Czech University of Life Sciences Prague

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Master's Thesis

Effects of Reservation Wage on Graduate Unemployment in Ghana

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Effects of Reservation Wage on Graduate Unemployment in Ghana

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Objectives of thesis

Objectives of the Study
The main objective of the study is to explore the determinants of reservation wage and its effects on graduate unemployment in Ghana. Specifically, the study seeks to:
1. Determine the factors influencing of reservation wage among graduates in Ghana.
2. Determine the determinants of graduate unemployment in Ghana.
3. Explore the association between reservation wage and graduate unemployment in Ghana.

Methodology

The target population of the study comprises graduates in Ghana. i.e., people who have had tertiary education. Secondary data from the Ghana Living Standard Survey – 7 will be analyzed.

Binary logistic regression analysis will be conducted to assess the relationship between graduate unemployment (dependent variable) and reservation wage (independent variable)

The proposed extent of the thesis

60 – 80

Keywords

Reservation wage, Graduate employment, Unemployment, Ghana, Youth

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Recommended information sources

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Declaration

I declare that I have worked on my master's thesis titled "Effects of reservation wage on graduate unemployment in Ghana" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 31.03.2023 ……
Antwi Bertha Debrah

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I want to express my gratitude to Ing. Karel Malec, Ph.D., for his guidance and assistance with thisthesis. In addition, I appreciate every professor and lecturer at the Faculty of Economics and Management. Next are my family and friends, both at home and abroad, who support me while I'm studying in Prague, Czech Republic.

I dedicate this to you all.

Thank you.

Effects of Reservation Wage on Graduate Unemployment in Ghana

Abstract

This study explored the determinants of reservation wage and its effects on graduate unemployment in Ghana. Linear and binary logistic regression analyses were employed to analyze secondary data from the seventh round of the nationally representative Ghana Living Standards Survey. The findings show that age was negatively related to reservation wage (β= -0.55) though not statistically significant while being female was associated with decreased reservation wage (β= -82.256; $p<0.05$). Also, compared with the married, being never married increased reservation wage by GH¢200 (β = 199.108; $p<0.001$). Again, being Muslim (β = -123.2; $p<0.01$), Traditionalist (β = -174.3; $p<0.001$) or having no religious affiliation (β = -122.9; $p<0.01$) decreased reservation wage. The finding reveals that the mean reservation wage of unemployed graduates is lesser than the mean actual wage of employed graduates. However, the difference was not statistically significant (T = 1.577; p=0.115). Finally, reservation wage was found not to have any statistically significant association with graduate unemployment. Rather, graduates' background characteristics (age, sex, marital status, and religion) were found to significantly determine unemployment.

Keywords: reservation wage, unemployment, employment, graduate, education, Ghana, developing countries, youth, overpricing, relationship, Africa.

Účinky rezervační mzdy na nezaměstnanost absolventů v Ghaně

Abstrakt

Tato studie zkoumala determinanty rezervované mzdy a její účinky na nezaměstnanost absolventů v Ghaně. K analýze sekundárních dat ze sedmého kola celostátně reprezentativního průzkumu životní úrovně Ghany byly použity lineární a binární logistické regresní analýzy. Zjištění ukazují, že věk negativně souvisel s mzdou za rezervaci (β= -0,55), i když nebyl statisticky významný, zatímco to, že byla žena, bylo spojeno s nižší mzdou za rezervaci (β= -82,256; p<0,05). Ve srovnání s ženatými také skutečnost, že nebyl nikdy ženatý, zvýšila rezervační mzdu o 200 GH¢ (β = 199,108; p<0,001). Opět platí, že být muslim (β = -123,2; p<0,01), tradicionalista (β = -174,3; p<0,001) nebo bez náboženské příslušnosti (β = -122,9; p<0,01) snížil rezervační mzdu. Ze zjištění vyplývá, že průměrná rezervní mzda nezaměstnaných absolventů je nižší než průměrná skutečná mzda zaměstnaných absolventů. Rozdíl však nebyl statisticky významný (T = 1,577; p = 0,115). Nakonec bylo zjištěno, že rezervační mzda nemá statisticky významnou souvislost s nezaměstnaností absolventů. Spíše se zjistilo, že základní charakteristiky absolventů (věk, pohlaví, rodinný stav a náboženství) významně určují nezaměstnanost.

Klíčová slova: rezervační mzda, nezaměstnanost, zaměstnání, absolvent, vzdělání, Ghana, rozvojové země, mládež, předraženost, vztah, Afrika.

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1. INTRODUCTION

Unemployment has been one of the gravest difficulties that many countries have faced. A person who has a job can at least support themselves and meet their fundamental necessities. It is difficult meeting the Sustainable Development Goals (SDGs), including among others the elimination of poverty, hunger, inequality between men and women, excellent education, decent health, and a fulfilling life, due to the high rate of unemployment, especially among young people. Education often makes people more employable (Cassarino-Perez *et al.*, 2018). However, graduate unemployment remains a significant issue in most nations which are still developing, notably in Sub-Saharan Africa.

Higher education is important for many people to have success in the workplace in terms of economic and health advantages, civic participation, personal growth, improved communication, realization of passion, a stronger sense of discipline, and a sense of achievement (Harrison, 2017). This may be done through the standardization of higher education curricula and the implementation of periodic revisions. In this changing world of rising uncertainty, all higher education institutions should respond positively to people's social and economic requirements. Experience has proven that higher education institutions that are concerned with constant quality, equality, and efficiency improvements may give the finest services to the community (Demissie *et al.*, 2021). The most significant aspects of higher education institution achievement in most developed countries are the match between graduates' qualifications and their employment status. One of the major difficulties related to competence development and graduate employability mentioned in the evaluation in Europe, for example, is the (mis)match between university graduates' abilities and employers' demands. Higher education institutions are concerned with establishing measures to promote the employability of their graduates. Employment and graduate skill development are dependent on a strong spirit of creativity and cooperation in higher education throughout the world (Abelha *et al.*, 2020).

Unemployment is a dreadful problem that can occur in any country on the planet. If an individual is in the labor force, they may become unemployed at some point (Hossain et al., 2018). If the unemployment issue remains unresolved, the nation's, societies, and even the country's contribution to the issues of jobless graduates will undoubtedly grow. Moreover, if somehow the country's unemployment continues to rise, riots and insurgencies will erupt across

the country, making the country's trading uncertain. As a result of this severe problem, the nation will suffer significant losses (Hanapi and Nordin, 2014). Graduate unemployment is complex and connects to many different things, including educational quality, discrimination, a lack of experience, rigid labor markets, and other structural variables. Since graduates (mainly young people) make up a higher portion of the workforce, concerns connected to graduate unemployment must be prioritized in most developing programs to solve the challenges of poverty and economic growth (World Employment Social Outlook, 2016).

Based on the fundamental principle of labor supply, the labor leisure choice model predicts that any salary below the worker's bait (the reservation wage) will result in them devoting all their waking hours to leisure (Gahramanov and Tang, 2016). The market wage, which determines the amount companies are prepared to give, has a significant impact on an individual's decision to enter the labor force. The worker's bait also demonstrates how hard they must work. The reservation wage, then, is the amount at which people value or peg their observable or unobserved traits and for which they are prepared to perform in exchange for compensation; if it is lower than this wage, they will not work (Addison, Machado, and Portugal, 2013; Brown and Taylor, 2015). Reservation wage, expressed simply, is the lowest salary that a worker will accept. "This pay offers the bare minimum required to persuade the worker to work. Workers will not accept a lower-paying position with equivalent working circumstances, making them undecided on whether to accept employment or stay jobless" (Hogan, 1999).

The Nation Builders Corps (NABCO) initiative was recently launched by the Ghanaian government to combat the issue of graduate unemployment in the nation. However, this measure only provided a short-term respite and did not significantly reduce the rate of unemployment among Ghanaian graduates. In addition, there is little study on this subject. Several research from throughout the globe have examined different facets of unemployment. Some people have looked at what causes unemployment (Baah-Boateng, 2013; Batu, 2016; Kriaa, Bouhari and Mathlouthi, 2020; Berhe, 2021; Warsame *et al.*, 2022) and found that factors such as gender, location, education, skills, and marital status – as well as the slow rate of job creation and rising environmental threats – are significant influences on unemployment in many African nations.

Others have evaluated how unemployment affects a nation's socio-economic progress (Nwogwugwu and Irechukwu, 2015; Awad, 2019; Jumpah, Ampadu-Ameyaw and Owusu-Arthur, 2020). Indeed, some investigations focused on graduate unemployment (Emunemu and Kasali,

2014; Baldry, 2016; Amani, 2017; Gebisa and Etana, 2019; Demissie *et al.*, 2021) whereas others concentrated on the determinants of reservation wage (Coen, Forrier and Sels, 2015; Axelrad, Luski and Malul, 2017; Vasilescu and Begu, 2019). Nevertheless, research has paid little attention to investigating the influence of reservation wage on graduate unemployment especially in a developing country like Ghana. Therefore, this study explores the determinants of reservation wage and graduate unemployment in Ghana as well as the extent to which reservation wage contributes to graduate employment.

2. OBJECTIVES AND METHODOLOGY

This chapter outlines the objectives and research questions that guide the study. In addition, the methods, and procedures to be employed in the conduct of the study are discussed.

2.1 Objectives of the Study

The study's main goal is to investigate the determinants of reservation wage and their effects on graduate unemployment in Ghana.

Specifically, the study seeks to:

1. Assess the factors influencing reservation wage among graduates in Ghana.
2. Evaluate whether graduates in Ghana are overpricing themselves.
3. Explore whether reservation wage contributes to graduate unemployment in Ghana.

2.1.1 Research Questions

1. What are the factors influencing reservation wage among graduates in Ghana?
2. Are Ghanaian graduates overpricing themselves?

2.1.2 Hypothesis

H_0: There is no statistically significant relationship between reservation wage and graduate unemployment in Ghana.

H_1: There is a statistically significant relationship between reservation wage and graduate unemployment in Ghana.

2.2 Methodology

Various approaches are employed in scientific enquiries. In this section, the design of the research, target population, data source, and techniques for data analysis are discussed into detail.

2.2.1 Research Design

The study was guided by a quantitative method approach, specifically a descriptive cross-sectional research design. According to Setia (2016), cross-sectional studies are observational studies in which the researcher does not change the exposure status. The researcher examines the population's outcome and exposure(s) and may investigate their relationships. Data for cross-sectional research is quickly gathered and analysed (Creswell and Poth, 2018). When opposed to cohort studies, the cross-sectional research design has the advantages of being quicker and less expensive to conduct. They frequently originate from questionnaire surveys, and because

individuals are only questioned once, there is often no loss to follow-up. Cross-sectional research is done either as a preparatory step for cohort studies or as a baseline for such investigations. In cross-sectional research, it is also possible to track exposure to a variety of risk variables and evaluate many outcomes (Sedgwick, 2014).

However, there are several restrictions related to this study design. If participants in the study vary from those who do not, the study may be vulnerable to non-response bias, likely to result in a sample which does not represent the population. These studies are equally susceptible to recall biases when the desired outcome is assessed in the past. Additionally, it would be challenging to determine the temporal link between a risk factor and an outcome because data for each participant are only collected once. Therefore, cross sectional research can only infer a correlation and not a causal relationship (Levin, 2006; Sedgwick, 2014).

2.2.2 Target Population

All components (people, things, or substances) that satisfy specified requirements for inclusion in a study are referred to as a research population (Burns and Grove, 2011). In other terms, a research population is often a sizable group of people or things that form the core of a scientific inquiry and serve as the foundation for analysis. The population for the study forms all graduates (persons with tertiary education) captured in the seventh round of the Ghana Living Standards Survey (GLSS 7). A total of 2,632 graduates were included in GLSS 7. The specific numbers are as follows: Teacher/Nursing Training = 764, Polytechnic = 478, University (bachelor) = 1,104; University (postgraduate) = 193; and Professional = 93. Thus, these 2,632 persons form the population for the study.

2.2.3 Source of Data

The seventh round of the Ghana Living Standards Survey (GLSS 7) served as the primary data source for this thesis. The GLSS is a multi-purpose household survey that gathers data on a variety of aspects of living situations, including welfare, health, employment, government, and financial services (household expenditure on food and non-food items). Since 1987/1988, seven rounds of data have been gathered, the most recent being in 2016/17. Except for the first two rounds, most of the questionnaires utilized were almost identical, making the findings immediately comparable. The survey offers adequate details about the employment of people.

Sampling procedure: The sample field data collection for GLSS7 started in October 2016 and continued for 12 months. A total of 1 000 enumeration areas (EAs) or clusters chosen across

the nation based on probability sampling were home to 14,009 households that were questioned. A household listing operation was conducted in each of the chosen EAs once the EAs were chosen. The household listing procedure is going to each of the 1,000 selected EAs and utilising a computer assisted personal interview (CAPI) to record all buildings and houses inside each EA, along with their addresses and names. In the second step of the main survey's selection, 15 households were chosen from among the listed homes using a systematic sampling approach.

Data validity and reliability: Since 1987, national statistics on the country's living conditions have been made available by the Ghana Statistical Service (GSS). The GSS has tried several different things throughout the years to raise the quality of data produced during each round. These surveys are created using measurements and requirements that are approved globally for developing nations. The data are thus appropriate for generalisation and analysis at the national level. By specifying the variables, the data will be examined to make sure that any current coding, which was previously based on the conventions and the reason the data was obtained, is appropriate for the research. All pertinent variables required for the analysis will be independently reviewed and verified using the codebook's explanation. Some variables may need to be recorded to fit the study's objectives.

2.2.4 Data Analysis

The statistical software STATA version 15 was used for analysis. To analyze the data, descriptive and inferential statistics were used. The background characteristics of the respondents (such as sex, age, and marital status) were summarized with frequencies and percentages.

The first purpose of the research was to make an analysis of the factors which influence reservation wage among unemployed graduates in Ghana. Linear regression was employed to analyze this objective. To investigate the linear relationship between a dependent variable and one or more independent variables, Schneider et al. (2010) claim that linear regression is utilized. The independent variables can be continuous, binary, or categorical, whereas the dependent variable must be continuous. To ascertain each independent variable's impact on the dependent variable (reservation wage), linear regression was used. The result/outcome variable being continuous is the underlying presumption for the linear regression. Reservation pay was recorded as a continuous variable, which aided in establishing the relationship between the study's dependent and independent variables. The beta coefficients of the correlations between the dependent and independent variables might also be explained. Thus, using linear regression helped

to understand the mean change in the dependent variable (reservation wage) given a one-unit change in each explanatory variable. The linear regression was based on the equation below.

$$\boldsymbol{Y = \beta_0 + \beta_1 X + \varepsilon}$$

Where, *Y = dependent variable (reservation wage)*

β_0 *= intercept*

β_1 *= regression coefficient which demonstrates the change in Y's value resulting from a change in X's unit.*

X = independent variable (age, sex, marital status, or religion)

ε *= random error*

The study's second objective was to figure out whether Ghanaian graduates are overpricing themselves. Independent samples t-test was employed to analyze this objective. Specifically, independent samples t-test was employed to evaluate for significant difference between the mean of the reservation wages of unemployed Ghanaian graduates and the actual wages of employed graduates. Differences in relation to the age, sex, marital status, and religion of the graduates were also assessed.

