MINIMUM WAGE AND UNEMPLOYMENT IN DEVELOPING COUNTRIES: A CASE OF NIGERIA

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Abstract

This study investigates the validity of the claim that high wage rates exacerbate unemployment, given that unemployment rates are still high in many developing countries despite existing unusually low minimum wage rates. To this end, the short-run effect of minimum wage on unemployment in Nigeria was evaluated by employing the Autoregressive Distributed Lag (ARDL) model to analyze the secondary data used for the study over the period 2000-2022. Findings of the study indicate that minimum wage, domestic investment, government expenditure, and inflation all positively affect unemployment levels in Nigeria. Conversely, growth rate of minimum wage was found to have negative effect on unemployment. Notably, the estimated effects of minimum wage, government expenditure, and inflation on unemployment were found to be significant, whereas those of growth rate of minimum wage and domestic investment were insignificant. The study concludes that increase in minimum wage does not necessarily lead to increase in unemployment, but depends on the nature and level of the increase, and the policies that accompany these increments. It recommends that the adjustments of minimum wage should be accompanied by strategic tax policies that seek to increase investment in the real sector while mitigating potential short-run job losses.

Key words: Minimum wage, Wage determination, Unemployment, Developing countries, Nigeria

INTRODUCTION

The wage rate specifically refers to the regular pay an employee receives, which is influenced by their job position's pay grade and the step within that grade as outlined in the wage rate grid. This grid defines the minimum wage that can be offered for labor across the country, commonly known as the national minimum wage. The International Labour Organization (ILO) defines the minimum wage as the lowest amount an employer must pay workers for their labor within a specified period, as mandated by law. This minimum cannot be lowered through collective bargaining or individual contracts. To safeguard the interests of lower-income earners, governments globally set minimum wage rates. This intervention is crucial as it protects workers who might otherwise face exploitation by employers seeking to maximize profits at their expense, since they possess less bargaining power and often do not receive fair compensation through market forces (International Labour Organization, 2024; Umeghalu, Machi & Chukwuka, 2025; World Bank, 2024).

For lower-income earners, wages play a significant role in highlighting income disparities within that bracket compared to those in higher brackets. Furthermore, these wages influence the extent

of inequality gaps and impact access to essential services such as healthcare and education, as well as other indicators of well-being. Unfortunately, in many developing nations, including Nigeria, minimum wage rates hover around USD $50 or less, making it challenging for workers to meet even their basic needs. This situation is often defended by the argument that raising minimum wages can negatively impact employment levels. Hence, despite the intention to protect low-wage workers through minimum wage laws, these individuals continue to struggle to secure a living wage (International Labour Organization, 2024; Umeghalu, Ezenekwe, & Okoli, 2025).

Recently, Nigeria approved a minimum wage of N70, 000, effective August 2024, which translates to approximately USD 45. Annually, this amounts to N840, 000 or about USD 500. When compared to global standards, this figure appears quite low. For instance, Seychelles boasts Africa's highest minimum wage at around USD 400 per month. As of 2023, countries such as Guinea-Bissau, The Gambia, Rwanda, and Sudan have minimum wage rates of USD 23.7, USD 30.5, USD 2.5, and USD 0.8, respectively. In contrast, developed nations like Switzerland, Luxembourg, Iceland, New Zealand, and the Netherlands reportedly had much higher minimum wages, ranging from about USD 2,287.5 to USD 4,221 per month. Despite these elevated minimum wage rates, developed countries typically enjoy lower unemployment rates compared to their developing counterparts (World Bank, 2024).

Unemployment serves as a critical indicator of economic health. In Nigeria, the unemployment rate is currently at 5%, with underemployment affecting 12.3% of the workforce. Notably, youth unemployment is at 8.6%, while youth underemployment stands at approximately 18%. This brings Nigeria's combined unemployment and underemployment rate to around 43.9% (CBN, 2024).

The connection between minimum wage increases and unemployment is not entirely straightforward. When real income levels are low in an economy, average earners often struggle to afford essential goods. This situation can make such economies less appealing for businesses that manufacture non-essential goods. However, when real wages rise, the economy starts to look more attractive to these firms, potentially leading to job creation. Thus, while there may be concerns that some companies could struggle to afford minimum, and thus would reduce staff strength as a way of reducing cost, this can paradoxically be accompanied by rising employment levels.

Policymakers often defend the low wage rates in developing countries by pointing to their perceived influence on unemployment and overall welfare. Scholars contend that even if minimum wage regulations are fully enforced, any gains from increased earnings are often diminished by high social security and labor taxes, which can limit the benefits to workers' take-home pay. They suggest that employers might respond to higher minimum wages by cutting benefits, reducing hours, or even laying off staff to manage costs. The potential impact on unemployment is a key

aspect of the ongoing debate surrounding minimum wage policies. In competitive markets, enforcing higher wages above a certain threshold can result in some companies opting not to pay these wages, leading to job losses (Sodsriwibin & Srour, 2019; Umeghalu, Agupusi, & Uzodigwe, 2019).

Some research suggests that increases in minimum wage could result in job losses, while other studies indicate these increases may have no impact on jobs at all, or even lead to job growth. In poorer developing countries, the effects of minimum wage changes are typically less pronounced than in developed nations, largely because enforcement of such wages is often weak. These countries usually have segmented labor markets, with minimum wage policies applying only to formal workers. Given the varying ways minimum wage policies are implemented across different developing nations, it is crucial to understand their effects on labor markets in order to address employment challenges and promote economic growth (Aaronson, 2001; Ngundu, Matema, Khumalo & Bila, 2023).

Unemployment serves as a vital indicator of a country's progress toward achieving the Sustainable Development Goals (SDGs), particularly in fostering sustained, inclusive economic growth and ensuring full and decent employment for everyone. Unfortunately, Nigeria has been grappling with persistently high unemployment rates. The reported figures show stark differences among estimates from various organizations. The Organization for Economic Co-operation and Development (OECD) paints a broader picture of unemployment, while the International Labour Organization (ILO) focuses on individuals who are actively searching for jobs yet currently lack work. Nigeria's national statistics take a slightly different approach, categorizing those working fewer than 40 hours as underemployed rather than unemployed. According to ILO data, unemployment rates in Nigeria were recorded at 5%, 10.5%, 13.4%, and 22.6% in 2010, 2012, 2016, and 2018, respectively. In contrast, national estimates of employment rates indicated figures of 3.73%, 3.77%, 4.52%, 5.12%, and 3.83% for the years 2010, 2012, 2016, and 2022 (ILO, 2024; World Bank, 2024).

Nigeria's unemployment crisis highlights serious inefficiencies in how resources are utilized and allocated. Critics argue that raising wages could lead to layoffs in both the public and private sectors, as employers might struggle to meet higher payroll costs. However, this argument does not hold up when we analyze employment trends in high-income countries, which often enjoy low unemployment rates. In 2022, high income countries such as Singapore, Switzerland, Denmark, Japan, and South Korea reported unemployment rates of 2%, 2.3%, 2.5%, 2.5%, and 2.5% respectively. In contrast, South Africa, Angola, Senegal, Ethiopia, and Nigeria, with much lower income levels, faced much higher rates, with figures at 33.5%, 32.5%, 22.3%, 18.9%, and 5% respectively (World Bank, 2024).

