

GAMBIA'S GROWTH AND FOREIGN CAPITAL INFLOWS: A DUAL-GAP APPROACH

ISRAEL ODION E. IDEWELE

PhD, Department of Banking and Finance, Evangel University, Ebonyi State, Nigeria.
Email: idewelei@evangeluniversity.edu.ng

ANICHEBE, NNAEMEKA A

PhD, Department of Business Management, Evangel University Akaeze Ebonyi State.
Email: emekanichebe@evangeluniversity.edu.ng

AMA IBIAM OBASI

PhD, Department of Accountancy, Akanu Ibiam Federal Polytechnic, Unwano Ebonyi State, Nigeria.
Email: amaibiamobasi@gmail.com

PROMISE NWAKAEGO EDEOGU

PhD, Department of Accountancy, Alex Ekwueme University, Ebonyi State, Nigeria.
Email: edeogupromise2019@gmail.com

IKWUO AMA KALU

PhD, Department of Accounting, University of Calabar. Email: amakalu945@gmail.com

ALIU KAFAYAT ARINOLA

Department of Accountancy, Alex Ekwueme University, Ebonyi State, Nigeria.
Email: Arinola.aliu@gmail.com

NNAM HILARYX IKECHUKWU

PhD, Accountancy Department, Faculty of Management Sciences, AE-FUNAI, Ebonyi State, Nigeria.
Email: hilarynwanennia@gmail.com

Abstract

The Gambia is an example of a small, open economy that has had substantial reforms since the 1980s, but despite initiatives to increase capital inflows, development is still erratic. This study examines the impact of foreign capital inflows on economic growth in The Gambia, as well as the part savings and foreign exchange imbalances play in the process. Using data from 1980 to 2023, the Dualgap framework was used in conjunction with the robust econometric methodologies of Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Squares (DOLS). Dynamic Ordinary Least Squares (DOLS) and Fully Modified Ordinary Least Squares (FMOLS) are two resilient econometric methodologies included in the Dualgap framework. The results demonstrate that foreign capital inflows and capital accumulation play a major role in driving Nigeria's economic expansion. Foreign exchange limits have significant negative consequences while FDI shows greater growth of 12% compared to remittances' 7% increase. Both the capital augmenting hypothesis and classical growth theory are supported by the results. Foreign exchange limits have significant negative effects, but human capital shows positive significance. The negative labor input coefficient and the negligible savings gaps point to inefficiencies in The Gambia's labor market, which are typified by a greater rate of informal employment. To promote sustainable economic growth, policymakers should create measures to draw in foreign direct investment (FDI), optimize remittance routes, resolve labor market inefficiencies, and put import substitution and export promotion policies into place. Despite a growing reliance on external capital to meet local capital constraints, the article addresses severe

foreign exchange and savings restrictions and offers the first empirical evaluation of the relationship between foreign capital flows and growth dynamics.

Keywords: Foreign Capital Inflows, Economic Growth, Dual-Gap Model, Nigeria, Dols, Fmols, Foreign Exchange Gap, Savings Gap.

INTRODUCTION

Their capacity to invest in industries like technology, infrastructure, and other vital growth areas is hampered by this so-called savings-investment gap. Therefore, luring in foreign capital inflows has emerged as a key development goal (Oteng-Abayie and Frimpong, 2006).

For African nations and other developing economies, a sizable inflow of foreign capital provides a lifeline to fill the gaps in external financial liquidity and domestic savings. External capital inflows have the ability to augment domestic savings by supplying the required sums to invest in vital areas, according to the prevalent academic consensus. By supplying foreign currency for necessary imports and economic activity, it also has the ability to assist in managing trade deficits. As a result, closing these disparities can promote capital accumulation, which is essential for sustained economic expansion. The dualgap model emphasizes the critical role that foreign capital plays in accelerating developing nations toward economic takeoff, claim Chenery and Strout (1966). This model acknowledges the limitations these economies face in terms of both foreign exchange and domestic savings.

In light of this, academics and decisionmakers have been closely analyzing the dynamics of recent foreign capital inflows and how they affect growth, particularly in emerging countries like Nigeria. The positive correlation between trade liberalization and foreign capital inflows into emerging markets has been supported by recent empirical research. Panel evidence from South Asia shows that trade openness significantly increases FDI inflows even after adjusting for traditional factors like inflation and exchange rates (Uz Zaman et al. 2018).

