The role of foreign direct investment, financial development, democracy and political (in)stability on economic growth in West Africa

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Abstract

Purpose – In this research, we examine the role of financial development, FDI, democracy and political instability on economic growth in West Africa.

Design/methodology/approach – The study uses the dynamic fixed effects technique on the secondary data obtained from 1996 to 2016.

Findings – Our empirical findings suggest that even though no significant relationship is established in the short run, the long-run coefficient of FDI is found to be significant and positive; a 1% increase in FDI inflow into the West African sub-region results in a 0.26% increase in economic growth. The coefficient of democracy is significant neither in the short run nor in the long run, but political instability is found to significantly and negatively impact the growth of the countries. Finally, the estimate of financial development–growth nexus follows the supply-leading hypothesis.

Research limitations/implications – This research affirms the proposition that FDI is a relevant means of technology and knowledge transfers, thus resulting in increasing returns to production as a result of productive spillovers, which drives the growth of the economy. Consequently, an efficient institution – where the rule of law, political stability and economic freedom are top priorities – is a key to accelerate the growth of the West African economy. Similarly, we confirm the validity of the supply-leading hypothesis in West Africa. As such, by deepening the financial system, the growth of the subregion is propelled because an efficient financial system is a basis for sustainable development.

Practical implication – The applicable policies are those that promote growth through FDI, financial development, democracy and political instability. The governments of West African countries are enjoined

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to promote policies that attract FDI into the subregion and promote financial sector credits so that economic performances may be enhanced. In addition, the governments of West African subregion should fully entrench democratic practices and enhance a stable and sustainable political environment. This will not only restore investor confidence but will also facilitate the inflow of FDI into the West African economy.

Originality/value – Our study is the first to jointly examine these important growth determinants, especially in the context of West Africa. This becomes necessary in order to open the eyes of policy makers to the need for entrenched full democracy and to proffer sustainable cures to the frequent unrests in the subregion. The use of Pesaran (2007) technique of unit root is also a deviation from several existing studies. One advantage of this technique over others is that being a second-generation test, it tests variable unit root in the presence of cross-sectional dependence.

Keywords Foreign direct investment, Financial development, West Africa, Economic growth, Institutions

Paper type Research paper

1. Background of the study

In order to mobilise savings, diversify risks and spur economic growth, the liberalisation of the economy is essential. This leads to a common practice among nations, who usually ease restrictions on the inflow of capital (including offering tax incentives) in the development process (Shahbaz and Rahman, 2012). The international flow of financial resources takes two main forms as follows: the private foreign investment and the public development assistance. The former is composed of both portfolio and direct investment. Again, while portfolio investment does not involve any direct control of the firms where funds are invested, foreign direct investment (FDI) mostly involves multinational corporations as the major players, who come with ownership and direct control of the firms in the host country (Quer *et al.*, 2012). Thus, the era of globalisation reflects the free movement of multinational companies (MNCs), from developed to developing countries, wherein a colossal amount of FDI is seen to flow into the developing economies through these MNCs. This gives it the leeway over other inflows into any economy. However, the share of credit to private sector (by banks) in West Africa has largely experienced a decline over the periods. Prior to 2005 (in Figure 1), the subregion's performance in financial development is abysmal, after which there was a relative improvement until 2012 when there was a sharp decline. In a similar scenario, the inflow of FDI into the West African economy increased relatively, until 2014, when there was a sharp decline. The consequence of these is staggered growth rates experienced between the periods.

The literature has suggested that FDI can only stimulate growth, given certain policy hypotheses, specifically the quality of institutions (Li and Tanna, 2019). Opines that

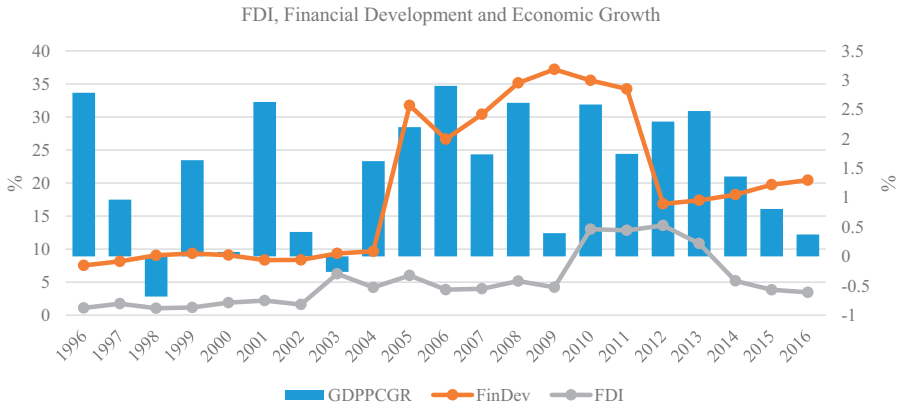

Figure 1.
FDI, financial development and economic growth in West Africa

institutional framework supports markets, defines and protects rights, registers and facilitates economic exchange and enforces contracts. Succinctly, proficient and well-established institutions offer an appropriate environment for growth-enhancing activities, such as investment, innovation and entrepreneurship. It also permits the society to function smoothly as individuals are able to invest their time in more productive activities. Consequently, institutional quality is seen as an important determinant of economic growth. This is traceable to the pioneering work of North (1990), who asserts that institutional factors are essential in the attainment of sustainable growth and economic development. Given these, two possible institutional factors attributed to these poor performances are inefficient democratic institutions and frequent political instability in the West African subregion. While democracy is expected to promote economic growth (Acemoglu *et al.*, 2015), Marc *et al.* (2015) document that in many occasions in West Africa, individuals saddled with the responsibility of maintaining law and order have themselves perpetually engaged in abuse of and disproportionate use of force against the civilians. In addition, the fundamental freedoms of several citizens have been desecrated via indiscriminate arrests, detentions and even murders, especially in atmospheres where the state fails to hold the perpetrator of such heinous acts accountable.

This research aims to empirically examine the roles of FDI, financial development, democracy and political instability on the growth of the West African subregion. Our study is the first to jointly examine these important growth determinants, especially in the West African subregion. This becomes necessary in order to open the eyes of policy makers to the need for entrenched full democracy and to proffer sustainable cures to the frequent unrests in the subregion. The use of the technique of unit root of Pesaran (2007) is also a deviation from several existing studies. One advantage of this technique over others (Levin *et al.*, 2002; Hadri, 2000; Im *et al.*, 2003) is that being a second-generation test, it tests variable unit root in the presence of cross-sectional dependence. As such, it controls for contemporaneous correlation which were not taken care of in the first-generation tests – leading to a possible (erroneous) rejection of the null hypothesis (Shittu and Abdullah, 2019).

The remains of the paper are arranged in the following order; Section 2 reviews the existing literature; Section 3 presents the research methodology; the empirical analysis is discussed in Section 4, while Section 5 draws conclusions and the implications of the findings.

2. Literature review

Gupta and Garg (2015) assessed the impact of FDI on India's economic growth, for the period 2000–2013. The study used a regression technique and established that FDI requires a time period of three years to make its contribution to the economic growth in a significant and utmost favourable manner. Also, Agya and Wunuji (2014) conducted a study on the effect of FDI on China's economic growth, using secondary data for the period 1995–2010. Using the Granger causality test, the authors established that used FDI does not cause economic growth in primary industry, but causes it in secondary industry; economic growth, in turn, causes FDI inflows in both secondary and tertiary industries. In determining the impact of savings and FDI inflows on economic growth in emerging Asian economies, Bayar (2014) used a vector error correction mechanism (VECM) on the data covering the period 1982–2012. A positive, long-run relationship was consequently established between FDI and economic growth. In agreement with this is the finding of Faruk (2012), who investigated the effect of FDI on the growth of Bangladeshi economy, using data spanning 1980–2011. Relying on the OLS technique, the author asserts that FDI has a greater impact on the country's growth.