The study hypothesized that there is no statistically significant relationship between reservation wage and graduate unemployment in Ghana. To evaluate the hypothesis, binary logistic regression analysis was performed. Thus, binary logistic regression analysis was employed to measure the connection between unemployment and reservation wage among Ghanaian graduates. Thus, unemployment and reservation pay were related. Because the dependent variable for this study, graduate unemployment, is dichotomous (that is, has just two values; Yes or No), binary logistic regression was utilized. This meets the required requirement that must be satisfied before such a tool can be used. The logistic regression model allows for the estimation of the incidence of an outcome (in this example, graduate unemployment) as a result of one or more explanatory factors. It enables the simultaneous adjustment of multiple explanatory variables and control for various confounders.

The binary logistic regression analysis was done at two levels – bivariate and multivariate levels. The bivariate analysis examined the relationship between each independent variable and graduate unemployment. This was accomplished by employing a bivariate logistic regression model to calculate the odds ratios. Multivariate logistic regression is a statistical method, all the explanatory variables were automatically included as part of the multivariate analysis process. This is done to determine the overall impact of all the factors on the likelihood of graduate unemployment.

Two models were estimated to explain the relationship between reservation wage and graduate unemployment. Model 1 was a bivariate model which featured graduate employment as the dependent variable and reservation wage as the independent variable. In Model 2, the background characteristics of the respondents (age, sex, marital status, and religion) added to the variables in Model 1. In all the analyses, statistical significance was set at 5% (0.05). The binary logistic regression analysis was based on the formula below:

$\ln[p/(1-p)] = \beta 0 + \beta 1X$

Where, ln = the natural logarithm, $\log_{exp}$, where e=2.71828

p = the probability that Y for cases (the unemployed) equals 1, p (Y=1)

1-p = the probability that Y for cases (the unemployed) equals 0, 1 – p(Y=1)

ln[p/1-p] = the log odds, or "logit"

$\beta 0$ = intercept

$\beta 1$ = the average change in Z (log odds of dependent variable) per one unit increase in X

X = independent variable

3. LITERATURE REVIEW

This chapter reviews literature which is relevant and related to study. The review is organized under theoretical, conceptual, and empirical reviews.

3.3. Theoretical Review

In the literature on economics, several ideas have been put out to explain the phenomena of unemployment. In this section, the classical economic theory of unemployment and the Keynesian theory were reviewed. In addition, the Human Capital Theory (HCT) and screening hypothesis were discussed (in the context of graduate unemployment).

3.3.1 Theoretical Perspectives on Unemployment

3.3.1.1 Classical theory of unemployment

According to the classical theory, the labor market is driven by supply and demand for labor (McDonald and Solow, 1981). The diminishing fraction of the marginal product of labor is used to determine the demand for labor. Since the quantity demanded for labor will decrease as wages rise and vice versa, the demand curve is a negative function of real pay. The decision of a worker to work some of the time or not determines the supply of labor. The number of hours worked is positively correlated with real pay because rising real wages encourage workers to put in additional hours.

According to classical economic theory, the economy's unemployment rate is just a temporary occurrence, and free market forces will eventually bring about full employment. In other words, the labor market always operates under the premise that salaries are flexible, and that all information is accurate. When this assumption is false, institutional rigidities like minimum wage laws prevent the market from clearing, hence, the traditional involuntary unemployment problem may arise. Involuntary unemployment may arise, as Goodwin (2006) notes, if minimum salaries obstruct market dynamics. Fewer employees will be employed if companies are forced to pay a minimum wage that is higher than the equilibrium wages. According to the traditional conception, there must be labor market function distortions before there can be involuntary unemployment. According to the idea, no such thing as cyclical unemployment exists, and individuals who are unemployed either chose not to work or are a part of frictional or structural unemployment.

Labour demand:

Demand for labour determines the quantity of labour organizations employed at a given real wage. Utilizing the neoclassical function of production, labour demand can be attained. According to economic theory, the production of goods and services (Y) is determined by two variables: labour demand (L) and capital stock (K): Y = (L).

On the other hand, firms determine the labour level that optimizes their profits by using the following formula:

$max_L\ \pi = pY - wL + rK = p\ F(K, L) - wL.$

Prices (p), wages (w), and capital rents (r) represent, respectively, the cost of output and each factor of production. Capital represents an exogenous variable determined by the previous period's given inversion. If we wish to determine the sign of labour demand relative to real wages, we can utilize the theorem of the implicit function, which yields the following equation:

$$-1\ \frac{\partial L^d}{\partial \frac{W}{P}} = -\frac{-1}{F_{LL}(K, L)} < 0.$$

Overall, the Cobb-Douglas function of production (Y) is used, which consists of a further element of productivity (A) and the elasticity of the factor α: □ = □ (□, □) = □ □ □□ $^{1\_a}$

In addition, we will consider the firm to be a monopoly, so we must include a variable representing monopolistic power, m.

This indicator equals $\frac{\varepsilon}{\varepsilon - 1}$, representing the price elasticity of product demand.

Solving (□□□□ □ = □□ − □□ + □□ = □ (□, □) − □□) under the assumption of imperfect competition leads to the conclusion that the marginal product of labour equals wage equation multiplied by m: □□ (□, □ □) = $\frac{W}{P}$

Following some algebra and the application of the Cobb-Douglas equation, the following equation is found in terms of the variation of the variables and logarithms:

$$\frac{\Delta L}{L} = \frac{1}{a}\frac{\Delta w}{w} - \frac{1}{a}\frac{\Delta m}{m} + \frac{1}{a}\left(\frac{\Delta A}{A} + a\frac{\Delta K}{K}\right)$$

From the preceding equation, productivity and capital stock are crucial for employment growth, whereas an increase in real wages or monopolistic power had the opposite effect.

Labour supply:

It determines the size of the labour force, which is the total number of willing workers at a given real wage. Whoever's opportunity costs in terms of material goods consumption are less than the real wage can be members of this labour force.

To order to find the labour supply for our Classical Theory of Unemployment, we will begin with the concept of consumption from a microeconomics overview. To maximize their utility function, individuals chose a particular level of consumption, C, and labour, L, in this instance.

(□ (□, □ ̄− □).

In addition, the number of available hours is *L* and $\bar{L}$-will be considered leisure time, (The hours of the day that a person is not working). Profit maximization is also subject to budgetary constraints. Specifically, this constraint ensures that consumption equals capital or non-labour rents, R. $pC = R + WL$

The incline of the labour supply, or the relationship that exists between real wages and employment, will be determined by the shape of the utility function. I employ a logarithmic function and solve it in accordance with the given constraint. The result demonstrates that real wages positively affect employment*:* $\boldsymbol{L}\left(\frac{\boldsymbol{W}}{\boldsymbol{P}}\right) = \frac{\boldsymbol{L}}{\boldsymbol{2}} - \frac{\boldsymbol{m}}{\boldsymbol{2\frac{W}{P}}}$

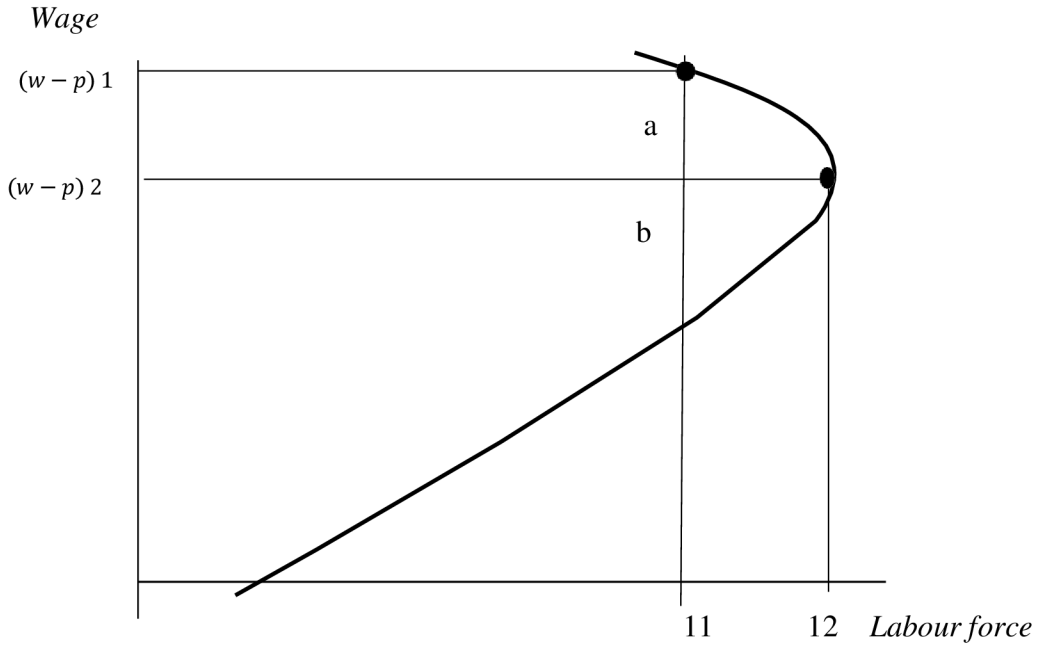
In addition, the slope of the labour supply can be positive or negative based on the so-called income effect and substitution effect incorporated into the Slutsky equation.

$\frac{\Delta H}{\Delta W}$= □□□ □□□□□□ = □□□□□□□□□□□□ □□□□□□ *(+)*− □□□□□□ □□□□□□ *(−).*

When the net effect is positive and the substitution effect is greater than the rent effect, workers will work longer hours because of pay increases. However, when the rent is greater, workers will prefer to work fewer hours.

The axis of the curve is comprised of real wages and the labour force (as determined by the number of work hours). When substitution dominates (b), the equation proposed by Slutsky will define a positive-sloped curve between real wages and the number of hours, Contrarily, a negative net effect will be accompanied by a negatively sloped curve. (a).

Figure 3.1: Labour supply curve real wage



Source: Compiled by author

Wage equation:

This equation describes how salaries are determined by third-party organizations (agents) and employees through collective or individual bargaining at a competitive level. As a result, the slope of this curve is solely determined by the labour market and the capability of these agents to influence the level of real wages.

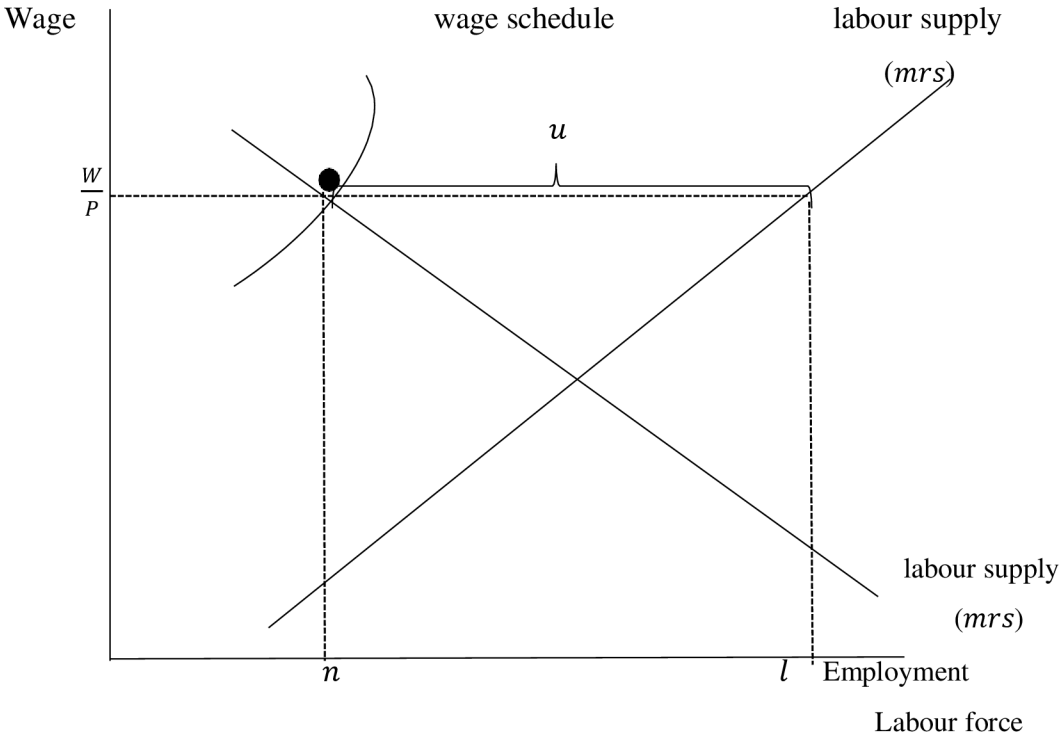
A positive wage equation curve is assumed in a classical perspective when there is more employment, and the labour market is performing efficiently.

$$(\omega = \tilde{c}(L) where \quad \frac{d\tilde{\omega}}{dL} > 0)$$

When we combine all three ingredients discussed in this chapter, we observe the following: To begin, we calculate an equilibrium level of employment, n, and a real wage, $\frac{W}{P}$.

Both have the intersection of the wage equation and labour demand at this point. Thus, the gap between the intersection and the labour supply at a given real wage determines unemployment. The solution to reducing unemployment is simple: minimize the wage equation until it reaches an equilibrium level.

Figure 3.2: Unemployment in the classical theory of employment



Source: Gail (2013)

3.3.1.2 Keynesian theory of unemployment

According to the Keynesian school of thinking, unemployment is mostly caused by shortfalls in aggregate demand during specific economic cycle times, resulting in a lack of jobs for everyone who wants to work (Keynes, 1937). Keynes contends that there is persistent instability in the economy and challenges the conventional wisdom that disequilibrium in the labour market is the root of unemployment. Keynes believed that because of the unpredictable nature of the economy, it was possible for it to reach an equilibrium without producing full employment. Thus, unemployment resulted from a lack of jobs being created in the economy to satisfy the demands of all job seekers at any given pay level due to insufficient aggregate demand.

Because there are few work prospects available, this sort of unemployment is cyclical and involuntary. When demand is low, few workers are hired by businesses. The theory's core premise is that low aggregate demand would result in declining sales, which would then decrease investments, which would increase unemployment and cause another decline in aggregate demand. To minimise involuntary unemployment in the economy, the Keynesian school of thought advocates the implementation of suitable government measures, either fiscal or monetary policies. To put it another way, the government must implement an expansionary fiscal policy framework that would boost aggregate demand and, in turn, create more jobs.