This observed trend suggests that higher wage rates may actually help reduce unemployment; this

perspective aligns with Keynesian economics, which posits that enhancing aggregate demand can stimulate economic activity through increased labor and capital utilization. It is important to note that the long-term effects of wage rates on unemployment may differ from their short-term impacts. In the short-run, the closure of smaller businesses that cannot afford higher wages for workers could lead to job losses. However, this may also lead to the creation of new job opportunities in the long-run, since the exit of smaller competitors would lead to the expansion of the old bigger firms, and the emergence of new firms that cater to higher-income consumers (Kohen, Brown & Gilroy, 1982).

Research on the relationship between minimum wage and unemployment has yielded mixed results. Some studies indicate a positive relationship, while others show a negative impact. Many of these analyses, however, fail to consider how the depreciation of the domestic currency can diminish the real value of wages following minimum wage increases in poorer developing nations like Nigeria. It is also vital to assess whether the current tax system ensures that wage increases translate into actual boosts in aggregate demand. This study seeks to explore the impact of wage rates on unemployment while factoring-in the adverse effects of currency depreciation on both wage levels and unemployment outcomes (Pigou, 1936).

This study aims to assess the impact of minimum wage on unemployment in Nigeria, specifically focusing on the short-run effects and the correlation between the growth rates of minimum wage and unemployment from 2000-2022. To thoroughly evaluate this relationship, the study is divided into three distinct periods: 2000-2010, 2011-2018, and 2019-2022. Each of these spans is designed to be long enough to effectively analyze how changes in minimum wage influence unemployment rates. Each period starts with the approval of a new minimum wage and concludes with the approval of another, thereby capturing the immediate effects of the minimum wage adjustments on unemployment. Given the significant depreciation of the domestic currency, which has declined by over 75% in the last decade, understanding the implications of exchange rate devaluation on this wage-unemployment relationship in Nigeria promises to yield insightful findings.

STYLIZED FACTS

Is Unemployment the Major Cause of Low Minimum Wage in Low-income Countries?

The connection between unemployment rates and low minimum wage levels has generated considerable debate among economists and policymakers. Some argue that elevated unemployment rates lead to lower minimum wages, as employers gain more leverage in wage negotiations. Conversely, others suggest that low minimum wages may contribute to higher unemployment, as they can restrict consumer spending and hinder economic growth. Three dimensions of related empirical studies, theoretical frameworks, and real-world case studies are briefly discussed below.

The Theoretical Perspectives

Classical economic theory posits that the labor market functions similarly to other markets, where the price of labor (wages) is governed by supply and demand dynamics. According to this perspective, high unemployment raises the labor supply, which in turn exerts downward pressure on wages, including the minimum wage. In scenarios with an excess of labor, employers can leverage their position in wage negotiations, potentially resulting in lower wages (Stigler, 1946). In contrast, Keynesian economics presents an alternative viewpoint, arguing that wages are influenced not only by market forces but also by institutional factors like labor unions and government policies. From a Keynesian standpoint, low minimum wages can lead to insufficient aggregate demand, ultimately increasing unemployment. Here, unemployment emerges not as a cause but as a consequence of low wages (Pigou, 1936).

The Empirical Perspectives

Empirical research on the link between unemployment and minimum wage rates has produced a variety of findings. Some studies indicate a negative correlation, implying that higher unemployment could lead to lower minimum wages. For example, Neumark and Wascher (2008) carried out an extensive review of over 100 studies assessing minimum wage effects on employment. They concluded that increased minimum wages can reduce job opportunities, particularly for low-skilled workers, which might create downward pressure on minimum wage rates. On the other hand, several studies have uncovered no significant connection between unemployment and minimum wage rates. A landmark study by Christopoulou and Monastiriotis (2014) explored the effects of minimum wage hikes on employment within the fast-food sector in New Jersey and Pennsylvania. Their findings challenged the conventional view that unemployment predominantly drives low minimum wages, showing that employment remained stable despite wage increases. Additionally, research by Allegretto, Dube, and Reich (2011) examined the impact of minimum wage increases across multiple states in the U.S. Their work revealed that the dynamics between minimum wage and unemployment are more intricate than previously recognized, with factors like regional economic conditions and labor market institutions playing vital roles.

Given these insights, it is essential to consider the influence of labor markets and institutions on wage rates. Labor market institutions, such as unions and collective bargaining mechanisms, can notably affect how unemployment relates to minimum wage rates. In countries with robust labor unions, minimum wage rates tend to be higher, even amid high unemployment. This phenomenon occurs because unions possess the leverage to negotiate better wages for workers, counteracting the downward pressure that unemployment can exert on wages. For instance, in advanced nations like Germany and Sweden, where labor unions are well-established, minimum wage rates remain relatively elevated despite fluctuations in unemployment levels. This points to the idea that

unemployment alone might not be the primary driver of low minimum wage rates, with the strength of labor market institutions being a crucial factor World Bank, 2024). Conversely, in countries with weaker unions and less effective labor market institutions, minimum wage rates generally decline, and the effects of unemployment on wage levels can become more pronounced. In the United States, for example, where union membership has dwindled in recent years, the federal minimum wage has stayed relatively low, and areas with heightened unemployment typically witness slower wage growth.

Government policies and minimum wage laws significantly affect the interplay between unemployment and minimum wage levels. Often, governments establish a minimum wage threshold that remains constant regardless of labor market conditions. This approach ensures that wages do not dip below a certain point, even during periods of high unemployment, thereby shielding workers from the adverse impacts on their earnings. A notable example is Australia, where the Fair Work Commission determines the national minimum wage by considering various factors such as living costs, inflation, and overall economic health. This wage is reviewed every year, with adjustments made to guarantee it meets a satisfactory living standard for workers. Consequently, Australia boasts one of the highest minimum wage rates worldwide, even amid fluctuating unemployment figures (International Labour Organization, 2024).

Conversely, in nations with less rigid minimum wage regulations or weak enforcement, unemployment tends to have a more direct effect on wage levels. Here, employers might pay below the legal minimum, especially in the informal sector, resulting in overall lower wage standards (International Labour Organization, 2024).

The Role of Macroeconomic Factors

Looking at the broader picture, macroeconomic factors—including inflation, economic growth, and productivity—also significantly influence minimum wage rates. High unemployment is frequently a signal of deeper economic issues, such as stagnant growth or falling productivity, which can restrict employers' capacity to raise wages. For example, during economic downturns, companies often find it tough to remain profitable, leading to wage freezes or reductions. In these situations, high unemployment may align with low minimum wage rates; however, the real driving force is the economic weakness rather than the unemployment itself (Blanchard & Katz, 1997).

Moreover, inflation diminishes the purchasing power of wages, making it challenging for workers to sustain a reasonable living standard even when their nominal wages stagnate. In countries grappling with both high inflation and unemployment, minimum wage rates might be kept intentionally low to prevent further inflationary pressures, which adds another layer of complexity to the relationship between unemployment and wage levels (International Monetary Fund, 2020). Therefore, the connection between unemployment and low minimum wage rates is intricate and

consists of multiple elements. While elevated unemployment can push wages downward by increasing the labor supply, it is not the exclusive factor behind low minimum wage rates. A variety of components, such as labor market policies, government regulations, macroeconomic factors, and inflation, all play essential roles in influencing wage levels.