Moreover, Gursoy *et al.* (2013) investigated the relationship between FDI and economic growth in some countries (Azerbaijan, Kyrgyz Republic, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan) for the period 1997–2010. The Johansen test of co-

integration and Granger causality results revealed that FDI and economic growth variables are co-integrated, with the existence of bi-directional relationship between the variables. In the same vein, Hassen and Anis (2012) studied the impact of FDI on Tunisian economic growth. Relying on data from 1975 to 2009, the findings assert that FDI could boost the process of long-term economic growth. More so, Wakyereza (2017) examined the impact of FDI on growth, employment and poverty reduction in Uganda, between 1985 and 2014. Using the vector autoregressive (VAR) and ordinary least squares (OLS) techniques, the findings reveal that FDI contributes to Uganda's economic growth, employment and poverty reduction. In addition, Nguye (2017) tested the short-run and the long-run effect of FDI and export on the growth of Vietnamese economy. Using the autoregressive distributed lag (ARDL) technique on the secondary data obtained between 1986 and 2015, the authors confirmed a significant and positive impact of FDI on economic growth in the long run. In a slight contrast to these findings, Tabassuum and Ahmed (2014) examined the impact of FDI on economic growth in Bangladesh, using a multiple regression technique on data spanning 1972 to 2011. The authors obtained that domestic investment exerts a positive influence on economic growth, whereas FDI and trade openness are less significant.

There is no consensus on the relationship between financial development and economic growth, being one of the highly debated issues in the literature. The advocates of one school of thought argued that financial development is indispensable for economic growth (Schumpeter, 1911; Goldsmith, 1959; McKinnon, 1973; and Levine, 1997). Conversely, the neoclassical theorists documented that finance is not a primary source of growth (see Lucas, 1988). In the empirical scene, Ibrahim and Alagidede (2018) examined the effect of the former on the latter in SSA, using a generalised method of moment (GMM) technique on annual data for the period 1980–2014. The findings reveal that while financial development supports economic growth, the extent to which finance helps growth depends crucially on the simultaneous growth of real and financial sectors. It was also established that the pass-through excess finance–economic growth effect via the investment channel is stronger. In agreement with this, Hassan *et al.* (2011) and Afonso and Blanco-Arana (2018) explored the relationship between financial development and economic growth in the organisation of Islamic countries (OIC) and the organisation for economic cooperation and development (OECD), respectively. Relying on panel regression and random effect (1990–2016) techniques, each of the authors obtained a positive association between financial development and economic growth. Also, Bist (2018) examined the effect of financial development on economic growth in 16 African and non-African low-income countries. Relying on secondary data spanning 1995–2014 and ordinary least squares (OLS) technique, the author observed a positive impact of financial development on growth in majority of the countries, even with a very low level of credit to the private sector in the region. In contrast to these findings, however, Ayadi *et al.* (2013) investigated the nexus between financial sector development and the growth of the Northern and Southern Mediterranean countries, between 1985 and 2009. Using a GMM technique, the authors found that the credit to private sector and bank deposit are negatively associated with economic growth. Singh (1997), Andersen and Tarp (2003), Ayadi *et al.* (2015) and Ductor and Grechyna (2015) have equally provided some arguments and evidence for an inverse relationship between financial sector development and the economic growth.

In a related study, the nexus between financial development and economic growth was examined in Poland, during the period 1990 to 2018. Škare *et al.* (2019) analysed this using the VECM, and they showed that financial series may possibly have long memory properties and that researching the financial development–growth nexus could require using fractional integration methods. The evidence equally suggested that financial development plays a significant role in both economic and credit growth. In line with this, Puatwoe and Piabuo (2017) obtained a positive association between financial development and economic growth in

Cameroon. The same relationship was examined in Nigeria, with a VECM on data for the period 1990–2009. Corroborating the earlier findings, Balago (2014) indicated that the development in banking sector credits and total market capitalisation affect economic growth positively. Furthermore, Jung (2017), using VAR technique on the South Korean data from 1961 to 2013, showed that financial development led to increase in economic growth and that there was a unidirectional causality from financial development through economic growth but not vice-versa. Conversely, Sekakela (2018) carried out a country-specific analysis of financial development and growth in Botswana, covering the period 1980 to 2014. Using the ARDL technique, the researcher established that financial development has a significant and negative impact on economic growth, both in the long run and the short run. Related to this is the finding of Samargandi *et al.* (2014), where financial development was observed to exert a positive impact on the growth of Saudi Arabia's non-oil sector but a negative or insignificant impact on the oil sector growth and total GDP growth.

On the political instability–growth nexus, Alesina *et al.* (1992) assessed the impact of political instability on economic growth in 113 countries, from 1950 to 1982. Using a simultaneous equation model (SEM), the researchers established that in countries and periods with a high propensity of government collapse, growth is significantly lower. Also, how political instability affects economic growth in 169 countries was evaluated by Aisen and Veiga (2011), using data spanning from 1960 to 2004. Relying on the GMM, the findings indicate that higher degrees of political instability are associated with a lower GDP per capita growth rate. The authors also found that political instability adversely affects growth, by lowering the rates of productivity growth and, to a smaller degree, physical and human capital accumulation. In 18 Latin American countries, Gyimah-Brempong and Camacho (1998) used the SEM to examine the link between political instability, human capital and economic growth. The authors affirmed that political instability has a direct (negative) effect on growth and an indirect effect on economic growth through a decreased investment in both human and physical capital. It was also found that economic growth decreases political instability and increases human capital formation, thus reinforcing the negative effect that political instability has on economic growth. In addition, Rahman and Rashid (2018) examined the association between political instability and Bangladeshi growth, using data obtained from a survey questionnaire. They found that political instability affects all economic variables (such as exports, imports, price level, tourism sector, human rights); firms re-optimise in response to political strikes and they are able to substitute among factor inputs, mostly by decreasing wages and capital consumption.

Another major study was embarked upon, on ECOWAS member countries, from 2005 to 2012. To achieve his objective, Okafor (2015) used the fixed effects and GMM techniques and showed that each of terrorism, poor governance, social unrest, youth unemployment, death rate and natural resource rent has a negative relationship with economic growth. In the same line, Asteriou and Price (2001) examined the association on UK data, from 1961 to 1997, with the aid of GARCH-M model. Following previous findings, it was evident that political instability has a negative effect on growth and a positive effect on uncertainty; uncertainty, in itself, does not affect growth. Similarly, Musibau *et al.* (2017) observed that political instability, high level of corruption and decline in infrastructural development among other banes has reduced the flow of foreign direct investment in most countries in African region. More so, Gurgul and Lach (2013) assessed the role of political instability on the growth of 10 countries, using data ranging from 1990 to 2009. Their findings confirmed the contention that political instability has a negative impact on growth. This conforms to the finding of Fosu (2002), who revealed that abortive coups, rather than successful ones, had the greatest adverse impact on economic growth. Relying on the data from 31 SSA countries, between 1960 and 1986, and the OLS technique, the scholar equally affirmed that coup plots were growth-inhibiting. As such, while abortive coups negatively influenced economic growth

monotonically, the impacts of successful coups and coup plots appeared to be non-monotonic. However, the findings of Abdelkader (2015), in the case of Egypt, deviated from the above as the impact of political instability on economic growth was found to be ambiguous. Using the error correction mechanism (ECM) on secondary data covering 1972–2013, the study equally confirmed a positive link between democracy and economic growth, while the level of uncertainty has a negative impact on growth.

On democracy–growth nexus, Sandalcilar (2013) found that economic democracy positively influences the growth in transition economies, using traditional panel techniques on data obtained between 1992 and 2010. There is, however, no significant relationship between political democracy and economic growth, leading to the conclusion that political democracy affects the growth of the economies via its effect on economic democracy. In a similar cross-country analysis, with data spanning 1970–2013, Salahodjaev (2015) showed that the link between democracy and the real GDP growth rate varies with the level of cognitive abilities. Similarly, Kim and Heshmati (2019) measured the impact of democracy on the growth of 144 countries, using data ranging from 1980 to 2014. As such, the author established that democracy had a robust positive impact on economic growth. A credit guarantee is one of the most significant positive links between economic growth and democracy, such that the marginal effect of credit guarantee and FDI inflows are stronger in democratic countries than they are in non-democratic ones. Furthermore, democracy–growth nexus was examined (Rachdi and Saidi, 2015) in MENA countries, using GMM on data covering 1983–2012. The authors found that the scores on institutionalised democracy, institutionalised autocracy, competitiveness of executive recruitment, openness of executive recruitment and executive constraints have a robust and negative impact on the growth of MENA countries. On the reverse link in Kazakhstan and Uzbekistan, the impact of economic development on democracy was carried out, using secondary data ranging from 1991 to 2016. The researchers (Topçuoğlu and Çağlayan, 2016) showed that economic development in Kazakhstan and Uzbekistan may not have had an impact on the country's democratisation process. This corroborates the findings of Shabbir (2017); Drury *et al.* (2006); Djezou (2014); Acemoglu *et al.* (2014) and Cantwell *et al.* (2010). Conversely, Ruiz Pozuelo *et al.* (2016) affirmed that democracy does not cause economic growth.

