MACROECONOMIC DETERMINANTS OF EMPLOYMENT IN NIGERIA'S SERVICES SECTOR: DO FOREIGN DIRECT INVESTMENT AND EXCHANGE RATE MATTER?

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Abstract

This study employs the ARDL modeling technique to investigate the determinants of employment generation in Nigeria's services sector, focusing mainly on the roles of foreign direct investment and exchange rate movements during the 1991-2019 period. This study found that in the short-run, FDI positively affects employment generation in the services sector, while currency depreciation adversely affects it with a one-year lag. The long-term employment generation effect of the FDI in the services sector remains positive. Still, it loses its statistical significance, while the impact of currency depreciation on services sector employment is positive and significant. It was also found that economic growth positively affects service sector employment generation in the short and long run, though the effect is only meaningful in the short term. The impact of trade openness is positive and significant over a short period but also turns out to be non-significant in the long run. Financial sector development favors employment generation in the services sector in the short and long run. Based on this evidence, it is recommended that the government try to enhance the attractiveness of various sectors of the economy to FDI and guard against undue appreciation of the nation's currency. It is also recommended that economic growth and the development of the financial system be prioritized. Given the transience of the effect of trade openness on employment generation in the services sector, caution must be exercised in implementing trade liberalization policies. These measures, if implemented, are expected to enhance job creation in the nation's services sector.

Keywords: services sector, Employment Generation, Job Creation, Foreign Direct Investment, Exchange Rate Movements.

JEL classification code: F41, J21, J64, M51, F21, F23, F31, G20, L80, L90.

INTRODUCTION

Increasing employment levels in all economies remains a significant policy issue. The eighth United Nations Sustainable Development Goal (UNSDG-8) stresses the need for member countries to provide decent employment for all by the year 2030. This is because labor employment is critical for sustainable growth and development.

Sustainable development requires expansion in output and structural transformation of the economy. This suggests that growth or output expansion

is a prerequisite for development. Human capital or labor plays a significant role in the production and expansion of output of goods and services, which are produced by the economy's key (real) sectors, namely the agriculture, industrial, and services sector.

In Nigeria, the services sector is the largest and fastest growing sector. According to reports from the Central Bank of Nigeria (CBN, 2019), the industry has been the most significant contributor to the gross domestic product (GDP) over the last four decades. This sector also has the highest number of activity subsectors. These include arts, entertainment and recreation, accommodation and food services, transportation and storage, finance and insurance, education, information and telecommunications, real estate, trade, oil, and gas services, etc. Thus, the services sector has been a critical driver of the nation's economy. The trends in contributions of the three major sectors to the nation's GDP are shown in Figure 1.

Figure 1

Sectoral contributions to the GDP
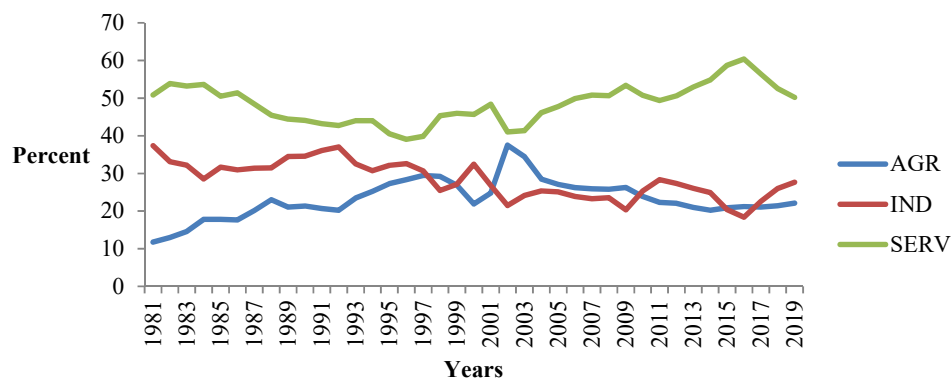
Source: CBN (2019).

AGR stands for the contribution of agric. sector to GDP; IND stands for the contribution of the industrial sector to GDP; SERV stands for the contribution of the services sector to GDP.

The observation concerning the developments in the services sector is global. It is not limited to Nigeria. The World Bank (n.d., p. 69) observed that

"services are the fastest growing sector of the global economy, and trade and foreign direct investment in services have grown faster than in goods …". These views were also shared by Saez and Goswami (2010, p. 1) who noted that "trade in services have been expanding rapidly because technological improvement has reduced the cost of cross-border exchange from infinity to virtually zero, thereby allowing for new exports activities" in developing countries. The UNCTAD (2018, p. 8) citing Wolfl (2005) and Lee and Wolpin (2006) identified the factors responsible for the rising share of services in the global economy to include "increase in final consumer demand for services as a result of a rise in per capita income (high income elasticity of demand for some services); technological changes that increase demand for labor in services; outsourcing of services-related activities from manufacturing to specialized services firms (interindustry division of labor); growing role of services as providers of intermediate inputs; demographic developments; and low productivity growth in services". Another contributing factor to the rise in services is the ease by which trade in some categories of services, such as consulting, education, etc., is facilitated with internet technology which does not require the movement of labor.

The services sector's share of employment in the country has been relatively high. The CBN (2019) reports that this sector has been the country's largest employer of labor over the last three decades. This is not unexpected considering the vastness of the industry and its contribution to the nation's output. The trends in the relative shares of the three critical sectors of total employment in the country are shown in Figure 2.

However, the sector is faced with several challenges, including inadequate finance, inadequate skills, inadequate research, and development (R&D), low level of competitiveness, external competition arising from the importation of services, low level of services exports, and so on. Despite the relevance of the sector to the nation's economy in terms of its contributions to growth and employment, to my knowledge (based on a comprehensive literature search), quite a few studies, including Aigheyisi and Edore (2021), have been conducted to identify the macroeconomic factors affecting employment therein.

Figure 2

Nigeria: sectoral shares of employment
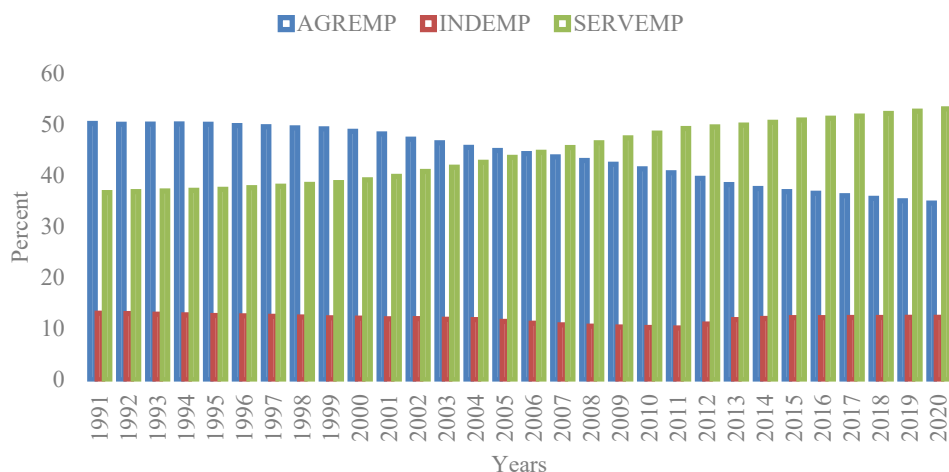
Source: World Bank – World Development Indicators (2020).

