.00763)	(0.00532)	(0.00878)
Age: (16-25) … (56-65)	0.00180	0.00593	0.00700*	0.00229	0.00717*	0.00416
	(0.00161)	(0.00514)	(0.00379)	(0.00498)	(0.00390)	(0.00482)
Inverse Mills Ratio	0.00180	-0.160***	0.0125	-0.101***	0.00640	-0.136***
	(0.00161)	(0.0366)	(0.0193)	(0.0239)	(0.0307)	(0.0309)
Proportion Of Other Employed	0.00180	-0.0136	-0.00235	-0.0129	-0.00252	-0.0131
	(0.00161)	(0.0125)	(0.00938)	(0.0116)	(0.0106)	(0.0120)
Constant	0.00724	0.232***	0.00779	0.225***	0.00790	0.225***
	(0.0286)	(0.0463)	(0.0308)	(0.0455)	(0.0306)	(0.0433)
Total Unexplained employment status gap	0.0349***	0.0947***	0.0304*	0.146***	0.0237***	0.109***
	(0.00758)	(0.00950)	(0.0175)	(0.0153)	(0.00754)	(0.00863)
Number Of Observations	16,900	19,670	16,900	19,670	16,900	19,670
*** p<0.01, ** p<0.05, * p<0.1. The Bootstrapped standard errors are in parentheses with 200 replications conducted.						

Source: Own Calculations from Malawi Labour Force Survey (2013).

Table 5.15 Botswana gender employment, gap and discrimination.

Botswana Employment, Gap and Discrimination: Yun Decomposition						
Reference Group:	**Using Male Coefficients**		**Using Female Coefficients**		**Using Pooled Coefficient**	
	Strict	**Expanded**	**Strict**	**Expanded**	**Strict**	**Expanded**
Unadjusted employment probability gap:						
$E[Employ_m] - E[Employ_f]$	0.0424***	0.125***	0.0424***	0.125***	0.0424***	0.125***
	(0.00792)	(0.00821)	(0.00818)	(0.00821)	(0.00818)	(0.00821)
Composition effects attributable to						
Residence: urban	-0.00160	-0.00228**	0.00101	-0.00137	0.000419	-0.00178***
	(0.00115)	(0.000925)	(0.00211)	(0.00104)	(0.000799)	(0.000653)
Marital Status: married	0.00118*	0.00200***	0.000661	-0.000547	0.000965**	0.000560**
	(0.000625)	(0.000730)	(0.00160)	(0.000612)	(0.000412)	(0.000259)
Education: no school,…, Tertiary	0.00594***	0.00919***	0.00254	0.00506	0.00397***	0.00867***
	(0.00229)	(0.00228)	(0.00254)	(0.0167)	(0.00128)	(0.00187)
Age: (16-25) … (56-65)	0.00361**	-0.000434	-0.00110	-0.00753*	0.000982	-0.000457
	(0.00146)	(0.000834)	(0.00453)	(0.00384)	(0.00112)	(0.00106)
Province: (Francistown,.., central district)	0.00359**	0.00489***	0.00144	0.00339	0.00237**	0.00330***
	(0.00158)	(0.00154)	(0.00231)	(0.00935)	(0.00105)	(0.00107)
Inverse Mills Ratio	0.0737***	0.0238***	0.0160	-0.0280	0.0413***	0.0218***
	(0.0131)	(0.00598)	(0.0125)	(0.0209)	(0.00591)	(0.00443)
Proportion Of Other Employed	-0.00395**	-0.00138	-0.00380	-0.00212	-0.00378**	-0.00144
	(0.00179)	(0.00150)	(0.00450)	(0.00426)	(0.00163)	(0.00158)
Total Explained by model	0.0825***	0.0357***	0.0168	-0.0311**	0.0462***	0.0307***
	(0.0141)	(0.00742)	(0.0131)	(0.0143)	(0.00730)	(0.00611)
Employment structure effects (Unexplained Gap) attributable to:						

Residence: urban	0.0274*	0.0281	0.0373	0.0261	0.00878	0.0278
	(0.0150)	(0.0194)	(0.132)	(0.0180)	(0.278)	(0.0189)
Marital Status: married	0.00342	0.0286***	0.00570	0.0307***	0.00122	0.0305***
	(0.00449)	(0.00520)	(0.0126)	(0.00564)	(0.0702)	(0.00553)
Education: (no school,… , Tertiary)	0.00720	0.0101	0.0149	0.0161*	0.00297	0.0104
	(0.00758)	(0.00877)	(0.0523)	(0.00870)	(0.0755)	(0.00874)
Age: (16-25) … (56-65)	0.0295***	0.0440***	0.0509	0.0491***	0.0109	0.0443***
	(0.00586)	(0.00663)	(0.0769)	(0.00705)	(0.396)	(0.00670)
Province: (Francistown,.., Central District)	-9.68e-05	-0.00440	0.00247	-0.00164	0.000277	-0.00272
	(0.00467)	(0.00605)	(0.0140)	(0.00538)	(0.0467)	(0.00576)
Inverse Mills Ratio	-0.143***	-0.171***	-0.139	-0.115***	-0.0402	-0.171***
	(0.0505)	(0.0409)	(0.186)	(0.0268)	(1.688)	(0.0370)
Proportion Of Other Employed	-0.00606	-0.0136*	-0.00850	-0.0130*	-0.00203	-0.0136*
	(0.00511)	(0.00741)	(0.0199)	(0.00695)	(0.140)	(0.00736)
Constant	0.0413	0.168***	0.0618	0.164***	0.0142	0.169***
	(0.0414)	(0.0389)	(0.104)	(0.0376)	(1.117)	(0.0387)
Total Unexplained employment status gap	-0.0401***	0.0897***	0.0256*	0.157***	-0.00384	0.0948***
	(0.0155)	(0.0107)	(0.0145)	(0.0153)	(0.0104)	(0.00947)
Number Of Observations	10,879	13,223	10,879	13,223	10,879	13,223
*** p<0.01, ** p<0.05, * p<0.1. The Bootstrapped standard errors are in parentheses with 200 replications conducted.						

Source: Own Calculations from Botswana Labour Force Survey; Multi-Topic Survey 2019

THE END