Empirical evidence highlights that the relationship between unemployment and minimum wage rates can differ greatly among countries and regions. This variation often stems from the robustness of labor market institutions and the effectiveness of government interventions. In nations where labor unions are strong and minimum wage legislation is well-enforced, the impact of unemployment on wage levels tends to be less pronounced. Conversely, in areas with weaker institutional frameworks and enforcement, unemployment can lead to decreased wages. Therefore, tackling the challenge of low minimum wage rates necessitates a multifaceted strategy that encompasses more than merely reducing unemployment. Policymakers need to take into account the wider economic landscape, bolster labor market institutions, and introduce effective minimum wage policies that safeguard workers' rights and ensure a livable wage.

Why are Unemployment Rates Lower in High Income Countries?

Regarding why unemployment rates are typically lower in high-income countries, it is crucial to recognize that unemployment is not just an economic statistic; it affects individual well-being, economic stability, and social cohesion. Generally, higher-income nations show lower unemployment rates than their lower-income counterparts. One key factor contributing to this trend is the diversified nature of economies in higher-income countries (Eichengreen and Gupta, 2013). These economies often have a broader range of industries, with a significant focus on services and high-tech sectors. Such industries tend to be more stable and less vulnerable to downturns than agriculture or manufacturing, which are more prevalent in lower-income economies.

Eichengreen and Gupta (2013) noted that nations that have effectively shifted from agricultural and manufacturing-based economies to service-oriented ones have seen more stable employment levels and reduced unemployment. The service sector's prominence in high-income countries makes it less prone to the volatility characteristic of primary and secondary industries. Additionally, the emergence of the knowledge economy in these nations has generated new job opportunities in fields like information technology, finance, and professional services—jobs that are generally shielded from the kinds of disruptions faced by more traditional sectors. This diversification facilitates smoother transitions of labor between sectors, helping to lessen the chances of extended unemployment.

Effective labor market policies and strong institutions are vital for maintaining low unemployment rates in high-income countries. These nations commonly adopt active labor market policies (ALMPs) aimed at helping unemployed individuals rejoin the workforce. Such measures include

job search assistance, training programs, and incentives for employers to hire new staff (Martin & Grubb, 2001). These efforts are typically backed by solid institutions—like labor unions and employer associations—that strive to ensure fair wages and good working conditions, which can help mitigate job loss.

Moreover, employment protection legislation (EPL) in wealthier countries often contains measures that make it more challenging for employers to terminate workers, promoting job stability even in tough economic times. While stringent EPL can limit labor market flexibility at times, it also enhances job security for workers and reduces the risk of unemployment. Research indicates that countries equipped with well-crafted labor market institutions and policies usually experience lower unemployment rates (Bertola, Blau, & Kahn, 2007).

Conversely, lower-income countries frequently lack the resources and institutional frameworks that are necessary for effective labor market policies. The informal economy tends to be more widespread in these regions, resulting in higher job insecurity and underemployment—issues that official unemployment statistics sometimes fail to capture (Martin & Grubb, 2001).

Education and skill development are crucial factors influencing employment, with higher-income countries typically investing more substantially in their education systems and policies. This investment leads to a workforce that is better skilled and more adaptable. As individuals achieve higher educational levels and gain access to ongoing skill development opportunities, their employability increases, reducing the chances of long-term unemployment. In these countries, a clear link exists between education and employment rates. For instance, data from the World Bank (2024) illustrates that individuals with tertiary education experience significantly lower unemployment rates compared to those with only primary or secondary education. This trend is due to the fact that higher education provides individuals with specialized skills sought after in the job market, especially in high-tech and service sectors.

Lifelong learning and ongoing professional development tend to be more feasible in higher-income countries. This allows workers to keep pace with the evolving labor market and advances in technology. Such adaptability is essential for maintaining low unemployment rates, as it prepares workers to switch between various jobs and sectors when necessary (Del Carpio & Pabon, 2017). In contrast, lower-income countries often face challenges in providing quality education and vocational training, which results in a workforce that lacks essential skills and suffers from reduced employability. The gap between what the education system offers and what the labor market requires only worsens the unemployment situation in these nations (Lee & Saez, 2012).

Technological innovation is a major factor driving employment in wealthier countries. These nations usually lead in embracing new technologies and encouraging innovative practices, which in turn fosters the emergence of new industries and job openings. For example, the rapid expansion of the information and communication technology (ICT) sector in high-income countries has led

to significant job growth in software engineering, data analytics, and digital marketing (Del Carpio & Pabon, 2017). Such countries typically allocate substantial resources to research and development (R&D), which fuels ongoing innovation and creates high-quality jobs that demand advanced skills. This strategy not only propels economic growth but also helps reduce unemployment by increasing the need for skilled workers. Furthermore, advancements in technology can boost productivity, leading to higher wages and greater job security (Autor et al, 2003).

Nevertheless, technological progress carries the risk of disrupting labor markets by rendering certain jobs obsolete. Higher-income countries, equipped with robust education systems and labor market policies, are generally better positioned to handle these disruptions by retraining workers and supporting them in finding new job opportunities. On the other hand, lower-income countries, which may not have the necessary resources to invest in technology and innovation, can encounter significant difficulties in sustaining employment levels as global advancements outstrip their ability to adapt (Del Carpio & Pabon, 2017)

Another advantageous aspect of higher-income countries is their implementation of social safety nets and income support programs, which help to maintain lower unemployment rates. These initiatives offer financial assistance to those who find themselves unemployed, providing them with the breathing room to seek jobs that align with their skills and aspirations rather than being pressured to accept low-paying or unsuitable work. Furthermore, these safety nets play a crucial role in preventing unemployed individuals from slipping into poverty, which can have long-lasting detrimental effects on their ability to secure employment and contribute to the economy effectively (Atkinson, 2015).

Research shows that unemployment benefits and similar forms of income support can shorten the duration of unemployment by equipping individuals with the resources and time needed to find more suitable job opportunities. Stigler (1946) highlighted that in the United States, unemployment insurance helps stabilize the economy by sustaining consumer demand during downturns, thereby facilitating job creation. In stark contrast, many lower-income countries lack robust social safety nets, leaving the unemployed without necessary financial support. This deficiency can lead to increased poverty and underemployment, forcing individuals to accept any job available, often without regard for its suitability or compensation. Additionally, without safety nets, the duration of unemployment often extends, as individuals may not have the means to engage in job searching or retraining (Robalino, Rawlings, & Walker, 2012).

Moreover, globalization has contributed to lower unemployment rates in higher-income countries by enhancing labor mobility and expanding access to international markets. With their more developed infrastructure and institutions, these countries are in a prime position to harness the benefits of globalization, including increased trade, investment, and the movement of labor across borders. Such global integration fosters new employment opportunities and helps reduce

unemployment by enabling workers to relocate to regions where job prospects are more favorable (Kohen, Brown & Gilroy, 1982).