3. Research methodology

3.1 Model specification and data source

The Cobb and Douglas (1928) production function asserts that the level of output rises in the long run if the constancy of the level of technology is complemented with increase in factor inputs (labour and capital). Relying on this proposition, we expect that the growth rate increases for a unit increase in labour and/or capital. More so, Dawson's (2000) framework, which relies on Solow's (1956) growth model, contends that the specification of the total factor productivity function – the determinant of the overall efficiency of the economy – in Mankiw *et al.* (1992) does not just reflect the level of technology (and their inflows). It also contends that the total factor productivity function equally includes other elements, such as institutions, which have different explicit impacts on productivity across economies. The choice of political institution is informed by the assertion that they form a part of the deep causes of economic performance, going by the hierarchy of institutions hypothesis (Acemoglu *et al.*, 2015) – where economic institutions are thought to be dependent on political institutions. Consequently, a rise in capital inflows (*via* FDI or otherwise) and improved governance quality promote economic growth. Finally, the supply-leading hypothesis (see Samargandi *et al.*, 2014) asserts that financial development acts as a productive input and therefore drives the growth of an economy. This is based on the premise that opening up the financial system propels the wheel of economic growth

through financial deepening and healthy rivalry. Again, this argument relies on series of conventional literature, which presume a positive nexus between financial development and growth via increased savings, capital accumulation and investment (see McKinnon, 1973; Schumpeter, 1911, Hicks, 1969; Shaw, 1973).

Following the above economic theories, as well as studies carried out by several researchers (including Tabassuum and Ahmed, 2014; Gupta and Garg, 2015; Ayadi *et al.*, 2013; Rahman and Rashid, 2018; Fosu, 2002; Rachdi and Saidi, 2015), the following model is specified [1] in order to measure the impacts of FDI, financial development and political institutions [2] on the growth of the West African subregion:

$$\begin{aligned} \text{GDPPCGR}_{it} = {} & \beta_0 + \beta_1 \text{FDI}_{it} + \beta_2 \text{Democ}_{it} + \beta_3 \text{PTS}_{it} + \beta_4 \text{TLF}_{it} + \beta_5 \text{GFCF}_{it} \\ & + \beta_6 \text{FinDev}_{it} + \mu_{it} \end{aligned} \tag{1}$$

We measure economic growth – used as the dependent variable – by accounting for the growth rate of population, in order to control for the differences in population among the West African countries under consideration [3]. The explanatory variables are foreign direct investment (FDI), political institutions (Democ and PTS), financial development (FinDev), labour (TLF) and capital (GFCF); $\beta_i (i = 0, 1, 2, \ldots, 11)$ is the representative parameter for the intercept and slope coefficients; μ_{it} is the residual term, which captures the impacts of other variables that are not included in the model; i represents the cross-section (countries) and t is the time series (in years). Furthermore, we rely on the secondary data source, composed of annual data on economic growth (GDPPCGR), FDI, FinDev, TLF, and GFCF), which are available on the World Bank's World Development Indicators' database. Moreover, the data on democracy are obtained from Polity IV, while that on PTS is sourced from the US Department of State, all of which range from 1996 to 2016. The between and within sample characteristics are 11 and 21 ($n = 11$ and $T = 21$) – bringing the sample size to 231 observations. The measurement and description of each variable is presented in Table 1.

3.2 The unit root test

The general form of a stationarity test follows a simple panel data model with a first-order autoregressive element as given below:

$$y_{it} = \rho_i y_{i,t-1} + z'_{it}\gamma_i + \varepsilon_{it} \tag{2}$$

where $i = 1, 2, 3, \ldots, N$; $t = 1, 2, 3, \ldots, y_{it}$ is the variable being tested (GDPPCGR, FDI, TLF, GFCF, PTS, FinDev and Democ); ϵ_{it} is a stationary error term.

The z_{it}term may stand for panel-specific means, time trend and panel-specific means or none of these – depending on the conditions relevant to the analysis. By default, $z_{it} = 1$ so that the term $z'_{it}\gamma_i$ represents panel-specific means (fixed effects). If trend is specified, $z'_{it} = (1, t)$ so that $z'_{it}\gamma_i$ denotes panel-specific means and linear time trends. It is to be noted that while Im–Pesaran–Shin (IPS) and the Fisher-type tests allow unbalanced panels, the other tests require balanced panels so that $T_i = T$ for all i.

The panel unit root tests are used to examine the null hypothesis [4], $H_0 : \rho_i = 1$ for all i, against the alternative hypothesis, $H_a : \rho_i < 1$. Depending on the technique adopted, H_a may hold for all i, a fraction of all i or just one i; the output of the respective test precisely states the alternative hypothesis. As such, [3.4] is often written as follows:

$$\Delta y_{it} = \varphi_i y_{i,t-1} + z'_{it}\gamma_i + \varepsilon_{it} \tag{3}$$

so that the null hypothesis becomes $H_0 : \varphi_i = 0$ for all i against the alternative hypothesis, $H_a : \varphi_i < 0$.

Variable	Description
GDPPCGR	This defines the annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2010 US dollars. The GDP per capita measures the gross domestic product divided by midyear population.
FDI	This refers to the net inflow (new investment inflow less disinvestment) in the reporting economy from foreign investors and is divided by GDP. It is the net inflow of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. The FDI aggregates the equity capital, reinvestment of earnings, other long-term capital and short-term capital, as shown in the balance of payments
GFCF	This includes plant, machinery and equipment purchases, land development (fences, ditches, drains, etc) and the construction of roads, railways, hospitals, offices, schools and commercial and industrial buildings etc.
TLF	This defines the people, ages 15 and older, who supply labour for the production of commodities and services during a specified period. It includes both the currently employed (excluding students, family and unpaid workers; some countries do omit the members of the armed forces) and unemployed but that are seeking jobs, as well as first-time job-seekers
FinDev	This measures the financial resources dispatched to the private sector by financial corporations, through loans, purchases of non-equity securities and trade credits and other accounts receivable, for which a claim of repayment is established. In some countries, these claims also cover the credit to public enterprises. The financial corporations include monetary authorities and deposit money banks, finance and leasing firms, money lenders, insurance corporations, pension funds and foreign exchange companies where data are available
Democ	This is measured by political right (PR), civil liberty (CL) and polity2 indices. Polity 2 estimates the autocracy–democracy index, which ranges between −10 (complete autocracy) and 10 (complete democracy), obtained from the Polity IV dataset. The PR and CL are measured on a one-to-seven scale; one represents the highest degree of freedom and seven represents the lowest
PTS	This measures the level of political terror, defined as the violation of fundamental rights to physical integrity of a person, by agents of the state. It is measured on a 5-point ordinal scale, based on the information contained in the annual human rights reports of the United States Department of State. A higher score implies a greater level of abuse, physical integrity rights violation or political terror

Table 1. Description of variables

Note(s): Polity instability – measured by PTS – and democracy are used as proxies for political institutions; each of Polity2, PR and CL is taken as a measure of democracy
Source(s): Authors' compilation

There are variations in the panel unit root tests; the Levin–Lin–Chu (LLC) and Breitung techniques assume that all panels share a common autoregressive parameter so that $\rho_i = \rho$ for all i. In contrast, some other techniques – IPS and Fisher-type – permit the autoregressive parameter to be panel-specific. More so, different assumptions are made (by different techniques) about the rates at which the number of time period (T) and panels (N) approach infinity or whether T or N is fixed. In the case of microeconomic panels of firms, increasing the sample size requires obtaining data on more firms ($N \to \infty$ while T is constant [5]); in a macroeconomic analysis of countries, T tends to infinity (while N is fixed). As such, the sample size largely determines the appropriateness of tests; with a small number of panels and a large number of time periods, a panel test that assumes that N is fixed or that N tends to infinity at a slower rate than T likely performs better than one that is designed for cases where N is large. Moreover, some of these tests are reliant on the sequential limit theory (SLT): $(T, N)(T, N) \to_{\text{seq}} \infty$; the time dimension first approaches infinity, then does the number of panels. In practice, these techniques are more appropriate with a large T and, at least, a moderate N (see Phillips and Moon, 2000). Finally, this study also uses the panel unit root technique developed by Pesaran (2007). Being a second-generation test, this technique has the advantage of examining the stationarity of variables in the presence of cross-sectional dependence.

