

DISABILITY AND THE INCIDENCE OF UNEMPLOYMENT IN KENYA

NJAI JEMIMAH WAMBUI


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DECLARATION


This research paper is my original work and has not been submitted for any award in any other institution.

Signature:  Date: 22-11-2022

NJAI JEMIMAH WAMBUI

X50/38564/2020

This research paper has been submitted with my approval as university supervisor.

Signature:  Date: 2022-11-23

PROFESSOR ANTHONY WAMBUGU

UNIVERSITY OF NAIROBI

DEDICATION

To my mother and brother in appreciation of their assistance during the research period.

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I would like to convey my appreciation to the University of Nairobi for allowing me to conduct this research. My sincerest gratitude goes to Professor Anthony Wambugu, my supervisor, for his dedication and commitment to assisting me in achieving academic success. Throughout my studies, I was motivated by his comprehensive knowledge and technical advice. I would want to thank my classmates and colleagues who provided educational support through their comments and ideas. Finally, I'd like to give thanks to God, my mother, and my brother. I could not have completed my studies without their constant support throughout my academic journey.

ABSTRACT

An aim of the Persons with Disabilities Act (2003) is to ensure that persons with disabilities access employment. This paper investigates the incidence of unemployment by disability status in Kenya. The empirical analysis in this study employed secondary, cross-sectional data from the 2021 Fin access Household Survey, conducted by the Kenya National Bureau of Statistics (KNBS), the Central Bank of Kenya (CBK), and Financial Sector Deepening Kenya (FSDK). Separate probit models for persons with disability and persons without disabilities, in which the probability of being unemployed is conditioned on observable characteristics of the individual and household, were estimated. Probit analyses of PWDs and non-disabled persons reveal a positive and statistically significant relationship between gender and unemployment. Unemployment was negatively and significantly related to education, marital status, household headship, and location. Further, age was associated negatively and significantly with unemployment. However, for PWDs, a positive association was seen between ages 55 and 64 and unemployment. Following the regression results, the study employed the Fairlie decomposition technique to examine the unemployment gap between PWDs and non-disabled persons. Gender and location were found to significantly reduce the gap in unemployment between those with and without disabilities. Age and education had mixed contributions to the unemployment gap. Age narrowed the unemployment gap for ages 25-34 and 35-44 but widened for those aged 45-54 and 55-64. The unemployment gap widens significantly for people with only primary school education, whereas it shrinks for those with secondary, vocational, or university education. However, neither marital status nor household headship is significant in explaining the unemployment gap. Based on the research's findings, policy suggestions were made to help bridge the gap in unemployment between persons with and without disabilities.

ACRONYMS AND ABBREVIATIONS

CBK	Central Bank of Kenya
FSDK	Financial Sector Deepening Kenya
ILO	Internal Labour Organization
KIHBS	Kenya Integrated Household Budget Survey
KNBS	Kenya National Bureau of Statistics
KNSPWD	Kenya National Survey for Persons with Disabilities
LFS	Labour Force Survey
MSMEs	Micro Small and Medium Enterprises
PWD	Persons with Disabilities
NCPWD	National Council for Persons with Disabilities
VDS	Vision 2030 Delivery Secretariat
WHO	World Health Organization

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CHAPTER ONE: INTRODUCTION

1.0 Background

Unemployment has become a huge socio-economic concern on a global scale. High unemployment rates are linked to societal problems like crime, drug misuse, and violence (OHiggins, 1997; ILO, 2005). Furthermore, the consequences of scarring have been studied extensively across geographic areas and time periods. There is a correlation between being unemployed and deteriorating mental health. The study by Bell and Blanchflower (2011) in the United Kingdom indicated that being unemployed as a young person had long-lasting impacts, including a tendency to reduce happiness for up to two decades later. This research shows that the longer someone is out of work, the more damage it does to their life. Second, the affordable housing shortage magnifies the unemployment rate's effects. Toro et al. (2011) found that housing expenses and economic uncertainty cause young adults to delay moving out of their parents' houses in the United States, as is the situation in Southern Europe (Guerrero, 2017). As a result, increased dependency among family members is another consequence of homelessness caused by unemployment. A jobless population can be expensive and wasteful (ILO, 2013). The loss of income directly impacts people's standard of living, causing them to cut back on their spending and, in extreme cases, fall into poverty.

Conversely, governments miss out on income tax payments that would have been paid by the unemployed if they had jobs. The government may also decrease its welfare expenditures. A considerable percentage of the labor force may not be able to benefit from public investments in education and healthcare due to a lack of suitable employment opportunities. Finally, unemployment lowers job prospects, mostly due to a lack of experience and quality of labor. High unemployment rates raise the likelihood of poverty and social exclusion through reducing household earnings (Görlich et al., 2013).

According to the ILO, world unemployment rose to 6.6% in 2020, up from 5.4 % in 2019 (ILO, 2022). However, the aggregate unemployment rates obscure unemployment differences between and within countries. Eastern Europe's unemployment rate grew from 4.7% in 2019 to 5.6% in 2020, whereas in the Northern, Southern, and Western regions of Europe, the rate increased to 6.9% from 7.3%. In 2020, unemployment in the North American region reached 8.2%, up from 3.9% in 2019. From 2019 to 2020, unemployment in the Arab States went up from 8.2% to 9.5%. The unemployment rate in South-Eastern Asia and the Pacific increased from 2.6% in 2019 to 3.2% in 2020, while the unemployment rate in Central and Western Asia rose from 9.4% in 2019 to 9.7% in 2020. Northern Africa's unemployment rate rose from 11.1% in 2019 to 12.8% in 2020, and the SSA unemployment rate from 6.3% to 6.9% (ILO, 2022).

Although several international and domestic frameworks guarantee the right to decent work for PWDs, major gaps persist. The ILO reports that the unemployment rate for PWDs is 7.6%, compared to 6% for persons without disabilities (ILO, 2022). 15% of the global population is disabled (World Bank, 2011). Almost two-thirds of the working-age population of PWDs are out of the labor force, and only one out of every three PWDs is employed, making them twice as likely to be unemployed as persons without disabilities (ILO, 2020).

In Kenya, according to the 2019 census, persons with disabilities made up 2.8% of Kenya's population (KNBS 2019). The 2007 Kenya National Survey for Persons with Disabilities (KNSPWD) estimated that overall, 4.6% of Kenyans were persons with disabilities, with physical impairment accounting for most cases (KNSPWD, 2008). The survey also revealed that about 25% do not work, 10% were homemakers, 33% of PWDs work in their own family company, and 16% had a paid job.

Employment for persons with disabilities is globally acknowledged as a strategy to achieve SDG 10, which seeks to reduce inequality (UN, 2015). As such, the UN Convention on the

Rights of PWDs advocates for equal employment opportunities and labor rights for all persons with disabilities (UN, 2008). PWDs are identified as a vulnerable group in the 2030 Agenda for Sustainable Development to be empowered to achieve the SDGs, particularly in the labor market (UN, 2015).

Like the rest of the world, Kenya values the rights of PWDs. The PWD Act of 2003 guarantees PWDs' rights, rehabilitation, and social equality. It establishes the National Council of PWDs to oversee their welfare. Employers in the public and private sectors are legally required to allocate 5% of their workforce to persons with disabilities (Kenya Law, 2003).

PWDs also require education assistance and support devices to help them acquire the technical, leadership, and software skills they need to run their start-ups and improve their employability prospects successfully. As a result, Kenya should strive to create a workforce for the disabled by providing adequate support and technology to enable PWDs to become more self-sufficient and creative.

1.1 Problem Statement

Unemployment is a serious issue in Kenya today, and PWDs have it especially tough in the job market (KNSPWD, 2008). The ILO estimated the overall unemployment rate in Kenya at 5.7% in 2021 (ILO, 2022). Available data on the employment of PWDs suggests that PWDs have a higher unemployment rate than others in the labour force (KNSPWD, 2008). The causes of the unemployment disparity between PWDs and non-disabled persons are unclear. Employment opportunities for PWDs in Kenya are possibly limited because of PWDs' lower levels of education and training, gender, their residence, marital status, employers' reluctance to hire them, the absence of disability-friendly workplaces, and PWDs' greater exposure to discrimination. They are also more likely to experience hardship, exclusion, and discrimination in the workplace and other areas (KNSPWD, 2008).

High unemployment rates among PWDs are undesirable because they reduce the likelihood that they will have access to essential socio-economic resources like good healthcare and education (World Bank, 2022). This situation presents a vicious cycle, with unemployment leading to poverty and lack of access to social and economic amenities, which in turn leads to prejudice on the part of employers, and so on (World Bank, 2022). Consequently, this study will address the following research questions:

- a. What personal and household characteristics influence the probability of unemployment of PWDs?
- b. What factors contribute to the gap in the incidence of unemployment between persons with and without disabilities?

1.2 Research Objectives

- a. To identify separately for persons with and without disabilities, the characteristics of individuals and households that make them more or less likely to be unemployed
- b. To explore the extent to which characteristics of individuals and their households contribute to the gap in the incidence of unemployment.