For example, the European Union's single market facilitates the movement of labor among member states, allowing workers from areas grappling with high unemployment to secure jobs in regions experiencing labor shortages. This mobility plays a vital role in diminishing unemployment gaps across countries and helps to achieve lower overall unemployment rates within the area (Mundell, 1961). However, globalization brings its own set of challenges, particularly for lower-income nations that may find it difficult to compete on the global stage. The relocation of jobs from wealthier to poorer countries can result in job losses in certain sectors, yet wealthier nations tend to be more capable of navigating these transitions through programs focused on retraining and social support. Conversely, lower-income countries often struggle to provide alternative employment opportunities for those displaced, which can lead to increased unemployment rates Hamermesh, 1982).

These situations illustrate that the lower unemployment rates seen in higher-income countries stem from a mix of factors, such as a diverse economic base, effective labor market policies, a high level of education and skill development, advancement in technology, strong social safety nets, and the advantages of globalization. Together, these elements create a more stable and adaptable labor market, thus reducing both the frequency and the duration of unemployment. In contrast, lower-income nations contend with challenges like dependence on unstable industries, insufficient labor market policies, limited access to quality education, and weaker safety nets. Tackling these issues is essential for lowering unemployment rates in these regions and achieving more inclusive and sustainable economic growth. Policymakers in lower-income countries can draw valuable insights from the experiences of their higher-income counterparts by investing in education, encouraging diversification, and enhancing labor market institutions to foster a more resilient and dynamic economy.

Disparity between the Short-run and Long-run Effects of Minimum Wage Increases

Proponents of minimum wage increase contend that raising the minimum wage can help alleviate poverty and reduce inequality, while critics caution against potential job losses and adverse effects on businesses. The impacts of minimum wage hikes can be categorized into short-run and long-run effects, which often vary significantly due to different economic adjustments that occur over time. Understanding the differences between these effects is pivotal for our work in supporting our objectives.

The Short-Run Effects of Minimum Wage Increases

In the short term, the impacts of raising the minimum wage become quite apparent and can primarily be grouped into effects on employment, business expenses, and consumer prices

(Ngundu Matemane, Khumalo, and Bila, 2023). One of the most contentious issues surrounding these wage hikes is the potential decrease in job availability, especially for low-skilled workers. Classic economic theory, influenced by thinkers like George Stigler (1946), posits that setting the minimum wage above the market equilibrium could cause unemployment, as businesses might cut hiring or even let go of employees to balance out the added labor expenses. Research findings are varied; some support this theory, while others show little to no substantial effect on employment levels in the short run.

For example, a meta-analysis by Neumark and Wascher (2007) reviewed numerous studies on minimum wage and found that most indicated negative employment impacts, particularly for teenagers and less-skilled workers. Their research suggested that despite some claims to the contrary, job reductions often accompany increases in the minimum wage, igniting extensive debate and further exploration of this issue.

Additionally, businesses encounter higher labor costs due to minimum wage increases in the short run. Companies may respond by raising their prices to protect profit margins, especially in sectors like retail and hospitality that rely heavily on labor. Aaronson (2001) observed price hikes in fast-food outlets following a minimum wage rise, implying that consumers might bear the burden of these higher wage costs. Unfortunately, this increase in prices can diminish consumers' real purchasing power, countering some of the advantages that come with boosted wages.

Another noteworthy short-term effect is the possible enhancement of worker productivity and a decrease in employee turnover. By offering higher wages, businesses could foster a more motivated workforce, resulting in better productivity levels. Moreover, improved wages might lower turnover rates, thus reducing recruitment and training expenses for employers. Supporting this idea, Dube, Lester, and Reich (2010) found that the introduction of higher minimum wages correlated with a decline in turnover rates within the U.S. restaurant sector (Umeghalu, Machi & Onwuka, 2025).

The Long-Run Effects of Minimum Wage Increases

In the long run, the implications of minimum wage increases can significantly differ from those seen in the short term, as both businesses and workers adapt to the altered wage landscape. These long-term effects can include shifts in employment, business investment behaviors, technological advancements, and overarching economic consequences.

In the long run, the labor market may adjust to increases in the minimum wage through several mechanisms that could soften the initial impact on employment. Companies might turn to automation and other labor-saving technologies to decrease their dependence on low-wage workers. For instance, Autor, Levy and Murnane (2003) showed how the introduction of computers and automated equipment has replaced many routine manual jobs, a trend that higher

minimum wages might accelerate. This shift towards automation could decrease the demand for low-skilled workers, potentially intensifying income inequality over time. Conversely, the labor market may see heightened demand for higher-skilled workers, prompting a shift in workforce structure. Businesses may invest in training and skill development to boost productivity, thus justifying the increase in wages. This could cultivate a more skilled workforce, potentially fostering long-term economic growth.

Looking ahead, the implications of minimum wage increases on business investment are quite intricate. Higher labor costs might deter investment in labor-intensive sectors, nudging companies toward more capital-intensive production strategies. Acemoglu (2002) noted that raising the minimum wage might motivate firms to allocate resources to technology and capital, fostering greater productivity over the long haul. Nonetheless, the overall effect on business investment will likely hinge on the extent of the wage hike and the surrounding economic conditions. In certain scenarios, businesses may cut back on investment due to rising operational costs, which could stall economic growth. This balancing act between labor and capital investment is vital for policymakers to consider.

Over time, the effects of minimum wage increases on income distribution and poverty can be mixed. While higher wages can elevate some workers above the poverty line, potential job losses and increased automation could widen income disparities. Furthermore, the long-term impact on poverty reduction may prove limited unless wage increases are paired with broader economic policies aimed at fostering job creation and skill enhancement. For example, Lee and Saez (2012) found that minimum wage increases have had a modest impact on reducing poverty across various nations, predominantly benefitting families with multiple earners. They advocated for a more holistic strategy encompassing tax credits and diverse welfare programs to effectively combat poverty in the long run.

In addition, the long-term implications of raising the minimum wage on economic growth and inflation remain a topic of discussion. Many economists believe that higher wages can encourage consumer spending, resulting in increased demand for goods and services and, ultimately, fostering economic growth. This demand-driven scenario is particularly vital in economies where income inequality is significant; by boosting the earnings of low-wage workers, overall consumption can see a substantial increase. However, the effect on inflation over the long run is more ambiguous. While wage hikes might result in higher prices initially, the sustained impact on inflation largely depends on whether businesses can offset these increased costs through enhanced productivity or if they need to transfer them to consumers. If wage growth does not align with corresponding productivity increases, there may be enduring inflationary pressures, as posited by the Phillips Curve framework (Phillips, 1958).