ARGREM represents the agriculture sector share of total employment; INDEMP represents the industrial sector share of total employment; SERVEMP represents the services sector share of total employment.

Given the relevance of the services sector to Nigeria's economy and considering the critical role of labor employment in sustaining the sector's relevance, an investigation of the factors affecting employment in the industry is not out of place. This study aims to identify factors affecting employment in the services sector. The distinguishing feature of this study is that it specifically examines the effect of FDI and exchange rate, among other factors, on service employment in Nigeria. These were not considered in other known Nigeria-focused studies. The focus on these variables is informed by the fact that FDI plays an essential role in technology spillover or technology imports which could be absorbed to boost the skills and the R&D required for effective service delivery. The recent rise in FDI sectors globally (World Trade Organization, 2019) calls for an assessment of the effect of FDI on service sector employment. The exchange rate affects individuals' and firms' import and export decisions relating to services. Depending on the elasticity of demand for services imports, currency depreciation could be used to protect the services sector by curbing imports and boosting exports of services, thereby promoting employment therein. These are empirically investigated in this study.

This study is significant as identifying the factors affecting employment generation in the services sector will aid policymakers in formulating policies and implementing programs to strengthen the industry.

1
LITERATURE REVIEW

This section is divided into two subsections. It begins with conceptual clarification. Following this is the theoretical literature review, then empirical evidence from previous studies is reviewed.

1.1 Brief conceptual clarification

FDI involves setting up new plants or establishing firm(s) by a foreign firm or multinational corporation in a host economy. It also requires acquiring or owning a substantial stake or voting rights (usually 10% or more) in an existing domestic firm (OECD, 2021). Whichever form it takes, FDI is generally embarked upon for several reasons, which include expansion of market share, enhanced competitiveness, elimination of costs such as transportation cost (that is, cost of exporting products to foreign markets), and reduction of other associated costs, resource-seeking, risk diversification, etc. Typically, foreign investors invest in sectors of the host economy that guarantee superior returns on their investment. Hence investment decision is based on careful and detailed evaluation and examination of the investment environment, including economic, socio-political, behavioral, and cultural issues.

The nominal exchange rate is the rate at which the domestic currency exchanges for a unit of a foreign currency. That is, how much of the domestic currency is given in exchange for a unit of a foreign currency. The exchange rate and its real counterpart play critical roles in the flow of trade and investment across national borders. The theoretical linkages will be explained in subsequent sections of this paper.

The services sector is part of the real sector, contributing mainly to any country's gross output of goods and services (GDP). The sector is quite broad and comprises sub-sectors such as transportation, trade, storage, telecommunications, public administration, tourism, entertainment, information technology, finance (including banking, insurance, stock brokerage firms, issuing

houses, and other capital market players or operators), etc. The vastness of the sector makes it one of the largest sectors in most economies.

The employment rate is the proportion of the labor force that is employed. In other words, it is the proportion of the labor force actively engaged in productive economic activities. The services sector employment rate is the sector's share of total employment or the proportion of employed population actively involved in rendering of services.

Services sector employment is affected by FDI through direct and indirect channels. The direct channel involves expansion in the volume of activities in the services sector because of increased inflows of FDI therein, as recently observed in developing countries, including Nigeria. This has tended to engender an increase in the efficiency and effectiveness of the sector's performance and boost their output, thereby engendering demand for more labor in the services sector. The indirect channel involves the inflow of FDI into other sectors of the economy, which boost the output of those sectors, enhancing effective demand for goods and services of the FDI-receiving sector. The rise in effective demand in the non-services industry is expected to raise the need for services in the country, and the level of services sector employment, consequent to an increase in effective demand for services in the country.

The exchange rate also affects employment generation in the services sector through direct and indirect channels. Where nominal currency depreciation engenders positive developments of output expansion and employment generation in the non-services sectors, this will engender an increase in the (effective) demand for the output of the services sector, which in turn leads to a rise in demand for labor in the services sector. This is the indirect channel. The direct channel involves output expansion, backed by an economy-wide increase in effective demand leading to demand for more labor in the services sector.

The preceding discussion highlights the interrelationships among various sectors of the economy. Output expansion in one industry, backed by an increase in effective demand, engenders output expansion and employment generation in another industry where FDI does not displace domestic investment and foreign technologies imported into the country through FDI do not substitute for human labor. These lead to a decrease in employment in the FDI-receiving sector and other sectors of the economy.

■1.2 Brief theoretical literature

The position of Keynesian economic theory on the relationship between exports and employment was that "policies that promote investment and exports and inhibit savings and imports increase employment and output…" (Mundell, 1961, p. 509). This implies the existence of positive linkage(s) between investment and employment and export and employment. Investment and exports are seen as injections, while savings and imports are leakages in the flow of income. International trade theory posits a positive effect of the exchange rate on exports. All things being equal, currency depreciation is expected to boost exports (this, however, is dependent on the volume, value, quality, competitiveness, and the composition or extent of diversification of the country's export basket). Incorporating the trade theory with the Keynesian theory, one could infer that the exchange rate is positively related to employment through its effect on exports.

The employment rate is also linked to the level of economic activities. The Keynesian theory of output and employment and Okun's Law provide adequate justification for this. According to the former, an increase in effective demand triggers an increase in the labor required to produce output to meet demand. Therefore, the level of effective demand in an economy isa crucial determinant of output level. Expansion of production (that is, economic growth) requires labor employment. Okun's law predicts an inverse relationship between economic growth and unemployment. To some extent, this suggests that economic growth enhances employment generation.

The endogenous growth theories predict FDI positively affects economic growth through technology spillover effects which are expected to boost productivity. The inflow of FDI also raises the economy's capital formation level. A combination of these tends to accelerate economic growth. All things being equal, enhanced growth resulting from FDI inflows will engender improvement in employment generation, given sustainable, effective demand and non-displacement of domestic investment by FDI.

■1.3 Empirical literature

This subsection contains a review of evidence from previous related studies. For ease of presentation, the subsection is divided into two reviews: the FDI and employment nexus review and the exchange rate and employment nexus review.

1.3.1 FDI and employment

Wong and Tang (2011) investigated the effect of FDI inflows on employment in Singapore's manufacturing and services sectors using quarterly data spanning the 1997Q2-2005Q4 period. The ARDL technique was employed to test for cointegration and causal relationships. The study found a long-term relationship among the variables. The short-run effect of FDI on services sector employment was positive but statistically insignificant, as indicated by the estimated ECM. Causality was found to run from employment in both sectors to FDI inflow.

The effect of FDI on employment in Japan's manufacturing, wholesale, and services sectors were investigated by Tanaka (2012) using the propensity score matching technique. The study found that in all the sectors, employment was higher in firms that attracted FDI. The positive employment effect of FDI was accompanied by an expansion in overall sales and exports, including services sector sales.