Evidence suggests that countries' absorptive capacity significantly moderates the growth effects of both FDI and remittances, confirming the empirical validation of the complementarity between human capital and foreign investment inflows in driving economic development in North African contexts (Sghaier 2021). Evidence from Jordan from 2005 to 2017 shows how several foreign capital streams, including grants, FDI, remittances, and portfolio investments, help the economy grow (Lozi & Shakatreh 2019).

The study concludes that in order to maximize the growth advantages of international capital flows, regulatory easing and more private sector involvement are essential. The impact of various capital inflows on West African economies was noted by Orji et al. (2014). They looked at four different forms of capital flows—FDI, ODA, FPI, and remittances across WAMZ nations between 1981 and 2010 using Seemingly Unrelated Regression Estimation (SURE). Although human capital is a significant mediating component and more robust estimating methodologies (DOLS and FMOLS) are used in

this study, their findings of varied impacts across nations provide insightful information. Specifically, they found that ODA had more significant economic effects in Sierra Leone and Ghana, whereas FDI promoted growth in Nigeria and Gambia. By concentrating on FDI and remittances in particular and taking into account how the growth impacts of these flows are reinforced by the development of human capital, the analysis in the current study expands on their work.

The Gambia is the subject of the study because it is a compelling example of a small, open economy that has experienced substantial changes during the 1980s yet continues to expand erratically in spite of initiatives to increase capital inflows. The impact of various capital inflows on West African economies was noted by Orji et al. (2014). They looked at four different forms of capital flows—FDI, ODA, FPI, and remittances—across WAMZ nations between 1981 and 2010 using Seemingly Unrelated Regression Estimation (SURE).

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The Gambia is the subject of the study because it is a compelling example of a small, open economy that has experienced substantial changes during the 1980s yet continues to expand erratically in spite of initiatives to increase capital inflows. Many people think that The Gambia should have been in a better position to draw in large amounts of international investment after implementing a progressive currency rate liberalization approach in 1986. Although there is a great deal of potential for foreign capital to propel the economy ahead, the nation has not been able to draw in enough inflows to spur this expansion.

This is mostly because major investments are discouraged by the market's limited size. Investment is further hampered by the requirement for a developed capital market. The nation lacked a stock market and efficient laws to draw in portfolio investment and ease the movement of financial resources until the establishment of the Capital Market in 2023. Since independence, the nation's inadequate financial system has not been able to meet its demands for infrastructure development, poverty alleviation, and steady economic growth. As a result, although with its wealth of natural and human resources, The Gambia regrettably belongs to the group of countries categorized as the least developed in the world, which means that it receives little foreign direct investment. The nation has lately upgraded its infrastructure, enhanced governance and institutional systems, and improved the investment climate. The Gambia Investment and Export Promotion Agency (GiEPA), an autonomous organization tasked with promoting private sector led investment and export diversification under The Gambia's liberalization

program, was established in 2010 as a major institutional reform. In order to promote sustainable socioeconomic development by generating jobs, wealth, and reducing poverty, the organization supports laws that create an atmosphere that is conducive to business. However, The Gambia saw a notable increase in foreign direct investment (FDI) from USD 71 million in 2019 to USD 208 million in 2023, despite the global economic crisis brought on by the COVID-19 pandemic (UNCTAD 2024).

The nation has a lot of promise in the tourist and reexport sectors, even if it was ranked 155th in the world in the 2020 Doing Business report. To draw in investment, it provides tax breaks and clear, uncomplicated processes. The Gambia's tourist industry, which accounts for 20% of its GDP, attracts investors primarily from sun and bird lovers. Additionally, remittances continue to be a crucial source of financial assistance for citizens. Central bank data indicates that private remittances reached a record high of USD 774.6 million by 2021, a significant increase from USD 329.79 million as recently as 2019. The Gambia must yet fully capitalize on the prospects presented by the increase in foreign capital inflows for long-term, sustainable economic growth. The study aims to evaluate the impact of foreign capital inflows on growth as a useful contribution to the body of existing literature. By responding to the following queries, the study seeks to explore these concerns. Which categories of foreign investments have impacted growth the most? What tactics might The Gambia use to optimize the potential for growth from different types of foreign capital inflow? In order to achieve sustainable prosperity, how should The Gambia promote and utilize beneficial foreign capital inflows?