The ongoing discussion around the short-term and long-term effects of the minimum wage is

informed by various empirical studies that highlight the differences in outcomes. For instance, Dube et al. (2010) found that the size and direction of these effects can vary significantly based on context, such as the minimum wage's relationship to the median wage, the overall economic climate, and labor market characteristics. Meer and West (2016) observed that the adverse employment effects of minimum wage increases tended to become more evident over time, especially in states where the minimum wage was considerably higher than the median wage. Their research indicated that while initial effects on employment were minor, the long-term ramifications were much more pronounced, as businesses evolved their hiring practices and investment strategies in response to the elevated wage threshold. In a similar vein, Allegretto, Dube, and Reich (2011) looked into the long-run consequences of minimum wage increases in the U.S. and found that negative employment impacts were much more significant over time, particularly affecting teenagers and low-skilled workers. They contended that even though short-term effects were minimal, the long-term consequences warrant serious consideration, underscoring the need to evaluate minimum wage policies through both short-term and long-term lenses.

The gap between the immediate and longer-term impacts of minimum wage increases carries significant implications for policymakers. While the short-term effects may be milder than expected, the long-term outcomes can be more significant, especially concerning employment levels and business investment. Additionally, the enduring effectiveness of minimum wage hikes in combating poverty and inequality may hinge on supportive policies that foster job creation, skill enhancement, and social welfare programs. Without these supplementary initiatives, the long-term advantages of raising the minimum wage might fall short, and any adverse impacts on employment and economic expansion could overshadow the income benefits intended for low-wage earners. Although increases in minimum wage can enhance wages and improve worker welfare in the short run, the longer-term repercussions are far more intricate, entailing trade-offs among employment, investment, and economic growth. A comprehensive understanding of these dynamics is crucial for formulating effective minimum wage policies that meet their objectives without bringing about unintended negative consequences.

REVIEW OF RELATED LITERATURE

Numerous theories in the literature address the interplay between unemployment and wage rates. A few relevant theories that explore the relationship between unemployment and minimum wage, pertinent to the arguments presented in this study, are summarized below.

Say's law of markets serves as the foundation of classical theory concerning employment, unemployment, and wage determination. This principle posits that supply generates its own demand, thereby eliminating the possibility of widespread overproduction and unemployment within the economy. In a well-functioning market, the equilibrium wage and labor quantity would be established by market mechanisms. According to the classical model, true involuntary unemployment can only arise if market forces are obstructed. The enforcement of a legal minimum

wage is often cited as such an impediment. When employers are mandated to pay a minimum wage above the equilibrium rate, the model suggests they will employ fewer workers, leading to a surplus of unemployed individuals. In this scenario, the market's ability to reach equilibrium is hindered by legal restrictions imposed on employers.

Neoclassical wage theory derives from the broader framework of neoclassical economics, which stresses the significance of supply and demand dynamics in various markets. When applied to the labor market, this theory seeks to clarify how wages are established. It builds upon classical theory but integrates more intricate models that examine labor market behaviors. Central to this theory is the idea that workers earn wages based on their marginal productivity—the extra output produced by an additional worker. When a minimum wage exceeds the marginal productivity of low-skilled workers, the theory suggests that these workers might find themselves priced out of the labor market, leading to increased unemployment. This happens because employers are unlikely to pay more for labor than the revenue generated by that labor. Similar to classical theory, neoclassical theory faces criticism for failing to adequately address the complexities found in real-world labor markets, including factors like imperfect information and the influence of labor unions.

In contrast, the Keynesian perspective on wage determination, rooted in John Maynard Keynes' seminal work, “The General Theory of Employment, Interest and Money” (1935-1936), posits that unemployment often stems from inadequate demand for goods and services rather than wage levels alone. Keynesians contend that raising the minimum wage can enhance overall demand by increasing the purchasing power of low-wage workers. This boost in purchasing power can lead to higher consumption and potentially create more jobs. However, if the minimum wage is set excessively high, it may trigger inflation or deter business investment, thereby adversely affecting employment in the long term. This viewpoint significantly diverges from the neoclassical approach, highlighting the broader contrasts between Keynesian and neoclassical economics. While neoclassical theory focuses on the equilibrium of supply and demand in an ideal competitive environment, Keynesian economics emphasizes the importance of aggregate demand, the presence of market imperfections, and the possibility that wages may be “sticky,” resulting in unemployment and other macroeconomic challenges.

In his study titled “The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957,” Phillips noted a significant inverse correlation between changes in money wages and unemployment levels in the British economy during the analyzed period. This intriguing pattern was not unique to the UK; similar trends were identified in other countries as well. In 1960, economists Paul Samuelson and Robert Solow built on Phillips’ findings, clearly linking inflation and unemployment: they observed that high inflation generally accompanies low unemployment and vice versa. The concept known as the Phillips curve illustrates this economic phenomenon, indicating a stable, inverse relationship between inflation

and unemployment. Essentially, it posits that economic growth typically leads to inflation, which in turn creates more job opportunities and reduces unemployment. Phillips' "curve" depicted the average relationship between unemployment rates and wage behavior throughout the business cycle, revealing the rate of wage inflation associated with a sustained level of unemployment.

Regarding the Wage Fund Theory, this concept seeks to explain how wages are set and how income is distributed between labor and capital within a market economy. While John Stuart Mill is most commonly linked to this theory, its origins can be traced back to influential economists such as Adam Smith and David Ricardo. The theory operates on the premise that a fixed amount of capital is available for paying employee wages, known as the "wage fund." This fund is determined by the total capital available from capitalists and is regarded as constant in the short term. Wages, or the average compensation for each worker, are calculated by dividing the wage fund by the total number of workers. Additionally, the theory assumes that capital is immobile in the short run, meaning that it is not easy to modify the wage fund. As a result, any fluctuations in the workforce directly impact the wage rate. Moreover, the theory is based on the assumption that the economy is functioning at full employment, where all individuals willing and able to work at the current wage rate are indeed employed.

Reviewed related empirical works in the literature are categorized into two primary categories: those focused on Nigeria and those examining other countries. In the context of Nigeria, a notable study by Alege, Oye, Ogundipe, and Adu (2021) delved into the macroeconomic implications of minimum wage increases. Utilizing a calibrated and log-linearized New Keynesian Dynamic Stochastic General Equilibrium (DSGE) model that incorporates labor heterogeneity, their findings indicated that raising the minimum wage does not enhance household welfare or living standards, nor does it spur economic growth. Additionally, such increases place a burden on government finances. The authors suggested that minimum wage policies need to be accompanied by other pro-poor and inclusive initiatives to genuinely uplift the living conditions of low-income workers and the vulnerable.

Further insights come from Ajibola and Oraka (2020), who examined the interplay between minimum wage, inflationary pressures, and youth unemployment in Nigeria through annual data from 1991 to 2019. Their findings reveal a significant association between minimum wage levels and youth unemployment, while inflation was found not to have significant effect on youth unemployment. This contradicts certain arguments within the literature that advocate for minimum wage as a viable income policy to enhance worker welfare, as their findings suggest it actually contributes to rising youth unemployment.

Otu and Ezeabasili (2017) investigated the relationship between wage rates and unemployment in Nigeria, analyzing data from 1980 to 2015. They identified a notable inverse correlation: higher wages tend to correspond with lower unemployment rates. Nevertheless, this effect varied

according to different economic contexts. The authors advocated for the stabilization of wage rates and the implementation of strategies that promote wage growth without triggering inflation, especially in sectors that have experienced stagnant wage growth.