Inekwe (2013) employed the methodologies of the Johansen cointegration test and VECM to investigate the effects of manufacturing sector FDI and services sector FDI on employment during the 1990-2009 period. The study found that jobs in the country are adversely affected by services sector FDI but positively affected by manufacturing sector FDI.

Yeuming (2014) investigated the effect of outward FDI on employment in China's primary, secondary and tertiary industries during the 2004-2012 period in a panel setting. The system GMM technique was employed for the analysis. The results indicated that the effect of outward FDI on employment in the primary and secondary industries was insignificant. However, outward FDI affected employment in the tertiary sectors positively and significantly. This implies that FDI in the country may not have been substituting domestic services.

Sakura and Kondo (2014) examine the effect of outward FDI on employment generation in Japan's services sector. Firm-level data covering the period from 2000-2011 on the countries listed companies were analyzed using the IV-2SLS technique, which corrects for endogeneity problem. The study found that, on the aggregate, outward FDI had been favorable to job creation in the country's services sector. This was attributed to the fact that FDI in the services sector does not substitute for or displace domestic activities in the industry. Thus, the outflow of FDI from the sector only creates room for demand for more labor in the industry as domestic operators or service providers gain a more significant share of the markets.

Abbas and Xifeng (2016) examined the effect of FDI on employment generally and employment in the tourism sector, specifically in Zanzibar. Primary data obtained through interviews and questionnaires were used for the study. The methodology involved percentages and Pearson's correlation analysis of the data. The study found a positive correlation between FDI and tourism development. It also found that the tourism sector's growth resulted in increased employment.

Rozen-Bakher (2017) examined the effects of inward and outward FDI on industrial sector and services sector employment using a sample of 33 advanced countries and 116 emerging markets and developing countries. The methodology involved hierarchical multiple regression analysis. It was found that inward and outward FDI engendered a change in employment from industry to services. It also found that inward FDI engendered shift of employment from services to manufacturing in emerging markets and developing countries. This implies that inward FDI was associated with declining in services sector employment in emerging markets and developing countries.

Mishra and Patti (2020) examined the role of FDI in employment generation in India during the 1991-2018 period using trend analysis. Among other findings, it was found that inward FDI and employment generation in the services sector followed the same trends. The researchers noted that FDI generated more employment in the services sector than in any other sector in the country.

Saucedo et al. (2020) studied the effect of FDI on low-and high- skilled employment and wages across Mexico's 32 states manufacturing and services sectors during the 2005-2018 period. Quarterly panel data were used, and the methodologies of fixed effect modeling and panel corrected standard errors (PCSE) were employed for the analysis. Amongst other things, it was found that FDI positively affects employment in the manufacturing sector for both low-and high-skilled work. However, though the fixed effect model showed a negative and weak significance of FDI on low-skilled in the services sector, its effects on high-skilled employment in the same industry were insignificant. Additionally, the PCSE result showed that the impact of FDI on low-and high-skilled employment was insignificant. The researcher concluded that the findings concerning the employment effect of FDI in the services sector were inconclusive.

1.3.2   *Exchange rate and employment*

Baggs et al. (2008) examine the effect of exchange rate movement on profitability, sales, and survival of services firms in Canada using various panel data modeling techniques, including the least squares, fixed effect model, and random effect (tobit) model. The study found that genuine appreciation of the country's currency adversely affects the chances of survival, profitability, and sale of services firms. In contrast, the opposite effect was found for real depreciation. Considering that all things are equal, survival, sales, and profitability are strongly linked to demand for labor, and it could be deduced or inferred from the study's findings that real depreciation of the Canadian dollar is favorable to employment generation in the services sector.

Dizaji and Badri (2014) examined the effect of the exchange rate, export, and other variables on employment in Iran during the 1976-2005 period. The ARDL modeling technique was employed for the analysis. The study found that export positively influenced employment generation in the short-and long-run, while the exchange rate negatively affected the country's employment in the short-and long-run.

Huang et al. (2014) studied the effect of exchange rates on employment in Canadian manufacturing and non-manufacturing industries. The study found that exchange rate appreciation significantly affected work in the manufacturing industries, mainly through the channel of the export-weighted exchange rate. It also found that the effect of the exchange rate on non-manufacturing industries' employment is insignificant. In the aggregate, the impact of outward FDI on Canada's employment was insignificant. This was attributed to the fact that the manufacturing sector accounts for only about 10% of jobs in the country.

Yokoyama et al. (2015) examined the exchange rate's effect on Japan's employment. The instrumental variable technique was used to analyze the firm-level panel dataset covering the period from 2001-2012. The study found that currency appreciation adversely affects the employment of exporting firms. The influence of currency appreciation on employment in importing firms was insignificant in most of the results.

1.3.3   *Other macroeconomic variables and employment*

Empirical evidence on the effects of other macroeconomic variables on employment is reviewed in this section. For ease of presentation, this subsection is divided into three. First, the impact of trade on (services sector)

employment is reviewed. This is followed by a review of the literature on financial development and (services sector) employment, and finally, a review of the literature on economic growth and (services sector) employment.

Trade

Mitra (2009) investigated the effect of trade on employment in India's services sector from1975-2005 using the ARDL modeling approach. The study found no significant impact of exports and imports on employment in the country's organized and unorganized services sector.

Yanikkaya (2013) examined the responses of sectoral employment to trade openness in industrial and developing countries. The study found a weak negative effect of trade expansion on jobs in services and industrial sectors in developing countries. The adverse employment effect of trade was attributed to the probable negative effect of trade on output in developing countries. Higher trade volumes in developed countries were also found to affect employment in the industrial sector adversely. However, though trade protection or barriers was favorable to employment in developing countries' industrial and services sectors, the effect was adverse in developed countries industrial sector.

Nwaka (2015) examined the effect of trade openness and other macroeconomic variables, including real GDP, foreign price shock, etc., on unemployment in Nigeria during the 1970-2010 period. VECM was employed for the analysis. The study found that trade openness significantly reduced employment in the short run but increased it in the long run, suggesting that demand for labor was adversely affected by trade openness in the long run. Output also reduced unemployment, while foreign price shocks deteriorated the unemployment problem, though its short-run effect is positive and significant.

In a study to examine the effect of financial development on unemployment in Nigeria during the 1986-2012 period, Omofa (2017) also investigated the impact of the exchange rate on unemployment. The study involved three-stage least squares (3SLS) estimation of a system of simultaneous equations. The study found the increased exchange rate's positive and significant effect on unemployment. This, to some extent, implies that currency depreciation adversely affected employment generation in the country in the period covered.

Tahir et al. (2019) examines the effect of trade openness on sectoral output and sectoral employment in developing countries during the 1993-2014 period using the Fixed and random effect models. The system GMM and FGLS techniques were also employed to check for robustness. The study found that

trade openness adversely affected the service sector's output and employment generation. However, the effects of trade openness on employment and growth in industrial and agricultural sectors were positive and significant.