3.3 Panel ARDL: the dynamic fixed effect

Given a system of equations, each of the variables in the relationship is presented with no regard to any specific order – as in the general relationship of the PARDL in equation (4):

$$\begin{aligned}\text{GDPPCGR}_{it} = \alpha_{0i} &+ \sum_{l=1}^{p} \alpha_{1li}\text{GDPPCGR}_{i,t-l} + \sum_{l=0}^{p} \alpha_{2li}\text{FDI}_{i,t-l} + \sum_{l=0}^{p} \alpha_{3li}\text{TLF}_{i,t-l} \\ &+ \sum_{l=0}^{p} \alpha_{4li}\text{GFCF}_{i,t-l} + \sum_{l=0}^{p} \alpha_{5li}\text{Democ}_{i,t-l} + \sum_{l=0}^{p} \alpha_{6li}\text{FinDev}_{i,t-l} \\ &+ \sum_{l=0}^{p} \alpha_{7li}\text{PTS}_{i,t-l} + e_{it} \qquad (4)\end{aligned}$$

The dynamic panel model has recently largely focused on models with large cross sections (N) and time series (T) dimensions. The asymptotic features of these panels are different from the traditional large N and T assumptions with homogeneous slope parameters, which are largely inconsistent, inappropriate and leads to misleading results. Again, two important econometric problems associated with the dynamic panel model include (first) that the estimates of the parameters tend to produce biased estimates with both lagged dependent variables and fixed effects. In addition, the assumption of homogeneity on lagged dependent variable coefficients may result in biased estimates, when the dynamics are heterogeneous across the cross-sectional units (Weinhold, 1999). The PARDL technique is therefore useful in advancing the dynamic panel model with large N and T, whose slope parameters are heterogeneous across groups. Also, the DFE reduces the two other basic problems as it provides the diagnostic information regarding the level of panel heterogeneity, with no instrumental variables required in the estimation (Weinhold, 1999).

Following Rafindadi *et al.* (2018), we use a dynamic fixed effects (DFE) technique in examining the relationship between FDI and each of the explanatory variables. This permits the intercepts to vary across panel members nevertheless imposing homogeneity in all slope coefficients and error variances across panel. Although, Pesaran and Smith (1995) argue that under slope heterogeneity, especially in small samples, there is possibility of the estimator being affected by serious heterogeneity bias. To accommodate and take care of issues associated with these estimators, Pesaran *et al.* (1999) suggested a technique that imposes a restriction on the long-run parameters to be similar across panel members; however, it allows the short-run parameter (together with the speed of adjustment), intercepts and error variances to be different across the panel (Kim *et al.*, 2010). This procedure is known as the pooled mean group (PMG) estimation technique. Where the long-run homogeneity restrictions are valid, then this technique will produce an efficient estimate. As indicated by Pesaran *et al.* (1999), the Hausman-type statistic can be used to select the most suitable estimator between the MG and PMG.

4. Result and discussion

4.1 Summary statistics

From the summary statistics presented in Table 2, it is evident that each of the variables has a positive mean value. Also presented is the summary of each series in panel (overall), time series (within) and cross-sectional (between) dimensions, with TLF and Democ having the highest and the lowest mean values, respectively. Also, the standard deviation of each variable gives a more accurate and comprehensive estimate (overall, between and within) of dispersion because an outlier can largely overstate the range of observations. While the PTS has the lowest dispersion from the mean, TLF exhibits the highest. Finally,

Variable		Mean	Std. Dev	Minimum	Maximum	Observations
GDPPCGR	Overall	343.455	80.222	25	463	$N = 231$
	Between		28.628	277.905	383.476	$n = 11$
	Within		75.415	90.550	521.550	$T = 21$
FDI	Overall	122.346	66.278	12	237	$N = 231$
	Between		28.929	78.571	166.048	$n = 11$
	Within		60.239	−14.225	247.823	$T = 21$
TLF	Overall	7,285,513	1.23e+07	357,935	5.74e+07	$N = 231$
	Between		1.27e+07	509,861.1	4.47e+07	$n = 11$
	Within		2,199,795	−3146,759	2.00e+07	$T = 21$
GFCF	Overall	113.026	66.784	1	228	$N = 231$
	Between		18.783	76.095	143.381	$n = 11$
	Within		64.327	−11.355	249.359	$T = 21$
Democ	Overall	2.675	4.729	−8	8	$N = 231$
	Between		4.039	−5.048	6.524	$n = 11$
	Within		2.732	−8.087	10.437	$T = 21$
FinDev	Overall	536.013	147.866	25	679	$N = 231$
	Between		70.834	353.333	603.286	$n = 11$
	Within		131.466	34.537	797.680	$T = 21$
PTS	Overall	2.701	0.798	1	5	$N = 231$
	Between		0.499	2.238	4	$n = 11$
	Within		0.640	1.273	5.273	$T = 21$

Table 2.
Summary statistics

the minimum and maximum values describe each variable as it appears, in terms of the lowest and highest values in each series. As such, the minimum observation when compared to the maximum observation gives the range for each of the variables of analysis.

4.2 Correlation analysis

The correlation matrix (Table 3) measures the degree and direction of a linear relationship between two variables; a −1 indicates perfect negative, +1 denotes perfect positive and 0 implies the absence of correlation.

Variable	GDPPCGR	FDI	TLF	GFCF	Democ	FinDev	PTS
GDPPCGR	1.000						
FDI	0.175	1.000					
	(0.008)						
TLF	0.173	−0.014	1.000				
	(0.009)	(0.838)					
GFCF	0.073	0.140	−0.018	1.000			
	(0.271)	(0.033)	(0.785)				
Democ	0.109	0.063	0.132	−0.083	1.000		
	(0.098)	(0.343)	(0.046)	(0.208)			
FinDev	0.301	0.152	0.161	0.278	0.330	1.000	
	(0.000)	(0.021)	(0.014)	(0.000)	(0.000)		
PTS	−0.149	0.054	0.520	−0.049	−0.067	−0.079	1.000
	(0.023)	(0.417)	(0.000)	(0.459)	(0.308)	(0.232)	

Table 3.
Correlation matrix

Note(s): Probability values are presented in parentheses
Source(s): Authors' computation

Hence, we observe a positive correlation between each of FDI, GFCF, TLF, FinDev, Democ and GDPPCGR; while a negative correlation is found between PTS and GDPPCGR. With the exception of the coefficient of GFCF, each of the correlation coefficients is significant at 10%.

4.3 Stationarity test

In order to examine the unit root properties and the order of integration of the variables, the results of the first and the second generation tests of stationarity are presented in Table 4.

As presented in the table, each of the coefficients of GDPPCGR, FDI, PTS, Democ, TLF, GFCF and FinDev is significant, though at varying levels; this implies the rejection of the null hypothesis. The evidence of this is apparent from the fact that each of the Chi-square and Zt-bar statistic is greater than the critical value at 1%, 5% or 10%.

4.3 Analysis of cointegration

Table 5 details the results of Pedroni, Kao and Westerlund tests of co-integration used, in order to examine the existence of the long-run relationship among the variables.