Attamah, Anthony, and Ukpere (2015) examined how fiscal and monetary policies have influenced unemployment in Nigeria from a managerial economics perspective, focusing on the years 1980 to 2013. In their analysis, fiscal policy was represented by government expenditures and revenues, while monetary policy was measured through broad Money Supply (M2), interest rates, and exchange rates. Their findings indicated a positive relationship between government expenditure and unemployment, whereas government revenue exhibited a negative and insignificant impact on this issue. In terms of monetary policy, both money supply and exchange rates were found to have significant positive effects, while interest rate shared a positive correlation with unemployment. The study further highlighted that raising interest and exchange rates exacerbate unemployment by increasing production costs, which discourages the private sector from expanding its workforce. Conversely, national productivity, assessed via real GDP, was found to have a significant negative impact on unemployment rate in Nigeria.

Kayode, Arome, and Silas (2014) investigated the growing unemployment rates in Nigeria and identified several underlying causes, including widespread corruption across public and private sectors, industrial decline, and the neglect of agriculture. Their findings suggested that prevalent poverty, youth unrest, and a high incidence of social issues and crimes are directly linked to joblessness. If these trends are left unchecked, they warned of potential apathy, cynicism, and even social revolutions. The study advocated for urgent intervention in key economic sectors, particularly power, industry, and agriculture, to generate job opportunities and emphasized the need for a more vigorous fight against corruption.

Umo (2012) analyzed the relationship between wage rates and unemployment in Nigeria, utilizing secondary time-series data on wage rates, unemployment rates, inflation, and productivity from 1990 to 2011. Employing Ordinary Least Squares (OLS) regression and Granger causality tests, they discovered that wages do not respond to unemployment levels, reflecting wage rigidity in the Nigerian context.

Akinbobola (2011) explored the relationship between wage determination and unemployment in Nigeria, using secondary time-series data on wage rates, unemployment rates, labor market policies, and inflation. Using Vector Autoregressive (VAR) models and other time series econometric analysis, the study found that the inflexibility of wages contributes significantly to the high unemployment rates observed in Nigeria.

In 2007, Folawewo conducted an empirical study to explore the macroeconomic implications of minimum wage in Nigeria, utilizing a static computable general equilibrium model for a thorough general equilibrium analysis. The research relied on data sourced from the 2005 National Accounts

of Nigeria, which facilitated the creation of a 22 x 22 social accounting matrix (SAM) for the economy. The calibration of the model demonstrated a commendable ability to replicate baseline data with reasonable accuracy. The simulation outcomes indicated that an increase in the minimum wage could enhance productivity across all economic sectors. However, the effects on employment were varied; while there was a slight increase in employment within the agricultural sector, the services sector experienced a minor decline, and the manufacturing and mining sectors showed no significant changes. Additionally, a rise in the minimum wage was projected to significantly elevate the general price levels. On a positive note, this wage increase would benefit household income and consumption, as well as improve government balances.

In 2001, Odusola examined the relationship between wages and employment in Nigeria through a detailed analysis titled "The Wage-Employment Nexus: The Case of Nigeria." This investigation utilized secondary time series data on wage levels, employment rates, inflation, and labor productivity spanning from 1980 to 2000 and employed time-series analysis alongside structural modeling techniques. Their findings suggested that wage increases could lead to employment reductions, attributing this to heightened labor costs.

Shifting focus to international research, Ngundu Matemane, Khumalo, and Bila (2023) analyzed the consequences of the national minimum wage policy on inflation and unemployment in South Africa for the years 1980 to 2022. They adopted an Autoregressive Distributed Lag (ARDL) model for their data analysis. The results revealed that rising minimum wages have a positive and significant effect on increasing unemployment in both the short and long terms, indicating that higher minimum wages can escalate the unemployment rate within an economy.

Caliendo, Schrödern, and Wittbrodt (2019) thoroughly examined the causal effects of implementing a minimum wage in Germany. Their study focused on the introduction of the statutory minimum wage in 2015 and its subsequent impact on unemployment. The results indicated that overall employment levels remained largely unaffected by the minimum wage increase, although some low-wage sectors did experience marginal job reductions.

In Greece, Christopoulou and Monastiriotis (2014) investigated the wage-unemployment dynamic through their research on the Greek Wage Curve, utilizing secondary time series data from 1992 to 2013 that encompassed wage rates, unemployment rates, and both regional and individual-level variables. Their methodological approach involved micro-econometric analysis and macro-level regressions with fixed effects. The findings revealed a strong negative correlation between wages and unemployment, with noted regional disparities influencing the outcomes.

Hodge (2009) explored the relationship between growth, unemployment, and wages in South Africa by analyzing economic growth, wage levels, unemployment rates, and labor market policies over time. Utilizing cointegration analysis and vector error correction models (VECM), the study

found that wages react slowly to changes in unemployment, indicating a level of wage rigidity.

In their research, Banerjee, Galiani, Levinsohn, McLaren, and Woolard (2008) aimed to understand the rising unemployment in post-apartheid South Africa. They focused on the influence of wage policies on unemployment rates, particularly among the youth. Their conclusions revealed that wage controls, such as minimum wage laws, have played a role in increasing youth unemployment by making it harder for younger individuals to enter the job market.

RESEARCH METHODS

Theoretical Framework

This study is grounded in the Keynesian theory of wage determination. Keynes, in his seminal work "The General Theory of Employment, Interest and Money," posits that unemployment often stems from insufficient demand for goods and services, rather than wage levels alone. He argues that higher wages can enhance overall demand by increasing the purchasing power of low-wage workers, leading to greater consumption and potentially creating more jobs. However, he also warns that excessively high wages might trigger inflation or diminish business investment, negatively impacting employment in the long run (Pigou, 1936).

The theory suggests that higher wage rates tend to elevate aggregate demand, which in turn boosts employment because people tend to spend more as they earn more. This increase in spending can lead to the creation of firms that provide goods and services, thereby enhancing local economic activity. While Keynes raises concerns about the potential adverse effects of "setting the wage too high," viewing it as a long-term issue, wage adjustments are generally seen as a more immediate concern.

Empirical Model Specification

Aligning with the Keynesian perspective on wage determination, and following the methodologies employed by Caliendo, Schrödern, and Wittbrodt (2019), as well as Christopoulou and Monastiriotis (2014), this study expresses unemployment as a function of aggregate demand, as outlined below:

$$\text{Unemployment} = \text{Aggregate Demand} \quad (1)$$

Substituting for the components of aggregate demand, the model is specified linearly thus;

$$UNEM = f(MNW + GRMW + DMI + GXP + INF) \quad (2)$$

The econometric form will be;

$$UNEM = a_1 + a_2MNW + a_3GRMW + a_4DMI + {}_{a5}\,GXP + {}_{a6}INF + U_t \quad (3)$$

Where UNEM = Unemployment rate, MNW = Minimum wage rate, GRMW = Growth rate of

minimum wage rate, DMI = Domestic Investment, and INF = Inflation, Ut = Stochastic Variable (Error term), a_1 = Intercept; and $a_{2,}$ $a_{3,}$ $a_{4,}$ $a_{5,}$ & a_6 = slope.