1.3 Justification

The government of Kenya launched vision 2030, which is a strategy devised with the objective of achieving sustained, long-term economic growth by the year 2030. The Kenya Vision 2030 requires that there be a balance struck between the number of available workers and the number of jobs that need to be filled. Vision 2030 includes a social pillar that gives priority to a wide range of human and social welfare initiatives, including policy proposals to lessen socio-economic stratification. The goal of this pillar is a high quality of life for Kenyans, and it is included in the plan as part of Vision 2030. To this end, the Vision Delivery Secretariat (VDS)

has been hard at work on an initiative to educate the public about the rights of PWDs, under the Public Procurement and Disposable [Preference and Reservation] Regulations 2013. The Act was amended in 2013 to mandate 30 percent of the public procurement budget for purchasing goods, works, and services from MSMEs owned by youth, women, and PWDs. The NCPWD also has a department that is responsible for promoting mainstreaming programs for PWDs.

In Kenya, the Persons with Disabilities Act, which was passed in 2003, requires that suitable adjustments be made to accommodate PWDs. According to the KNSPWD, economic and social discrimination against people with impairments is one of the most common reasons for their exclusion from employment (KNSPWD, 2020). As a result, the findings of the survey suggest that there is a need to increase awareness among various communities to reduce stigma and social discrimination, as well as the need for specific programs to target PWDs in various parts of the country to address the challenges that are faced by this critical demographic group (KNSPWD, 2020). Therefore, conducting research and gaining an understanding of the differences between these population groups is essential to inform the formulation of policy. Knowledge of any differences in the incidence of unemployment between persons with and without disabilities and the factors that predict the incidence of unemployment would therefore be helpful.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter presents the definition of "disability" in section 2.1 and the concept of "unemployment" in section 2.2. It also reviews the theoretical and empirical literature on the determinants of unemployment. The theoretical and empirical literature is discussed in Section 2.3 and 2.4, respectively, and an overview of the relevant literature is presented in Section 2.5.

2.1 Definition of disability

The World Health Organization has a three-pronged definition of disability:

- a. Physical, psychological, or cognitive impairment; examples include amputation of a limb, visual loss, or memory loss.
- b. Restricted activity due to difficulties with vision, hearing, movement, or problem-solving
- c. Limitations include working, socializing, enjoyment, and accessing health care and preventative services, among other everyday activities.

Furthermore, disabilities can be caused by preexisting conditions that manifest later in life, developmental disorders that become apparent during childhood, injuries (such as traumatic brain injuries or spinal cord injuries), or chronic conditions (such as diabetes), which can lead to impairments such as impaired vision, nerve damage, or amputation.

2.2 Concept of unemployment

According to the ILO, unemployed persons are: "Those above a specific age (16 years) who during a reference period were: Not in paid employment or self-employment (not even for an hour) or are currently available for paid employment or self-employment during the reference

period or are seeking work by taking specific steps in a specified recent period to seek paid employment or self-employment" (ILO, 1982, p. 4). Unemployment, when too high, is undesirable since it results in other socio-economic problems such as crime, homelessness, violence, and drug misuse (OHiggins, 1997; ILO, 2005). Additionally, being unemployed for long periods reduces the chances of securing a job because of inexperience and labour quality.

2.3 Theoretical explanations of unemployment

Workers' willingness to work (labor supply) and employers' willingness to hire (labor demand) are crucial in determining employment outcomes in the labor market. Theory predicts why some persons are more likely to be unemployed than others.

Neoclassical theory of Labour demand and labour supply

Individuals choose how many hours they work in the same way that they choose the goods and services to purchase. Workers compete in the job market with the goal of maximizing their utility with the income and leisure time they have available to them. The rationale behind the labor supply curve is based on decisions that are made in response to shifting wage levels along the labor-leisure budget constraint. According to this train of thought, people with disabilities may have a more challenging time finding work.

On the supply side, a disability may cause a person's financial condition to alter, as well as their preferences for the time they spend working compared to enjoying leisure activities. It's possible that fixed costs associated to a disability will lower their disposable income while simultaneously increasing their motivation to work, which will contribute to budgetary constraints. Nevertheless, the availability of disability cash transfers or other types of social insurance programs would influence the individual's income as well as their willingness to continue working. The opportunity cost of working may be increased by the amount of time

and money spent commuting to and from work. The substitution effect may result in a reduction in the opportunity cost associated with not working.

In addition, the onset of impairment may cause a shift in the preferences that determine the marginal value of leisure time. This is true if we consider leisure time in its broadest sense (including self-care-related activities). It is possible for it to increase in severity if the impairment forces the individual to spend a significant amount of time engaging in activities related to self-care or attending medical or rehabilitation appointments. The onset of a handicap is another factor that could have an impact on the marginal utility of consumption. If additional costs associated with caring for a disabled person are added, it's possible that it will go up (for instance, increased health care costs in nations without universal health insurance coverage). The effects of these supply-side factors on labor supply could be either favorable or adverse, depending on how prevalent they are.

On the demand side, if a worker is disabled, it could result in a decrease in their productivity, which could influence demand. It is anticipated that the severity of this disability-related employment disadvantage will vary from person to person based on several factors, one of which is the nature of the condition and how it relates to the person's area of work. It is possible that occupations in the primary sector, which are the most popular and available in developing countries like Kenya, will involve a significant amount of backbreaking physical work. It's possible that individuals who have trouble moving around won't be able to reach them. However, if companies are compelled to pay for adequate accommodations for their employees, this could cause the marginal cost to increase. As a result of these two demand-side implications, the market earnings of people who have disabilities may experience a negative impact, and the number of employments that are now available may decline.

It is reasonable to suppose that a person with a disability will have a lower level of productivity in their place of employment. Nevertheless, the amount to which this is true will change depending on the type of impairment and the requirements of the individual's line of work (Jones, 2008). It's possible that the person's preferences will change from consumption to leisure and that their income from activities other than work will increase because of their diminished capacity to work. Because of this, there is a chance that the wage at the reservation would go up, but the number of jobs that are available will go down.

High reservation wage workers and those with a large stock of human capital are more likely to actively seek new employment. This is because they are less likely to be aware of the varying compensation offers and hiring standards of other companies (Ehrenberg et al., 2004). People who possess the minimum of skills have a greater chance of receiving an offer of employment. However, since individuals are rational beings, they are more likely to gather several job offers and select the one that provides compensation that is comparable to their reservation wage (Ehrenberg et al., 2004). Because of this, fewer job openings lead to an increase in the cost (in terms of duration) of unemployment, as well as their reservation wages and the likelihood that they will continue to be unemployed (Ehrenberg et al., 2004). Wages on reservations and the development of human capital are likely to be affected by factors such as an individual's age, gender, and degree of education. The employment disparities that exist between people with disabilities and their non-disabled counterparts may be attributable, in part, to these individual traits.

Efficiency wages are the underlying cause of wage rigidity and unemployment (Stiglitz, 1981). Workers are paid wages that are greater than the prevailing rate in the market to motivate them to produce more (Stiglitz, 1981; Riddell et al., 2002). In addition, businesses will often increase the cost of unemployment for their workers as a means of discouraging shirking. The length of time it will take an employee to acquire a new position that pays the same as their former one

is a significant factor in determining the financial impact of being terminated. If the costs are high, workers will work harder out of the concern that they will lose their jobs. This leads to high unemployment as a direct consequence since fewer jobs exist. Workers with disability in Kenya are receiving retirement pay from their employers, which is helping to enhance both morale and productivity in the workplace.

In the labor market, frictional unemployment happens when there is a mismatch between job seekers and employers because of insufficient or delayed information, which can be produced by a variety of variables. This mismatch can be attributed to various causes (Ehrenberg et al., 2004). The job search model illustrates how the level of frictional unemployment in the labor market is influenced by the factors that influence the ability of unemployed employees to locate and accept job offers (Ehrenberg et al., 2004). Two premises serve as the basis for this idea. To begin, the labor market is defined by a lack of information on the skill sets of potential employees and the roles that are currently available to fill. In addition to this, the labor market is characterized by many unqualified applicants.

Second, wages are not determined by the features of the workers but rather by the particulars of the work that is being done (Ehrenberg et al., 2004). If each employer has minimum hiring conditions, which may include educational qualifications, work experience requirements, and age requirements, then the wage offers that are associated with job openings in the labor market will be disseminated (Ehrenberg et al., 2004). Because the model operates under the assumption that job seekers do not have access to wage information, it approaches the process of finding work as if it were a series of random visits to multiple firms. If the candidate's skills are comparable to those desired by the employer, then the candidate is selected for the position. The model predicts that human capital and reservation wages can explain the probability of unemployment.

Geographical inequalities are another contributor to structural unemployment that should not be overlooked. Wage rigidity occurs when demand in two locations is the same, but supply in one location is lower than in the other. This situation leads to an increase in unemployment (Ehrenberg et al., 2004). There are three reasons why workers in this region are still waiting for employment opportunities to become available to them. To begin, it's possible that the need for the same type of work in the other location is unknown. Second, the costs of moving and the transactions involved are high. Third, there is a huge emotional cost associated with having to leave behind family and friends (Ehrenberg et al., 2004). This makes it more challenging to move around geographically, and migration tends to diminish as people get older. Because of the expenses involved in moving from one location to another, it is highly likely that people with disabilities will find themselves unemployed.