Panel unit root test		Maddala and Wu (1999)	Pesaran (Cantwell *et al.*, 2010; Pesaran, 2007)
Variable	Lag	chi_sq	Zt-bar
Specification without trend			
GDPPCGR	0	174.031***	−6.559***
	1	88.254***	−4.320***
FDI	0	53.108***	−2.256***
	1	33.341*	−1.356*
PTS	0	85.678***	−2.888***
	1	55.768***	−2.525***
Democ	0	35.654**	−1.306*
	1	39.138***	−0.566
TLF	0	0.126	3.234
	1	0.120	−0.539
GFCF	0	42.526***	−1.279*
	1	28.022	−0.569
FinDev	0	38.144**	−1.992**
	1	25.609	0.061
Specification with trend			
GDPPCGR	0	138.724***	−4.603***
	1	56.762***	−2.349***
FDI	0	44.060***	−1.150
	1	40.330***	−0.260
PTS	0	76.220***	−2.341***
	1	48.344***	−0.845
Democ	0	29.558	0.283
	1	29.089	0.699
TLF	0	14.112	3.934
	1	14.461	−1.570*
GFCF	0	66.248***	−2.720***
	1	24.673	−2.414***
FinDev	0	64.408***	−2.643***
	1	31.463*	0.423

Note(s): ***, ** and * denote significance at 1%, 5% and 10% respectively; Null for MW and CIPS tests: series is I(1); MW test assumes cross-sectional independence; CIPS test assumes cross-sectional dependence is in form of a single unobserved common factor

Source(s): Authors' computation

Table 4.
Test of unit root

	Westerlund test	Statistic
Variance	ratio	−1.571*
Pedroni test		
Modified Phillips–Perron	*t*	2.786***
Phillips–Perron	*t*	−10.465***
Augmented DF	*t*	−9.799***
Kao test		
Modified DF	*t*	−7.224***
Unadjusted modified Dickey	*t*	−13.068***
Dickey–Fuller	*t*	−7.705***
Augmented DF	*t*	−3.582***
Unadjusted DF	*t*	−9.065***

Table 5.
Test of co-integration

Note(s): H_0: No Cointegration; *** and * denote significance at 1% and 10% respectively
Source(s): Authors' computation

It is evident from the table that all of the statistics support the rejection of null hypothesis, which is a confirmation of the existence of long-run relationship among the variables for the West African countries under consideration. Thus, it can sufficiently lead to the conclusion that the variables of the analysis have long-run relationship.

4.4 Estimation of the short-run and the long-run coefficient

The estimates from the dynamic fixed effect technique is presented in Table 6. The coefficient of the co-integrating equation depicts a significant and negative estimate; this defines the convergence rate of the economy to the long-run equilibrium (Pesaran and Smith, 1995). The average rate of convergence explains that as much as 79.2% of the short-run disequilibrium is being corrected every year so that the equilibrium state is attained in the long run.

Dep. Var. = GDPPCGR	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
	Model one (Polity2)		Model two (CL)		Model three (PR)	
Long-run coefficient						
FDI	0.255**	0.121	0.248*	0.129	0.264**	0.128
TLF	0.00002**	8.79e-06	0.00002**	8.38e-06	0.00002**	8.43e-06
GFCF	−0.028	0.114	−0.027	0.115	−0.036	0.117
Democ	−0.146	2.993	−1.780	11.932	2.494	7.696
FinDev	0.131**	0.058	0.130**	0.055	0.129**	0.056
PTS	−21.670*	11.417	−20.987*	11.831	−22.316*	11.665
Short-run coefficient						
Coint. Eqn	−0.793***	0.067	−0.794***	0.067	−0.790***	0.067
D.FDI	−0.046	0.097	−0.045	0.098	−0.047	0.098
D.TLF	−0.0004**	0.0002	−0.0004**	0.0002	−0.0004**	0.0002
D.GFCF	−0.029	0.094	−0.029	0.094	−0.027	0.094
D.Democ	0.036	2.544	−0.341	12.153	2.418	7.168
D.FinDev	−0.111*	0.060	−0.111*	0.060	−0.111*	0.059
D.PTS	1.122	8.612	1.123	8.881	1.022	8.635

Table 6.
Coefficient estimation

Note(s): ***, ** and * denote significance at 1%, 5% and 10% respectively
Source(s): Authors' computation

In Table 6, even though no significant relationship is established in the short run, the long-run coefficient of FDI is found to be significant and positive, at 5% and 10% levels. This suggests that a 1% increase in FDI inflow (as a proportion of GDP) into the West African subregion results in (an average of) 0.26% increase in the subregion's economic growth. For decades, FDI has been regarded as an essential source of capital accumulation, which inadvertently leads to economic growth in the West African economy. This prompts the region to put in place all possible policies to attract more inward FDI, through the removal of restrictions on foreign investment, promoting policies and regulations as well as conducive environment for foreign investment. Even though it is in a slight contrast to the finding of Tabassuum and Ahmed (2014), our finding is in consonance with those of Kalyoncu, Sekreter and Gursoy *et al.* (2013), Faruk (2012), Bayar (2014), Hassen and Anis (2012), as well as with those of Wakyereza (2017). As buttressed in several other studies, FDI is an important vehicle for the transfer of technology and knowledge; it generates increasing returns in production via positive externalities and productive spillovers, which potentially enhance sustainable economic growth. More so, it plays a complementary role in the overall capital formation, by filling the gap between domestic investments and savings. It also raises the level of investment in the host economy, which (by multiplier effect) leads to increase in employment, income and savings, and thus it drives the growth of an economy (Feenstra and Markusen, 1992; Singh, Chadha and Sharma, 2012.

Furthermore, the coefficient of democracy is neither significant in the short run nor in the long run. This implies that the level of democracy is found with no impact on the rate of growth of the West African countries considered; this follows an argument that democracy and growth are unrelated (Baum and Lake, 2003). An alternative interpretation, explained in Flachaire *et al.* (2014), is the likelihood that the inherent assumptions imposed by the standard approach are too limiting and neither appreciates the role of political institutions on the growth of the subregion. However, political instability is found to significantly and negatively impact the growth of the countries. This portends that increased political instability in the West African subregion is at the expense of economic growth to the tune of 21.66%, on the average. While this finding goes against that of Abdelkader (2015), who obtained an ambiguous nexus, it is in tandem with those of several other studies (Fosu, 2002; Alesina *et al.* 1992; Aisen and Veiga, 2011); Gyimah-Brempong and Camacho (1998). Moreover, economists regard political instability as a harmful malaise to economic growth and development. This impact is twofold; first, uncertainty stemming from unstable political system and environment may reduce private investment and therefore economic growth. On the other hand, uncertainty may change the type of investment undertaken, alter other factor demands or even alter the composition of public spending, with a direct effect on growth over and above its effect on investment (Nannestad and Paldam, 1994; Grofman and Roozendaal 1997).

In addition, while the coefficient of capital is found to be statistically insignificant, both in the short run and the long run, the coefficient of labour is significant and positively influences the growth of the subregion. This latter finding is in agreement with the Cobb and Douglas (1928) production function, wherein increased labour hour raises the levels of productivity and growth. Finally, the financial development–growth nexus follows the supply-leading hypothesis and the findings of Ibrahim and Alagidede (2018), Hassan *et al.* (2011) and Afonso and Blanco-Arana (2018). A well-functioning financial system is considered one of the key foundations on which a sustained economic development is built (Demirguc-Kunt, 2006). This finding contends that the growth of the subregion rises by 0.13% for a percentage increase in financial development.

5. Summary and conclusion

While a number of studies have examined the relationship between each of financial development, FDI and institutions on economic growth, none of these has jointly measured these growth-influencing factors in a model. Even when they are measured separately, the findings have so far produced mixed estimates, leading to contradictory policy recommendations. In this study, we measure the impacts of financial development, FDI, democracy, and political instability on economic growth in West Africa. Using the dynamic fixed effects estimates on data obtained for 11 countries in the subregion, dated 1996–2016, our empirical findings suggest that even though no significant relationship is established in the short run, the long-run coefficient of FDI is found to be significant and positive; a 1% increase in FDI inflow into the West African subregion results in a 0.26% increase in economic growth. The coefficient of democracy is neither significant in the short run nor in the long-run, but political instability is found to significantly and negatively impact the growth of the countries. While the coefficient of capital is found to be statistically insignificant, both in the short run and the long run, the coefficient of labour is significant and positively influences the growth of the subregion. Finally, the estimate of financial development–growth nexus follows the supply-leading hypothesis.

