



**DIGITAL FINANCE AND EMPLOYMENT RATE IN NIGERIA FINANCIAL
INDUSTRY**

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Abstract

This study investigated the relationship between digital finance and employment rate in Nigeria covers the period of 14years between 2010 and 2023. Data on remita, point of sales transaction, web pay and mobile pay and employment rate were gathered from CBN Statistical Bulletin, 2023 edition. Ordinary Least Square method was used to analyze the data with the aid of E-view. The study revealed that there is significant relationship between remita and employment rate in Nigeria. Also, evidence of no statistical significant impact was found between point of sales and employment rate in Nigeria. In addition, analysis from this study revealed there is no significant influence of web pay on employment rate in Nigeria. Lastly, this study realized that mobile pay has significant effect on employment rate in Nigeria under the period of study while it was found that gross domestic product growth rate has no significant impact on the remittances in Nigeria. The study therefore concluded that digital finance have significant impact on employment rate in Nigeria. The study therefore recommends that Government agencies should actively promote the development of digital finance and focus on the role of digital finance in improving the consumption level of low and middle-income families and underdeveloped areas. Also, the website infrastructure and security should be further improved to enhanced web based digital finance transactions.

Keywords: Remita, Point of Sales Transaction, Web Pay, Mobile Pay, Employment Rate.

1.0 Introduction

The goal of achieving full employment among other macroeconomic goals is an important one in many developing nations where unemployment and underemployment has been a major cause and consequence of widespread poverty. However, in spite of the very high-sounding electioneering promises of political leaders in many poor nations of the world, the achievement of impressive growth and decent employment remains a mirage. High rate of unemployment, unimpressive growth rates and poverty among other miseries of the populace, are the order of the day. For instance, facts available for the Nigerian economy show a high rate of unemployment and

underemployment. The rate of open unemployment was 12% in March 2020; it rose to 19.7% in March 2023 while the rate of underemployment hovered around 19% in 2018 (NBS, 2023). Among the youths in the 15-24 age cohorts, the rate of unemployment is over 40% according to the 2020 edition of the Labour Force Sample Survey of the National Bureau of Statistics. Thus, the issue of real output and employment growth in developing nations is a sine qua non for poverty reduction and a more equitable income distribution (Fofana 2020).

Technology has been an enabler to the provision of financial services since man has learnt to embrace the former in their financial affairs. Recently, of particular significance is the digital technology and its application to the financial services industry. Every aspect of modern life is transformed by the advent of digital technology and most electronic devices and machinery incorporate digital technology (Goodman, 2018). Consequently, digital financial services are provided by both banks and the wide range of non-bank financial institutions. Thus, digital finance, has found to expand the range of financial services, and also promotes in financial inclusion. Digital technologies also offer affordability and convenience to consumers of financial services to save, make payments, access credit, and obtain insurance. Thus, due to attendant benefits of internet-based digital technologies, many developing countries recently advocated for the adoption of digital economy thus facilitating capital flows from rich to poor countries (Gbenga, Chinyere, Ayodeji, Awah & Josaphat, 2024).

Nigeria faces significant economic and security challenges, including banditry, cattle rustling, ritual killings, and kidnapping, largely linked to high levels of unemployment and underemployment among young adults. The government has emphasized diversifying the economy to create jobs, reduce reliance on crude oil, and increase productivity (Chukwuemeka, 2023). Digital finance has rapidly transformed Nigeria's financial sector, bringing efficiency and broader access to financial services. However, the rise of technologies like automated banking systems, mobile apps, and AI-driven services raises concerns about job displacement in traditional banking roles, such as cash handling and basic customer inquiries (Ndungu & Moturi, 2020). The shift to digital finance demands new skills, including expertise in technology, data analytics, cybersecurity, and digital marketing, potentially outpacing the current skill set of Nigeria's banking workforce. While jobs in digital finance, such as mobile banking support and fintech development,

may increase, the overall impact on employment remains uncertain due to potential job losses in traditional roles (Jiang, Sun, Song & Ma, 2023).