2.4 Review of Empirical Studies

This section summarizes previous studies that investigated the factors contributing to unemployment in different countries. The reviewed empirical literature suggests individual and geographic factors that influence unemployment. This section is organized systematically according to each factor that contributes to unemployment.

Age has been linked to unemployment in prior research. Johnson and Butrica (2012) conducted an exploratory analysis of age differences in unemployment using survey data from the U.S. Census Bureau. They discovered that older employees suffered lower unemployment than their younger colleagues during this period. In Ghana, Baah-Boateng (2013) used a probit model to investigate the factors that affect unemployment in Ghana. The results show that unemployment rates decrease with age. The rate for young people ranged from 5% in 1998/99 to 6.6% in 2005/06, compared to less than 4% for other age groups. This finding is explained by the youth's greater susceptibility to economic hardship than their older counterparts due to

their limited labor market experience and lack of knowledge. Using probit models, Mourelo and Escudero (2013) examined employment outcomes in Kenya and discovered that young people had a notably higher likelihood of being unemployed than adults. Vuluku et al. (2013) employed a probit model and data from the 2005/06 household budget Survey. They found that men and women of all ages are less likely to be unemployed than people between the ages of 15 and 24. Additionally, the ILO(2015) reported that the unemployment crisis is particularly hard on young workers aged 15 to 24, with a global youth unemployment rate of almost 13% in 2014 and a predicted rise in the following years. On the other hand, older workers had done well since the global financial crisis began in 2008. Carlsson and Erikssonfield (2019) ran an experiment with over 6,000 fictitious resumes for people aged 35 to 70. The resumes were submitted to businesses in Sweden advertising entry-level and middle-level positions. The researchers tracked callback rates and observed a drop beginning in people's 40s. Employers' bias against older workers' aptitude for learning new skills may be to fault for this pattern.

Drydakis et al. (2022) investigated how age interacts with other factors, such as race and gender, to affect who is hired and how much wage they are offered for open positions. For this study, there were four separate field tests carried out in England at the same time. The employment outcomes of young white British men were compared to those of older white British men and females, as well as older black British men and females. The scope of the study was limited to job openings in the private sector, specifically in the service and sales industries, both of which generally only require a moderate amount of education or experience to be considered qualified for available positions. This study found that older white British men and women, as well as older black British men and women, experienced employment entry barriers and were selected for lower-paid jobs. According to the findings, black British men and women living in the United Kingdom are more likely to be subjected to age discrimination. It's possible that these tendencies are consistent with prejudice toward ethnic minorities and

gender discrimination assumptions, such as the notion that women experience a more significant decline in physical abilities and professional performance than males do.

Individual employment outcomes have also been found to vary by gender, with empirical analysis showing that women are more likely to be unemployed than men. Vuluku et al. (2013) employed probit regressions and a decomposition technique to examine the gender disparity in factors influencing unemployment and underemployment in Kenya. Women experiencing higher unemployment than men may be explained by women's age. Women become more responsible for their families and have less time for work. In addition to this, Drydakis et al. (2022) investigated the interaction between age and other individual characteristics, such as race and gender, to affect employment and the wages offered for open positions. The study found that black British women face the most significant rates of age discrimination of any other group in the United Kingdom.

A study was carried out by Kriaa et al. (2020) with the purpose of gaining a better understanding of the relationship between the individual's characteristics and the likelihood of young men and women in Tunisia finding gainful employment. The Kaplan-Meier approach was applied in order to determine the possibility of remaining unemployed, and the results of the study revealed that found that women in Tunisia face higher unemployment rates compared to the men.

Using a meta-analysis and two additional empirical studies, Triana et al. (2019) examined the hypotheses of the deprivation theory on the role of context in mediating the relationship between workplace discrimination and professional success. In the meta-analysis, more than eighty-five correlations were utilized to analyze significant predictors of gender discrimination in the workplace as perceived by workers. These correlations were from research that was published as well as research that had not been published. The findings of this study expanded

the applicability of the deprivation theory by drawing attention to the ways in which cultural and legal norms at the national level can act as moderators of the association between gender discrimination in the workplace and the experiences of workers. It was discovered that workers' perceptions of experiencing gender discrimination had a detrimental effect on various elements of their lives, including their attitudes about their professions, their physical and mental health, and their ability to advance in their careers (job-based and relationship-based). In addition, countries with cultural practices that are more gender egalitarian had correlations that were stronger across a number of employee outcomes of reported workplace gender discrimination. Furthermore, the findings of the meta-analysis were supported by evidence from two separate studies (an employee survey and an experiment), which lent credibility to the relative deprivation theory that forms the basis of this study's approach. It is essential for future research and practice to take into account the impact of the national context on organizational actions to prevent and manage gender discrimination and its ramifications for employees and, ultimately, employers. These ramifications have important implications for gender equality.

Conversely, it was discovered by Mourelo and Escudero (2013), using data from Kenya, and Sackey and Osei (2006), using data from Ghana, that women were less likely to be unemployed than men. According to Sackey and Osei (2006), this is the case in Ghana because most women sought self-employment due to a lack of work opportunities. Butkus et al. (2021) investigated how the nonlinear impact of sectoral output growth brought on by the business cycles influenced the unemployment rates of various age groups and genders. The research used a first-differenced specification of Okun's Law to estimate heterogeneous coefficients for each of the following economic sectors: agriculture, manufacturing, services, and construction. In addition, the size of each industry, which was determined by its share of total output, was taken into account during the course of the business cycle. It was discovered that various parts of the economy exhibited varying degrees of sensitivity to rises in the rate of unemployment.

According to the findings of the study, male construction employees were more adversely affected by the shift in the business than female construction workers were.

Studies examine the connection between marital status and employment. Wamalwa (2009), Vuluku et al. (2013), and Mourelo and Escudero (2013) employed KIHBS 2005-06 data and found that single people are more likely to be unemployed than married people. According to Wamalwa (2009), being single raised the likelihood of being unemployed by 2.7%. Siddiqui and Qayyum (2007) found a similar result for Pakistan. They argued that the higher unemployment rate among single people is due to married people's obligations to their families, which makes earning money a priority for them. According to data from Batu (2016), this is not the situation in Ethiopia, where married people are more likely to experience unemployment than those who have never been married, are separated from their spouse, or are widowed.

It was investigated by Fazio et al. (2018) in a research of Chinese internet job boards if the un/employment histories of single and married women affected their interview prospects differently. Over 7,000 crafted applications were used in the study, and every callback was tracked. After that, the effects of each factor were evaluated using linear probability models. According to the results, prospective employers evaluate female applicants differently depending on whether or not they are married. In light of the current unemployment rate, the study concluded that married women have a lower chance of finding gainful employment. As a result, it improves the employment prospects of single women who are seeking employment.

A person with a disability is more likely to be unemployed. According to Wamalwa's (2009) research, those in Kenya who do not have physical disabilities have a 12 percent lower likelihood of being unemployed than those with physical disabilities. Research on disability conducted by Lewis et al. (2018) examined how anti-discrimination laws impacted the

employment opportunities available to persons with disabilities in the United States who worked for the federal government. The study used a sample that was selected annually from the Central Personnel Data File that was maintained by the OPM from 1977 through 1989. In the paper, the researchers investigated employment regulations, including job placement and promotion procedures. According to the findings of the study, persons with disabilities working for the federal government "made limited gains in the federal work force except in their numbers." The authors of the study warned against linking the findings to discriminatory actions in a direct manner. However, they urged paying more attention to the working life of Americans with disabilities.

The research conducted by McKinney et al. (2021) investigated how persons with disabilities coped with challenges such as filling out job applications and advertisements, participating in interviews, keeping their condition concealed or revealing to potential employers, and taking various types of standardized tests. Interviews with 72 individuals from South Africa who live with a range of disabilities and provided qualitative data about the challenges they experience were conducted in a semi-structured format. The findings showed that despite the implementation of progressive legislation, the transition into the workforce remains difficult for persons who have disabilities.

There is no clear correlation between education and employment outcomes in empirical studies. There is a dissenting opinion among the available data regarding whether or not increasing one's level of education will result in a lower unemployment rate. Previous research has shown that a person's educational attainment and work status are linked in several nations. For instance, Batu (2016) discovered that Ethiopian youth with a certificate, diploma, or higher have a higher probability of finding employment. Institute or college graduates have a lower unemployment rate (17.2%) than non-graduates (24.6%). Similar results emerge from Vuluku et al. (2013) and Wamuthenya (2010), that secondary-educated Kenyans are less likely to be

unemployed than those with only primary-level education. Riddell and Song (2011) investigated the extent to which individuals with greater levels of education have a better chance of finding new employment. The purpose of the study was to develop instrumental variables that would enable the researchers to isolate the positive correlations between education and transitions into the labor force. These variables included information on mandatory schooling and child labor restrictions, as well as the danger of compulsory military service during the time of the Vietnam War. It was discovered that getting an education considerably increased the reemployment rates of formerly unemployed people. The periods at which a student is 12 and 16 years old have the greatest concentration of significant effects. There is a dissenting opinion among the available data regarding whether or not increasing one's level of education will result in a lower unemployment rate.