One theoretical implication is the affirmation of the proposition that FDI is a relevant means of technology and knowledge transfers, thus resulting in increasing returns to production as a result of productive spillovers, which drives the growth of the economy. Consequently, an efficient institution – where the rule of law, political stability and economic freedom are top priorities – is a key to accelerate the growth of the West African economy. Similarly, we confirm the validity of the supply-leading hypothesis in the West African subregion. As such, by deepening the financial system, the growth of the subregion is propelled because an efficient financial system is a basis for sustainable development.

The applicable policies are those that promote growth through FDI, financial development, democracy and political instability. Specifically, the governments of the West African countries are enjoined to promote policies that attract FDI into the subregion so that economic performances may be enhanced. The development of financial is equally key to the attainment of a sustainable economy; the target should therefore be on increasing credit to the private sector of the economy. In addition, the governments of the West African subregion should fully entrench democratic practices and enhance a stable and sustainable political environment. This will not only restore investor confidence, but will also facilitate the inflow of FDI into the West African economy.

Notes

1. Each of the independent variables (including GFCF and TLF, which are taken as control variables – in order to avoid specification errors) – is selected based on literature review, practical significance, parsimony and theoretical relevance.
2. We measure political institutions both by the extent of the region's democratic rule (Democ; see Flachaire *et al.*, 2014), as well as using the United States Department of State's political instability index (political terror scale, PTS).
3. Because of data availability (especially on political institutions), we have only considered 11 of the 16 countries in the West African subregion: Nigeria, Niger, Mauritania, Guinea-Bissau, Burkina Faso, Benin, Mali, Liberia, Senegal, The Gambia and Ghana.
4. Each of the techniques including that of Levin *et al.* (2002), Fisher-type (Choi, 2001), that of Breitung (2000; Breitung and Das, 2005) and that of Im *et al.* (2003) defines the null hypothesis that the panels contain a unit root.

5. Fisher-type is better in the converse case (when N is finite or infinity and $T \to \infty$); LM tests of Breitung and Hadri are more appropriate if $(N, T) \to \infty$; IPS may be used if $(N, T) \to \infty$ or if $N \to \infty$ and T is fixed or if N and T are fixed.

References

Abdelkader, A. (2015), "A manifest of barriers to successful e-government: cases from the Egyptian programme", *International Journal of Business and Social Science*, Vol. 6 No. 1, pp. 169-186.

Acemoglu, D., Gallego, F.A. and Robinson, J.A. (2014), "Institutions, human capital, and development", *Annual Review of Economics*, Vol. 6 No. 1, pp. 875-912.

Acemoglu, D., Naidu, S., Restrepo, P. and Robinson, J.A. (2015), "Democracy, redistribution, and inequality", in *Handbook of Income Distribution*, Vol. 2, pp. 1885-1966, Elsevier.

Afonso, A. and Blanco Arana, C. (2018), *Financial Development and Economic Growth: A Study for Oecd Countries in The Context of Crisis*, REM Working Paper, 046-2018, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3224317.

Agya, A.A. and Wunuji, E.A. (2014), "Effect of foreign direct investment on China economic growth: a Granger Causality approach", *IOSR Journal of Economics and Finance*, Vol. 2 No. 4, pp. 56-63.

Aisen, A. and Veiga, F.J. (2011), *Imf Working Paper: How Does Political Instability Affect Economic Growth?*, International Monetary Fund Working Paper, WP/11/12.

Alesina, A., Özler, Ş., Roubini, N. and Swagel, P. (1992), "Political instability and economic growth", NBER Working Paper 4173.

Andersen, T.B. and Tarp, F. (2003), "Financial liberalization, financial development and economic growth in LDCs", *Journal of International Development: The Journal of the Development Studies Association*, Vol. 15 No. 2, pp. 189-209.

Asteriou, D. and Price, S. (2001), "Political instability and economic growth: UK time series evidence", *Scottish Journal of Political Economy*, Vol. 48 No. 4, pp. 383-399.

Ayadi, R., Arbak, E., Ben Naceur, S. and Pieter De Groen, W. (2013), *Benchmarking the Financial Sector in the Southern and Eastern Mediterranean Countries and Projecting 2030 Financial Sector Scenarios*, MEDPRO technical report No. 31/March 2013.

Ayadi, R., Arbak, E., Naceur, S.B. and De Groen, W.P. (2015), "Financial development, bank efficiency, and economic growth across the Mediterranean", in *Economic and Social Development of the Southern and Eastern Mediterranean Countries*, pp. 219-233, Springer, Cham.

Balago, G.S. (2014), "Financial sector development and economic growth in Nigeria: an empirical investigation", *International Journal of Finance and Accounting*, Vol. 3 No. 4, pp. 253-265.

Baum, M.A. and Lake, D.A. (2003). "The political economy of growth: democracy and human capital", *American Journal of Political Science*, Vol. 47 No. 2, pp. 333-347.

Bayar, Y. (2014), "Savings, foreign direct investment inflows and economic growth in emerging Asian economies", *Asian Economic and Financial Review*, Vol. 17.

Bist, J.P. (2018), "Financial development and economic growth: evidence from a panel of 16 African and non-African low-income countries", *Cogent Economics and Finance*, Vol. 6 No. 1, 1449780.

Breitung, J. and Das, S. (2005), "Panel unit root tests under cross-sectional dependence", *Statistica Neerlandica*, Vol. 59 No. 4, pp. 414-433.

Cantwell, J., Dunning, J.H. and Lundan, S.M. (2010), "An evolutionary approach to understanding international business activity: the co-evolution of MNEs and the institutional environment", *Journal of International Business Studies*, Vol. 41, pp. 567-586.

Choi, I. (2001), "Unit root tests for panel data", *Journal of International Money and Finance*, Vol. 20 No. 2, pp. 249-272.

Cobb, C.W. and Douglas, P. H. (1928), "A theory of production", *American Economic Review*, Vol. 18, pp. 139-165.

Dawson, R. (2000), "Knowledge capabilities as the focus of organisational development and strategy", *Journal of Knowledge Management*.

Demirguc-Kunt, A. (2006), *Finance and Economic Development: Policy Choices for Developing Countries,* The World Bank.

Djezou, W.B. (2014), "The democracy and economic growth nexus: empirical evidence from cote d'Ivoire", *The European Journal of Comparative Economics*, Vol. 11 No. 2, p. 251.

Drury, A.C., Krieckhaus, J. and Lusztig, M. (2006). "Corruption, democracy, and economic growth", *International Political Science Review*, Vol. 27 No. 2, pp. 121-136.

Ductor, L. and Grechyna, D. (2015), "Financial development, real sector, and economic growth", *International Review of Economics and Finance*, Vol. 37, pp. 393-405.

Faruk, M.O. (2012), "The effect of FDI to accelerate the economic growth of Bangladesh and some problems and prospects of FDI", *Asian Business Review*, Vol. 2 No. 4, p. 7.

Feenstra, R.C. and Markusen, J.R. (1992), *Accounting for Growth with New Inputs (No. W4114)*, National bureau of economic research.

Flachaire, E., García-Peñalosa, C. and Konte, M. (2014), "Political versus economic institutions in the growth process", *Journal of Comparative Economics*, Vol. 42 No. 1, pp. 212-229.

Fosu, A.K. (2002), "Political instability and economic growth: implications of coup events in Sub-Saharan Africa", *American Journal of Economics and Sociology*, Vol. 61 No. 1, pp. 329-348.

Goldsmith, R.W. (1959), *The Comparative Study of Economic Growth and Structure*, NBER Books.

Grofman, B. and Van Roozendaal, P. (1997), "Modelling cabinet durability and termination", *British Journal of Political Science*, Vol. 27 No. 3, pp. 419-451.

Gupta, D.K. and Garg, I. (2015), "Foreign direct investment and economic growth in India: an econometric approach", *Journal of Management Sciences and Technology*, Vol. 2 No. 3, pp. 6-14.

Gursoy, F., Sekreter, A. and Kalyoncu, H. (2013), "FDI and economic growth relationship based on cross-country comparison", *International Journal of Economics and Financial Issues*, Vol. 3 No. 2, p. 519-524.