Data and Data Sources

The secondary data utilized in this analysis has been gathered from reputable sources, including the Central Bank of Nigeria (CBN) Annual Statistical Bulletin, the National Bureau of Statistics, and the World Bank's Development Indicators. Below are the definitions and measurements of the key variables examined in this study.

Unemployment Rate: This indicator represents the proportion of the labor force that is actively seeking work but is currently without employment. It was calculated by taking the total number of unemployed individuals—both male and female—and comparing it to the overall labor force. For this research, the unemployment rate estimates are based on the methodology provided by the International Labour Organization (ILO).

Minimum Wage: Minimum wage is defined as the lowest compensation that employers are mandated to pay their employees for work performed during a specified time frame. This amount cannot be reduced through collective agreements or individual contracts (International Labour Organization, 2024). Minimum wage laws aim to guarantee a fair distribution of economic gains and to provide a living wage for all workers requiring such support. The real minimum wage is calculated by adjusting the nominal minimum wage for inflation. Additionally, data on the minimum wage is expressed in terms of the US Dollar equivalents of Nigeria's sanctioned minimum wage rates across various years.

Growth Rate of Minimum Wage: This metric refers to the annual percentage increase in the minimum wage. It is determined by calculating the difference in minimum wage from one year to the next, expressed as a ratio to the minimum wage of the preceding year. Given the significant depreciation of the Naira, the analysis employed the Dollar equivalent of the minimum wage rates, providing both a comprehensive set of time series data and annual real values of the approved minimum wage rates.

Domestic Investment: Domestic investment is quantified through gross domestic investment, also known as gross capital formation. This encompasses expenditures for adding fixed assets within the economy and net inventory changes. Fixed assets considered include improvements to land, construction of plants, machinery, and equipment purchases. The measurement is expressed as a percentage of the country's GDP.

Government Expenditure: Total government expenditure, now referred to as general government expenditure, encompasses the full range of government spending—including recurrent and capital expenditures, as well as debt servicing. It captures the complete financial outlay for government operations, including the procurement of goods and services. This figure is reported as a

percentage of GDP.

Inflation: This refers to the continuous increase in the overall price level within an economy over time. It serves to gauge the average price changes between two specific periods for products that households consume. This measurement encapsulates trends in product prices while maintaining constant quality. The consumer price index is the standard tool used to measure this, indicating the annual percentage change in the cost of a set basket of goods and services that may be fixed or adjusted at defined intervals, like annually.

Estimation Techniques and Procedures

To perform the necessary pre-estimation tests, we utilized the Augmented Dickey-Fuller (ADF) unit root test alongside the ARDL bounds test for cointegration. The ADF test was used to assess the stationarity of the time series data employed in the study, while the ARDL bounds test was used to evaluate the long-term relationships between the dependent and independent variables. For estimating the coefficients within the model, the Autoregressive Distributed Lag (ARDL) model was employed. The ARDL cointegration technique is particularly advantageous when handling variables integrated of different orders, whether I(0), I(1), or a combination of both. It also facilitates the distinction between long-run and short-run effects of the regressors.

DATA ANALYSES, PRESENTATION AND DISCUSSION OF RESULTS

Pre-estimation Tests

Since time series data often show a unit root, the ADF unit root test will be employed to determine stationarity. Conducting this test is crucial in order to avoid skewed results. The findings are presented in Table 1.

Table 1: Summary of ADF Test

Variables	ADF Statistics	Critical Value @5%	Order of Integration	Remarks
UNEM	-4.5015	-3.0124	I(1)	Stationary
MNW	-4.7133	-3.0124	I(1)	Stationary
DMI	-4.1702	-3.0124	I(1)	Stationary
GRMW	-4.5149	-3.0124	I(0)	Stationary
GXP	-4.4240	-3.0124	I(1)	Stationary
INF	-4.4439	-3.0299	I(1)	Stationary

Source: Authors' compilation using E-views

The analysis presented in Table 1 shows that the unemployment rate (UNEM), minimum wage rate (MNW), domestic investment (DMI), government expenditure (GXP), and inflation rate (INF) are stationary at their first difference, while the growth rate of minimum wage (GRMW) is stationary at the level. Given this mixed order of integration, we proceeded with the ARDL bounds test to examine the long-term relationship between these variables.

Following the identification of the order of integration, we employed a bounds F-test to determine

the presence of a long-run relationship among the variables. The results from the ARDL co-integration test, along with the critical values, are detailed in Table 2.

Table 2: Summary Result of the ARDL Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	3.226190	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: Authors' compilation using E-view

The results from the ARDL bounds tests, as shown in Table 2, indicate that the F-statistic calculated at 3.2262 falls below the upper critical bound at the 5% significance level. This suggests there is no long-term relationship between the dependent and independent variables, allowing us to accept the null hypothesis of no co-integration. With the cointegration status established, the study then applied the Autoregressive Distributed Lag Model (ARDL) to obtain the regression model's parameter coefficients. Given the absence of a long-term relationship between the variables, we now focus on the findings from the short-run analysis.

Table 3: Summary of Short Run Estimate

Conditional Error Correction Regression				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.211501	0.110058	1.921728	0.0787
D(MNW)	0.044728	0.014267	3.134994	0.0086
D(GRMW)	-0.002815	0.001458	-1.930307	0.0775
D(DMI)	0.012378	0.013440	0.921005	0.3752
D(GXP)	0.076033	0.015911	4.778690	0.0004
D(INF)	0.025255	0.005149	4.904679	0.0004
CointEq(-1)	-0.275210	0.039921	-6.893838	0.0000
R-squared	0.981748	Mean dependent var		-0.132934
Adjusted R-squared	0.978705	S.D. dependent var		0.688192
S.E. of regression	0.100425	Akaike info criterion		-1.595837
Sum squared resid	0.181535	Schwarz criterion		-1.397465
Log likelihood	21.55421	Hannan-Quinn criter.		-1.549107
Durbin-Watson stat	2.006242			

Source: Authors' compilation using E-views

Based on the findings in Table 3, it can be seen that the regression line begins with a positive intercept, represented by a constant (c) value of 0.2115. This implies that when all variables are

set to zero, the UNEM would be valued at 0.2115. The coefficients for the minimum wage rate, domestic investment, government expenditure, and inflation rate are 0.047, 0.0123, 0.0760, and 0.0254, respectively. This points to a positive relationship between these variables and the unemployment rate. Specifically, a 1 percent increase in any of these factors is expected to lead to increases of 0.05%, 0.01%, 0.08%, and 0.03% in the unemployment rate, accordingly. Conversely, the growth rate of the minimum wage has a negative coefficient of -0.0028, indicating that a 1 percent rise in the minimum wage growth rate could reduce the unemployment rate by 0.0028% in the short term. The error-correcting term, which shows the adjustment speed, was significant at the 5 percent level, with a coefficient of -0.2752. This suggests that approximately 28 percent of previous year's disequilibrium is corrected in the current period.