Labour demand:

Under the assumption that prices are perfectly fixed, employment is determined by the amount of output produced by firms. Furthermore, firm production is determined by demand. As a result, aggregate demand for goods establishes income at a specific price, resulting in a new employment level. This is because companies will hire new employees based on their specific production requirements. If every worker has been recruited, the wage equation determines the real wage. According to this theory, aggregate demand is the mechanism by which employment can be modified. This new perspective requires us to reconsider several points. The new mindset encourages a focus on monetary and fiscal policies as drivers for influencing aggregate demand and, in the second case, employment. I will use the IS-LM model to explain this. Two equations define it:

IS (Investment-Saving): $Y = (Y - (\downarrow)) + I\,(i\,(\downarrow))\,(\uparrow) + G\,(\uparrow)$

LM (Liquidity Preferences-Money Supply): $\frac{M(\mathfrak{t})}{P} = ((\downarrow), Y)$

The arrows represent expansionary policies in the equation. Based on a fiscal standpoint, governments may either boost public spending or lower tax rates. Monetary policy usually affects the currency supply by reducing the interest rate.

Wage equation:

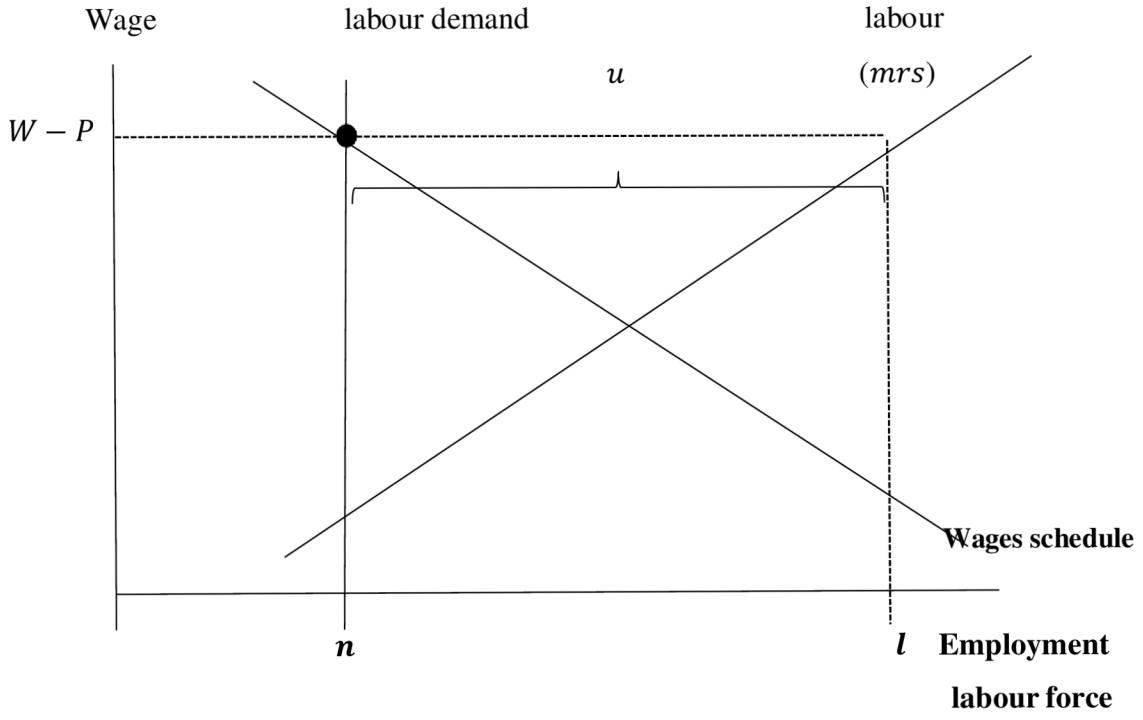
The wage equation is the competitive wage total. Labour organizations, governments, employers, and individuals can fix it. The new Keynesian theory is a negative curve. It has a downward slope because firms drastically fire workers, increasing productivity but leaving output unchanged. (short run). In the short run, a higher marginal product of labour FLt would lead to higher wages. Thus, higher unemployment raises productivity and wages. However, the marginal product of labour and wages can be better explained: In a non-competitive market with wages above the

competitive level, the marginal product of labour equals real wage multiplied by monopolistic indicator m_p^t.

Let us logarithmize (FL (K, L d) = W/P) to clarify:

Figure 3.3: Unemployment in the Keynesian theory of unemployment

$(\omega_t - p_t)\,(\uparrow) = F_{Lt}\,(\uparrow) - m_t^p$



Source: Gail (2013)

3.3.2 Theories Relating to Graduate Unemployment

3.3.2.1 Human Capital Theory

The early works of economists like Beckerman and Denison (1962), Martin et al. (1965) and Schultz (1963) are the beginning of human capital theory. These economists claimed that increasing a population's potential for production through formal education was extremely important. They believed that education could effect change and that there was a connection between it and economic growth (Acheampong, 2006). The UNESCO Institute for Statistics (2012) stated that education generates a country's information, knowledge, values, skills, attitudes, and competencies for growth and development.

According to the human capital theory, which supports UNESCO's position, it is the number and quality of occupational abilities that a people possess that, when used to mobilise and control other forces of production, allows that society to hasten its socioeconomic growth.

The Organization for Economic Cooperation and Development (OECD, 1998) defines human capital as a collection of knowledge, skills, competences, and other characteristics that people possess, and which hasten the development of a society's economic, social, and personal wellbeing.

According to the human capital theory, education or training converts a person's cognitive and other intrinsic qualities into useful output. The idea of human capital describes how investing in education leads to greater wages throughout the course of a person's working career. People are therefore more likely to spend money on education.

The theory's fundamental tenet is that education and training boost a person's human capital stock and, as a result, their capacity for productivity. Higher wages follow this.

According to the human capital idea, workers are more productive when they are educated. The workers' future income is augmented by a rise in their lifetime earnings as a result of their enhanced knowledge and abilities (Xiao, 2002). Barker (2007) adds that education and training offer long-term financial rewards through better salaries in addition to immediate advantages like subjective pleasure and prestige. According to Filer et al. (1996), in comparison to those with less education, individuals with more education had greater age-earnings profiles with later peaks and steeper age earnings.

However, it is true that workers with more education may start out with lower pay than those with less education, but they rapidly catch up and make more money overall over the course

of their careers. Ehrenberg and Smith (2009) note that investing in education has other benefits than improved incomes, such as a lifetime expectation of higher work satisfaction and a stronger appreciation of nonmarket pursuits. Barker (2007) contends that because employees are more productive, such investments will raise wages and, consequently, living standards for workers in the labour market without raising prices.

Why then would a person decide against investing in further education given this and the possibility of greater lifetime earnings? The truth is that enhancing education involves both direct costs (such as tuition, books, and living expenses) and indirect costs (such as lost wages), as well as emotional costs (which arise because learning is sometimes challenging and tiresome) (Ehrenberg and Smith, 2009). Todaro and Smith (2006) claim that to comprehend the choice to engage in higher education, the expected income benefits from education must be compared to the overall expenditures incurred. The percentage of return on the investment in education must consider both the expenses and the rewards, some of which will not manifest themselves until much later in the person's life. The human capital hypothesis presupposes that individuals maximize their own utility and consider the long term when making decisions about investing in education (Ehrenberg, Smith and Hallock, 2021). Long-term human capital theory predicts that competent people will be available at a pay that covers their expenses of skill acquisition (Bosworth et al., 1996).

The human capital hypothesis is criticized on the grounds that it is difficult to assess human capital due to its inherent complexity. Both the individual's productivity and education and training must be measured to determine the impact they have on output. How will the level and scope of this education and training be evaluated? Years of school are not a reliable indicator of the calibre of training and education (Barker, 2007). A further issue that the theory is unable to address is how to measure both worker productivity and the potential revenue associated with each occupation (Marshall, 1998). A person could also have inadequate education for the job market. This could happen if a person's temperament or society does not support making money, or if their talents are outdated. Therefore, low levels of human capital are inherent given that they represent modest advances in productivity (Darwin, 2010). Therefore, it is incorrect to presume that an individual would be more productive at work just because they have more years of schooling. These elements have unquantifiable effects on production.

Additionally, (Acheampong, 2006) claims that the fundamental critique of the theory comes from its presumption that there is ideal competition on the labour market and that the individual with a higher level of education is more likely to obtain a better position. In his opinion, this presumption is false because there is enough evidence to the opposite in many nations, especially emerging nations. Based on social networking and other personal factors, graduates with extremely strong credentials have either failed to impress during job interviews or been passed over in favour of candidates with comparably worse credentials.

Furthermore, the human capital theory also fails to differentiate between actual human capital and personal traits, each of those that have an impact on graduates' ability to perform productive work. In the context of the idea of human capital, failing to make a distinction between these implies that characteristics thought to be enhancements of the qualitative nature of the factor labour are instead "enhancements" of labour power (Krul, 2010). Graduates' capacity to successfully use their knowledge and perform well in terms of personal skills in the job is determined by these qualities. The qualities of graduates are crucial in determining their employability, therefore. According to Stroomberger et al. (2002), knowledge, skills, competences, and traits that are embodied in people make it easier to create personal, social, and economic wellbeing.

Despite the objections of the human capital theory, there is no denying that the theory's claim that the kind of country's human capital indirectly influences its degree of development is true. The theory is still relevant and the basic conceptual framework for comprehending human capital investment, both from the standpoint of the person and the enterprise, in the human resource development debate (Bassi and McMurrer, 2006). Massive investments in education have been motivated and justified by the human capital idea as a means of promoting economic growth and development. However, as graduates are not guaranteed to obtain work or, at the very least, employment that is equal to their investment in school, the predicted future rewards from this investment are uncertain. The simple fact that graduate unemployment exists goes against what the human capital hypothesis claims. Graduates who invested in their studies are unemployed, unable to boost productivity and incomes. Some can even have more qualifications than the market requires.

The model also suggests that the individual will begin working right away after graduating or leaving school and will keep doing so throughout their working years until retirement. The

individual could, however, not get a job for several years after leaving school or graduating. Additionally, the person can have a brief spell of unemployment. For instance, the person's abilities can become outdated, and before having a chance to be hired again, he or she might need to obtain training to improve those skills.

3.3.2.2 The Screening Hypothesis

Like the human capital theory, the screening hypothesis (also known as the signalling hypothesis) promotes investing in education. It suggests that education serves as a filter, delivering crucial knowledge to the market's economic actors. "Higher education serves as a screening instrument, in that it sorts out individuals with varied capacities and so provides information to employers," according to Arrow (1973, pg. 194). However, screening models, despite enabling learning, pay attention to the numerous ways in which education serves as a sign of productivity disparities, in contrast to human capital theory, which is focused on the function of learning in determining the return on schooling (Lee, Thakor and Vora, 1983; Weiss, 1995).

Because it might send a message to prospective employers, investing in education is something that employees may do for a variety of reasons (Kubler et al., 2003). As a result, students will pick a schooling duration to indicate their aptitude to companies, and firms will need a minimum degree of education from candidates in order to screen their personnel (Weiss, 1995). Academic credentials are publicly viewable, but a potential employee's productivity and aptitude are not. Although the potential employers cannot see the ability of the workers, they are aware that investing in education is less expensive for highly capable people. Therefore, education is rewarded with a higher salary and acts as a reliable indicator of unobserved production.

Additionally, according to Filer et al. (2006), educational attainment categorizes people into positions that pay higher earnings based on characteristics that employers find appealing. College experience might be a means for graduates to show prospective employers that they have self-discipline, drive, and aptitude to succeed in the workplace. However, the screeners contend that acquiring human capital may have a similar apparent impact on wages, either because the productivity relationship is dependable or because it serves as a conduit for the influence of some other background factors.

It is argued that the screening/signalling theory makes the incorrect assumption that all schooling is the same. As a result, signals could be deceptive and not correctly reflect graduate output. Employers are thus uncertain about a potential employee's productive talents at the time

of hiring, among other information asymmetries. Furthermore, it will not be accessible right away after hiring. Although it is useful to overcome information asymmetries by using education as a proxy, other aspects should also be considered when estimating a graduate's level of production.

3.4. Conceptual Review

This section focuses on various concepts which are related to the issue under investigation. The conceptual review is presented under the following sub-headings: concept of reservation wage, definition of unemployment and graduate unemployment, types of unemployment and overview of unemployment rate in Ghana.

3.4.1 The Concept of Reservation Wage

The reservation wage in labor economics refers to the lowest wage that an employee would be willing to accept to enter the labor market. (Killingsworth, 1983). Consequently, for a worker to participate in the labor market, they must earn a minimum wage. (Way, 2015). It indicates the monetary worth to the worker of one hour of leisure time, which is widely defined as any activity not related to the labour market. The worker's utility is maximized by staying unemployed if the salary offer does not match or surpass their reservation wage. A lower-paying job with similar working conditions will be rejected, making workers indifferent between taking a job or remainingunemployed (Hogan, 1999).

It is interesting that the reservation pay is changeable and depends on several factors rather than being fixed. The reservation pay of a worker is influenced by microeconomic and macroeconomic factors that influence that worker's marginal utility of leisure or marginal utility of spending when unemployed. Walker (2003) discovered that factors such as household income, work status, education, and length of unemployment are crucial in explaining variation in reservation wages. Personal preferences, household production activities, unemployment benefits, and other non-labour income are other factors that affect reservation wages (Way, 2015).

3.4.2 Definition of Unemployment

In the economic literature, the problem of unemployment has been analyzed from a variety of angles. In actuality, the fundamental requirements of the definition of unemployment have not changed despite recurrent revisions. A person is jobless if they satisfy the criteria for being a) "without employment," b) "currently available for work," and c) "seeking work" all at the same time within a reference period.

People who are unemployed are defined as "all those of working age who were not in employment (that is, were not in paid employment or self-employment during the reference period), engaged in activities to seek employment during a specified recent period, and were currently available to take up employment given a job opportunity" in a resolution passed by the 19th International Conference of Labour Statisticians (ICLS) in 2013. In order to find a job, one must first "arrange for financial resources, apply for permits and licenses; look for land, premises, machinery, supplies, and farming inputs; enlist the help of friends, relatives, or other types of intermediaries; register with or contact public or private employment services; apply to employers directly; check at worksites, farms, factory gates, markets, or other assembly places; place or answer newspaper or on-line ads; and look for land, premises, machinery, supplies, and farming input" (International Conference of Labour Statisticians, 2013).

Also included in the unemployment bracket are: (1) future starters, who are defined as individuals who are "not in employment" and "currently available" but who did not "seek employment" because they had plans in place to begin a job within a short subsequent period, set in accordance with the typical waiting period for starting a new job in the national context, but typically not longer than three months; (2) Participants in skill-training or retraining programs within employment promotion programs who, based on that, were "not in employment," "currently available," and did not "seek employment" because they had a job offer to start within a short subsequent period, generally not greater than three months; and (3) those who were "not in employment," but who engaged in migration-related activities in anticipation of having the chance to labour for pay or profit overseas (International Conference of Labour Statisticians, 2013).