Gyimah-Brempong, K. and De Camacho, S.M. (1998), "Political instability, human capital, and economic growth in Latin America", *The Journal of Developing Areas*, pp. 449-466.

Gurgul, H. and Lach, Ł. (2013), "Political instability and economic growth: evidence from two decades of transition in CEE", *Communist and Post-Communist Studies*, Vol. 46 No. 2, pp. 189-202.

Hadri, K. (2000), "Testing for stationarity in heterogeneous panel data", *The Econometrics Journal*, Vol. 3 No. 2, pp. 148-161.

Hassan, M.K., Sanchez, B. and Yu, J.S. (2011), "Financial development and economic growth: new evidence from panel data", *The Quarterly Review of Economics and Finance*, Vol. 51 No. 1, pp. 88-104.

Hassen, S. and Anis, O. (2012), "Foreign direct investment (FDI) and economic growth: an approach in terms of cointegration for the case of Tunisia", *Journal of Applied Finance and Banking*, Vol. 2 No. 4, pp. 193-207.

Hicks, J. (1969), *A Theory of Economic History*, Oxford University Press, Oxford, Vol. 9.

Ibrahim, M. and Alagidede, P. (2018), "Effect of financial development on economic growth in sub-Saharan Africa", *Journal of Policy Modeling*, Vol. 40 No. 6, pp. 1104-1125.

Im, K.S., Pesaran, M.H. and Shin, Y. (2003), "Testing for unit roots in heterogeneous panels", *Journal of Econometrics*, Vol. 115 No. 1, pp. 53-74.

Jung, S.M. (2017), "Financial development and economic growth: evidence from South Korea between 1961 and 2013", *International Journal of Management, Economics and Social Sciences (IJMESS)*, Vol. 6 No. 2, pp. 89-106.

Kim, D.H., Lin, S.C. and Suen, Y.B. (2010), "Dynamic effects of trade openness on financial development", *Economic Modelling*, Vol. 27 No. 1, pp. 254-261.

Kim, N.S. and Heshmati, A. (2019), "The relationship between economic growth and democracy: alternative representations of technological change", in *Panel Data Econometrics*, Academic Press, pp. 885-929.

Levine, R. (1997), "Financial development and economic growth: views and Agenda", *Journal of Economic Literature*, Vol. 35 No. 2, pp. 688-726.

Levin, A., Lin, C.F. and Chu, C.S.J. (2002), "Unit root tests in panel data: asymptotic and finite-sample properties", *Journal of Econometrics*, Vol. 108 No. 1, pp. 1-24.

Li, C. and Tanna, S. (2019), "The impact of foreign direct investment on productivity: new evidence for developing countries", *Economic Modelling*, Vol. 80, pp. 453-466.

Lucas, R. (1988), *Economic Development with Unlimited Supplies of Labour*, Manchester School Studies, Vol. 22, pp. 3-42.

Maddala, G.S. and Wu, S. (1999), "A comparative study of unit root tests with panel data and a new simple test", *Oxford Bulletin of Economics and statistics*, Vol. 61 No. S1, pp. 631-652.

Mankiw, N.G., Romer, D. and Weil, D.N. (1992), "A contribution to the empirics of economic growth", *Quarterly Journal of Economics*, Vol. 107 No. 2, pp. 407-437.

Marc, A., Verjee, N. and Mogaka, S. (2015), *The Challenge of Stability and Security in West Africa*, The World Bank.

McKinnon, R.I. (1973), *Money and Capital in Economic Development*, Brookings Institute, Washington.

Musibau, H.O., Mahmood, S. and Hammed, A.Y. (2017), "The impact of foreign capital inflows, infrastructure and role of institutions on economic growth: an error correction model", *Academic Journal of Economic Studies*, Vol. 3 No. 4, pp. 35-49.

Nannestad, P. and Paldam, M. (1994), "The VP-function: a survey of the literature on vote and popularity functions after 25 years", *Public Choice*, Vol. 79 Nos 3-4, pp. 213-245.

Nguye, N.T.K. (2017), "The long run and short run impacts of foreign direct investment and export on economic growth of vietnam", *Asian Economic and Financial Review*, Vol. 7 No. 5, pp. 519-527, doi: 10.18488/journal.aefr.2017.75.519.527.

North, D.C. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge, MA.

Okafor, G. (2015), "Locational determinants of US outward FDI into Sub-Saharan Africa", *The Journal of Developing Areas*, pp. 187-205.

Pesaran, M.H. (2007), "A simple panel unit root test in the presence of cross-section dependence", *Journal of Applied Econometrics*, Vol. 22 No. 2, pp. 265-312.

Pesaran, M.H., Shin, Y. and Smith, R.P. (1999), "Pooled mean group estimation of dynamic heterogeneous panels", *Journal of the American Statistical Association*, Vol. 94 No. 446, pp. 621-634.

Pesaran, M.H. and Smith, R. (1995), "Estimating long-run relationships from dynamic heterogeneous panels", *Journal of Econometrics*, Vol. 68 No. 1, pp. 79-113.

Phillips, P.C. and Moon, H.R. (2000), "Nonstationary panel data analysis: an overview of some recent developments", *Econometric Reviews*, Vol. 19 No. 3, pp. 263-286.

Puatwoe, J.T. and Piabuo, S.M. (2017), "Financial sector development and economic growth: evidence from Cameroon", *Financial Innovation*, Vol. 3 No. 1, p. 25.

Quer, D., Claver, E. and Rienda, L. (2012), "Political risk, cultural distance, and outward foreign direct investment: empirical evidence from large Chinese firms", *Asia Pacific Journal of Management*, Vol. 29 No. 4, pp. 1089-1104.

Rachdi, H. and Saidi, H. (2015), "Democracy and economic growth: evidence in MENA countries", *Procedia-Social and Behavioral Sciences*, Vol. 191, pp. 616-621.

Rafindadi, A.A., Muye, I.M. and Kaita, R.A. (2018), "The effects of FDI and energy consumption on environmental pollution in predominantly resource-based economies of the GCC", *Sustainable Energy Technologies and Assessments*, Vol. 25, pp. 126-137.

Rahman, R. and Rashid, M.M. (2018), "Political instability and economic growth in Bangladesh", *Peer-reviewed academic journal Innovative Issues and Approaches in Social Sciences*, Harvard University, available in: https://repositorio.leon.uia.mx/xmlui/handle/20.500.12152/36039.

Ruiz Pozuelo, J., Slipowitz, A. and Vuletin, G. (2016), *Democracy Does Not Cause Growth: The Importance of Endogeneity Arguments (No. 7758)*, Inter-American Development Bank.

Salahodjaev, R. (2015), "Democracy and economic growth: the role of intelligence in cross-country regressions", *Intelligence*, Vol. 50, pp. 228-234.

Samargandi, N., Fidrmuc, J. and Ghosh, S. (2014), "Financial development and economic growth in an oil-rich economy: the case of Saudi Arabia", *Economic Modelling*, Vol. 43, pp. 267-278.

Sandalcilar, A. (2013), "Democracy and growth: evidence from transition economies", *American International Journal of Contemporary Research*, Vol. 3 No. 1, pp. 63-75.

Schumpeter, J. (1911), "The theory of economic development", *Harvard Economic Studies*, Harvard University Press, Cambridge, MA, Vol. 46.

Sekakela, K. (2018), "Financial development and economic growth in Botswana", Africa Portal, available at: https://www.africaportal.org/publications/financial-development-and-economic-growth-botswana/.

Shabbir, T. (2017), *Pakistan-China Relations in the Post-Cold War Period: Regional and Global Implications*, Doctoral dissertation, Quaid-i-Azam University Islamabad.

Shahbaz, M. and Rahman, M.M. (2012), "The dynamic of financial development, imports, foreign direct investment and economic growth: cointegration and causality analysis in Pakistan", *Global Business Review*, Vol. 13 No. 2, pp. 201-219.

Shaw, E.S. (1973), *Financial Deepening in Economic Development*, Oxford University Press, New York, NY.

Shittu, W.O. and Abdullah, N. (2019), "Fertility, education, and female labour participation", *International Journal of Social Economics*, Vol. 46 No. 1, pp. 66-82.