Post-estimation Test Results

The regression outcomes displayed in Table 3 reveal a coefficient of determination (R^2) of 0.9817, showcasing the strong explanatory capability of the variables in this model. This means that 98% of the variations in unemployment rate can be explained by the minimum wage rate, growth rate of minimum wage, domestic investment, government expenditure, and inflation in Nigeria. The remaining 2% of variation in unemployment rate is attributed to other potential factors not included in the model. Additionally, the adjusted R^2 value of 0.9787 further supports the explanatory strength of the independent variables, confirming their collective capability to account for 98% of the total variation in unemployment rate.

Table 4: Summary of Heteroscedasticity Test Result

Null hypothesis: Homoskedasticity			
F-statistic	2.629867	Prob. F(9,12)	0.0606
Obs*R-squared	14.59857	Prob. Chi-Square(9)	0.1026
Scaled explained SS	4.049712	Prob. Chi-Square(9)	0.9081

Source: Authors' compilation using E-views

To evaluate the overall significance of the model, we used the F-test. The F-statistic is vital in establishing the model's significance. As shown in Table 3, the F-calculated value surpasses the F-tabulated value, allowing us to reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1). This indicates that the model shows a statistically significant difference from zero, meaning there is a joint significant impact between the dependent and independent variables in this analysis.

Table 5: Summary of Serial Correlation Test Result

Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.204866	Prob. F(2,10)	0.8181
Obs*R-squared	0.865929	Prob. Chi-Square(2)	0.6486

Source: Authors' compilation using E-views

The Breusch-Godfrey test was performed to determine the presence of serial correlation within the model. As shown in Table 5, the F-statistic probability value of 0.8181 exceeds the critical threshold at a 5 percent significance level. Consequently, we accept the null hypothesis, which posits that there is no serial correlation present in the model.

In addition, we utilized the t-test to assess the statistical significance of each individual parameter in our research hypotheses. A two-tailed test was carried out at the 5% significance level.

Evaluation of Research Hypothesis

Hypothesis 1

H_0: The minimum wage rate does not significantly affect unemployment rate in Nigeria.

H_1: The minimum wage rate significantly affects unemployment rate in Nigeria.

After applying the decision rule for this hypothesis, we found that the calculated absolute t-value of 3.1349 exceeds the tabulated absolute t-value of 2.101. Thus, we reject the null hypothesis and accept the alternative hypothesis. This leads us to conclude that minimum wage rate significantly affects unemployment rate in Nigeria.

Hypothesis 2

H_0: The growth rate of the minimum wage rate has no significant effect on unemployment rate in Nigeria.

H_1: The growth rate of the minimum wage rate significantly affects unemployment rate in Nigeria.

Upon applying the decision rule for this hypothesis, the calculated absolute t-value of -1.9303 is less than the tabulated absolute t-value of 2.101. Hence, we accept the null hypothesis and reject the alternative. This indicates that the growth rate of minimum wage does not significantly affect unemployment rate in Nigeria.

Hypothesis 3

H_0: Domestic investment does not significantly affect unemployment rate in Nigeria.

H_1: Domestic investment significantly affects unemployment rate in Nigeria.

Applying the decision rule to the third hypothesis reveals that the calculated absolute t-value of 0.9210 is lower than the tabulated absolute t-value of 2.101. Therefore, we accept the null hypothesis and dismiss the alternative, concluding that domestic investment has no significant effect on unemployment rate in Nigeria.

Hypothesis 4

H_0: Government expenditure does not significantly affect unemployment rate in Nigeria.

H_1: Government expenditure significantly affects unemployment rate in Nigeria.

Through the decision rule for this hypothesis, we observe that the calculated absolute t-value of 4.7787 surpasses the tabulated absolute t-value of 2.101. As a result, we reject the null hypothesis and embrace the alternative hypothesis, concluding that government expenditure significantly affects unemployment rate in Nigeria.

Hypothesis 5

H_0: Inflation rate does not significantly affect unemployment rate in Nigeria.

H_1: Inflation significantly affects unemployment rate in Nigeria.

For this final hypothesis, the decision rule shows that the calculated absolute t-value of 4.9047 is greater than the tabulated absolute t-value of 2.101. Thus, we reject the null hypothesis and accept the alternative hypothesis, concluding that inflation significantly affects the unemployment rate in Nigeria.

Discussion of Findings

The results of the analyses reveal the existence of a significant positive relationship between minimum wage and unemployment. Specifically, as minimum wage increases, unemployment also tends to rise. This observation is consistent with established economic theories, which suggest that higher wages can inadvertently lead to job losses, particularly in sectors that employ low-skilled workers, where employers may struggle to manage the increased labor costs. When wages go up, businesses might respond by downsizing their workforce or slowing their hiring processes, especially in labor-intensive industries where productivity can be limited. This indicates that, while minimum wage initiatives aim to elevate living standards, they might unintentionally exacerbate unemployment rates, especially among those in lower-skilled roles or within the informal sector.

On the other hand, the growth rate of the minimum wage was found to have a negative but statistically insignificant effect on unemployment. This suggests that while gradual increases in the minimum wage could potentially help in slightly reducing unemployment, the effect is not substantial enough to be deemed significant. A plausible reason for this could be attributed to the fact that real minimum wage growth has been negative, and the predicted relationship is with employment instead of unemployment. Increase in real income leads to increase in aggregate demand, which is expected to spur increase in employment opportunities.

Furthermore, domestic investment was found to have a positive but insignificant effect on

unemployment. The insignificance of the estimated relationship does not provide sufficient information to make a valid remark about it. Government expenditure and inflation were found to have positive and significant effects on unemployment. The observed relationship between government spending and rising unemployment stems from high cost of governance, which implies that government spends more on administrative cost, while allocating a smaller proportion of the government's budget to the productive sectors of the economy to create sustainable job opportunities. Additionally, the estimated positive relationship between inflation and unemployment does not align with extant theories. This suggests that increase in inflation diminishes real wages, lowers consumer purchasing power, and raises business operating costs, often leading to job cuts and exacerbating unemployment.

CONCLUSION

This study attempted to tackle the theoretical and empirical challenges surrounding the relationship between minimum wage and unemployment. Using the Autoregressive Distributed Lag (ARDL) model, effort was made to estimate the relationship between the duo variables. The results of the analyses show that minimum wage, domestic investment, government expenditure, and inflation all have positive effect on unemployment in Nigeria. Conversely, the growth rate of the minimum wage was found to have a negative effect on unemployment. The estimated relationships between minimum wage, government expenditure, and inflation, with unemployment were found to be statistically significant, while the estimated relationships between the growth rate of minimum wage and domestic investment with unemployment was not found to be statistically insignificant.

The study concludes that increase in minimum wage does not necessarily lead to a higher unemployment rate. The purported positive correlation between minimum wage and unemployment obtained by most of the related studies that dwell on developing countries occurred because these works did not account for the real changes that occur alongside nominal increases in minimum wage. This discrepancy which was effectively captured in this study is evident in the negative values of the computed data for the growth rate of real minimum wage.

The study recommends the need to focus on raising average real wage through timely minimum wage review, as an effective means of reducing unemployment and enhancing well-being in general. This approach can foster improvements in economic well-being by boosting aggregate demand and creating job opportunities without increasing unemployment rates. Also, minimum wage increases should be gradual and accompanied by real sector investments designed to create new job opportunities that can absorb unanticipated immediate or long-run rise in unemployment.

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