However, it has been questioned whether this description really captures the status of unemployment in Africa today. For example, Baah-Boateng (2015) believed that this definition was overly restrictive in the context of many African nations, including Ghana. This phenomenon tends to classify many unemployed individuals as discouraged workers, painting an inaccurate image of the state of unemployment in these nations. Furthermore, because of the way the labour market is set up in many African nations, unemployment is often disguised as informality. In Africa, he discovered a significantly negative relationship between unemployment and informality.

3.4.3 Graduate Employment

Graduate unemployment is defined as "a lack of employment caused by a lack of employability, kind of qualification received as well as subject of study, secondary school education, university education, high expectations, job search, and work experience" (Oluwajodu et al., 2015). Mathematically speaking, the unemployment rate is calculated by dividing the entire number of jobless people (for a nation or a particular group of workers) by the equivalent labour force, which is the total number of people in the group who are employed and unemployed together. It should be emphasized that this number is based on the labour force, sometimes referred to as the economically active population, rather than the entire population. As a result, the graduate unemployment rate is determined by dividing the total number of graduates by the number of jobless graduates. The World Bank computes graduate unemployment as the percentage of the labour force with an advanced level of education for those who are unemployed. The International Standard Classification of Education defines advanced education as short-cycle tertiary education, a bachelor's degree or equivalent level of education, a master's degree or comparable level of education, or a doctoral degree or equivalent level of education" (UNESCO Institute for Statistics,2012).

3.4.4 Types of Unemployment

There are seven major types of unemployment observed in Ghana. These include cyclical unemployment, frictional unemployment, structural unemployment, technological unemployment, seasonal unemployment, casual unemployment, regional unemployment, and seasonal unemployment. The following is a discussion of each type, with relevant details to help you better understand the unemployment situation.

Cyclical unemployment:

Cyclical unemployment is one of the most prevalent types of unemployment when examining the many classifications. As the name suggests, unemployment is cyclical and primarily impacts Ghana's workforce, which is primarily made up of people who work on a temporary basis. "Periods of recession when aggregate demand and the related demand for labour are weak are when cyclical unemployment occurs" (Barker, 2007, pg. 177). The trade economy's cycles may be going through a recession or a depression. In the former, there is a strong economy and rapid product turnover, which results in significant profit. Because of this, it becomes necessary to manage production with a larger team, and the increased revenues enable us to do so. At this stage,

Employment is at its highest potential. When the economy is in the depression stage, workers are laid off since there is no longer enough money to pay them. This is a result of the delayed movement of products. As a result, there are many employees who are eager and available to work but have no available job.

The condition of cyclical unemployment simply arises when there is a reduction in consumer demand, which results in little to no investment, a decline in output, and unemployment since there is not enough money to support the labor. Be aware that decreased demand for products might be caused by a simple loss of interest on the part of earlier buyers, by the availability of more substitutes, or by a drop in the target market's purchasing ability. Cyclical unemployment can be reduced by enacting policies that boost overall economic spending, which raises the level of effective demand and prevents layoffs due to low buying power.

Frictional unemployment:

This sort of unemployment "occurs as a result of the regular labour turnover that takes place in every dynamic economy and the time delays associated in the re-employment of labour" (Barker, 2007, pg. 176). As a result, it occurs when a person is unemployed after quitting their work or finishing a professional degree. Since people eventually quit their jobs and do not instantly find new ones, frictional unemployment is widespread and expected in the labour market. In fact, it is thought that everyone experiences frictional unemployment at some point (Ehrenberg and Smith, 2009). It makes sense that there would be some delay between graduating from college and finding employment. For instance, if someone graduates from college today and begins looking for work, it is stated that they are frictionally unemployed during this time. Making it simpler for job searchers to learn about the available possibilities through advertisements, developing equitable methods of hiring employees to offer everyone an equal shot, and improving the working conditions of staff may all contribute to reducing the incidence of frictional unemployment.

Structural unemployment:

This is a different form of economic unemployment. It speaks of "the entire economy's incapacity to accommodate the whole labour force, even at the top of the business cycle, due to structural imbalances" (Barker, 2007, pg. 177). It also refers to a mismatch in skills between the disciplines of study that graduates provide and those that employers desire. Therefore, structural unemployment occurs when a person is jobless because the open positions require skills that the

person does not possess. Simply put, it is unemployment brought on by a lack of necessary skills. This is a type of frictional unemployment, but instead of seeking any job that comes their way, the job seeker is hunting for a particular job that they want. It typically occurs in technological enterprises, which require specialist individuals to perform their duties. It may alsobe brought on by a decline in consumer demand for products made in a specific factory, which results in the firing of extra staff.

For instance, if you are seeking employment and have a business degree and an opportunity in civil engineering arises, you are unable to apply even if you learn about the opportunity because you do not possess the necessary engineering skills. As a result, you remain jobless until a business or non-specific position becomes available. Another instance of structural unemployment is when a person with a handicap is offered a job opportunity but declines it because the company is not accommodating to their condition. Job searchers who concentrate on job descriptions that match their credentials can sort structural unemployment. These specialist personnel may be trained to be absorbed into growing businesses if some jobs become obsolete, solving the structural unemployment issue.

Technological unemployment:

This type of unemployment happens when people lack jobs because of technological advances that replace manual labor or require specialized skills to operate. Given the structural changes brought about by technological advancements in the workplace, it could easily fall under the category of structural unemployment. In developed countries, technological unemployment is never a big problem because it happens slowly, and people are always ready for it. The current workforce frequently cannot keep up when something new is presented, so they end up being scrapped off, which causes significant changes that result in job losses in Ghana and other third-world countries.

Modern technologies speed up production at work, cut down on the cost of labor, and make tasks easier. For the company, the advantages are enormous. Employee terminations must cover the cost. Wherever possible, one aspect of technology should be introduced gradually before another to help people adjust to the change. This will help address technological unemployment. If this is impossible, firms should try to find new jobs for the employees they want to replace to keep them from becoming the victims of technological unemployment.

Regional unemployment:

As implied by the name, it is a sort of unemployment that can happen for any cause in a certain geographic area. For instance, if the diamond in Ghana's Birim valley runs out, the miners there and in Akwatia will lose their jobs. The Awaso bauxite miners experience the same situation. This falls under the category of regional unemployment.

Casual unemployment:

This kind of unemployment occurs when some people decide not to work despite being able to because they do not need the money. Other names for it include voluntary unemployment. The main purpose of a job is typically to provide us with money. Nowadays, most people have other ways to pay their bills. Some people rely on the support of working family members, while others are supported by a government program that provides cash to seniors at the end of each month. Professionals occasionally receive lucrative contracts that enable them to quit their jobs and voluntarily go without employment for a while. The only issue this causes is an increase in the unemployment rate in the nation's economy. Another explanation for casual unemployment would be people who routinely look for casual opportunities but are unsuccessful. Anytime a casual job is terminated, one becomes jobless.

Seasonal unemployment:

Seasonal unemployment occurs when people who work in seasonal occupations are laid off when the season ends. It takes place on a consistent and predictable basis. Seasonal employment is also referred to as a work agreement in which one is contracted for a specific time of the year and only when work is available. When a job or period of employment ends, one becomes seasonally unemployed until the next opportunity presents itself. Seasonal unemployment in Ghana is most prevalent in industries such as agriculture, where products vary seasonally, and tourism, which has high and low seasons. Holiday resorts hire more employees during the peak holiday season, such as December, when they expect a high volume of visitors. These seasonal workers are laid off when the season is over.

To combat the issue of seasonal unemployment, job seekers can learn the order of various industries and ensure they have a position lined up in a new industry when their present position ends. For example, instead of working in a holiday resort during the holidays, plan to harvest nuts on a large-scale farm in January. Alternatively, the government could implement modern farming methods that would create full-time jobs for seasonal agricultural workers. Irrigation,

mechanization, double cropping, and mixed farming can create opportunities all year long, reducing seasonal unemployment.

3.4.5 Causes of Unemployment

Poor education:

A key factor affecting graduates' chances of finding work is their educational background. The impact of low educational quality, which sends a poor productivity signal to employers and raises the likelihood of graduates finding work after graduation, limits the returns to tertiary human capital. (Chamberlain and Van der Berg, 2002). How well a graduate performs in the workplace is directly influenced by the quality of their tertiary education. There are many substitutes that can be used, despite the difficulty of determining quality. Several factors can be used to evaluate the quality of education, including the curriculum's relevance and current, access to online resources and libraries, lecturer-to-student ratios, pass and graduation rates, and lecturer-to-pupil ratios.

In most African countries, a lack of education is a leading predictor of the high rate of unemployment among our youth. This is because, according to Baah-Boateng (2013), only basic education has been obtained by about half of the working-age population, leaving them unable to find employment in the formal sector of the labour market other than being able to read and write. A key factor affecting graduates' chances of finding work is their educational background. The impact of low educational quality, which sends a poor productivity signal to employers and raises the likelihood of graduates finding work after graduation, limits the returns to tertiary human capital. (Chamberlain and Van der Berg, 2002). How well a graduate performs in the workplace is directly influenced by the quality of their tertiary education. There are many substitutes that can be used, despite the difficulty of determining quality. The quality of education can be assessed using a variety of factors, including the curriculum's relevance and current, access to online resources and libraries, lecturer-to-student ratios, pass and graduation rates, and lecturer-to-pupil ratios.

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reflect the economic conditions that exist outside of the classroom. He is adamant that it merely imparts general and literary education without any application-specific information.

Increase in population growth:

The country's high rate of youth unemployment has been attributed in large part to the population's growth rate, which has been increasing at a rate of 2.7 percent annually on average over the past 20 years. This puts pressure on the labour force. (Poku-Boansi and Afrane, 2011). According to Amoafo (2011), population and resource considerations have constantly framed the relationships between population growth and development. He claims that traditional economists like Malthus, Coale, Hoover, and others have taken notice of this issue because they were concerned about population growth that was occurring too quickly in the face of limited resources. The entire debate was changed to include the connections between population, environment, and development in the early 1970s, and it now includes sustainable development. As a result, a distinct policy priority should be set forth that will enable a balanced increase in both the population and the economy, which could result in sustainable development and the emergence of job opportunities for young people.

Skills mismatches:

Many young people who are unemployed either lack skills or, worse yet, possess undesirable skills. Because of this, they are not employable in the formal labour market, where the emphasis is placed on credentials and experience. The problem facing young people has been made worse by the gap between academic training and industry requirements in which there is official training for job seekers. (Poku-Boansi and Afrane, 2011).

Graduates from the educational system continue to lack the skills and goals needed by contemporary industry. As a result, it is estimated that 68,000 graduates are produced annually by universities and other tertiary institutions without a correspondingly enormous number of jobs being created to hire them. According to recent data from the University of Ghana's Institute of Statistical, Social, and Economic Research (ISSER), about 50% of 2011 graduates may have to wait until 2014 before finding employment.

According to Amoako (2016), the course materials taught in our universities, polytechnics, and other institutions of higher learning should be revised to offer equal amounts of theoretical and practical training. He believed that courses that would not immediately benefit the nation and have zero chance of leading to employment should not be taught. Amoako (2016) further argued

that our educational system's emphasis should be changed to emphasize the development of graduates who are creative, innovative, and critical thinkers and who will be able to look for solutions to social issues and thereby find employment for themselves. He thinks that by doing this, those who are struggling will always be willing to use their services, and in this way, graduate unemployment will become obsolete.

According to Boateng and Ofori (2002), the question of quality touches on the possession of a few skills thought to be crucial for job performance. They contend that employers do not always prioritize credentials over performance, and due to that, there is a higher demand for skills like managerial, technical, analytical, and computer-related skills, to name a few. For instance, in 1995, only 13.4% of jobs requiring a university degree also required computer proficiency; 0.4% also required communication proficiency. Additionally, 1.5% demanded character traits. In 2000, the demand rose to 45.7% for computer skills, 38.6% for communication skills, and 41.88% for personal qualities, respectively. (Boateng and Ofori, 2002). Youth hopes and expectations also play a role in the employment-unemployment nexus. Graduates' expectations for employment do not correspond to wage offers made by employers. In a survey of 450 students in their last year at the University of Ghana conducted in 2000, it was found out that more than 80% of respondents expected a wage that was significantly higher than the current wage offered by the sectors where they said they would prefer to work. (Boateng and Bekoe, 2001 cited by Boateng and Ofori, 2002).

Lack of experience:

Lack of work experience is one of the things that makes graduates more likely to be unemployed. Employers look for evidence of aptitude in the form of work experience. Employers prioritize experience and skills; they view inexperienced job seekers as risky investments. (de Rheede, 2012). Employers are discouraged from hiring graduates without work experience because even when they are successful in finding employment Before employees can contribute, however, they need intensive training from their employers. Due to the economic downturn, employers prefer to hire experienced workers rather than training graduates because doing so would result in extra expenses. Graduating workers experience cyclical unemployment because of this downturn. Some businesses, particularly small and medium-sized businesses (SMEs), cannot afford any training. (Mannack, 2009). Due to this cohort's inexperience, Du Toit (2003) notes that layoffs happen more frequently, leading to high graduate unemployment rates. To gain

experience and improve their employability, Von Fintell and Black (2007) advise graduates to offer to work as free apprentices.

Lack of investment and economic growth:

The factors that have contributed to youth unemployment in Ghana on the demand side are low investment and low economic growth rates. The lack of capital is the first issue a developing country like Ghana must deal with. Low savings rates in emerging markets are to blame for this. Enough capital (domestic and foreign) is necessary for any nation's development because domestic capital must come first, and foreign capital must come second. (Amoafo, 2011). No nation has grown solely on foreign investment, it is important to remember this. Construction of new projects like power plants, roads, harbours, sanitation facilities, sewer plants, airports, etc. necessitates a large labour pool; as a result, a lack of funding for such projects becomes a significant factor in unemployment. It is also possible to argue that Ghana's unemployment problem is a result of the country's subpar macroeconomic performance over the previous 50 years, necessitating a more comprehensive solution than just focusing on supply-side measures. (Amankrah 2006).

Lacking a passion for agriculture:

The development of any nation, including Ghana, depends on its agricultural sector. According to Ghana's development plan, agriculture is one of the country's economic pillars. Our economy is structurally agrarian, but even though the youth must be involved in this development, the agricultural sector continues to be unappealing to recent graduates and the youth in general. It is essential and necessary for young people to get involved in agriculture to support the nation's food and nutrition security as well as to create jobs. Additionally, there is strong proof that the country's farmer population is aging, a problem that needs to be solved to support the sustainability of agricultural production.

In Ghana, farmers are 55 years old on average and have a life expectancy of 55 to 60 years, according to the Ministry of Food and Agriculture (MOFA). Additionally, there is a need to change the negative perception of those who work in agriculture, particularly in rural areas. The youth are the best group to lead this change because they are more apt and eager to adopt the newest concepts, ideas, and technologies—all of which are crucial for altering how agriculture is carried out and viewed. The youth, who make up between 20 and 30 percent of Ghana's working population, are

in fact, essential to increased agricultural productivity. It is incredibly possible to boost agriculturalproductivity because of their sheer numbers and vigour.