Financial development

The development of the financial sector, which is part of the services sector, is a critical factor for the development of other sectors of the economy, particularly those relying on it for credit. Efficient credit allocation by the sector will enhance economic activities in various sectors including other sub-sectors. All things being equal, this will lead to improvement in employment generation. Moreover, the financial subsector also engages labor. Its development can also necessitate demand for more labor to facilitate its financing and other activities it participates in. In what follows, the empirical evidence on the effect of financial development on employment in general and services sector employment are reviewed.

Shabbir et al. (2012) examined the effect of financial development on unemployment in Pakistan during the period 1973-2007 using the ARDL approach to cointegration analysis. The study found that improvement in activities of the financial sector which increases the money supply, positively affected unemployment (or adversely affected employment) in the country in the short and long run. This suggests that the allocation of credit in the country had not been efficient.

Aliero et al. (2013) examined financial development's effect on Nigeria's unemployment during the 1980-2011 period using the ARDL modeling approach. The study found a negative and significant impact of domestic credit on unemployment in the country. The result implies that expanding credit to the private sector reduces unemployment in the short and long run. The study also found that FDI worsens the unemployment problem in the short and long run.

Akande (2019) employed the ARDL technique to investigate the effect of financial development on unemployment in Nigeria using different measures of economic growth. The study focused on two periods: the 1980-2016 period for the effects of financial sector efficiency and stability on unemployment, and the 1970-2016 period for the impact of credit to the private sector (as a percentage of GDP) and deposits (as a percentage of GDP) on unemployment in the country. The study shows evidence that financial system development (measured as total financial system deposit as a percentage of the GDP) significantly reduced unemployment in the short and long run. Other measures

of economic growth, such as financial efficiency, financial liquidity, financial stability, and financial sector credit to the private sector, only reduce unemployment in the short run.

Ndubuaku et al. (2020) examine the effect of financial development on employment in Nigeria during the 1999-2019 period using the technique of ARDL modeling. The study found that economic development measured as broad money as a percentage of the GDP was positively and significantly related to employment. Credit extended to the private sector by the domestic financial system was also found to affect employment generation positively and significantly. Thus, the development of the nation's financial system is an essential factor for employment generation therein.

Aigheyisi and Edore (2021) examined the effect of economic growth, financial development, and other variables on employment in Nigeria's services sector from1991-2020 using the ARDL approach to cointegration analysis. Among other findings were that economic growth and financial development positively and significantly affected employment in the country's services sector.

Economic growth

Herman (2011) examined the effect of economic growth on employment in the European Union countries during the 2000-2010 period. The study found, amongst others, that the Union's employment elasticity of employment was positive but relatively low. This suggests that economic growth in the country did not generate desired employment in the period covered by the study.

The effects of economic growth, FDI, and exports on unemployment in Turkey were examined in Bayar (2014). The bound test approach to cointegration was employed to analyze quarterly time series data for 2000Q1 to 2013Q3. The study found that the variables are cointegrated. The study further found that economic growth reduces unemployment (or improves employment) in the country, while FDI exacerbates the unemployment problem therein.

Folawewo and Adeboje (2017) investigated the validity of Okun's law in the ECOWAS sub-region during the 1991-2014 period using various panel data modeling techniques, including fixed and random effect models and the panel fully modified least squares. The study found GDP growth was weakly related to a decline in unemployment in the sub-region. Similar weak effects of economic growth on employment were found in subgroups, namely the Anglophone and Francophone countries of the sub-region. The results imply

that the employment elasticity of economic growth in the sub-region had been relatively low.

Soylu et al. (2018) investigated the effect of economic growth on unemployment in Eastern European Countries during the 1992-2014 period. The methodology involved estimating a panel data model using pooled least squares technique. The results showed that economic growth had a depressing effect on unemployment in the region during the period covered by the study. This, to some extent, suggests that economic growth in Eastern Europe was employment-generating.

The effect of actual output per capita on employment generation in Nigeria's services sector during the 1991-2020 period was investigated by Aigheyisi and Edore (2021) using the ARDL approach to cointegration analysis. The study found that economic growth positively and significantly affected the demand for labor in the country's services sector.

2
METHODOLOGY

■ 2.1 Theoretical framework and model

The Keynesian economic theory, which predicts the positive effect of economic growth on employment generation, and Okun's Law which posits that economic growth serves to reduce unemployment, provide the framework for this study. The study model is an augmentation of these theories to suit the objectives of the study. This study hypothesizes that employment generation in the services sector (SERVEMP) is affected by FDI (measured by FDI as a percentage of GDP) and (nominal ₦/$) exchange rate (EXRT). Other factors hypothesized to affect services sector employment in Nigeria are economic growth (real GDP growth, RGDPG), trade openness (TOPEN), and financial development (FINDEV) measured as domestic credit to the private sector as a percentage of GDP. The macroeconomic variables are chosen based on theories and empirical evidence from previous studies. Thus, the model of the study is specified in functional form as:

$$SERVEMP = f\left(FDIY, \; EXRT, \; TOPEN, \; FINDEV, \; RGDPG\right) \qquad (1)$$

Pesaran et al. (2001)'s ARDL (or bounds test) approach to cointegration and error correction modeling is employed for the analysis. The methodology was chosen for several reasons, making it suitable for the study. First, it is applicable in cases where the data series are integrated of different orders – order-1(I(1)) or order-0 (I(0)), so long as none is integrated of order-2 (I(2)), as it was with the data used for this study evident in the results of the unit root test presented in section 4. The method is applicable in small and finite data series cases, as it is with the data series (sample size of 29) used in this study. Studies involving small samples which employed the ARDL technique include those of Akbota and Baek (2018) and Bhuyan and Oh (2021), which used sample sizes of 24 and 25, respectively. Furthermore, the method is designed to yield efficient and consistent long-run estimates with valid t-ratios even in the presence of regressors' endogeneity which is peculiar with cointegrated variables (Harris & Sollis, 2003). Operationalizing the Bound test approach involves OLS estimation of an unrestricted error correction model version of the ARDL model specified as:

$$
\begin{aligned}
\Delta SERVEMP_t = {} & \beta_0 + \sum_{s=1}^{n}\left(\gamma_{1s}\Delta SERVEMP_{t-s}\right) + \sum_{s=0}^{n}\left(\gamma_{2s}\Delta FDIY_{t-s}\right) + \\
& \sum_{s=0}^{n}\left(\gamma_{3s}\Delta LnEXRT_{t-s}\right) + \sum_{s=0}^{n}\left(\gamma_{4s}\Delta TOPN_{t-s}\right) + \sum_{s=0}^{n}\left(\gamma_{5s}\Delta FINDEV_{t-s}\right) + \\
& \sum_{s=0}^{n}\left(\gamma_{6s}\Delta ARGDPG_{t-s}\right) + \omega_1 FDIY_{t-1} + \omega_2 LnEXRT_{t-1} + \omega_3 TOPN_{t-1} + \\
& \omega_4 FINDEV_{t-1} + \omega_5 RGDPG_{t-1} + \varepsilon_t
\end{aligned}
\tag{2}
$$

The γs correspond to the short-run effects, while the ωs correspond to the long-run effects. The variables are as defined previously. ε is the error term.