2.0 Literature Review

Conceptual Review

Digital finance, also known as internet finance, has been described as the merger of digital and information technology with traditional financial services (Wang et al., 2020). Digital finance also refers to financial services delivered over digital infrastructure (Okoyeuzu et al., 2019). The term has also been popularly conceptualized as financial services delivered through mobile phones, personal computers, the internet or cards linked to a reliable digital payment system (Uduk, 2018). Appah et al. (2023) simply defined digital financial services (digital finance) as a suit of financial services utilized by customers via digital technology. According to Ndungu and Moturi (2020), digital finance is the use of technology innovations in the provision and delivery of financial services. Igoni et al. (2020) also defined digital finance as a financial transaction via an electronic environment or a branchless financial services delivery outside conventional bank branches.

Concept of Employment Rate

The term employment is used to describe a situation whereby able-bodied men and women who are qualified by the condition to work in any given society can gainfully secure jobs whereby he or she will not be exploited on securing the job and equally optimize his or her capability in terms of his marginal labour production. Employment also has varying concepts. Employment is a relationship between two parties, usually based on a contract, one being the employer and the other being the employee. It is also defined as situations whereby able-bodied men and women who are qualified by the condition to work in any given society can gainfully secure jobs whereby he or she will not be exploited on securing the job and equally optimize his or her capability in terms of his marginal labour production.

Theoretical Review

The Keynesian Theory of Employment

Keynesian theory of employment is based on the concept of aggregate demand, emphasizing that in a capitalist economy, the level of employment is directly linked to aggregate demand. Unemployment arises from insufficient effective demand, and increasing this demand can raise

employment and profits through higher investment. Effective demand refers to the total demand for goods and services at various employment levels (Jhingan, 2003). Keynes argued that employment levels determine effective demand, which in turn influences aggregate demand and supply prices, with investment driving employment when favorable economic conditions are realized (Marglin, 2018). Keynes identified unemployment as cyclical or caused by deficient demand. He believed that capitalists hire workers and invest when the economy and profit expectations are positive, but if those expectations are not met, unemployment arises due to low aggregate demand, especially in investment. Keynes suggested that government intervention, through deficit spending, could stimulate aggregate demand and reduce unemployment (Obadan & Odusola, 2020).

Diffusion of Innovation Theory

The Diffusion of Innovation theory, developed by Everett M. Rogers in 1962, focuses on the factors that influence the likelihood of adopting a new idea, product, or practice within a culture. According to Rogers, the theory is based on four key components: development, time, communication channels, and social system impacts. Rogers (1995) further identifies five factors that determine adoption: relative advantage, compatibility, complexity, trialability, and observability. According to Monyoncho (2015), it improves status, increases efficiency, and brings about economic benefits. Past assessment has derived that general advantage of a progression is quite associated with the speed of gathering. As per Roberts and Amit (2003), a client is bound to embrace another innovation when they see a general benefit or handiness over a more established one. How much a help is seen to be viable with clients' current qualities, convictions, and schedules, as well as their current and past encounters, is alluded to as similarity.

Empirical Review

Gbenga *et. al.* (2024) aimed to assess the influence of Automated Teller Machine (ATM), Point of Sales (POS), mobile payment (mobilepay), and web-based payment (webpay) digital finance transactions on stock market capitalization ratio in Nigeria. This study, conducted for the period from January 2012 to December 2021, utilized Fully Modified Ordinary Least Squares regression to investigate the impact of digital finance on stock market performance in Nigeria. Monthly secondary data were sourced from the Central Bank of Nigeria's Statistical Bulletin, Statistics and

Monthly Economic Reports. Empirical findings revealed that ATM, POS, mobile based, and web-based digital finance transactions had a positive and significant impact on the stock market capitalization ratio in Nigeria. Consequently, the study concluded that digital finance contributes to enhancing stock market performance in the country.