Inflexibility of the labour market:

Laws governing the labour market are designed to protect important players in the labour market and help correct market failure. They do, however, unintentionally have detrimental effects that promote graduate unemployment. Furthermore, some labour laws expressly forbid employment. The International Monetary Fund (IMF) imposed a ban on public sector hiring as one of its conditions between 2015 and 2018, when Ghana sought a bailout from the organization. The nation's unemployment problem grew worse as a result.

3.4.6 Overview of Unemployment Rate in Ghana

According to Ghana's latest Population and Housing Census, there are about 30.8 million persons (15,200,440 males and 15,631,579 females) in the country (Ghana Statistical Service, 2021a). 11,541,355 population are in the labour force, also known as the economically active population; 9,990,237 are employed and 1,551,118 are unemployed, or 58.1% of population aged 15 and over.

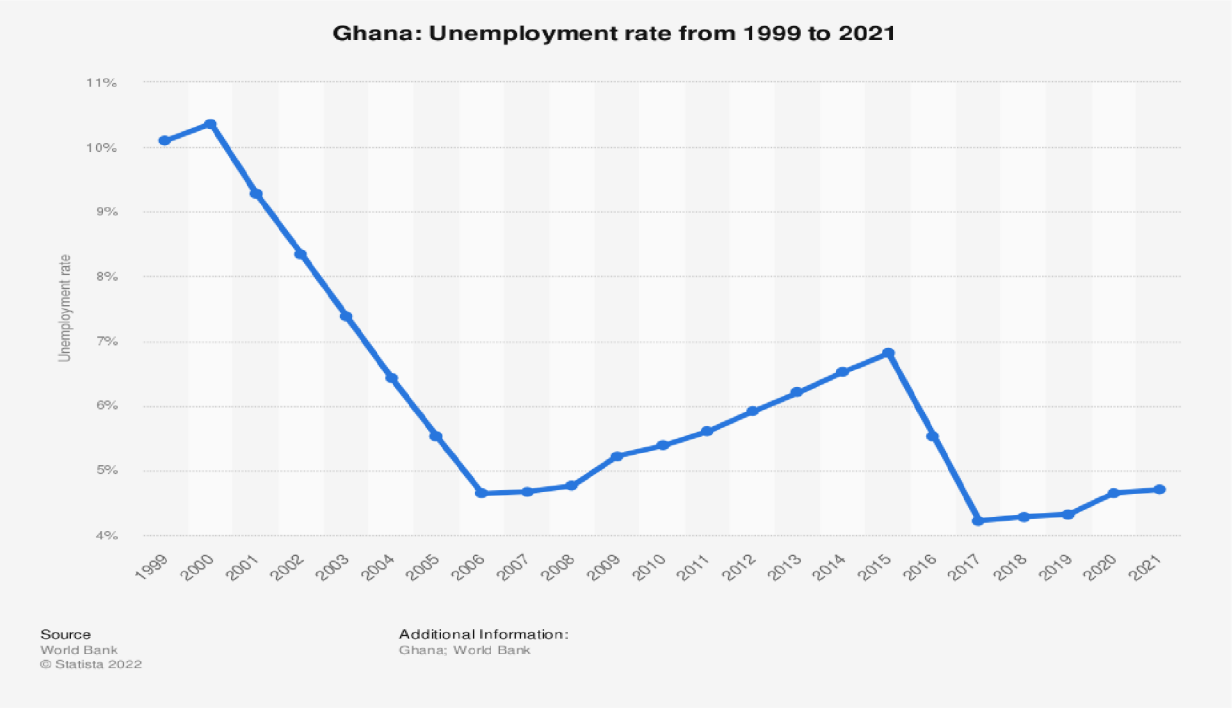
(Ghana Statistical Service, 2021b). Male economic activity (63.5%) is significantly higher than that of female economic activity (53.0%), with a greater difference between male and female economic activity (63.6%) and female economic activity (51.5%) in rural areas.

The report also revealed that the unemployment rate for people aged 15 and over is 13.4%, with a higher rate for females than for males (11.6%), at 15.5%. The unemployment rate is 19.7% among people aged 15 to 35, and it is much higher for young adults aged 15 to 24 (32.8%).

In terms of regional breakdown, eight regions (Oti, Bono East, Eastern, Ahafo, Greater Accra, Western North, Ashanti, and Central regions) have an unemployment rate lower than the national average of 13.4 percent with Oti region recording the least (6.7%). All the five regions in the northern part of the country, together with the Western, Bono and Volta regions, recorded unemployment rates higher than the national average. What is interesting is that youths (15-35 years) make up two-thirds (65.8%) of all unemployed population aged 15 and older who are available for work but are not looking for employment. (Ghana Statistical Service, 2021b).

According to estimates from the World Bank, unemployment rate in Ghana has reduced from over 10 percent in the late 1990s and early 2000s to about 4.7 percent in 2021. During this period, there has been a rise and fall in the rate of unemployment. Particularly, between the year 2000 to 2006, there was a fall in unemployment rate from 10.4 percent to 4.6 percent. However, from that time to 2015, there was a gradual increase to 6.8 percent before another drop to 4.2 percent in 2017. Currently, the unemployment rate in the country is estimated to be 4.7 percent. Figure 3.4 shows the trend of unemployment in Ghana from 1999 to 2021.

Figure 3.4: Unemployment rate in Ghana (1999-2021)



Source: Statista | Ghana (2022)

Over the years, gender differences in unemployment rates have been observed in the country. For example, according to International Labour Organisation (ILO) estimates, in the year 2000, while unemployment rate was 10.2 percent among males, it was higher (10.7%) among females. Similar trends were observed in 2005 (5.5% and 5.8% respectively) and 2010 (4.9% and 5.9% respectively). However, in 2015, an opposite trend was observed where the rate of

unemployment in males was higher than among females (7.0% and 6.6% respectively). In 2020, the usual trend was recorded (4.5% for males and 4.8% for females) (World Bank, 2022).

In terms of youth unemployment, the gender differences are not consistent. For instance, in the years 2000 and 2010, youth unemployment rate was higher among females than males. On the other hand, in the years 2005, 2015 and 2020, youth unemployment rate was higher among males than females. Graduate unemployment rate has reduced from 11.2 percent in 2000 to about seven percent in 2015. For females, the rate has reduced from 14.3 percent to 5.9 percent in the same period. However, in the case of their male counterparts, graduate unemployment rate reduced from 9.8 percent in 2000 to 7.5 percent in 2010 before increasing slightly to 7.7 percent in 2015. These are summarized in Table 3.1.

Table 3.1: Unemployment rate in Ghana

	2000	2005	2010	2015	2020
Unemployment (total)	10.5	5.6	5.4	6.8	4.7
Unemployment (female)	10.7	5.8	5.9	6.6	4.8
Unemployment (male)	10.2	5.5	4.9	7.0	4.5
Youth unemployment (total)	16.4	10.2	11.0	14.0	9.5
Youth unemployment (female)	16.5	10.1	12.0	13.4	9.2
Youth unemployment (male)	16.3	10.3	10.0	14.5	9.8
Graduate unemployment (total)	11.2	..	7.8	7.1	..
Graduate unemployment (female)	14.3	..	8.4	5.9	..
Graduate unemployment (male)	9.8	..	7.5	7.7	..

Source: World Bank (2022)

3.5. Empirical Review

Numerous studies have been conducted on the issues of reservation wages and graduate unemployment. In this section, some of these studies are chronicled. The empirical review is

presented under the following sub-headings: factors influencing reservation wage, factors influencing graduate unemployment, and relationship between reservation wage and unemployment.

3.5.1 Factors influencing reservation wage.

The level of reservation wages among older jobless (45+) was researched by Axelrad, Luski and Malul (2017), who also looked at what occurs to the level of reservation wages when unemployment duration lengthens. If they are willing to make a sacrifice in terms of their occupation, profession, or geographic area to obtain a job, the respondents were questioned. The findings showed that older persons were more likely to lower their income expectations and had longer durations of unemployment. Thus, the study demonstrated a link between older jobless, reservation wages, and the length of unemployment, demonstrating that older unemployed person's longer unemployment is a result of higher reservation wages (Axelrad, Luski and Malul, 2017).

Prasad (2003) investigated the variables that influence the reservation wage for unemployed German workers. Prasad uncovered data demonstrates the link between the reservation salaries of jobless employees and macroeconomic variables such as aggregate and local unemployment rates, the generosity of the unemployment compensation system, and features of the wage structure, in addition to individual-specific determinants such as proxies for general and specific human capital, duration of unemployment spell, and alternative income sources. Additionally, it was shown that reservation salaries for employees who move from unemployment to employment alter over time and connect with accepted salary offers (Prasad, 2003).

Björn (2001) examined the reservation wages of jobless people in prior German research utilizing a model for job-search with non-static reservation wages. The findings imply that, in comparison to other nations, reservation salaries are disproportionately high in Germany. Additionally, aggregated regression findings demonstrate that the most recent earnings and individual characteristics of the jobless are the key factors influencing reservation wages. On the other hand, according to (Björn, 2001) neither the length of the unemployed nor the kind of

unemployment benefits affect reservation wages. Björn concluded that those who are jobless are not under a lot of financial strain and do not have a lot of incentive to look for work.

In their 2021 study, Fedorets and Shupe take advantage of differences in regional exposure to Germany's implementation of a high-impact minimum wage in 2015, in conjunction with survey responses regarding the wage acceptance thresholds of job seekers. In the period immediately following the implementation of the reform, reservation wages for the lowest-income unemployed job seekers increased by 16%. Eventually, however, wage expectations return to their levels prior to the reform. The results point to the possibility of learning throughout the search process and imply that minimum wages do not necessarily result in an increase in short-term labour force participation, as job seekers adjust their reservation wages accordingly. In their 2010 study, Coen, Forrier and Sels examined the connection between age and the reservation pay for workers in their mid- and late-career. Coen and colleagues looked at whether employability criteria like "willingness to move" and "easy of moving" mediated the link between age and reservation pay. Age positively influences the reservation wage via desire to migrate, according to a path analysis of a sample of 8,113 Belgian employees between the ages of 40 and 60. However, the detrimental affect brought about by ease of mobility cancels out this benefit (Coen, Forrier and Sels, 2010). If employability characteristics are considered, further analysis showed a direct, positive influence of age on the reservation wage, indicating that pay claims are rising as people transition from mid to late career, regardless of their employability.

In a different Belgian study, Coen, Forrier and Sels (2015) investigated the association between age and reservation wages and evaluated whether people's employment efficacy and work intention, or attitudes toward employment, mitigate this relationship. The study included a sample of 22,796 Belgian workers between the ages of 18 and 60. The findings indicated a U-shaped relationship between age and the reservation salary via work intention and a reverse U-shaped relationship via employment efficacy. There was also a clear correlation between age and reservation wage, the impacts of which changed depending on one's work position (Coen, Forrier and Sels, 2015).

Arrazola and de Hevia (2016) examined inactive or jobless people in Spain in terms of offered and reservation earnings to provide a more comprehensive picture of gender wage inequalities. The findings indicate that compared to supplied perspectives, the observed earnings provide a more favourable perspective of the gender wage difference. Additionally, Arrazola and

de Hevia pointed out that there is a significant gender wage disparity for reservation wages, which they attribute to women being more likely than men to oversee household and family caring duties. The findings indicate that Spanish women earned more on reservations and less on offers than males (Arrazola and de Hevia, 2016).

Likewise, Caliendo, Lee, and Mahlstedt (2014) examined the gender pay gap and the potential role of reservation wages. Based on two waves of extensive data from the IZA Evaluation Dataset Survey, to understand the gender disparity in realized salaries for a sample of recently jobless people in Germany actively pursuing full-time employment, the authors looked at the impact of gender variations in reservation wages. The data set has measurements for education, socio-demographics, work history, psychological factors, and job search characteristics., allowing us to conduct a decomposition analysis that includes these potentially influential factors. The findings suggest that the gender wage gap disappears when reservation wages are considered. Caliendo and co-workers discovered a close correlation between the two gaps for specific subgroups. Those with little experience in the labour market, for example, exhibited no gender gap in reservation wages and no corresponding gap in observed wages. The authors dissected the gender gap in reservation wages and drew preliminary conclusions about the nature of the unobservable traits that reservation wages may be capturing to gain a more complete understanding of evolution of the initial gender gap in reservation wages.

Vasilescu and Begu (2019) also investigated the factors that influence young people's wage reservations in Romania and examined if young people's salary expectations are too high and dissuade them from accepting accessible employment. The findings showed that, given their personal qualities, young unemployed persons genuinely have high reservation wages, anticipating more than they are predicted to receive on the market. Age, gender, education, purpose to immigrate, duration of unemployment, and friends' income are the primary determinants of their reservation wage (Vasilescu and Begu, 2019).

Similarly, Malk (2014) examined the personal and macroeconomic factors that affect reservation wages in Estonia, paying special attention to the impact of unemployment length. To assess the factors influencing reservation wages, data from the Estonian Labour Force Survey 2011–2013 were analysed using instrumental variable regression analysis. According to the findings, personal traits, household income level, and the local unemployment rate are crucial variables that influence reservation wage setting. Malk (2014) also discovered that the duration of

unemployment has a considerable negative impact on the reservation wage, which is mostly driven by males and older people.

Caliendo, Lee, and Mahlstedt (2017) investigated the role that disparities in reservation wages play in the gender pay gap. Caliendo and colleagues performed a decomposition analysis on measures for reservation wages, education level, socio-demographics, previous employment, and personality traits using data from two waves of a comprehensive survey of recently unemployed people in Germany. Once reservation wage is considered, the gender wage gap becomes negligible and statistically insignificant. In addition, Caliendo et al. conducted a subgroup analysis that sheds light on the significance of potentially unobserved characteristics that influence both reservation wages and realized wages. Differences in reservation wages may result from differences in productivity, the fact that women anticipate discrimination, and various unobserved traits or preferences. (Caliendo, Lee, and Mahlstedt, 2017).

3.5.2 Factors influencing graduate unemployment.

The supply-side or demand-side perspectives have been the main points of focus in empirical studies on the factors that influence unemployment. Numerous empirical studies have indicated that, from the supply-side perspective, those with higher educational attainment tend to have lower unemployment rates. Elhorst cited in Dagume and Gyekye (2016) showed a direct correlation between educational attainment and employability in his empirical investigation on unemployment. He looked at four effects that schooling has on people's job patterns and employability. First, he believes that in a technologically advanced economy, employers prefer to prioritize talents that are primarily demonstrated by people with higher levels of education. Second, people with higher levels of education can discover employment more rapidly than people with lower levels of education thanks to their search behaviours. Thirdly, a person's likelihood of being laid off decreases with more educational attainment. Finally, highly trained employees push out lower educated workers by taking positions that need less education than they do (Dagume and Gyekye, 2016).