Singh, A. (1997), "Financial liberalisation, stockmarkets and economic development", *The Economic Journal*, Vol. 107 No. 442, pp. 771-782.

Škare, M., Sinković, D. and Porada-Rochoń, M. (2019), "Financial development and economic growth in Poland 1990-2018", *Technological and Economic Development of Economy*, Vol. 25 No. 2, pp. 103-133.

Singh, J., Chadha, S. and Sharma, A. (2012), "Role of foreign direct investment in India: An analytical study", *Research Inventy: International Journal of Engineering and Science*, Vol. 1 No. 5, pp. 34-42.

Solow, R. (1956), "A contribution to the theory of economic growth", *Quarterly Journal of Economics*, Vol. 70, pp. 65-94.

Topçuoğlu, E. and Çağlayan, S. (2016), "Impact of economic development on democracy: a case study of kazakhstan and uzbekistan from 1991-2016", *Dumlupinar University Journal of Social Science/Dumlupinar Üniversitesi Soysyal Bilimler Dergisi]*.

Wakyereza, R.K.S. (2017), "The impact of foreign direct investment on economic growth", *Employment and Poverty Reduction in Uganda*, p. 383.

Weinhold, D. (1999), *A Dynamic Fixed Effects Model for Heterogeneous Panel Data*, London School of Economics. Mimeo, London.

Further reading

Acemoglu, D., Johnson, S. and Robinson, J.A. (2002), "Reversal of fortune: Geography and institutions in the making of the modern world income distribution", *Quarterly Journal of Economics*, Vol. 117, pp. 1231-1294.

Adegboye, F.B. (2014), *Foreign Direct Investment and Economic Development: Evidence from Selected African Countries*, Doctoral dissertation, Convenant University, Ota.

Adeyeye, O. and Awolusi, D. (2016), "Impact of foreign direct investment on economic growth in Africa", *Problems and Perspectives in Management*, Vol. 14 No. 2, pp. 289-297, doi: 10.21511/ppm.14.(2-2).2016.04.

Agbloyor, E.K., Abor, J.Y., Adjasi, C.K. and Yawson, A. (2014), "Private capital flows and economic growth in Africa: the role of domestic financial markets", *Journal of International Financial Markets, Institutions and Money*, Vol. 30, pp. 137-152.

Agosin, M.R., Mayer, Agya, A.A. and Wunuji, E.A. (2014), "Effect of foreign direct investment on China economic growth: a Granger causality approach", *IOSR Journal of Economics and Finance*, Vol. 2 No. 4, pp. 56-63.

Amusa, K., Monkam, N. and Viegi, N. (2016), "Foreign aid and foreign direct investment in Sub-Saharan Africa: a panel data analysis", *Economic Research Southern Africa (ERSA)*, Vol. 612, pp. 1-23.

Anyanwu, J. (2011), "Determinants of foreign direct investment inflows to Africa, 1980-2007", African Development Bank Group, pp. 1-32.

Awino, Z.B. (2014), "Foreign direct investment and economic growth: an empirical analysis of Kenyan data", Vol. 4 No. 1, p. 22.

Barry, F. and Bergin, A. (2010), "Ireland's inward FDI over the recession and beyond", *Institute for International Integration Studies*, Discussion Paper Series, IIISDP, p. 321.

Borensztein, E., De Gregorio, J. and Lee, J.-W., (1998), "How does foreign direct investment affect economic growth?", *Journal of International Economics*, Vol. 45, pp. 115-135.

Dkhili, H. and Dhiab, L. (2018), "The relationship between economic freedom and FDI versus economic growth: evidence from the GCC countries", *Journal of Risk and Financial Management*, Vol. 11 No. 4, p. 81.

Douglas, P.H. (1976), "The Cobb-Douglas production function once again: its history, its testing, and some new empirical values", *Journal of Political Economy*, Vol. 84 No. 5, pp. 903-915.

Hoskisson, R.E., Eden, L., Lau, C.M. and Wright, M. (2000), "Strategy in emerging economies", *Academy of Management Journal*, Vol. 43 No. 3, pp. 249-267.

Juma, M.A. (2012), *The Effect of Foreign Direct Investment on Growth in Sub-saharan Africa*, doctoral dissertation, Amherst College.

Lee, K.J., Fariza, B. and Sharipova, Z. (2015), "The relationship between FDI, diversification and economic growth in natural resource oriented countries: case of Kazakhstan", *Journal of International Business and Economics*, Vol. 3 No. 2, pp. 51-62.

Marshall, M. and Jaggers, K. (2009), *Polity IV Project: Political Regime Characteristics and Transitions, 1800–2017*, Center for Global Policy, George Mason University, available at: http://www.systemicpeace.org/polity/polity4.htm.

Matallah, S., Ghazi, N. and Bounoua, C. (2015), "How the triptych'economic freedom-financial development-FDI' can affect the MENA region's economic growth?", *International Journal of Innovation and Applied Studies*, Vol. 13 No. 1, p. 50.

Mishra, M.K., Kumari, V. and Pandey, V. (2014), "International capital flow and economic growth: a case of FDI in Asian economies", *International Journal*, Vol. 2 No. 12, pp. 255-262.

Ogbokor, C.A. (2016), *Econometric Analysis of the Impact of Foreign Direct Investment on Economic Growth in Namibia: Evidence from Annual Data*, PhD, Postdoctoral Fellow, Graduate School of Business and Leadership, University of KwaZulu-Natal, South Africa, Vol. 8 No. 2, p. 14.

Opoku, E.E.O., Ibrahim, M. and Sare, Y.A. (2018), "Foreign direct investment, sectoral effects and economic growth in Africa", *International Economic Journal*, pp. 1-20.

Orji, A., Uche, A.S. and Ilori, E.A. (2014), "Foreign capital inflows and growth: an empirical analysis of WAMZ experience", *International Journal of Economics and Financial Issues*, Vol. 4 No. 4, pp. 971-983.

Ozekhome, H.O. (2017), "Foreign aid, foreign direct investment and economic growth in ecowas countries: are there diminishing returns in the aid-growth nexus?", *West African Journal of Monetary and Economic Integration*, Vol. 17 No. 1, pp. 61-84.

Peng, M.W., Wang, D.Y.L. and Jiang, Y. (2008), "An institution-based view of international business strategy: a focus on emerging economies", *Journal of International Business Studies*, Vol. 39, pp. 920-936.

Škare, M., Sinković, D. and Porada-Rochoń, M. (2019), "Measuring credit structure impact on economic growth in Croatia using (VECM) 1990-2018", *Journal of Business Economics and Management*, Vol. 20 No. 2, pp. 294-310.

Sothan, S. (2017), "Causality between foreign direct investment and economic growth for Cambodia", *Cogent Economics and Finance*, Vol. 5 No. 1, doi: 10.1080/23322039.2016.1277860.

Stern, N. (1991), "The determinants of growth", *The Economic Journal*, Vol. 10 No. 404, pp. 122-133.

Swagel, P., Roubini, N., Ozler, S. and Alesina, A. (1992), *Political Instability and Economic Growth*, Harvard University Press, Cambridge, MA, available at: https://repositorio.leon.uia.mx/xmlui/handle/20.500.12152/36039.

Ullah, I. and Khan, M.A. (2017), "Institutional quality and foreign direct investment inflows: evidence from Asian countries", *Journal of Economic Studies*, Vol. 44 No. 6, pp. 1030-1050.

Wahiba, N.F. (2014), "Impact of foreign direct investment on economic growth in Tunisia. 5, 10", *Journal of Economics and Finance*, Vol. 6 No. 9, p. 117, doi: 10.5539/ijef.v6n9p117.

Wang, P., Alba, J.D. and Park, D.(2013), "Determinants of different modes of FDI: FirmLevel evidence from Japanese FDI into the US", *Open Economies Review*, Vol. 24, pp. 425-446.

Wukari, N. and Atabani Adi, A. (2014), "Effect of foreign direct investment on China economic growth: a Granger causality approach", *IOSR Journal of Economics and Finance*, Vol. 2 No. 4, pp. 56-63, doi: 10.9790/5933-0245663.

Yucel, G.E. (2014), "FDI and economic growth: the case of Baltic countries", *Research in World Economy*, Vol. 5 No. 2, p. 115.

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