Youssra, Souhaila and Sahar (2024) attempted to explain the impact of Fintech on the Asian economies through two main indicators, inflation and unemployment over the period. This study uses panel data regression models to explain the relationship between Fintech, inflation as an indicator of currency circulation and unemployment since Fintech has disrupted the labor market. Empirical results show a consistently strong and positive relationship between the development of financial technologies and the reduction of inflation and unemployment unless these technologies are actively used. Digital finance has become a new driver of economic development.

Chukwuemeka (2023) explored the critical role of digital finance in enabling the development of the Nigerian digital economy. It is estimated that digital economy will contribute up to 25% to the global GDP by 2025. Digital finance especially effective digital payment systems have played a very important role in all countries with a thriving digital economy. The research adopted a descriptive research methodology using secondary data obtained from the CBN publications and used multiple linear regression methodology for analysis. The result obtained shows that digital finance plays a significant role in the development of a digital economy.

3.0 Methodology

An ex post facto research configuration was utilized to assemble important time series information on the subject of conversation. The population of this study is all sectors of the economy. The data utilized consists of aggregate data on all banks and therefore no sample was selected. Secondary sources were used to collect the required data in order to accomplish the study's stated goal. The data covered a period of fourteen (14) years, starting from 2010 to 2023. For this study, an employment rate (EMR) proxy for the employment rate in Nigeria is the (dependent variable) while remita, point of sales transaction, web pay and mobile pay are the independent variables. In testing for already stated hypothesis, the following model was adopted:

$$EMR = f(REM, POS, WEP, MOP)..... (i)$$

$$EMR = \beta_0 + \beta_1 REM + \beta_2 POS + \beta_3 WEP + \beta_4 MOP + U \dots\dots\dots (ii)$$

Where;

EMR = Employment Rate

REM = Remita

POS = Point of Sales Transaction

WEP= Web Pay

MOP= Mobile Pay

U= Stochastic error term

β_0 = Constant intercept

β_1 - β_4 = Coefficient of independent variables

4.0 Data Analysis, Interpretation and Discussion of Findings

Table 4.1.1: Descriptive Statistics Table

	EMR	REM	POS	WEP	MOP
Mean	56.87036	11399.36	5.01E+08	1.99E+09	2.10E+08
Median	56.87850	8437.970	603.7545	111.9700	599.6250
Maximum	58.13300	27410.56	3.89E+09	1.41E+10	1.86E+09
Minimum	55.02600	986.1700	11.03000	25.05000	1.270000
Std. Dev.	1.035746	9793.109	1.22E+09	4.48E+09	5.26E+08
Skewness	-0.260474	0.392629	2.154746	2.004772	2.541809
Kurtosis	1.834969	1.578661	5.934963	5.406480	8.215058
Jarque-Bera	0.950066	1.538154	15.85834	12.75610	30.94000
Probability	0.621865	0.463441	0.000360	0.001698	0.000000
Sum	796.1850	159591.1	7.01E+09	2.78E+10	2.94E+09
Sum Sq. Dev.	13.94600	1.25E+09	1.93E+19	2.61E+20	3.60E+18
Observations	14	14	14	14	14

Source: Author's Computation from E-View Output (2024)

Table 4.1.1 provides descriptive statistics for the variables used in the research, including the mean, median, and standard deviation, along with skewness, kurtosis, and the Jarque-Bera statistic. These statistics offer insights into the distribution and key characteristics of the data. The variables show consistent distribution, with mean and median values closely aligned with the minimum and maximum values. Most series exhibit high standard deviations, indicating large dispersions from their means, with Remitta having the highest at 9793.11. The likelihood of the Jarque-Bera statistic

suggests normal distribution for all variables except POS, MOP, and WEP, which support the normality assumption.