The determinants impacting employment achievement among recent Bachelor graduates have been investigated in Australia (Jackson, 2014). According to findings of Jackson's study, technical proficiency, general skill knowledge, and a well created graduate identity were all considered by employers. The survey also showed that employment opportunities are not only

determined by merit, with employers favouring graduates from elite institutions, part-time students, and those whose studies included on-campus learning (Jackson, 2014).

Hanapi and Nordin (2014) investigated the factors that contribute to the issue of unemployment among Malaysian graduates. They discovered that among the elements contributing to the unemployment problem among Malaysian graduates are the characteristics of graduates, the competence of lecturers, and the quality of education (which is referred to as the curriculum of a study field). According to Kadir et al. (2020) the primary causes of graduate unemployment were lack of employability skills, a poor fit between education and work, and unrealistic pay. The study looked at how graduate characteristics, employability abilities, English proficiency, unreasonably high starting salaries, and job mismatches relate to graduate unemployment in Malaysia.

Baldry (2016) examined how South African graduates' demographic and educational traits affected their employment and unemployment rates. The biggest predictors of unemployment, according to binary logistic regression, were the graduates' race, socioeconomic position, and graduation year. Unexpectedly, the graduates' subject of study, level of study, grades, and whether they had gotten career assistance at their higher education institution had no impact on whether they were employed or not. The findings raise concerns about how much higher education institutions and graduate employers are contributing to social inequality through their practices and services for graduate recruitment. They also demonstrate the significant impact structural factors have on determining graduates' employment prospects (Baldry, 2016).

Amani (2017) reviewed the job obstacles Tanzanian graduates encountered using secondary sources to identify potential solutions. The choice of study field, job-skill mismatch, inefficient career advice, lack of confidence and poor communication skills, an ineffective labour market information system, and gaps in employment policy were all revealed to be hurdles to employment. Amani contends that to overcome these obstacles, concerted efforts must be made to educate incoming graduates about a variety of job alternatives through career counselling. The author suggests revising university training courses to include important general skills like entrepreneurship and communication that will direct graduates toward self-employment in the face of a virtually fully employed formal labour market (Amani, 2017).

Gebisa and Etana (2019) looked at the factors that contribute to young adult unemployment in Ethiopia. The findings showed that the unemployment rate was highly influenced by factors

such as education, the number of graduates, work experience, career counselling, market information, family income, aspiration to low-paying jobs, and the quality of education. However, it was discovered that entrepreneurial skill had no appreciable impact on graduate youth employment in that nation (Gebisa and Etana, 2019).

Demissie et al. (2021) established the parameters linked to graduate unemployment in research conducted in Ethiopia that was comparable to that of Gebisa and Etana (2019). According to the study, the independent variables that correlate with graduates' unemployment are demographics, curriculum, institutional characteristics, graduate characteristics, and economic and labour market conditions using multinomial logistic regression to analyze data from 359 graduates. According to these findings, higher education institutions and governing bodies should re-evaluate the sector's policy and strategic directions in terms of the employability output of graduates. The research consequently advocated for the development of an environment that encourages firms to succeed while higher education institutions modify their courses to accommodate employers (Demissie *et al.*, 2021).

Emunemu and Kasali (2014) looked at Nigerian graduates' unemployment and entrepreneurship. They especially looked at Oyo State graduates' views toward white collar occupations and the efficacy of self-reliance strategies. The survey discovered substantial levels of perceived unemployment among graduates. White collar job preference has been noted as the main contributor to graduate unemployment. Therefore, it was suggested that entrepreneurial education be implemented in higher educational institutions to increase graduates' sense of independence (Emunemu and Kasali, 2014).

3.5.3 Relationship between reservation wage and graduate unemployment

Brown and Taylor (2011) examined the probable discrepancy between the reservation wages of unemployed people and their expected market wages using individual level panel data with a focus on finding the influencing factors. The authors also investigated the implications of such divergences for future employment and wages using propensity score matching techniques, and they discovered that having reservation wages that are high in comparison to the anticipated market wage has an impact on both future employment and future wages.

The findings that link reservation wage to unemployment are like reports from Ghana. For instance, Baah-Boateng (2015) stated that reservation wage was one of the main reasons that

generate unemployment in Ghana after using the logit regression estimation approach to examine the causes of unemployment in Ghana from both the labour demand and supply perspectives.

3.6 Summary of Chapter

This chapter focuses on the review of theoretical, conceptual, and empirical literature which are related to the study. The chapter begins with some theoretical perspectives on unemployment. Particularly, the classical and Keynesian perspectives on unemployment were discussed. In addition, the Human Capital Theory and the Screening Hypothesis were discussed in relation to graduate unemployment. The conceptual review covers issues such as definition of reservation wage, unemployment, graduate unemployment, types of unemployment, causes of unemployment and overview of unemployment rate in Ghana. The chapter concludes by reviewing some empirical literature under the sub-headings: factors influencing reservation wage, factors influencing graduate unemployment, and relationship between reservation wage and unemployment.

4. PRACTICAL PART

This chapter presents the results of the research. This was for research purposes the aims of the study.

4.1 Background Characteristics of Respondents

The study focused on four (4) background characteristics of respondents. These were age, sex, marital status, and religion. The focus on these four variables was based on prior evidence linking them to unemployment and their availability in the dataset. Age was a continuous variable that was divided into four categories: (1 = less than 25 years, 2 = 25-34 years, 3 = 35-44 years, and 4 = 45 years and above). The gender was coded as follows: (1 = male, 2 = female). The following marital statuses were coded: 1 = Married, 2 = Consensual union, 3 = Separated, 4 = Divorced, 5 = Widowed, and 6 = Never married. This was broken down into three categories: (1) married/consensual union, (2) separated/divorced/widowed, and (3) never married. Religion was initially coded as follows: 1 = No religion, 2 = Catholic, 3 = Protestant, 4 = Pentecostal/charismatic, 5 = Other Christian, 6 = Islam, 7 = Traditional, and 8 = Other. Religion was recoded into five categories: (1) No religion, (2) Christian, (3) Islam, (4) Traditional, and (5) Other.

The respondents who were less than 25 years made up 44 percent of all the respondents. Those within the ages 25-34 years and 35-44 years were 14.4 percent and 13 percent, respectively while 28.5 percent of them were 45 years or older. Also, more than half (56.6%) of the respondents were females. Concerning marital status, two-thirds (66.6%) of the respondents were married or in consensual unions. Sixteen percent were never married. In addition, more than half (54.6%) professed the Christian faith and about 27 percent were Muslims. (6.2%) of them had no religious affiliation. These are shown in Table 4.1.

Table 4.1: Background Characteristics of Respondents

Variable	Frequency	Percentage
Age		
Less than 25 years	10,543	44.1
25 – 34 years	3,454	14.4
35 – 44 years	3,093	12.9
45 years and above	6,826	28.5
Sex		
Male	10,375	43.4
Female	13,541	56.6
Marital status		
Married	10,375	66.6
Separated/divorced/widowed	2,704	17.3
Never married	2,503	16.1
Religion		
No religion	1,472	6.2
Christian	13,036	54.6
Islam	6,621	27.7
Traditional	2,745	11.5
Other	13	0.05

Source: Author, Computed from STATA 2023, GLSS 7

4.2 Results

4.2.1 Factors Influencing Reservation Wage among Graduates in Ghana

The study's initial objective was to evaluate the factors influencing reservation wage among Ghanaian graduates. A one-way analysis of variance (ANOVA) was used to compare the numbers and find out which factors significantly influenced reservation wage. According to the result,

reservation wages were higher among younger graduates. For instance, the mean reservation wage among graduates less than 25 years and those between ages 25-34 years was GH¢212.80 and GH¢317.10, respectively. However, among their older counterparts, reservation wage was much lesser; GH¢157.00 among 35–44-year-olds and GH¢123.50 among those older than 44 years. The result also showed that age was a significant determinant of reservation wage ($F = 10.3$; $p<0.000$). Further, a post hoc test revealed that significant differences exist between Ghanaian graduates aged 25-34years and 35-44yaers as well as 25-34 years and 45+ years.

Concerning sex, the findings show that males had a higher reservation wage than females. Specifically, while males had a mean reservation wage of GH¢284.70, their female counterparts had a reservation wage of GH¢152.40. The analysis of variance revealed that the reservation wages of males and females is statistically different ($F = 19.1$; $p<0.000$). The graduates who were never married had a reservation wage higher than those who were either married (married/consensual union) or have been married before (separated/divorced/widowed). Specifically, unemployed graduates who were never married had a reservation wage of GH¢417.20. On the other hand, those who were married (or in consensual union) had a reservation wage of GH¢143.70 and the rest who were separated/divorced/widowed had a reservation wage of GH¢107.70. The results of the ANOVA test showed a statistically significant difference between their mean reservation wages ($F = 12.5$; $p<0.000$), particularly between the never married and married as well as the never married and separated/divorced/widowed but not between married and separated/divorced/widowed. Christians had the highest reservation wage of GH¢282.10, followed by those who have no religious affiliation (GH¢142.60), Muslims (GH¢116.50) and Traditionalists (GH¢66.50). Religion was found to be a significant determinant of reservation wage ($F = 12.5$; $p<0.000$). The mean reservation wage of Christians was found to be significantly different from those of no religion, Muslims, and traditionalists. These results are presented in Table 4.2.

Table 4.2: Reservation wage by background characteristics

Variable	Mean	Standard error
Age	***(F=10.264, p<0.000)***	
Less than 25 years	212.8	42.1
25 – 34 years	317.1 [a b]	34.8
35 – 44 years	157.0 [a]	20.4
45 years and above	123.5 [b]	16.8
Sex	***(F=19.101, p<0.000)***	
Male	284.7	30.6
Female	152.4	14.6
Marital status	***(F=36.988, p<0.000)***	
Married	143.7 [a]	14.1
Separated/divorced/widowed	104.7 [b]	21.2
Never married	417.2 [a b]	43.6
Religion	***(F=12.503, p<0.000)***	
No religion	142.6 [a]	45.5
Christian	282.1 [a b c]	23.8
Islam	116.5 [b]	17.7
Traditional	66.5 [c]	9.4

Source: Author, Computed from STATA 2023, GLSS 7

Means with the same superscript are statistically different at 0.05 level.

Also, a linear regression analysis was employed to discover the association between reservation wage and respondents' background characteristics. Thus, age, sex, marital status, and religion were used as independent (explanatory) variables in the linear regression model with reservation wage as the dependent variable. The results show a negative relationship between age and reservation wage. However, this relationship was not statistically significant (β= -0.55). Being female was associated with decreased reservation wage. Being a female is associated with GH¢82 reduction in reservation wage of unemployed graduates (β= -82.256; p<0.05). Concerning marital status, being never married had a significant positive relationship with reservation wage while being separated/divorced/widowed is negatively related to reservation wage. In fact,

compared with the married, being never married increased reservation wage by GH¢200 (β = 199.108; p<0.001) and though not statistically significant, being separated/divorced/widowed decreased reservation wage by almost GH¢50 (β = -48.7). Compared with Christians, being Muslim, Traditionalist or having no religious affiliation decreased reservation wage. Specifically, being Muslim decreased reservation wage by GH¢123 (β = 123.2; p<0.01), Traditionalist by GH¢174 (β = 174.3; p<0.001), and no religious affiliation by GH¢123 (β = 122.9; p<0.01). These results are presented in Table 4.3.

Table 4.3: Linear regression of reservation wage and background characteristics

Variable	Coef.	95% confidence interval
Age	-0.552	-2.648, 1.544
Sex		
Male	Ref	
Female	-82.256 *	-144.327, -20.185
Marital status		
Married	Ref	
Separated/divorced/widowed	-48.71582	-137.013, 39.581
Never married	199.108 ***	117.232, 280.984
Religion		
Christian	Ref	
No religion	-122.9266 **	-212.767, -33.086
Islam	-123.1606 **	-192.947, -53.375
Traditional	-174.3381 ***	-261.627, -87.049
_cons	299.9604 ***	180.023, 419.898

Source: Author, Computed from STATA 2023, GLSS 7

*p<0.05, **p<0.01, ***p<0.001

4.2.2 Are Ghanaian graduates overpricing themselves?

The second objective of the research was to determine if unemployed Ghanaian graduates are overpricing themselves. Initially, the reservation wage of unemployed graduates was compared to the actual wages of employed graduates according to their background characteristics. While reservation wage was higher for younger graduates, actual wages of employed graduates were higher for older graduates. For example, there was a statistically significant difference of about GH¢300 in the actual wages of graduates less than 25 years and those 45 years or older. For sex, both reservation and actual wages was higher for males than females and the differences in both instances were statistically significant.

Based on marital status, reservation wage was significantly higher for those who were never married than the married or those who were separated/divorced/widowed. Nevertheless, the married had an actual wage which was significantly higher than those who were never married. Also, the reservation wage of Christians was higher than all other graduates who profess no or other religions, but the actual wages of the employed graduates did not follow same pattern. These findings are presented in Table 4.4 and Figure 4.1 – 4.4.

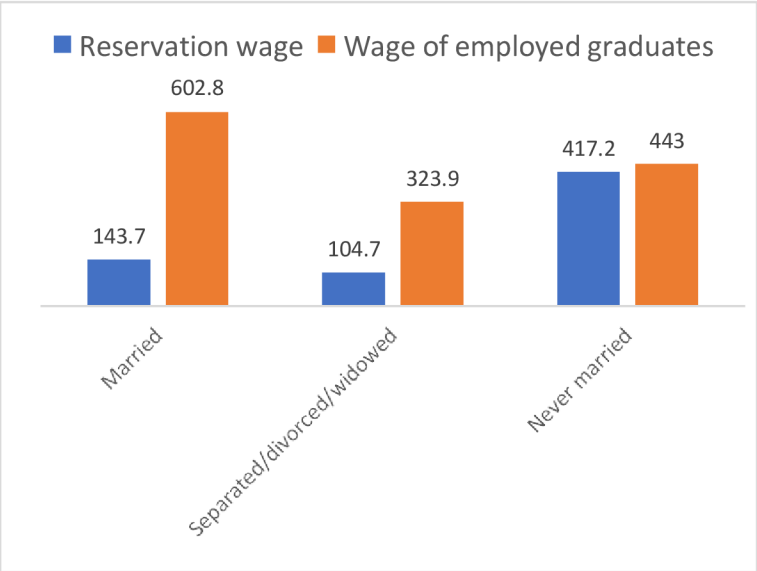
Table 4.4: Comparison of reservation wage of unemployed graduates and actual wage of employed graduates by background characteristics

Variable	Reservation wage of unemployed graduates		Actual wage of employed graduates	
	Mean	Standard error	Mean	Standard error
Age	*(F=10.264, p<0.000)*		*(F=3.326, p<0.019)*	
Less than 25 years	212.8	42.1	286.8[a]	62.5
25 – 34 years	317.1[a b]	34.8	527.3	55.0
35 – 44 years	157.0[a]	20.4	512.2	29.8
45 years and above	123.5[b]	16.8	584.1[a]	28.1
Sex	*(F=19.101, p<0.000)*		*(F=174.4, p<0.000)*	
Male	284.7	30.6	837.7	33.3
Female	152.4	14.6	302.0	24.7
Marital status	*(F=36.988, p<0.000)*		*(F=14.218, p<0.000)*	
Married	143.7[a]	14.1	602.8[a b]	27.3
Separated/divorced/widowed	104.7[b]	21.2	323.9[a]	23.4
Never married	417.2[a b]	43.6	443.0[b]	33.6
Religion	*(F=12.503, p<0.000)*		*(F=33.758, p<0.000)*	
Christian	282.1[a b c]	23.8	600.4[a]	29.8
No religion	142.6[a]	45.5	558.6	64.9
Islam	116.5[b]	17.7	412.1[a]	29.0
Traditional	66.5[c]	9.4	421.4	44.2

Source: Author, Computed from STATA 2023, GLSS 7

[*] Means with the same superscript are statistically different at 0.05 level.