Education was studied by Lavrinovicha et al. (2015) to see how it affected unemployment and income in Latvia between the years 2000 and 2013. The study employed correlation and regression analysis as its primary methods. Between the years 2002 and 2013, the research found a marginally significant negative correlation between levels of education and rates of unemployment, with a significance level of 0.01. A person's chances of finding gainful employment in the labor market improve with their level of education.

On the other hand, Qayyum and Siddiqui (2007) found that persons with formal education had a greater unemployment rate in Pakistan than those without formal education. Additionally, Baah-Boateng (2013) found that in Ghana, individuals with university education had higher unemployment rates in 1991–1992, followed by those who had completed their secondary education, while those with no formal education had the lowest rates. Secondary-educated individuals had the highest unemployment rates in 2005–2006, followed by university graduates, with non-educated individuals having the lowest rates. Wamalwa (2009) and

Mourelo and Escudero (2013) found that in Kenya, secondary school completers are more likely to be unemployed than primary school completers.

Mpendulo and Mang'unyi (2018) conducted a study in which they looked at the association between young unemployment and educational achievement in four different municipalities located in South Africa. The human capital theory was utilized as the conceptual framework for the purpose of this study. This study employed a quantitative research paradigm; hence, participants were recruited at random, and a cross-sectional survey design was used for the research. The data was collected from the responses of 120 young adults who were now employed and had provided their responses independently. After analyzing the data using cross tabulation, correlation, and chi-square, regression analysis was used to test whether or not the expected relationships between the variables actually exist. It was discovered that there is a positive correlation between education and unemployment, and that education level has the most significant impact on unemployment.

Sackey and Osei (2006) investigated the factors that determine unemployment in Ghana. They discovered that household heads have a lower likelihood of unemployment, probably due to the additional familial responsibilities which require employment. Wamuthenya (2010) used the Blinder-Oaxaca decomposition technique, the 1986 Urban Labor Force Survey, and the 1998/99 Labor Force Survey data in Kenya to determine the factors influencing unemployment and gender gaps in unemployment. The study found that employers who use family headship to indicate unobserved productive qualities are more likely to hire household heads. Trzebiatowski (2020) uses the conservation of resources theory in a multi-source analysis to examine the relationship between discrimination in family responsibilities and work-life balance through the lens of emotional stress. The study analyzed not just the roles that gender and power distance values play in this dynamic but also the association between workers' perceptions of discrimination based on their family duties and their degrees of

emotional stress. According to the findings, male employees who report increased levels of emotional stress and conflict between their professional and personal lives are more likely to have experienced familial responsibility discrimination from their employer. Whether the power gap between supervisor and employee is high or low, emotional stress and work-life conflict are both higher for women who feel discriminated against by their supervisor for taking on family responsibilities.

It has also been observed that the probability of an individual becoming unemployed differs according to the location of their place of residence. According to Kriaa et al. (2020), it is easier for the youth living in urban areas of Tunisia to find gainful employment compared to the youth residing in rural areas. Vuluku et al. (2013) used the Fairlie decomposition technique and KIHBS 2005/06 data to investigate the role that disparities in the distribution of observable individual and household variables play in Kenya's gender unemployment gap. They discovered that people living in rural areas had a 0.039 % higher probability of being unemployed than people living in urban areas.

In Ghana, Sackey and Osei (2006) carried out a study and found that urban residents have a higher likelihood of being unemployed than rural residents. Specifically, the probability of being unemployed is increased by 6.5 percentage points for the individual who resides in an urban location as opposed to rural communities. Kingdon and Knight (2004) conducted research in South Africa and found that the likelihood of being unemployed was 8.6 percentage points higher in urban areas. Furthermore, Wamalwa's (2009) probit estimates show that urban youth have by 16.6 percentage points higher likelihood of unemployment than youth in rural areas. This was shown to be the case when they compared youth from rural and urban areas.

According to Baah-Boateng (2013), in Ghana, in 1991–1992, the unemployment rate in urban regions was thirteen times greater than that in rural areas, while in 1998–1999 and 2005–2006,

it was more than four times higher. This was linked to young people moving from rural to urban areas in search of jobs, which are hard to come by. The high unemployment rate in urban areas is also a result of poor amenities and unappealing earnings in rural areas. According to research by Mourelo and Escudero (2013) and Wamalwa (2009), young people in Kenya in urban areas are less likely to find employment than those in rural areas. Using cross-tabulation and descriptive analysis, Batu (2016) examined Ethiopia's young unemployment. According to the survey, more developed areas, like Addis Ababa and Amhara, have greater unemployment rates than less developed areas, such as Gambela and Afar. In addition, Qayyum and Siddiqui (2007) discovered that the structural mismatch between skill demand and supply led to greater unemployment rates in Pakistan's urban areas than in rural areas.

Franklin (2018) conducted a study in which he randomly assigned transportation subsidies to youth who were unemployed in urban Ethiopia. The purpose of this study was to determine whether or not high search costs affect the labor market outcomes of job seekers who reside in rural areas. The treated respondents increased the amount of effort they put into finding employment, which in turn increased their chances of securing stable, long-term jobs. Franklin utilized a high-frequency phone call survey to monitor the trajectory of search behavior across time in order to demonstrate that the subsidies increased job search intensity as well as the usage of formal search strategies. The findings indicated that young people gave up their job hunt far too soon due to concerns about their financial situation.

Marinescu (2018) evaluated the data from the most popular online job board, CareerBuilder.com, to determine whether or not aiding job seekers in physically relocating to where available jobs are situated will significantly lower the rate of unemployment in the United States. According to the findings of the survey, job seekers were 35% less inclined to apply for employment that was 10 miles or further from their homes. On the other hand, this aversion to travel is relatively minimal given that, on average, job seekers live within driving

distance of potential positions. Consequently, this aversion to travel is not a significant barrier to employment. According to the search and matching model used in the research, moving job-seekers around in an effort to lower unemployment would have just a marginal influence, amounting to 5.3%. As a result, the geographical mismatch only accounts for a small portion of the overall unemployment rate.

Several authors have employed the decomposition approach to analyze various demographic groupings. Wamuthenya (2010) employed the Blinder-Oaxaca decomposition technique using the 1986 Urban LFS and the 1998/99 LFS, and Vuluku et al. (2013) employed the Fairlie decomposition technique using the 2005/06 KIHBS to examine the contribution of observable individual and household variables to unemployment by gender in Kenya. The findings show that variations in observable traits explain 81–84 percent of the unemployment gap in urban areas and 88.8% of the gap in urban and rural areas (Vuluku et al., 2013).

Mizunoya and Mitra (2012) used the World Health Survey to analyze the employment gap between persons with and without impairments in fifteen developing nations. According to the study, which employed the Blinder-Oaxaca decomposition method, results from a logistic decomposition imply that for countries where there is a disability gap in employment, observable characteristics of persons with or without disabilities do not account for much of the disparity.

The impediments to employment for young people with and without disabilities in South Africa were compared in a survey by Cramm et al. (2013). Logistic regression analyses were performed to predict impediments to employment for impaired and non-disabled young adults. The survey showed that young people with and without disabilities have different employment experiences. The latter is more likely to be unemployed due to a lack of job opportunities and

appropriate qualifications. Unemployment was linked to negative self-perception and health outcomes for handicapped youth.

Using survey data from the Australian Bureau of Statistics, Wilkins (2004) analyzes the impact of disability on four different employment statuses: not in the labor force, unemployment, part-time employment, and full-time employment. The research, which employed a multinomial logit model, found that disability acts mostly to decrease labor supply rather than demand. Further, the study found that impairment significantly affects participation in the labor force. An individual's ability to participate in the labor force is negatively impacted by several factors, including the number and severity of impairments, the age at which their disabilities first manifest, and the degree of each impairment.

To determine whether discrimination based on age is still a significant factor in the current French labor market, Challe (2013) utilized the Fairlie decomposition method to conduct a study of the Employment Surveys that were conducted between the years of 1982 and 2011. According to the data, 6.8% of the total variance in overall participation during the 1980s can be attributed to factors that are beyond the control of the individual. Because of this, the employment probability dispersion would be greater for populations with features that are similar to one another. In addition, during the decade that began in 1990, the component that cannot be explained reached a value of -11.2% of the overall employment difference (the other component has a value of 111.2% during this time). On the other hand, gender is a substantial contributor, as seen by its effect size of -0.0021 (-1.5% of the total). A direct consequence of this is that it tends to increase the standard deviation of one's probability of finding work. The decade beginning in 2011 produced quite different results in regard to the data that was collected. The proportion of the employment difference that can be explained is still less than ten percent, coming in at -9.8 percent, while the proportion of the employment gap that can't be explained grows to 109.8 percent. The variable 'gender' now has a positive impact of 1.3%

when compared to earlier time periods; nevertheless, this contribution is still rather minor because it is relatively insignificant. As a result, it helps to reduce the gap in work prospects that exists between groups of people who are, overall, comparable.