Wald's F-test is after that used to test the null hypothesis that no long-run relationships exist (expressed mathematically as $\omega 1 = \omega 2 = \omega 3 = \omega 4 = \omega 5 = 0$) against the alternation hypothesis of the existence of long-run relationships (expressed as $\omega 1 \neq \omega 2 \neq \omega 3 \neq \omega 4 \neq \omega 5 \neq 0$) at a chosen level of statistical significance. Pesaran et al. (2001) developed two sets of critical values against which the F statistic is compared to infer the existence or non-existence of long-run relationships among the variables. They are the upper bound critical value (UBCV) which assumes the variables are all I(1), and the lower bound critical values (LBCV), which assumes the variables are I(0). The decision rule is shown in Table 1.

Table 1

Decision rules

Observation	Decision
F-stat > UBCV	Reject the null hypothesis
F-stat. < LBCV	Do not reject the null hypothesis
LBCV < F-stat < UBCV	Test is inconclusive

Source: Author's compilation, 2022.

Rejecting the null hypothesis implies that the variables are cointegrated. Consequently, the error correction model is derived as:

$$\Delta SERVEMP_t = \Psi_0 + \sum_{j=1}^{\eta}\left(\Psi_{1j}\Delta SERVEMP_{t-j}\right) + \sum_{j=0}^{\eta}\left(\Psi_{2j}\Delta FDIY_{t-j}\right) +$$
$$\sum_{j=0}^{\eta}\left(\Psi_{3j}\Delta LnEXRT_{t-j}\right) + \sum_{j=0}^{\eta}\left(\Psi_{4j}\Delta TOPN_{t-j}\right) + \qquad (3)$$
$$\sum_{j=0}^{\eta}\left(\Psi_{5j}\Delta FINDEV_{t-j}\right) + \sum_{j=0}^{\eta}\left(\Psi_{5j}\Delta RGDPG_{t-j}\right) + \delta ECT_{t-1} + \varepsilon_{1t}$$

e definitions of the variables remain the same. The estimated Ψs reflect the short-run effects of the independent variables on the dependent variable. ECT is the error correction term incorporated in the model to reconcile short-run dynamics with the steady-state relationship. To play this role, its coefficient should be negative and significant. ε_1 is the error term.

The corresponding long-run model is derived as:

$$SERVEMP_t = \beta_0 + \beta_1 FDIY_t + \beta_2 LnEXRT_t + \beta_3 TOPN_t +$$
$$\beta_4 FINDEV_t + \beta_5 RGDPG_t + \mu_t \qquad (4)$$

The βs are estimates of the long-run effects of the independent variables on the dependent variable. μ is the error term. The *a priori* expectations are $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 > 0$.

2.2 Justification of *a priori* expectations

FDI is expected to positively affect employment generation in the services sector if the sector receives a significant amount of it; it does not displace domestic investment in the economy; and the technology it introduces into the economy does not substitute human labor in the various sectors, including the services sector. The rationale is that, given the conditions, FDI will boost production and enhance effective demand, thereby improving employment in various economic sectors.

The sector-employment effect of exchange rate changes depends on its impact on the sectors' activities. The long-run effect of currency depreciation on employment in the services sector is expected to be positive as the increase in the exchange rate raises the cost of importing goods and services into the country. This provides a shield for service sector operators in the country.

Services sector employment depends on the extent to which services firms benefit from trade openness. Trade liberalization offers ample opportunities for services firms, including banks, insurance firms, real estate firms, trade-facilitating firms, business-registration firms, consulting firms, transportation firms, telecommunication firms, tourism promoters, etc., to offer their services to more of those requiring them, thereby expanding their chances of enhanced profitability. This is expected to increase the demand for labor in the sector. The positive spillover effect of currency depreciation from other sectors to the services sector is also expected to contribute to the anticipated positive impact of the exchange rate on services sector employment in the country.

The financial sector is a viable engine of economic growth, providing the required finance for oiling activities in all sectors of the economy. A well-developed financial system characterized by efficient and equitable allocation of credits to all sectors of the economy will boost activities in the industries, including the services sector, thereby engendering demand for more labor in the sector.

In theory, economic growth is expected to engender improvement in employment as expansion in output of goods and services, backed with improvement in effective demand, enhances firms' profitability leading to improvement in employment.

2.3 Post estimation model diagnostic tests

The accuracy and reliability of the estimated model were tested using various diagnostic checks. The residual normality of the model was tested using the

Jarque-Berra procedure. The Breusch-Godfrey test was performed to test the model for serial correlation. The Breusch-Pagan-Godfrey test was employed to test for heteroskedasticity. The Ramsey Regression Equation Specification Error Test (RESET) was used to test the accuracy of the model specification.

■2.4 Data and source

The study utilizes annual time series from 1991 to 2019, sourced from the World Bank's WDI. The choice of the data scope was dictated by data availability from the source as data on the dependent variable (services employment share of total employment) starts from 1991, while the last data observation on several of the independent variables was for 2019 at the time of conducting the research.

3
RESULTS AND DISCUSSION

The estimation results are presented in this section. This section discusses the stationarity and cointegration tests' outcomes before proceeding to the estimated models' discussion. Post-estimation diagnostics and stability tests are also performed to ascertain the model's reliability for policy purposes.

■3.1 Stationarity and cointegration tests

The results of the stationarity test for the variables are presented in Table 2. The variables are integrated in a different order. The dependent variable (SERVEMP) and the natural logarithm of exchange rate are integrated of order-1, implying they are first-differenced stationary, while the other variables are stationary at levels.

Though the variables are of mixed order of integration, there is the possibility of them converging in the long run. The long-run convergence was tested using the bound test procedure, which is a more appropriate cointegration test in cases of variables that are of mixed order of integration. The result of the test is presented in Table 3. The estimated F-stat. > UB at the 1% significance level. Therefore, the null hypothesis of no cointegration is not accepted, and the inference is that the variables are cointegrated.

Table 2

Stationarity test

| Variables | KPSS test | | | | | | I(d) |
| | Levels | | | 1st difference | | | |
	test Stat	Critical value (5%)	Inference	test Stat	Critical value (5%)	Inference	
SERVEMP	0.6722	0.4630	NS	0.2100	0.4630	S	1
FDIY	0.3191	0.4630	S	-	-	-	0
LnEXRT	0.6287	0.4630	NS	0.2194	0.4630	S	1
TOPEN	0.2325	0.4630	S	-	-	-	0
FINDEV	0.4293	0.4630	S	-	-	-	0
RGDPG	0.2055	0.4630	S	-	-	-	0

Source: Author's estimation using EVIEWS 9.

I(d) represents the order of integration.

Table 3

Bounds test for cointegration

| Test stat. | Value | Critical value bounds (1% sig. level) | |
		LB	UB
F-stat.	26.37	3.41	4.68

Source: Author's estimation using EVIEWS 9.