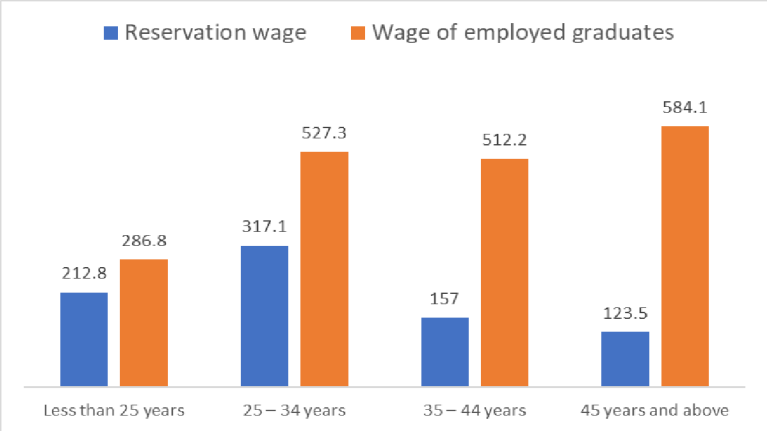
Figure 4.1: Reservation wage by marital status



Source: Author, based on survey data. STATA 2022

According to marital status shown in figure 4.1, reservation wage was significantly higher for those who were never married which is 417.2 than the married or those who were separated/divorced/widowed.

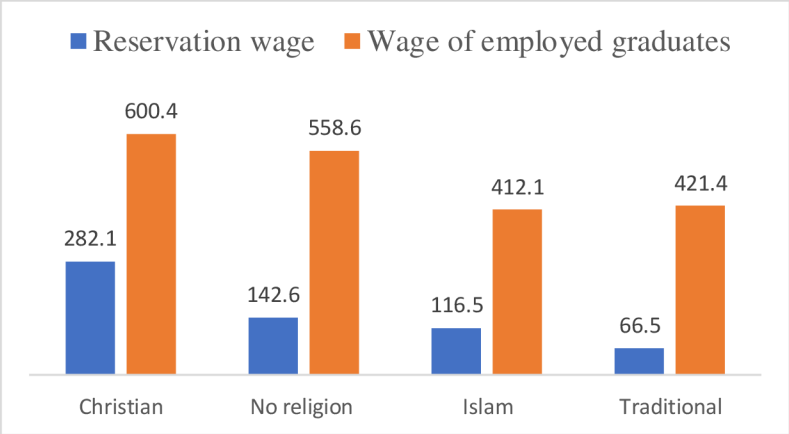
Figure 4.2: Reservation wage by age



Source: Author, based on survey data. STATA 2022

According to reservation wage by age shown in figure 4.2, reservation wage was higher for those who age is between 25years and 34years which is 317.1 than other age.

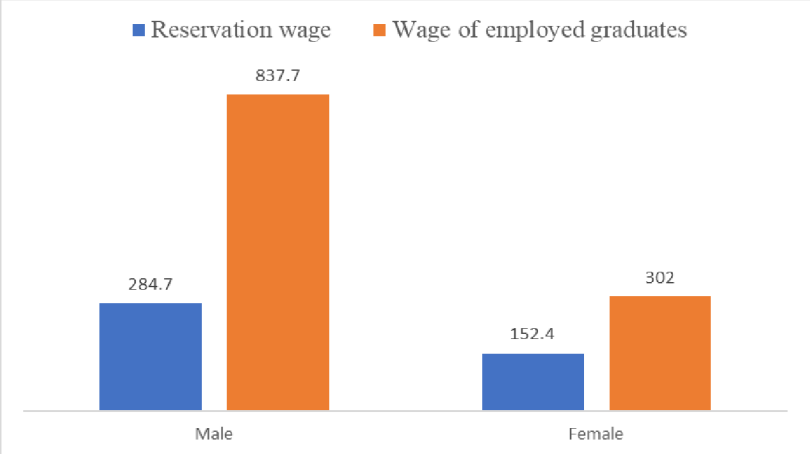
Figure 4.3: Reservation wage by religion



Source: Author, based on survey data. STATA 2022

According to reservation wage by religion shown in figure 4.3, reservation wage for Christians is significantly higher than other religion. Christians are the most dominate religious group in Ghana.

Figure 4.4 Reservation wage by sex



Source: Author, based on survey data. STATA 2022

In figure 4.4, Based on reservation wage by Sex, reservation wage is higher for male 284.7 compared to female 152.4.

Further, an independent sample t-test was conducted to ascertain whether the reservation wages of unemployed graduates is significantly different from the wages of employed graduates. This was to answer the question of whether Ghanaian unemployed graduates are overpricing themselves. The finding reveal that the mean reservation wage of unemployed graduates is lesser than the mean actual wage of employed graduates. While unemployed graduates had an average reservation wage of GH¢435 (GH¢332 – GH¢539), their employed counterparts had an average wage of GH¢522 (GH¢482 - GH¢562). However, the t-test showed that the difference of GH¢86.5 (GH¢-21 - GH¢194) was not statistically significant (T = 1.577; p=0.115). This finding is summarised in Table 4.5

Table 4.5: Independent sample t-test of reservation wage and actual wage of employed graduates

	N	Mean	Std. Error	95% CI for mean
Employed	4620	522.1	20.2	482.43, 561.69
Unemployed	736	435.6	52.8	331.85, 539.29

t-test for Equality of Means				
T	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI of the Difference
1.577	0.115	86.5	54.9	-21.1, 194.0

Source: Author, Computed from STATA 2023, GLSS 7

4.2.3 Reservation Wage and Graduate Unemployment in Ghana

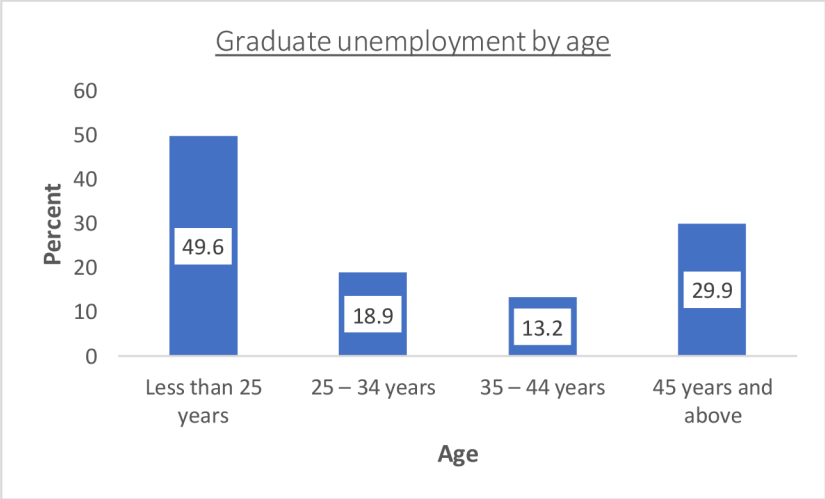
The last objective of the study was to determine if reservation wage contributes to unemployment among graduates in Ghana. Initially, a chi-squared analysis was used to determine how prevalent graduate unemployment is given their background characteristics. In all, 29 percent of the graduates were unemployed. According to the findings, unemployment was greater among younger graduates. Among graduates less than 25 years, almost half (49.6%) were unemployed. The level of unemployment among the other age groups was less; 30 percent among those 45 years and above, 19 percent among those 25-34 years and 13.2 percent among those aged 35-44 years. The findings again showed that age was a significant determinant of graduate unemployment (χ^2 = 1191.4; p<0.000).

In addition, it was evident that age was a significant determinant of graduate

unemployment (χ^2 = 35.7; p<0.000) with unemployment being more prevalent among female

graduates (30.1%) than their male colleagues (25.8%). Concerning marital status, about 40 percent of those who were separated/divorced/widowed were unemployed. Among those who were never married, the proportion of unemployed people was 32.5 whereas 18.5 percent of the married were unemployed. Marital status was also discovered to be a statistically significant factor of graduate unemployment (χ^2 = 610.6; p<0.000). Religious affiliation, on the contrary, was found not to have any significant association with graduate unemployment (χ^2 = 9.3; p=0.056) (see Figure 4.5 – 4.8and Table 4.6).

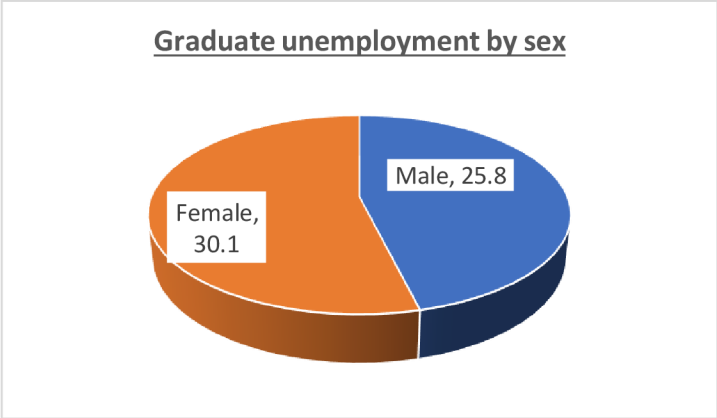
Figure 4.5: Graduate unemployment by age



Source: Author, based on survey data. STATA 2022

According to the graph, unemployment was greater among younger graduates. Among graduates less than 25 years, almost half (49.6%) were unemployed. The level of unemployment among the other age groups was lesser; 30 percent among those 45 years and above, 19 percent among those 25-34 years and 13.2 percent among those aged 35-44 years.

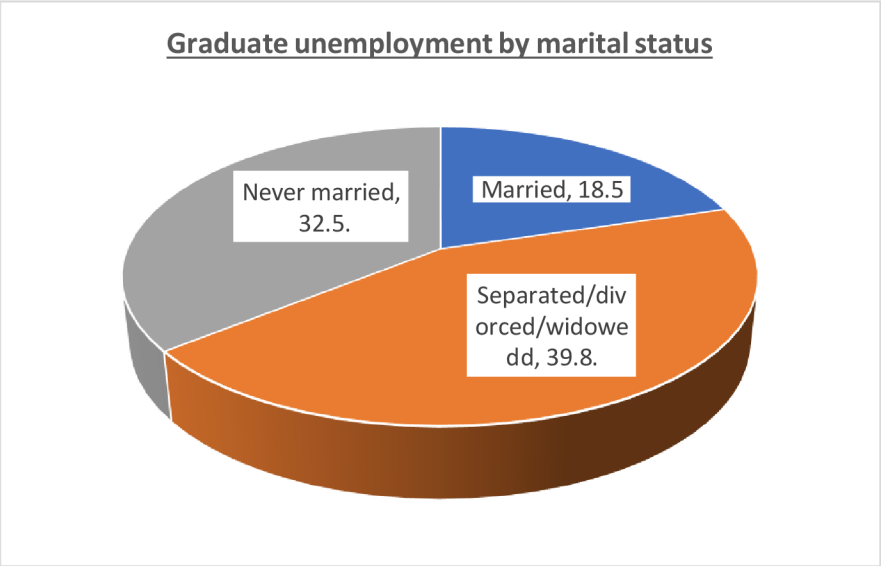
Figure 4.6: Graduate unemployment by sex



Source: Author, based on survey data. STATA 2022

Figure 4.6 shows unemployment being more prevalent among female graduates (30.1%) than their male colleagues (25.8%).

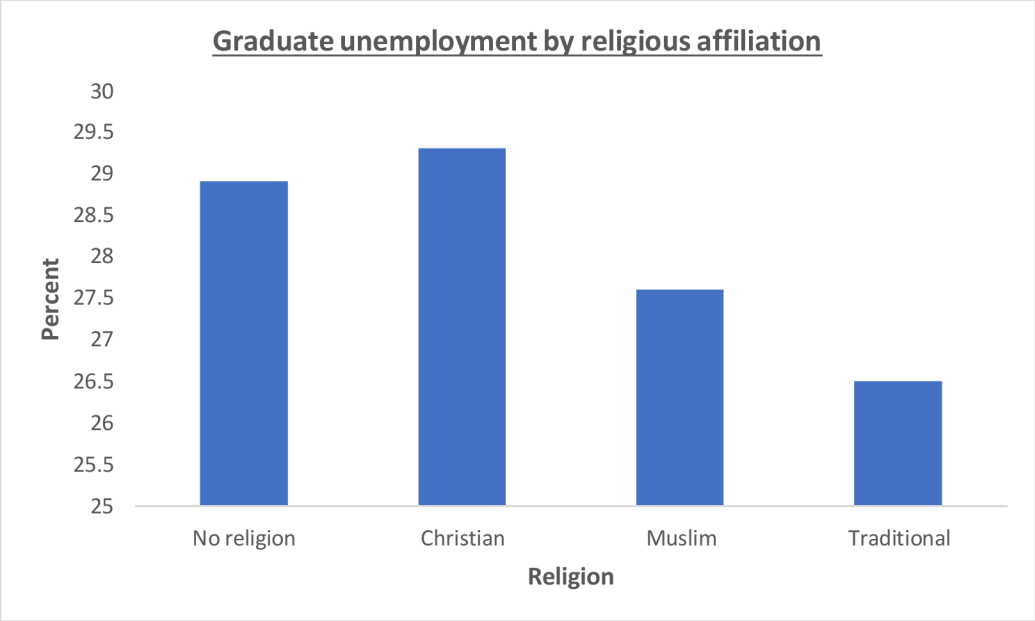
Figure 4.7: Graduate unemployment by marital status



Source: Author, based on survey data. STATA 2022

According to figure 4.7 shown, marital status, about 40 percent of those who were separated/divorced/widowed were unemployed. Among those who were never married, the proportion of unemployed was 32.5 whereas 18.5 percent of the married were unemployed.

Figure 4.8: Graduate unemployment by religion



Source: Author, based on survey data. STATA 2022

According to religion shown in Figure 4.8, Christian is higher than other religion in graduate unemployment by religious.