On the other hand, Sevak et al. (2015) investigated whether individual variables affect the employment gap between those with and without disabilities. The results showed that PWDs had a lower employment rate than those without impairments. Remarkably, the results showed that the disability employment gap is smaller for women than for males, indicating that women with impairments may experience fewer work impediments than men. Additionally, the employment gap is most pronounced during the prime earning years (middle-aged). With higher educational attainment, the employment gap between those with disability and those without it continuously narrows. This shrinking disparity might mean that those with impairments stand to gain more from higher education than those without impairments.

Other empirical research has investigated employment outcomes but not the employment gap. For instance, a mixed-method study was conducted by Ebuenyi et al. (2019) to examine the employability of persons with mental disorders in Kenya. Both quantitative and qualitative data from surveys and focus groups were used in the study. The results showed that those who were thought to have mental problems experienced the most significant employment barriers (63.2%). Ebuenyi et al. (2019) investigated the employers' perceptions of work chances for persons with mental disorders in Kenya using a mixed-method approach. According to the study's findings, only 15.4% of those surveyed had ever had a job. Employers also mentioned that skill level was a key factor when recruiting PWDs.

2.5 Conclusion of Literature Review

Previous research has shown that a person's employability is influenced by their impairment. According to theoretical arguments, a variety of factors, such as human capital, business cycles,

information symmetry, wage rigidity, efficiency wages, geographical imbalances, and job search expenses, may contribute to unemployment. Additional personal, household and geographic variables that affect work outcomes include age, gender, education level, disability status, marital status, household headship, and geographic location.

According to statistics, PWDs have higher unemployment rates. However, a lot of research does not investigate if there are any differences in the causes of unemployment for those with and without impairments. By examining the variables that determine the likelihood of an individual being unemployed based on their impairment, this research aims to close this gap. The study employs the Fairlie decomposition technique to determine how much of the gap is unexplained and how much is explained by variations in the individual's impairment and household factors.

CHAPTER THREE: RESEARCH METHODS

3.0 Introduction

This study's main objective is to investigate the incidence of the unemployment gap between PWDs and persons without disabilities. Specifically, the study aims at identifying separately for persons with and without disabilities, the characteristics of individuals and of their households that make them more or less likely to be unemployed, determining the gap in the incidence of unemployment between persons with and without disabilities, and to explore the extent to which characteristics of individuals and their households contribute to the gap in incidence of unemployment. This chapter presents the analytical methods used in investigating the gap between the employability of PWDs and persons without disabilities. This chapter discusses the methodology. The econometric model, the specification and estimate process for the unemployment probit model, and the difference in unemployment rates between people with disabilities and people without disabilities broken down into its parts will be presented in Section 3.1. The data and variables that were utilized in the study are discussed in Section 3.2.

3.1 Econometric Model

3.1.1 Determinants of Unemployment

The first research question addressed by this study is identifying separately for persons with disabilities and non-disabled persons, the characteristics of individuals, and residence that make them more or less likely to be unemployed.

Separate probit models were used to investigate and explain how individual and household characteristics influence unemployment incidence.

The Probit Model

In the Kenyan labor market, workers are classified into PWDs (D) and non-disabled (P). Let there be an unobserved variable U_i^* representing the probability of an individual's employment status. Assuming an observed variable U_i is generated by the unobserved variable U_i^* that is related to the observed individual and household characteristics in the following structural equation:

$$U_i^* = X_i \beta + \varepsilon_i \quad (1)$$

Where β is the vector of population parameters, x_i is the vector of regressors, and ε_i is the disturbance term. Since U_i^* cannot be observed, we observe U_i , that is, whether the individual is unemployed ($U_i = 1$) or whether the individual is employed ($U_i = 0$). Therefore:

$$U_i = \begin{cases} 1 & \text{if } U_i^* > 0 \text{ if the individual is unemployed} \\ 0 & \text{if } U_i^* \leq 0 \text{ if the individual is employed} \end{cases} \quad (2)$$

Thus, the probability of being unemployed, conditional to X , can be represented by the equation:

$$Pr(U_i = 1|X_i) = Pr(U_i^* > 0|X_i) \quad (3)$$

Rewriting equation (3) using (1):

$$Pr(U_i = 1|X_i) = Pr(X_i \beta + \varepsilon_i > 0|X_i) \quad (4)$$

Subtracting $X_i \beta$ from both sides of the inequality:

$$Pr(U_i = 1|X_i) = Pr(\varepsilon_i > -X_i \beta|X_i) \quad (5)$$

We must invert the inequality since the cdf expresses the likelihood of a variable being smaller than a specific value. Thus,

$$Pr (U_i = 1|X_i) = Pr (\varepsilon_i \leq X_i\beta|X_i) \quad (6)$$

The right-hand side represents the cdf of the disturbance term distribution. Therefore, we can recast equation (6) as a probit model if the disturbance term is assumed to be normally distributed:

$$Pr (U_i = 1|X_i) = \Phi (X_i \beta) \quad (7)$$

Where Φ is the normal cumulative distribution function confining the unemployment probability between 0 and 1.

3.1.2 Decomposition of the disabled and non-disabled unemployment gap

The second research question addressed by this study is to explore the extent to which characteristics of individuals and of their households contribute to the gap in the incidence of unemployment. The influence of an individual's and household's traits on their unemployment status is investigated using a decomposition technique. Specifically, the unemployment gap between the disabled and non-disabled was decomposed using the extended Blinder-Oaxaca decomposition method proposed by Fairlie (2003) for non-linear models. Fairlie (2003) used the approach to explain racial differences. Similarly, Vuluku et al. (2013) and Challe (2013) employed the decomposition technique to decompose the gender employment gap in Kenya and age discrimination in the French labor market, respectively.

We let the average probability of PWDs (D) unemployment be represented as:

$$\bar{Y}_i^D = \sum_{i=1}^{N^D} \frac{\Phi (X_i^D \hat{\beta}^D)}{N^D} \quad (8)$$

and the average probability of non-disabled (P) unemployment be:

$$\bar{Y}_i^P = \sum_{i=1}^{N^P} \frac{\Phi (X_i^P \hat{\beta}^P)}{N^P} \quad (9)$$

Where:

- \bar{Y}_i^D - average probability of unemployment of disabled persons
- \bar{Y}_i^P - average probability of unemployment of non-disabled persons
- N^D - sample size representing disabled persons
- N^P - sample size representing non-disabled persons
- β^D - estimated coefficient of the characteristic of disabled persons
- β^P - estimated coefficient of the characteristic of non-disabled persons
- Φ - cumulative distribution function

The difference in the average probability of unemployment of disabled persons and non-disabled persons can be expressed as:

$$\bar{Y}_i^D - \bar{Y}_i^P = \sum_{i=1}^{N^D} \frac{\Phi(X_i^D \hat{\beta}^D)}{N^D} - \sum_{i=1}^{N^P} \frac{\Phi(X_i^P \hat{\beta}^P)}{N^P} \quad (10)$$

Therefore, to evaluate the influence of the individual and household characteristics in the disabled-nondisabled unemployment gap, we decompose equation (10) to be expressed as:

$$\bar{Y}_i^D - \bar{Y}_i^P = \left\{ \sum_{i=1}^{N^D} \frac{\Phi(X_i^D \hat{\beta}^D)}{N^D} - \sum_{i=1}^{N^P} \frac{\Phi(X_i^P \hat{\beta}^D)}{N^P} \right\} + \left\{ \sum_{i=1}^{N^D} \frac{\Phi(X_i^D \hat{\beta}^D)}{N^D} - \sum_{i=1}^{N^P} \frac{\Phi(X_i^P \hat{\beta}^P)}{N^P} \right\} \quad (11)$$

Equation's (11) first part represents the portion of the disparity attributable to differences in the distribution of individual and household characteristics across groups. Put another way, it quantifies the anticipated shift in the unemployment probability gap if disabled and non-disabled persons have similarly distributed traits. This is the observed segment of the unemployment gap.

The second term represents the percentage of the discrepancy that can be attributed to varying rates of return to observable qualities. This is the unobserved segment of the unemployment gap. It's a gauge of how the unemployment level is likely to evolve over time if returns to individual and household characteristics of disabled and non-disabled persons are similar.

3.2 Data source and definition of variables

The empirical analysis of this paper makes use of secondary cross-sectional data from the 2021 Fin access Household Survey. This survey was carried out by the KNBS, the CBK, and FSDK. Individuals living in family units from all around Kenya were asked to participate in the survey. People aged 16 and older made up the bulk of its target demographic. The survey was designed to give estimates for the entire country as well as for each of the 47 counties individually. It was decided that the minimum sample size for integrated Surveys would be 1,700 Enumeration Areas (EAs) and 30,600 households.