LB and UB stand for lower bound and upper bound critical values, respectively.

■3.2 Estimated models

The estimated ECM showing the short-run impacts of FDI, exchange rate, and other variables are shown in Table 4. The model shows that the short run effect of FDI on employment in Nigeria's services sector are positive and significant at the 10% level. A unit rise in FDI (as a percentage of GDP) is associated with the 0.05% rise in the share of services employment in total employment. Thus, all things being equal, FDI inflows will enhance job creation in the nation's services sector. This may be attributed to the expectation that the inflow of FDI engenders an increase in the level of economic activities in

various sectors of the economy, including the services sectors (directly and indirectly), thereby engendering an increase in demand for more services in the country.

The short-run contemporaneous effect of currency depreciation on service sector employment is statistically insignificant. However, its one-year lag effect is negative and significant at the 10% level. A 1% rise in the nominal exchange rate is associated with a 19.2% decrease in the relative share of services sector employment in total employment. Thus, in the short-run, currency deprecia-tion adversely affects employment generation in Nigeria's services sector. This may be explained by the fact that for an import-dependent country such as Nigeria, currency depreciation raises the cost of importing essential goods (including advanced technology) and services required to enhance the func-tioning of the services and non-services firm in the short run. Where this transpires, employment generation will be adversely affected. The observed adverse effect of the exchange rate on services sector employment corrobo-rates evidence from Dizaji and Badri (2014), who also found adverse short-run effects of currency depreciation on employment in Iran.

Trade liberalization favors job creation in the country's services sector in the short run. The positive and significant current indicates this, and one-year lagged trade openness variables. Thus, trade openness opens opportunities for trade-related and other (nontrade-related) services in the country.

Job creation in the services sector is also significantly linked to the devel-opment of the nation's financial sector in the short run. The more developed the financial sector is, the more the number of jobs created in the services sector. This is not unexpected considering the crucial role the financial sector plays in providing the finance required for the effective and efficient func-tioning of other sectors of the economy. Moreover, the financial sector is also a part of the services sector providing financial products and services. Its de-velopment, *ceteris paribus*, may also engender demand for more labor required to provide more financial assistance to those who need them, thereby raising employment levels in the services sector.

Significant positive contemporaneous and significant one-year lagged eco-nomic growth effects on services sector employment are observed. However, the contemporaneous effect is larger and more significant than the lagged effect, resulting in a net positive and significant short-run impact of economic growth on employment in the services sector. Thus, economic growth sig-nificantly enhances job creation in the services sector in the short run.

As expected, the ECT is negatively signed and statistically significant (at the 5% level). This further confirms cointegration. However, the absolute value of the coefficient of this variable indicates that the speed of adjustment to equilibrium in the event of short-run deviation from there is relatively low. An annual adjustment of 2.82% towards equilibrium suggests a very low rate of employment generation in the services sector.

The coefficient of determination (R^2) shows that the model has high goodness of fit. The regressors explain about 93.81% of the variation in SERVEMP. The F-stat. of 15.1423 is significant at the 1% level and suggests that the explanatory variables are jointly crucial in explaining the variations in SERVEMP. The Durbin-Watson (DW) statistic indicates 1.5608 points to the absence of autocorrelation.

Table 4

Error correction model

Dependent variable: ∆SERVEMP			
Selected model: ARDL (1, 1, 2, 0, 2, 2)			
Sample: 1991-2019			
Variables	Coefficients	t-ratio	Prob.
∆(FDIY)	0.0478	1.9912	0.0679
∆LOG(EXRT)	0.1004	1.0611	0.3080
∆LOG (EXRT(-1))	-0.1923	-1.9880	0.0683
∆(TOPEN)	0.0115	2.9532	0.0112
∆(TOPEN(-1))	0.0069	1.8181	0.0922
∆(FINDEV)	0.0184	2.1226	0.0536
∆(RGDPG)	0.0473	4.3604	0.0008
∆(RGDPG(-1))	-0.0294	-3.4436	0.0044
ECT(-1)	-0.0282	-2.2384	0.0433

Source: Author's estimation using EVIEWS 9.

R^2 = 0.9381, $\overline{R}^2$ = 0.8761, F-stat = 15.1423 (p = 0.0000), DW stat. = 1.5608.
$\overline{R}^2$ stands for adjusted R^2.

The long-run estimates are shown in Table 5. In the short run, the effect of FDI on employment in the services sector is also positive in the long run, but it is not statistically significant. This suggests that the relevance of FDI in employment generation in the service sector diminishes over the long run as the services sector may have stabilized, and reliance on foreign services and technology brought into the country through the channel of FDI may have significantly declined. The non-significance effect of FDI on employment in the services corroborates evidence from Saucedo et al. (2020).

Currency depreciation marked by a rise in the exchange rate provides a shield for job creation in the service sector, as observed by the positive and significant coefficient of the exchange rate variable. A 1% rise in the exchange rate is associated with a 0.05% rise in the share of services sector employment in total employment. This shows that depreciation of the currency helps to curb some categories of services imports and boost some types of services exports (mainly services that cannot be rendered online), thereby creating the impetus for increased demand for and supply of services in the long run in the country. This corroborates evidence from Nucci and Pozzolo (2010), who also found that currency depreciation serves to improve employment.

The long-run effect of trade openness on employment generation in the services sector is negative but not statistically significant. When viewed against the observed short-run positive and significant impact of trade openness, this observation suggests that the positive effect of trade openness on service sector employment is only transient. This buttresses Baldwin's (1994) pessimistic view that trade does not guarantee employment generation and corroborates the evidence from Mitra (2009) wherein the effects of trade (export and imports) on employment in India's organized and unorganized service subsectors were not significant, and Yanikkaya (2013) who also found a weak negative effect of trade openness on services sector employment in developing countries. The negative sign on the coefficient also corroborates the evidence from Tahir et al. (2014), who also found a negative (though significant) effect of trade openness on service employment in developing countries.

As in the short-run, financial development is also observed to affect employment generation positively and significantly in Nigeria's services sector in the long run. The long-run service sector employment effect of economic growth is also positive as in the short-run but insignificant.

Table 5

Long run coefficients based on ARDL (1, 1, 2, 0, 2, 2)

Dependent variable: ∆SERVEMP			
Variables	Coefficients	t-ratio	Prob.
FDIY	0.6050	0.5544	0.5887
LOG(EXRT)	5.1072	3.6545	0.0029
TOPEN	-0.3254	-1.2905	0.2194
FINDEV	0.6511	2.2097	0.0457
RGDPG	2.8530	1.7560	0.1026
C	33.9032	2.9358	0.0116

Source: Author's estimation using EVIEWS 9.

3.3 Diagnostic test

The results of the diagnostic tests for the underlying ARDL model are presented in Table 6. The residual normality test indicates that the models' residuals are normally distributed. The test for serial correlation fails to reject the null hypothesis of no serial correlation. The test for heteroskedasticity indicates the absence that the variances of the residuals are constant. The RESET test demonstrates that the specification of the model is error-free.