Table 4.6: Graduate unemployment by background characteristics

Background characteristics	Chi-squared (χ^2)	p-value
Age	1191.4	0.000
Sex	35.658	0.000
Marital status	610.60	0.000
Religion	9.217	0.056

Source: Author, Computed from STATA 2023, GLSS 7

In addition, binary logistic regression analysis was used to quantity the association between graduate unemployment and reservation wage and other background characteristics of Ghanaian graduates. Two binary logistic regression models were estimated. Model 1 included graduate unemployment (dependent variable) and wage (independent variable). In Model 2, age, sex, marital status, and religion were introduced as independent variables. The pseudo R^2 of the two models were 0.0008 and 0.0256, respectively. In Model 2, age, sex, marital status, and religion were found to have statistically significant association with graduate unemployment. However, reservation wage did not have any statistically significant relationship with graduate unemployment. In terms of age, compared with graduates less than 25 years, graduates aged 25-34 years (OR = 0.54, $p<0.000$), 35-44 years (OR = 0.38, $p<0.000$) and 45 years or older (OR = 0.47, $p<0.000$) were all less likely to be unemployed.

The findings also show that females were more likely to be unemployed. Compared with their male counterparts, female graduates were about 25 percent more likely to be unemployed (OR = 1.25, $p<0.05$). Being never married was associated with higher unemployment compared with the married (OR = 1.49, $p<0.01$). Though not statistically significant, graduates who were separated/divorced/widowed were less likely to be unemployed compared with the married (OR = 0.95). And with religion, being traditionalists and those ascribing to no religious view were more likely, compared with Christians, to be unemployed. Specifically, traditionalists were about 50 percent more likely to be unemployed compared with Christians (OR = 1.51, $p<0.01$). Similarly, graduates with no religious affiliation were about 50 percent more likely to be unemployed in comparison with graduates who were Christians (OR = 1.50, $p<0.05$). Muslims were also more likely to be unemployed, but the association was not statistically significant. These are presented in Table 4.7.

Table 4.7: Binary logistic regression of graduate unemployment and background characteristics

Variable	Model 1 OR (95% CI)	Model 2 OR (95% CI)
Wage	0.999 (0.9998, 1.0001)	0.999 (0.999, 1.000)
Age		
Less than 25 years		Ref
25 – 34 years		0.542*** (0.402, 0.731)
35 – 44 years		0.376*** (0.269, 0.527)
45 years and above		0.467*** (0.339, 0.644)
Sex		
Male		Ref
Female		1.245* (1.048, 1.480)
Marital status		
Married		
Never married		1.494** (1.155, 1.932)
Separated/divorced/widowed		0.947 (0.745, 1.204)
Religion		
Christian		Ref
No religion		1.498* (1.104, 2.033)
Islam		1.147 (0.951, 1.384)
Traditional		1.512** (1.142, 2.002)
Prob > χ^2	0.0606	0.0000
Pseudo R^2	0.0008	0.0256

Source: Author, Computed from STATA 2023, GLSS 7

*p<0.05, **p<0.01, ***p<0.001

OR = Odds ratio; CI = Confidence interval

5. DISCUSSION OF RESULTS AND RECOMMENDATIONS

This section will discuss the study's findings. In the discussion, the findings of the study are compared to those of past studies drawing similarities and differences among them. Plausible reasons which explain the findings were also discussed. Additionally, based on the findings of the study, recommendations are made.

5.1 Discussion of Results

The results demonstrated a negative correlation between age and reservation wage. However,this relationship was not statistically significant (β= -0.55; p> 0.605) we reject the null hypothesis is greater than 0.05. Thus, there was no statistically significant relationship between age and reservation wage. This contrast reports from earlier studies which found age to be a significant determinant of reservation wage (Axelrad et al., 2017; Coen et al., 2010; Coen et al., 2015; Vasilescu and Begu, 2019). For example, Axelrad et al. (2017) found a significant positive relationship between age and reservation wage explaining that older persons were more likely to lower their income expectations. Others like Coen et al. (2010) and Coen et al. (2015) found significant negative relationship between age and reservation wage. According to Coen et al. (2010), age positively influences reservation wage. The authors explain that the positive relationship between age and reservation wage is mediated by desire to migrate. In a similar research, Coen et al. (2015) investigated the association between age and reservation wages and evaluated whether people's employment efficacy and work intention, or attitudes toward employment, mitigate this relationship. They reported a U-shaped association via work intention and a reverse U-shaped association via employment efficacy between age and reservation wage.

Being female was associated with decreased reservation wage. Being a female is associated with GH¢82 reduction in reservation wage of unemployed graduates (β= -82.256; p<0.05). This is like the findings of Le Barbanchon, Rathelot and Roulet (2020) who reported that newly hired women are paid less than males. This finding, however, contrasts the findings of Arrazola and de Hevia (2016) that Spanish women had higher reservation wages than their male counterparts.

Concerning marital status, being separated/divorced/widowed is negatively related to reservation wage. Being separated/divorced/widowed decreased reservation wage by GH¢50 (β = -48.7). Being never married had a significant positive relationship with reservation wage. In fact,

compared with the married, being never married increased reservation wage by almost GH¢200 (β = 199.108; p<0.001). Previous research has yielded conflicting results. For example, Malk (2014) discovered that married and cohabiting people have higher reservation wages than unmarried people, which Ampah confirmed. (2019). According to Ampah, the reservation wage for married youth is higher than the reservation wage for single youth because the cost of catering for other spouses and family members raises their expenditure and expectation to survive. The contrasting result found by this study could be explained by the fact that the unmarried graduates are yet to establish themselves and "start life" hence, they need more money to get themselves settled.

Previous studies (Beck, 2016; Naseem and Adnan, 2019; Beck and Brodersen, 2021) have reported significant association between religion and wage. Naseem and Adnan (2019), for instance, found that Muslim women have the lowest labor force participation rates, work the fewest hours, and make the lowest wages, and that those who openly express their faith (by wearing headscarves, for example) are even less likely to find employment. This study found results that corroborates these past studies which found association between religion and wage. Compared with Christians, this study revealed that being Muslim (β = -123.2; p<0.01), traditionalist (β = -174.3; p<0.001) or having no religious affiliation (β = -122.9; p<0.01) decreased reservation wage. This result demonstrates the significance of religion in people's lives.

According to Vasilescu and Begu (2019), young unemployed persons genuinely have high reservation wages, anticipating more than they are predicted to receive on the market. This study found contrary result was found. The finding reveal that the mean reservation wage of unemployed graduates is lesser than the mean actual wage of employed graduates. While unemployed graduates had an average reservation wage of GH¢435, their employed counterparts had an average wage of GH¢522. However, the t-test showed that the difference of GH¢86.5 was not statistically significant (T = 1.577; p=0.115). This conclusion is consistent with the research of Nattrass and Walker (2005), who found that youth without jobs tend to reduce their reservation wages in comparison to their employed peers. Again, the finding corroborates that of a past Ghanaian study by (Ampah, 2019). According to Ampah claims that employed young people have higher wage expectations and are more willing to accept higher wages than their unemployed peers. It was revealed in that study that while employed youth earned an average of GH¢350, their unemployed colleagues had a reservation wage of GH¢260. The finding is indicative that Ghanaian graduates'

joblessness cannot be attributed to their overpricing themselves. Rather, opportunities are just inadequate to accommodate all graduates in the labor market.

According to Brown and Taylor (2011), having reservation wages that are high in comparison to the anticipated market wage has an impact on both future employment and future wages. This was corroborated by Baah-Boateng (2015) who stated that reservation wage was one of the main reasons that generate unemployment in Ghana. Keeping the reservation wage high in comparison to what jobs can afford tend to limit people's chances of getting employed. In this study, however, reservation wage was found not to have any statistically significant association with graduate unemployment. Rather, graduates' background characteristics (age, sex, marital status, and religion) were found to significantly determine graduate unemployment. In terms of age, comparing with graduates less than 25 years, all other graduates were less likely to be unemployed. The findings also show that females were more likely to be unemployed.

Age's influence as a demographic characteristic is consistent with Baah-Boateng's (2015) observation that unemployment decreases with age. Furthermore, Poon (2017) discovered an age gap in employment, implying that young graduates are more likely to compete in the labor market. Yenew's (2019) findings support the link between graduates' demographic characteristics (age and gender) and employment status. Second, additional studies, such as those conducted in Lebanon and Portugal, have confirmed the significant relationship between these variables and unemployment. (Nauffal and Skulte-Ouaiss, 2018; Sin, Tavares and Amaral, 2019).

Young people face many issues that older people do not, making it difficult for them to find work. Labour demand barriers that young people face include a lack of labor market skills, little or no job experience, and a lack of exposure to work ethics and environment. According to Sackey and Osei (2006), the increased likelihood of young people being unemployed is due to their lower labor market skills in comparison to their older counterparts. Youth unemployment is exacerbated by their lack of labor-market experience, which creates specific barriers to obtaining decent jobs. (Baah-Boateng, 2015).

Being never married was associated with higher unemployment compared with the married (OR = 1.49, $p<0.01$). In a similar past Ghanaian study, Baah-Boateng (2015) similarly reported that marital status was a significant determinant of unemployment; such that married People who are married have a lower unemployment rate than those unmarried counterparts. It is possible to explain this finding by the fact that married people (females most especially) are usually occupied

with familial duties, hence, may not be available for any work. It is worth stressing that unemployment is not just about joblessness but also the availability of the person to engage in work. Thus, married people's lower unemployment level is perhaps due to their unavailability to work.

According to Alam, Amin, and McCormick (2018), religion is one factor which significantly influence participation in the labor force (especially among women). Traditionalists (OR = 1.51, $p<0.01$) and graduates ascribing to no religious belief (OR = 1.50, $p<0.05$) were more likely, compared with Christians, to be unemployed. Both category of respondents were about 50 percent more likely to be unemployed compared with Christians. Muslims were also more likely to be unemployed, but the association was not statistically significant.

The study hypothesized that there is no statistically significant relationship between reservation wage and graduate unemployment in Ghana. Evidence gathered does not support a rejection of the hypothesis. Thus, reservation wage is not a significant determinant of unemployment among Ghanaian graduates. In other words, reservation wage does not contribute to graduate unemployment in Ghana. Moreover, the study found that unemployed Ghanaian graduates were not overpricing themselves. Therefore, graduate unemployment in Ghana cannot be blamed on high wage demands of graduates.

6. Conclusion

Graduate unemployment remains a significant problem in most developing countries, particularly in Sub-Saharan Africa. Graduate unemployment is complicated and connect to a variety of factors, such as the quality of education, discrimination, a lack of experience, tight labor markets, and other structural factors. The labor leisure choice model predicts that any wage below the worker's bait (the reservation wage) will result in them spending all their waking hours on leisure, suggesting a relationship between reservation wage and unemployment. Yet, research has not focused much on examining the impact of reservation wage on graduate unemployment, particularly in a developing nation like Ghana. The study addressed this knowledge gap.

This study explored the factors which determine reservation wage and its effects on graduate unemployment in Ghana. Specifically, the study assessed factors influencing reservation wage among graduates in Ghana, evaluated whether graduates in Ghana are overpricing themselves, and explored whether reservation wage contributes to graduate unemployment in Ghana. It was hypothesized that there is no statistically significant relationship between reservation wage and graduate unemployment in Ghana.

Literature was reviewed covering theoretical, conceptual, and empirical issues relating to the study. In the theoretical review, the classical economic theory of unemployment and the Keynesian theory were discussed. Additionally, the Human Capital Theory and screening hypothesis were discussed (in the context of graduate unemployment). The conceptual review was organized under these sub-headings: concept of reservation wage, definition of unemployment and graduate unemployment, types of unemployment, causes of unemployment, and overview of unemployment rate in Ghana. The empirical review was based on the objectives of the study. Therefore, it was presented under the following sub-headings: factors influencing reservation wage, factors influencing graduate unemployment, and relationship between reservation wage and unemployment.

The study employed descriptive cross-sectional design. Secondary data from the seventh round of the nationally representative Ghana Living Standards Survey (GLSS 7) was analyzed. The GLSS is a multi-purpose household survey that gathers data on a variety of aspects of living situations, including welfare, health, employment, government, and financial services (household expenditure on food and non-food items). The GLSS 7 was conducted between 2016 and 2017.

Linear regression, independent samples t-test and binary logistic regression analyses were employed to analyze. Linear regression was used to analyze the factors which influence reservation wage among unemployed graduates in Ghana. Independent samples t-test was conducted to evaluate whether Ghanaian graduates are overpricing themselves while binary logistic regression was used to determine the relationship between reservation wage and graduate unemployment in Ghana. With the binary logistic regression, two (2) models were estimated to explain the relationship between reservation wage and graduate unemployment. Model 1 was a bivariate model which featured graduate employment as the dependent variable and reservation wage as the independent variable. Age, sex, marital status, and religious affiliation were added to the variables in Model 1 to represent the respondents' backgrounds in Model 2. Statistical significance was established at 5% for all the analyses (0.05).

The findings show that age was negatively related to reservation wage (β= -0.55) though not statistically significant (p=0.605) whereas being female was associated with decreased reservation wage (β= -82.256; p<0.05). Also, compared with the married, being never married increased reservation wage by GH¢200 (β = 199.108; p<0.001). Again, being Muslim (β = -123.2; p<0.01), Traditionalist (β = -174.3; p<0.001) or having no religious affiliation (β = -122.9; p<0.01) decreased reservation wage. The finding reveals that the mean reservation wage of unemployed graduates is lesser than the mean actual wage of employed graduates. However, the difference was not statistically significant (T = 1.577; p=0.115). Finally, reservation wage was found not to have any statistically significant association with graduate unemployment. Rather, graduates' background characteristics (age, sex, marital status, and religion) were found to significantly determine unemployment.

The findings of the study show that there are limited jobs available in the nation. Therefore, it is crucial for political leaders to foster an atmosphere where firms can flourish and grow to hire more graduates. To alleviate the unemployment issue, governments must also implement long-term, effective intervention programs for job searchers.

7. Recommendations

1. The study's findings point to the country's limited job opportunities. As a result, political leaders must create an environment conducive to business growth and expansion to employ more graduates. To address the unemployment problem, policymakers must also implement long-term, effective intervention programs for job seekers.
2. In addition, a shift in policy focus from a more capital-intensive growth strategy with minimal employment creation content to an employment-oriented growth strategy is recommended to address the country's graduate unemployment problem.
3. It is worth noting that the study's dataset is quite old. The information was compiled between 2016 and 2017. As a result, it is recommended that the Ghana Statistical Service, in collaboration with relevant stakeholders, conduct more frequent surveys of this type to produce nationally representative data that is timely.

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9. LIST OF TABLES, GRAPHS AND ABBREVIATIONS

1.11 List of Tables

1.12 List of Graphs

1.13 List of Abbreviations

GLSS	Ghana Living Standards Survey
HCT	Human Capital Theory
ICLS	International Conference of Labour Statisticians
IMF	International Monetary Fund
NABCO	Nation Builders Corps
SDGs	Sustainable Development Goals