Additionally, the minimum sample size for each Survey domain would be independently calculated. Using data from the 2019 Kenya Population and Housing Census, survey responses were gathered from a sample of households in Kenya that was representative of the country (K-HMSF). Using the probability proportional to size, or PPS, ten thousand clusters were selected from a total of 128,239 Enumeration Areas (EAs) that were produced for the 2019 Population and Housing Census. The EAs, which were the primary sampling units, were constructed out of 92 different strata that were drawn at random from the K-HMSF. To populate each EA, a random selection of 18 households was made from the whole list of households that were counted for the 2019 KPHC. The demographics of the respondents, their housing conditions, their educational and medical backgrounds, the most recent technological developments, consumer rights, financial literacy, and their levels of indebtedness were all subjected to data collection. The dependent variable is unemployed, and the independent

variables include age, gender, marital status, disability status, completed education level, household head, and location.

3.2.1 Age

Their age often determines individuals' participation in the labor force. Younger people are presumed to face high unemployment rates than their elder counterparts. Therefore, the unemployment rates tend to decline with an increase in age, exhibiting a non-linear relationship.

Additionally, PWDs and non-impaired persons of the same age are socially constructed to have different societal roles. Younger persons have fewer financial responsibilities than their elder counterparts (Sackey and Osei, 2006). As such, age sometimes predicts the individual's work experience as well. This paper split the variable age into five dummy variables: 15–24, 25–34, 35–44, 45–54, and 55–64. Those aged 15 to 24 were used as a baseline.

3.2.2 Gender

An individual's gender is another factor that could explain why they are out of work. Women have a higher unemployment rate than men because they tend to stay out of the workforce for longer. This is because of the responsibilities in the household, such as raising children. Additionally, it might be due to personal traits or prejudice. Some employers might discriminate against females depending on the nature of work, especially if it involves strenuous activity (Azmat et al. 2006; Vuluku et al. 2013). The respondents' gender is coded as a dummy variable, with responses taking the value of one if the respondent was female and the value 0 for male.

3.2.3 Marital status

Many studies have observed that marital status affects the unemployment status of individuals. Wamalwa (2009) found that being single raised the unemployment rate by 2.7%. According to

Kingdon and Knight (2004), companies are more likely to recruit married people because they view them as mature and dependable compared to unmarried people. This study assigned a value of 1 to a married individual, while unmarried people were assigned a value of 0.

3.2.4 Disability status

An individual's impairment influences participation in the labor force. Several studies have shown that PWDs experience higher unemployment rates for various reasons. It is presumed that disabled persons have lower productivity at work than their non-disabled counterparts, depending on the task and their impairment level (Jones, 2008). Additionally, evidence from the US indicates that disabled persons were employed in non-standard employment characterized by lower earnings (Jones, 2008). This study used a dummy variable and assigned 1 to show disability and 0 for non-disabled persons.

3.2.5 Education level completed

The correlation between education and unemployment rates is quite unclear. Authors such as Lavrinovicha et al. (2015), Batu (2016), Vuluku et al. (2013), and Wamuthenya (2010) found that higher education levels reduced unemployment probability. Firms hiring prefer candidates who meet their minimum education levels. This is because they have the kinds of skills that are increasingly valuable in a market driven by rapid technological change (Elhorst, 2003). Additionally, they are simple to train and produce better results afterward, and they are less likely to experience layoffs and display more stable employment patterns (Elhorst, 2003; Wamuthenya, 2010; Kingdon and Knight, 2004). On the other hand, some studies have found that higher education levels result to higher unemployment levels. The variables used to capture education were no formal education (none), primary education, secondary education, technical/vocational training, and university education.

3.2.6 Household headship

Studies show a negative correlation between being the head of a household and the likelihood of being unemployed. Sackey and Osei (2006) found that being the head of the household in Ghana was associated with having a lower probability of being unemployed. The additional responsibilities of a family head make it necessary for them to maintain gainful employment. Firms are more likely to hire household heads if they view the position as a proxy for underlying productive qualities (Wamuthenya, 2010). The household head variable was a dummy, with a value of 1 assigned for an individual who was a household head and 0 for individuals who were not household heads.

3.2.7 Location

Researchers have found that where one resides can affect how likely they are to be unemployed. Kingdom and Knight (2004) in South Africa found that the risk of unemployment rose by 8.6 percentage points in urbanized regions. Vuluku et al. (2013) applied the Fairlie decomposition method to data from the 2005/06 KIHBS and found that the unemployment rate was 0.039 percentage points higher in rural areas compared to metropolitan ones. Even further, Wamalwa (2009) investigated the dynamics of youth unemployment in Kenya by employing a probit model. The study found that the likelihood of youth unemployment was 16.6 percentage points higher for those residing in urban regions than for those in rural areas. The location variable was a dummy variable, with a value of 1 assigned to individuals living in urban areas and 0 for individuals residing in rural areas.

Table 1: Variables Definition and Measurement

Variable	Variable Definition and Measurement
Unemployed	1= unemployed 0 = employed

Age	
15-24	1 = individual is between ages 15 and 24, 0 otherwise
25-34	1 = individual is between ages 25 and 34, 0 otherwise
35-44	1 = individual is between ages 35 and 44, 0 otherwise
45-54	1 = individual is between ages 45 and 54, 0 otherwise
55-64	1 = individual is between ages 55 and 64, 0 otherwise
Gender	1 = female 0 = male
Marital status	1 = married, 0 otherwise
Disability status	1 = with a disability, 0 otherwise
Education level completed	
None/primary level	1 = individual has not completed primary education, 0 otherwise
Primary level completed	1 = highest level of education is primary school, 0 otherwise
Secondary completed	1 = highest level of education is secondary school, 0 otherwise
Technical training	1 = highest level of education is technical training, 0 otherwise
College/University	1 = individual has completed college/university, 0 otherwise
Household Headship	1 = household head, 0 otherwise
Location	1 = individual resides in an urban area, 0 otherwise

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.0: Introduction

This chapter presents the findings from this study in three sections. Section 4.1 describes the data for all the variables, section 4.2 gives the results for the estimated probit models, and section 4.3 presents the decomposition of the PWDs' and non-disabled unemployment gap.

4.1 Descriptive Statistics

This study used cross-sectional data from the 2021 Fin access Household Survey, which was conducted by the Kenya National Bureau of Statistics (KNBS), the Central Bank of Kenya (CBK), and Financial Sector Deepening Kenya (FSDK). Table 2 provides an overview of the characteristics that are representative of the entire sample, whereas Table 3 provides descriptive statistics that are further broken down according to the participants' employment status. Additionally, table 4 compares PWDs and non-disabled persons' characteristics.

4.1.1 Descriptive Statistics for the pooled sample

Table 2 shows that the majority of the participants in the labour force were between the ages of 25 and 34. Women made up a slightly greater share of the workforce (56.96%) than men, and 56.25 percent of the sample were married. The vast majority of the respondents have not progressed beyond the basic primary school level of education, while just a tiny percentage have earned a degree from the university. The proportion that did not have any form of formal education was 14.32%. 40.60% had a primary level of education, 32.57 % had a secondary school education, 7.68 percent had received vocational training, and 4.73% had a university education. More than half (54.97%) of the participants were household heads, and 36.57% resided in urban areas.

Table 2: Descriptive statistics for the pooled sample

Variable	Observations	Mean	Standard deviation
Age			
15-24	19,663	0.2439	0.4294
25-34	19,663	0.3009	0.4586
35-44	19,663	0.2234	0.4165
45-54	19,663	0.1353	0.3421
55-64	19,663	0.0966	0.2954
Gender	19,663	0.5696	0.4951
Marital status	19,663	0.5625	0.4961
Disability	19,663	0.0911	0.2877
Education			
None	19,663	0.1432	0.3502
Primary	19,663	0.4060	0.4910
Secondary	19,663	0.3257	0.4686
Vocational	19,663	0.0768	0.2663
University	19,663	0.0473	0.2130
Household Head	19,663	0.5497	0.4975
Location	19,663	0.3657	0.4816

4.1.2 Descriptive Statistics of the pooled sample conditional on unemployment

There are distinct distinctions in descriptive statistics based on employment status. The number of unemployed individuals exceeded the number of employed ones by 15,233. As shown in

Table 3, the proportion of unemployed individuals is greater than the proportion of employed individuals for all age groups except those aged 24-35. This demonstrates that, up to a certain age, the likelihood of gaining a job grows, but afterward, it begins to decline.