Table 6

Diagnostics

Tests	Test stat	p-value
Residual Normality (Jarque-Bera)	1.4047	0.4954
Serial Correlation (Breusch-Godfrey LM test)	1.1654	0.3475
Heteroscedasticity (Breusch-Pagan-Godfrey)	0.5562	0.8486
Ramsey RESET	0.8066	0.3868

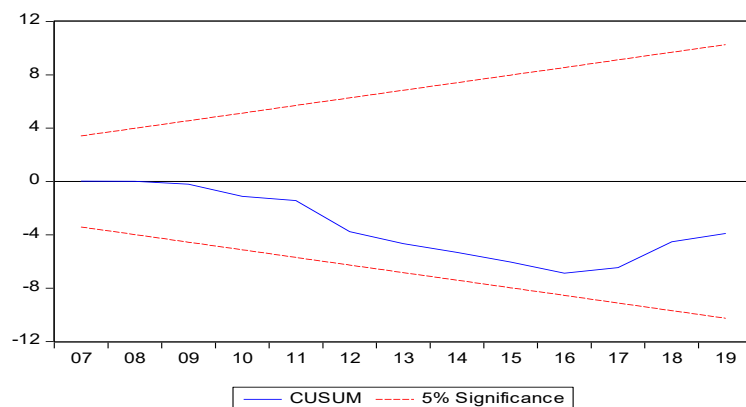*Source*: Author's estimation using EVIEWS 9.

3.4 Model stability test

The approaches – the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squared recursive residuals (CUSUMSQ) developed by Brown et al. (1975) for testing the constancy of regression coefficient over

time were used to test the stability of the model. The outcomes are presented in Figure 3 (for CUSUM plot) and Figure 4 (for CUSUMSQ). Both plots lie between the 5% significance bounds. It can therefore be inferred that the model is stable.
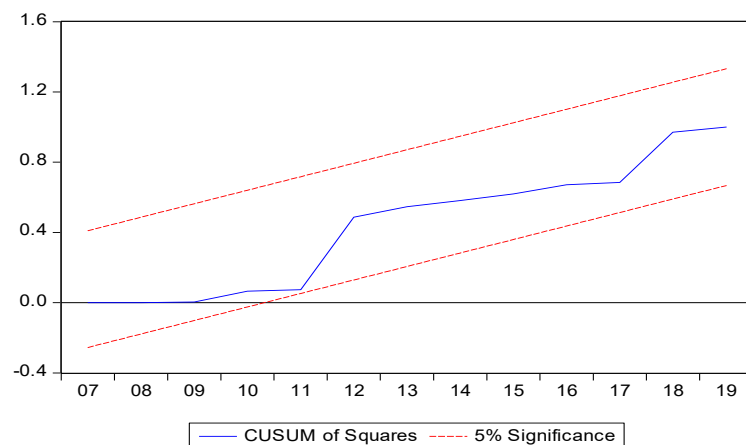
Figure 3

CUSUM

Source: Author's estimation using EVIEWS 9.

Figure 4

CUSUMSQ

Source: Author's estimation using EVIEWS 9.

CONCLUSION AND RECOMMENDATIONS

The study examined the determinants of employment in Nigeria's services sector, focusing mainly on the roles of FDI and exchange rate movements. The evidence-based conclusion of the paper is that FDI and exchange rate *do* matter for employment generation in the country's services sector, though to varying extents. FDI positively affects employment generation in the services sector in the short-and long-run but loses its significance in the long run. Currency depreciation adversely affects services sector employment in the short run, but the adverse effect is only transient. Its permanent (long-run) impact is positive and significant. Trade openness and economic growth significantly favor employment generation in the short run, but their long-run effects are not significant. The development of the financial system significantly and positively affects employment generation in Nigeria's services sector in the short and long run.

Based on the empirical evidence, it is recommended that the government try to enhance the attractiveness of various sectors of the economy to FDI and guard against undue appreciation of the nation's currency. It is also recommended that economic growth and the development of the financial system be prioritized. Given the transience of the effect of trade openness on employment generation in the services sector, caution must be exercised in implementing trade liberalization policies. These measures, if implemented, are expected to enhance job creation in the nation's services sector.

DETERMINANTES MACROECONÔMICOS DO EMPREGO NO SETOR DE SERVIÇOS DA NIGÉRIA: INVESTIMENTO DIRETO ESTRANGEIRO E TAXA DE CÂMBIO IMPORTAM?

Resumo

Este estudo emprega a técnica de modelagem ARDL para investigar os determinantes da geração de emprego no setor de serviços da Nigéria, concentrando-se principalmente nos papéis do investimento estrangeiro direto e nos movimentos da taxa de câmbio durante o período 1991-2019. Este estudo constatou que, no curto prazo, o IDE afeta positivamente a geração de empregos no setor de serviços, enquanto a depreciação da moeda o afeta negativamente com defasagem de um ano. O efeito de geração de emprego de longo prazo do IDE no setor de serviços

permanece positivo. Ainda assim, perde sua significância estatística, enquanto o impacto da depreciação cambial sobre o emprego no setor de serviços é positivo e significativo. Constatou-se também que o crescimento econômico afeta positivamente a geração de empregos no setor de serviços no curto e no longo prazo, embora o efeito seja significativo apenas no curto prazo. O impacto da abertura comercial é positivo e significativo em um curto período, mas também não é significativo no longo prazo. O desenvolvimento do setor financeiro favorece a geração de empregos no setor de serviços no curto e longo prazo. Com base nessas evidências, recomenda-se que o governo procure aumentar a atratividade de diversos setores da economia para o IDE e se precaver contra a valorização indevida da moeda nacional. Recomenda-se também priorizar o crescimento econômico e o desenvolvimento do sistema financeiro. Dada a transitoriedade do efeito da abertura comercial na geração de empregos no setor de serviços, é preciso cautela na implementação de políticas de liberalização comercial. Espera-se que essas medidas, se implementadas, aumentem a criação de empregos no setor de serviços do país.

Palavras-chave: setor de serviços, geração de emprego, criação de emprego, investimento estrangeiro direto, movimentos cambiais.

References

Abbas, A. O., & Xifeng, Z. (2016). Impact of foreign direct investment on employment evidence: Zanzibar tourism industry. *International Journal of Economics, Finance and Management Sciences*, *4*(5), 250–256. https://doi.org/10.11648/j.ijefm.20160405.13

Aigheyisi, O. S., & Edore, J. O. (2021). Economic growth and employment in Nigeria's services sector. *Journal of Economic and Allied Research*, *6*(1), 90–103.

Akabota, A., & Baek, J. (2018). The environmental consequences of growth: Empirical evidence from the Republic of Kazakhstan. *Economies*, *6*(19), 1–11.

Akande, R. I. (2019). The effect of financial development on unemployment in Nigeria: Do measures of financial deeping matter? *DBN Journal of Economics and Sustainable Growth*, *2*(2), 1–35.

Aliero, H. M., Ibrahim, S. S., & Shuaibu, M. (2013). An empirical investigation into the relationship between financial sector development and unemployment in Nigeria. *Asian Economic and Financial Review*, *3*(10), 1361–1370.