Table 4.1.2: Regression Results

Dependent Variable: EMR

Method: Least Squares

Date: 03/10/25 Time: 16:02

Sample: 2010 2023

Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	58.07715	0.109347	531.1262	0.0000
REM	-0.000118	1.07E-05	-11.03182	0.0000
POS	8.20E-10	5.37E-10	1.526762	0.1612
WEP	-3.12E-10	1.41E-10	-2.204073	0.0550
MOP	1.64E-09	6.00E-10	2.733978	0.0231
R-squared	0.962365	Mean dependent var	56.87036	
Adjusted R-squared	0.945639	S.D. dependent var	1.035746	
S.E. of regression	0.241490	Akaike info criterion	0.268472	
Sum squared resid	0.524855	Schwarz criterion	0.496707	
Log likelihood	3.120697	Hannan-Quinn criter.	0.247345	
F-statistic	57.53508	Durbin-Watson stat	0.950155	
Prob(F-statistic)	0.000002			

Source: Author's Computation from E-View Output (2024)

The model shows an R^2 of 96%, indicating a good fit, with the remaining 4% attributed to factors not included in the model. The adjusted R^2 of 94% suggests that the predictors can explain 94% of the variation in employment rate. **T-test Results:** Point of Sales (POS) and Web Pay (WEP) are statistically insignificant, with p-values of 0.1612 and 0.0550, respectively. However, Remitta and Mobile Pay are significant, with p-values of 0.0000 and 0.0231, respectively.

Coefficients

Employment Rate: The coefficient of 58.07715 indicates that a unit increase in employment rate leads to an increase in the employment rate.

Remitta: The coefficient of -0.000118 suggests that an increase in remittance inflow negatively impacts employment, contrary to some studies that show positive effects. This negative relationship may be due to reduced labor force participation.

Point of Sales (POS): With a coefficient of 8.20E-10, POS has a minimal positive impact on the employment rate. While the relationship is statistically significant, its practical impact is small.

Web Pay (WEP): The coefficient of $-3.12E-10$ suggests a slight negative relationship with the employment rate, but the effect is minimal.

Mobile Pay: The coefficient of $1.64E-09$ indicates that an increase in mobile payments slightly increases employment. However, some financial investors might avoid mobile payments due to security concerns.

Discussion of Findings

This study analyzed the relationship between digital finance and employment rate in Nigeria using Ordinary Least Squares (OLS) regression. The results showed that two hypotheses were statistically significant during the study period. The study found a significant relationship between remittances and employment rate, aligning with previous studies suggesting a positive impact of remittances on economic development and household welfare. This contradicts the view that remittance inflows worsen welfare in Nigeria. The study concluded that POS transactions do not have a significant impact on employment rate in Nigeria. Despite some studies showing a positive effect of POS on unemployment reduction, this study found no significant influence, though POS may still reduce youth unemployment by around 7% through financial inclusion. The study found no significant effect of web pay on the employment rate, despite recognizing the advantages of electronic payment systems as highlighted by Laudon and Traver (2017). The study revealed that mobile payments have a significant effect on employment rate in Nigeria. People with cars were more likely to adopt mobile payments, and social interactions, where friends shared experiences about mobile payments, also increased adoption.

5.0 Conclusion

The statistical analysis revealed that two out of four hypotheses tested were statistically significant. While digital finance influences employment rates in Nigeria, the effects are small and may vary across sectors. Future policies should focus on maximizing the positive aspects of digital finance while addressing potential negative impacts on employment. The study also concludes that digital finance have a significant impact on employment rate in Nigeria.

Recommendations

Based on the findings made in the course of this study, the following recommendations are hereby suggested below:

- i. Government agencies should actively promote the development of digital finance and focus on the role of digital finance in improving the consumption level of low- and middle-income families and underdeveloped areas.
- ii. The regulatory authorities should urgently and adequately curb cybercrime to encourage the use of WEB Pay innovation and further enlighten customers on easy and optimal utilization of this and other digital financial services.
- iii. Mobile banking innovation should be improved upon in terms of good network, awareness and extension to the unreached areas of the country to increase its impact on the economy of Nigeria.
- iv. Government through the CBN should enact a law on how to protect the interest of the POS customers, so that fund will not be withdrawn in their account unauthorized.
- v. Finally, the website infrastructure and security should be further improved to enhanced web-based digital finance transactions.

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