Table 3: Descriptive Statistics for Pooled Sample Conditional on Unemployment

Unemployed				Employed		
Variable	Observations	Mean	Standard deviation	Observations	Mean	Standard deviation
Age						
15-24	17,448	0.2563	0.4366	2,215	0.1458	0.3530
25-34	17,448	0.2913	0.4544	2,215	0.3756	0.4844
35-44	17,448	0.2182	0.4131	2,215	0.2637	0.4407
45-54	17,448	0.1326	0.3391	2,215	0.1571	0.3640
55-64	17,448	0.1015	0.3020	2,215	0.0578	0.2334
Gender	17,448	0.5872	0.4923	2,215	0.4311	0.4953
Marital status	17,448	0.5580	0.4966	2,215	0.5973	0.4906
Disability	17,448	0.0940	0.2918	2,215	0.0681	0.2521
Education						
None	17,448	0.1589	0.3656	2,215	0.0194	0.1380
Primary	17,448	0.4266	0.4946	2,215	0.2402	0.4273
Secondary	17,448	0.3243	0.4681	2,215	0.3368	0.4727
Vocational	17,448	0.0587	0.2351	2,215	0.2190	0.4136
University	17,448	0.0305	0.1721	2,215	0.1824	0.3863

Household Head	17,448	0.5259	0.4993	2,215	0.7454	0.4358
Location	17,448	0.3395	0.4736	2,215	0.5720	0.4949

Females accounted for 58.72% of the unemployed while making up only 43.11% of the employed, suggesting that males enjoyed a greater likelihood of employment. It appears that having a spouse increases one's chances of finding employment, as 59.73% of those who are employed are married compared to 55.78% of those who are unemployed. With 9.4 percent of the unemployed being persons with disabilities and 6.8 percent of the employed being people with disabilities, it is clear that having a disability makes it more difficult to find gainful employment. The statistics demonstrate that having more education opens up more opportunities in terms of finding a job. 15.89% of unemployed individuals lacked formal schooling, compared to 1.94 % of employed individuals. The data reveals that 3% of the unemployed had a college degree, compared to 18.24% of the employed, demonstrating that a higher education level boosts work opportunities. There were, 52.59 percent of heads of households who were unemployed. Still, there were 74.54 percent heads of households who were employed, showing that being a household head is positively correlated with having a job. When looking at the unemployment rate by location, we see that 33.95 percent of the unemployed live in urban regions, whereas 57.2 percent of the employed do. This suggests that there may be more job prospects in urban areas, primarily as a result of industrialization.

4.1.3: Descriptive Statistics for PWDs and non-disabled persons

Table 4 analyzes differences in features between PWDs and non-PWDs in the entire sample. There were 1,791 PWDs in the sample, compared to 17,872 non-disabled persons. The data reveals that 91.57 percent of PWDs were unemployed, compared to 88.45 percent of non-disabled persons. In addition, there are 10.98%, 14.49%, and 3.51% fewer non-disabled

individuals than PWDs in the 15-24, 25-34, and 35-44 age groups, respectively. However, In the 45-54 and 55-64 age brackets, PWDs outnumber non-disabled individuals by 9.01% and 19.97%, respectively. There were more women than men in both groups, but there were significantly more women in the disabled population (60.64%) than there were in the on-disabled population (56.60%).

Table 4: Descriptive Statistics-PWDs and non-disabled persons

PWDs				Non-disabled persons		
Variable	Observations	Mean	Standard deviation	Observations	Mean	Standard deviation
Unemployed	1,791	0.9157	0.2779	17,872	0.8845	0.3120
Age						
15-24	1,791	0.1441	0.3512	17,872	0.2539	0.4352
25-34	1,791	0.1692	0.3750	17,872	0.3141	0.4642
35-44	1,791	0.1915	0.3936	17,872	0.2266	0.4186
45-54	1,791	0.2172	0.4125	17,872	0.1271	0.3331
55-64	1,791	0.2781	0.4482	17,872	0.0784	0.2688
Gender	1,791	0.6064	0.4887	17,872	0.5660	0.4956
Marital status	1,791	0.5310	0.4992	17,872	0.5656	0.4956
Education						
None	1,791	0.1591	0.3659	17,872	0.1416	0.3486
Primary	1,791	0.4779	0.4997	17,872	0.3984	0.4896
Secondary	1,791	0.2635	0.4407	17,872	0.3319	0.4709
Vocational	1,791	0.0614	0.2402	17,872	0.0783	0.2687

University	1,791	0.0374	0.1898	17,872	0.0487	0.2152
Household Head	1,791	0.5930	0.4914	17,872	0.5454	0.4980
Location	1,791	0.2920	0.4548	17,872	0.3731	0.4836

Moreover, greater proportions of participants in both groups were married, with 53.10% of PWDs and 56.56% of non-disabled individuals being married. However, the ratio of married non-disabled to disabled was higher. Regarding formal education, both groups show an increase from those with no schooling to those with primary schooling but a decline from those with secondary education to those with post-secondary training or higher. 15.91% of PWDs did not have any form of formal education, while 47.79% had a primary school level. 26.35 percent had a secondary school education level, 6.14 percent had vocational training, and 3.74 percent had a university education. Non-disabled persons were more likely to have formal education than PWDs. 14.16% had no formal education, 39.84% had primary level education, 33.19% had a secondary level, 7.83% had a vocational level, and 4.87% had a university level of education. Nevertheless, the proportion of PWDs with no formal education and with only a primary education as their greatest level of education is greater than that of non-disabled individuals. As a result, non-PWD have a higher proportion of their population with post-secondary, vocational, and higher education than PWD do. This suggests that there may be educational barriers for those with disabilities. Finally, more people in both groups lived in rural regions, with 29.2 percent of PWDs and 37.3 percent of non-disabled persons living in urban areas.

4.2: Determinants of unemployment

This study employed separate probit models to examine the determinants of unemployment. Unemployment probit models' marginal effects are shown in table 5 below. The null hypothesis that all regression coefficients of the explanatory variables are zero was rejected at a 1% significance level since the likelihood ratios for the pooled, PWDs, and non-disabled samples were less than 0.01. This means the models are far more accurate than one without any predictors.

Age

The results show negative coefficients for the age of the individual, with most of them being statistically significant at 1%. As a result, it appears that the likelihood of being unemployed declines with age. This is to be expected, given that young workers generally have less experience and fewer opportunities when they first enter the job market. As young people mature, they acquire knowledge, skills, and experience that increase their employability. Coupled with this, as time goes on, more and more financial commitments become due, necessitating a concerted effort to find and accept gainful employment. Wamalwa (2009) and Baah-Boateng (2013) both showed very comparable findings for Kenya. Although the majority of the age coefficients found in the sample of PWDs have a negative sign, the results nonetheless show that these coefficients are not statistically significant at the conventional 1%, 5%, and 10% levels of significance. There is a 95% confidence that the accurate coefficients fall within the range of the confidence intervals. Accordingly, the study rejects the null hypothesis that the age coefficients are all zero regardless of the inclusion of the other

predictors in the model. Thus, it is not possible to rule out the possibility that age has a role in influencing unemployment among PWDs.

Additionally, the age group 55–64 has a positive coefficient. Therefore, between the ages of 55 and 64, those with disabilities are more likely to experience high unemployment rates than those in the 15-24 age category. This may be due to a combination of factors, including a more severe impairment as a result of advancing age, a concentration on self-care, or cash transfers.

Gender

The results reveal that the coefficients for the dummy variable gender are positive and statistically significant at the 1% level. This suggests that women are more likely to be unemployed than males. This may be because women are traditionally responsible for caring for the home and children. It is not uncommon for women to give up their careers to raise children and care for their homes. Culture is another possible justification for this observation.

For this reason, some cultures assign men the task of earning a living and supporting their families, which might leave women without gainful employment. As a result, rather than seeking formal employment like their male counterparts, many women turn to informal areas of the economy, such as helping out in family businesses. This study's findings are congruent with those of Vuluku et al. (2013), Mourelo and Escudero (2013), and Wamuthenya (2010).

Table 5: Marginal effects of the probit models

Variables	Pooled Sample	PWDs sample	Non-disabled persons sample
Age with (15-24) being the reference age group			
25-34	-0.2923***	-0.211	-0,2981***

35-44	-0.3556***	-0.266*	-0.3575***
45-54	-0.3951***	-0.169	-0.4118***
55-64	-0.0479	0.2194	-0.0796
Gender (1=female, 0=male)	0.2097***	0.236**	0.2070***
Education with "None" being the reference education level			
Primary	-0.6436***	-0.4528**	-0.6615***
Secondary	-1.006***	-0.8702***	-1.0182***
Vocational	-1.642***	-1.907***	-1.6228***
University	-1.916***	-1.752***	-1.9306***
Others	-1.354***	0	-1.3898***
Marital status (1=married, 0=otherwise)	-0.0411*	-0.0707**	-0.0383
Household headship (1=Household head, 0=otherwise)	-0.3664***	-0.5657***	-0.3545***
Location(1=urban, 0=rural)	-0.2825***	-0.1821*	-0.2902***
N	19,663	1790	17,872
LR Chi-squared	2379.27***	231.28***	2147.05***
Pseudo R-squared	0.1719	0.2233	0.1679
Log Likelihood	-5732.0594	-402.181	-5321.7485

***, **, * denotes significance at 1% level, 5% level, and 10% respectively

Education

According to the results, negative coefficients for education were shown to be significant at both the 1% and 5% levels. This suggests that when education levels rise, unemployment rates fall relative to those who lack formal education. In other words, higher levels of education

decrease the likelihood of unemployment for both demographic groups. These results run counter to those found by Wamalwa (2009) and Mourelo and Escudero (2013), who found that higher levels of education were associated with a higher likelihood of unemployment.