Baggs, J., Beaulieu, E., & Fung, L. (2008). *Are service firms affected by exchange rate movements?* Forum for Research In Empirical International Trade [Working Paper 046]. https://freit.org/Working Papers/Papers/FirmLevelGeneral/FREIT046.pdf

Baldwin, R. (1994). *Towards an integrated Europe*. Centre for economic policy research.

Bayar, Y. (2014). Effects of economic growth, export and foreign direct investment inflows on unemployment in Turkey. *Investment Management and Financial Innovations*, *11*(2), 20–27.

Bhuyan, Md. I., & Oh, K.-Y. (2021). Exports and inequality: Evidence from the highly concentrated textile and garment sector of Bangladesh. *Journal of South Asian Developmen*, *16*(2), 293–309.

Brown, R. L., Durbin, J., & Evans, J. M. (1975). Techniques for testing the constancy of regression relationships over time. *Journal of the Royal Statistical Society*, *37*(2), 149–192.

CBN (2019). *Statistical bulletin*. The Central Bank of Nigeria.

Dizaji, M., & Badri, A. K. (2014). The effect of exports on employment in Iran's economy. *Merit Research Journal of Art, Social Science and Humanities*, *2*(6) 81–88.

Folawewo, A. O., & Adeboje, O. M. (2017). Macroeconomic determinants of unemployment: empirical evidence from economic community of west African states. *African Development Review*, *29*(2), 197–210. https://doi.org/10.1111/1467-8268.12250

Harris, R., & Sollis, R. (2003). *Applied time series modelling and forecasting*. Wiley.

Herman, E. (2011). The impact of economic growth process on employment in European Union countries. *The Romanian Economic Journal*, *14*(42), 47–67.

Huang, H., Pang, K., & Tang, Y. (2014). Effects of exchange rates on employment in Canada. *Canadian Public Policy*, *40*(4), 339–352. https://doi.org/10.3138/cpp.2013-033

Inekwe, J. N. (2013). FDI, employment and economic growth in Nigeria. *African Development Review*, *25*(4), 421–433. https://doi.org/10.1111/1467-8268.12039

Mishra, R., & Patti, S. (2020). Role of FDI on employment scenario in India. *International Journal of Recent Technology and Engineering*, *8*(6), 1481–1489.

Mitra, A. (2009). *Impact of trade on service sector employment in India.* Institute of Economic Growth University of Delhi Enclave North Campus [Working Paper Series, No. E/298/2009].

Mundell, R. (1961). Flexible exchange rates and employment policy. *The Canadian Journal of Economics and Political Science*, *27*(4), 509–517. https://doi.org/10.2307/139437

Ndubuaku, V., Inim, V., Samuel, U. E., Idamoyibo, H. R., & Abner, I. P. (2020). Financial development on employment rate in Nigeria. *Research in World Economy*, *12*(1), 267–278. https://doi.org/10.5430/rwe.v12n1p267

Nucci, F., & Pozzolo, A. F. (2010). The exchange rate, employment and hours: What firm-level data say. *Journal of International Economics*, *82*(2), 112–123.

Nwaka, I. D., Uma, K. E., & Tuna, G. (2015). Trade openness and unemployment: Empirical evidence for Nigeria. *The Economic and Labour Relations Review*, *26*(1), 117–136. https://doi.org/10.1177/103530461557122

OECD (2021). *Foreign Direct Investment (FDI)*. https://www.oecd-ilibrary.org/finance-and-investment/ foreign-direct-investment-fdi/indicator-group/english_9a523b18-en

Omofa, M. N. G. (2017). An assessment of the effect of financial sector development on growth and unemployment in Nigeria: 1986-2012. *Open Journal of Business and Management*, *5*(1), 34–50. https://doi.org/10.4236/ojbm.2017.51004

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, *16*, 289–326. https://doi.org/10.1002/jae.616

Rozen-Bakher, Z. (2017). Impact of inward and outward FDI on employment: The role of strategic asset-seeking FDI. *Transnational Corporations Review*, *9*(1), 16–30. https://doi.org/10.1080/191864 44.2017.1290919

Saez, S., & Goswami, A. G. (2010). *Uncovering developing countries' performance in trade in services*. The World Bank's Economic Premise [No. 39, November].

Sakura, K., & Kondo, T. (2014). *Outward FDI and domestic job creation in the service sector*. Bank of Japan [Working Paper, No.14-E-3, February].

Saucedo, E., Ozuna, T., & Zamora, H. (2020). The effect of FDI on low and high-skilled employment and wages in Mexico: A study for the manufacture and service sectors. *Journal of Labour Market Research*, *54*. https://labourmarketresearch.springeropen.com/articles/10.1186/s12651-020-00273-x

Shabbir, G., Hussain, K., & Imran, M. (2012). Contribution of financial sector development in reducing unemployment in Pakistan. *International Journal of Economics and Finance*, *4*(1), 260–268. https://doi.org/10.5539/ijef.v4n1p260

Soylu, Ö. B., Çakmak, I., & Okur, F. (2018). Economic growth and unemployment issue: Panel data analysis in Eastern European countries. *Journal of International Studies*, *11*(1), 93–107. https://doi.org/10.14254/2071-8330.2018/11-1/7

Tahir, M., Mazhar, T., & Afridi, M. A. (2014). Trade openness and sectoral growth in developing countries: Some new insights. *Foreign Trade Studies*, *12*(2), 90–103. https://doi.org/10.1108/JCEFTS-01-2019-0001

Tanaka, A. (2012). *The effects of FDI on domestic employment and workforce composition*. RIETI Discussion [Paper Series 12-E-069, October].

UNCTAD (2018). *Trade in services and employment*. United Nations Conference on Trade and Development.

Wong, K. N., & Tang, T. C. (2011). Foreign direct investment and employment in manufacturing and services sectors: Fresh empirical evidence from Singapore. *Journal of Economic Studies*, *38*(3), 313–330. https://doi.org/10.1108/01443581111152427

World Bank (n.d.). *Trade in services: Using openness to grow*. http://documents1.worldbank.org/curated/en/285571468337817024/310436360_20050012013700/additional/multi0page.pdf

World Trade Organization. (2019). *World Trade Report 2019: The future of services trade*. https://www.wto.org/english/res_e/booksp_e/00_wtr19_e.pdf

Yanikkaya, H. (2013). Is trade liberalization a solution to the unemployment problem? *Portuguese Economic Journal*, *12*(1), 57–85. https://doi.org/10.1007/s10258-013-0088-9

Yeuming, Z. (2014). *The employment effect of outward FDI on home country* [Paper presented]. 2nd International Conference on Education Technology and Information System, April 26–27, 2014, Jinan China. https://www.atlantis-press.com/proceedings/icetis-14

Yokoyama, I., Higa, K., & Kawaguchi, D. (2015). *The effect of exchange rate fluctuations on employment in a segmented labor market*. RIETI Discussion [Paper Series 15-E-139].