Marital Status

The likelihood of being unemployed is negatively correlated with marital status in all three models. Accordingly, the unemployment rate is lower among married individuals. Disabled persons who are married are 7.07 percentage points less likely to be unemployed than non-disabled people who are not married, while the inverse is true for non-disabled people. On the other hand, non-disabled persons who are married are 4.11 percentage points less likely to be unemployed compared to their non-married counterparts. These results are congruent with those of Wamalwa (2009), who found that unmarried individuals are more likely to be unemployed than married individuals. Siddiqui and Qayyum (2007) reported similar findings for Pakistan.

Household Headship

In all three models, the likelihood of unemployment is strongly and negatively correlated with household headship. Consequently, the unemployment rate is lower among those who are the primary breadwinners in their households. Non-disabled individuals' sample experiences a more negligible effect of household headship on employment odds (35.45 percentage points) than the PWDs' sample experiences (56.57 percentage points). Non-disabled household heads were 35.5 percentage points less likely to be unemployed than non-household heads, and the PWDs household heads were 56.57 percentage points less likely to be unemployed than non-household heads.

Location

There is a statistically significant inverse relationship between unemployment and an individual's location. Across all three models, unemployment rates are predicted to be greater in rural areas than in urban areas. The rise in available jobs due to urbanization may explain these results. In addition, due to the wide variety of part-time and full-time occupations accessible in urban regions, this could result in lower unemployment rates in urban areas. These results are in line with those found by Vuluku et al. (2013), who found that rural residents of Kenya had a higher unemployment rate. This study's findings go counter to those of Wamalwa (2009), who found that youth unemployment was more prevalent in urban areas of Kenya.

4.3: The PWDs Non-Disabled Persons Unemployment Gap

After estimating the probit models for the PWDs and non-disabled persons, the study employed the Fairlie decomposition technique to examine and explain the unemployment gap between PWDs and non-disabled persons. The Fairlie decomposition technique measures the extent to which differences in the independent factors contribute to the outcome disparity between PWDs and non-disabled persons by calculating the difference in the predicted probability of the dependent variable occurring between the two groups. The disability coefficient-based decomposition outcomes are shown in Table 6.

Table 6: Decomposition results for the PWDs and non-disabled persons gap

Variables	Model (Disability coefficients)	Contribution
Average PWDs unemployment probability	0.9457	
Average non-disabled unemployment probability	0.8907	

Probability gap	0.0550	
Total explained gap	0.0358	65.09%
Total unexplained gap	0.090759	34.91%
25-34	-0.0178***	-32.32%
35-44	-0.0071*	-12.93%
45-54	0.0080***	14.54%
55-64	0.0056*	10.11%
Gender (1=female, 0=male)	-0.0016*	-2.86%
Marital status	0.00007	0.13%
Primary	0.0069	12.59%
Secondary	-0.0057	-10.37%
Vocational	-0.0140***	-25.60%
University	-0.0074***	-13.40%
Household headship (1=Household head, 0=otherwise)	0.0003	0.68%
Location(1=urban, 0=rural)	-0.0031*	-65.09%

***, **, * denotes significance at 1% level, 5% level, and 10% respectively

PWDs have a 0.9457 percent chance of being unemployed, compared to non-disabled person's 0.8907 percent probability. The PWDs-nondisabled people's gap in the predicted probability of unemployment is 0.0550, and the total explained PWDs-nondisabled gap of unemployment is 0.0358. This accounts for 65.09 percent of the gap, demonstrating that differences between PWD and non-disabled job seekers are primarily attributable to differences in their personal traits. 34.91 % of the gap cannot be explained and is thus determined by differences in the coefficients of the attributes.

A number of factors were identified as having substantial effects on the magnitude of the unemployment gap. The gap in unemployment rates is narrowed considerably by factors such as gender and location. There isn't a clear correlation between education level and the unemployment rate. The ages of 25 - 34 and 35-44 reduce the unemployment gap but increase between the ages of 45 - 54 and 55-64. The unemployment gap is widened by a primary school education but narrowed with a secondary, vocational, or post-secondary education. However, it was discovered that marital status and being the head of the household contributed to a marginally wider unemployment gap, although insignificant.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.0: Introduction

This chapter provides a brief overview of the study, summarizes its findings, extrapolates its implications for policy, and makes suggestions for further research. The study's findings and conclusions are presented in Section 5.1, and their policy implications are discussed in Section 5.2. Section 5.3 offers recommendations for further research.

5.1 Summary and Conclusions

This study aimed to determine what factors contribute to the disparity in unemployment rates between PWDs and those without disabilities. The objectives of the study were to identify separately, for persons with disabilities and persons without disabilities, the characteristics of individuals and of their households that make them more or less likely to be unemployed and to determine the gap in the incidence of unemployment between persons with disabilities and persons without disabilities.

This study found that both PWDs and non-disabled individuals were much less likely to be unemployed as their age increased. This suggests that youth unemployment will be far higher than that of the older generation. The study did find a positive correlation between unemployment and age 55–64 among PWDs. However, this relationship was not statistically significant. An individual may become less employable as they age due to the increased degree of impairment. Even though the coefficient for this age group was not statistically significant, the study did not rule out the possibility of an age-related effect on unemployment. A substantial positive correlation between gender and unemployment suggests that men, both with and without disabilities, have the upper hand in the job market compared to their female counterparts. An individual's likelihood of being unemployed decreases in direct proportion to

his or her level of education throughout both age ranges. The study also indicated that marital status significantly reduces the unemployment rate for people with disabilities, unlike for non-disabled individuals. Unemployment is also inversely and mainly related to being the household head and an individual's geographic location. Unemployment rates are much lower for people who are heads of households and who relocate to urban areas.

The Fairlie decomposition technique was used to investigate the gap in unemployment rates between PWDs and non-disabled persons. The gap in unemployment between PWDs and those without disabilities was shown to be greatly mitigated by factors such as gender and geographic location. However, the gap in unemployment is not significantly influenced by marital status or household headship. The gap in unemployment rates was influenced to varying degrees by both age and level of education. The unemployment gap narrowed for those aged 25-34 and 35-44 but widened for those aged 45-54 and 55-64. The unemployment gap widens dramatically for those with only primary school education but narrows for those with secondary, vocational, or post-secondary education levels.

5.2: Implications for policymaking

This study demonstrated that gender, geographic region, age, and level of education contribute considerably to the unemployment gap. There is a wider gap between the unemployed and the employed between the ages of 45 and 64. Perhaps the severity of a handicap at this age lowers a person's employability. Therefore, the government can promote greater reasonable accommodations for PWDs in the workplace by means of affirmative action. One way to do this is to create accessible environments for PWDs such as by installing programs that make digital content easier to read. The government might also introduce mandatory inclusion of sign language classes for all children. In the future, this will go a long way toward ensuring that people with disabilities have equal access to work opportunities, as it will eliminate the

language barrier that has prevented them from doing so. Moreover, if the individual is receiving government cash transfers, they may opt to care for themselves rather than look for work. To help PWDs make the most of the cash payments the government gives them, it might promote financial literacy. Because of this, the income of PWDs will rise, and they will be able to create wealth.

The gap in unemployment between PWDs and those without disabilities is exacerbated by gender. Unemployment rates among women are significantly higher than those among men. Perhaps it's due to cultural norms or the demands of the home. The government could do more to correct widespread societal assumptions about women's proper role as homemakers and primary caretakers.

The contribution of education to the unemployment gap was found to be mixed. The gap widened at the primary school level and narrowed in the secondary, vocational, and tertiary levels of education. Table 4 indicated that 15.91% of PWDs, compared to 14.16% of non-disabled people, had no formal education. Consequently, it's possible that PWDs face obstacles when trying to further their education. More schools catering to students with special needs could be opened and capacitated. A decrease in PWD employability could also be achieved by the provision of more scholarships and the formation of partnerships with firms to provide specialized training.

The unemployment rate gap is mitigated by one's location, which benefits those who live in urban centers. Perhaps there has been a shift in urban workplaces to better accommodate people with disabilities. This could refer to physical structures, educational programs, or technological tools. To further lower barriers for people with disabilities, the devolved government might work toward developing the same in rural areas.

5.3: Suggestions for Further Studies

This study looked into the various aspects that have an influence on an individual's chances of gaining employment. Although age has an effect on unemployment it is uncertain why persons of older ages have a higher likelihood of being unemployed. Is this an indication that age discrimination exists in Kenya's workforce? What elements could be responsible for this prejudice if this is the case?

In addition, the research found that the percentage of PWDs who have no formal education is much higher than the percentage of non-disabled persons who do not have any formal education. In comparison, the percentage of non-disabled persons with advanced degrees is significantly higher than that of PWDs with advanced education levels. Research needs to be done on the barriers that prevent persons with disabilities from advancing their education, as well as the characteristics of such impediments.

Lastly, when it comes to location, PWDs that reside in urban areas have a greater likelihood of getting employed than their rural counterparts. Consequently, there is a need for research into the perspectives on and levels of accommodation for people with disabilities in rural areas.

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