The study also uses dynamic ordinary least squares (DOLS) and completely modified ordinary least squares (FMOLS) regressions, a dualgap framework, and cointegration analysis. These techniques, which perform better than more conventional ones like ARDL and basic OLS, were chosen with care to increase the analysis's accuracy between 1980 and 2023. They are made to tackle the difficulties posed by smaller datasets, which underdeveloped nations like The Gambia frequently encounter. They also aid in reducing problems that can skew results, such as autocorrelation and sample size bias. Furthermore, there does not seem to be any research investigating the impact of foreign capital inflows on growth in The Gambia using sophisticated time-series analysis. The study is divided into five major pieces. The first section is an introduction, and the second section is a thorough literature review. The methodology is presented in the third section. The results of the investigation are provided and thoroughly explored in the fourth section. The final section concludes with a summary and conclusion of the main findings.

LITERATURE REVIEW

This literature review's initial section lays a strong basis for the investigation by discussing the pertinent theory and framework. In order to determine a research gap and how this study intends to fill it, the second section thoroughly examines previous publications on the topic through critical analysis. Background in Theory.

Theoretical Background

One of the main reasons why nations frequently look for foreign funding is to overcome trade imbalances as well as the gaps in domestic savings compared to the necessary financial commitments for economic transformation. The increase of productive capacity in the framework of economic development requires the purchase of investment products, which can be sourced both domestically and abroad. While importing these commodities necessitates having sufficient foreign exchange reserves, purchasing them domestically depends on having enough national savings. A minimal amount of foreign exchange is required to maintain economic growth on the assumption that some essential investment items are only available from external markets because of resource or technological limitations. The theoretical framework that tackles this issue is the dualgap model, which is based on the Harrod Do mar growth theory. The dualgap theory acknowledges an extra limitation, the import export gap, whereas Harrod Domar only addressed the savings investment gap (Chenery & Strout 1966). According to the idea, the Import, Export Gap (MX) and the Savings Investment Gap (IS) are the two main obstacles to economic growth in emerging nations. Gaps occur when a country imports more than it exports and its domestic savings are insufficient to finance essential investments. According to the dualgap theory, in order for developing economies to experience sustained growth, both gaps need to be closed. By providing the funds required for investment and import finance, foreign capital inflows can play a major role in closing these gaps (Chenery 1967). Theoretically, foreign capital inflows can bridge both gaps and promote economic progress, as shown by the following equation.

$$E = Y = I - S = M - X = F,$$

where E denotes domestic expenditure, Y represents output, investment is illustrated by I , and savings by S . The variable M stands for imports, X for exports, and F for foreign capital inflows.

The equation depicts the foreign exchange gap: $M - X = F$, where F represents capital inflows.

Accordingly, the equation $M - X = F$ signifies that the savings and foreign exchange gaps are equivalent. Similarly, $I - S = F$ represents the gap in savings that needs external capital to be closed.

This equation demonstrates a crucial point: **the savings gap ($I - S$) is equivalent to the foreign exchange gap ($M - X$).**

In simpler terms, the shortfall in domestic savings to finance investment is the same as the need for foreign capital to cover the trade deficit.

Empirical Review

The precise connection between foreign capital inflows and economic expansion is still up for debate, despite the generally positive trends in empirical research. To clarify this complexity, the next section deals with the relationships between foreign capital and

different forms of growth, examining the effects of FDI, transfer, and two-gap models on growth dynamics.

Foreign Direct Investment and Growth

Grossman & Help man (1991) and Romer (1990) situate the connection between growth and foreign direct investment within the framework of endogenous growth theory. Theoretically, Net to foreign capital inflows have the potential to propel economic growth. This theory suggests that limited production capacity can thwart growth in developing countries, and that inflows of foreign direct investment can support access to funds.

Foreign capital inflows could be substantial if there are fewer restrictions placed on liberalized capital accounts and foreign investments. This influx, which is financed by savings from outside sources, may result in an economic expansion known as a "noble cycle." If investment increases to promote further investment and ultimately promote economic growth, interest rates may initially rise (Prasad et al. 2007). Several studies (Dhahhuzel & Lamichhan 2023; Sound 2023; Odhiambo 2022) have demonstrated that FDI significantly boosts economic expansion.

These findings lend credence to the widespread perception that foreign direct investment (FDI) drives economic expansion. TRI-VAR is a framework developed by Adeniyi and others (2012) that combines vector error correction (VEC) methodology with Granger-Causality analysis. Their findings indicated, based on the financial index used, that achieving growth in Gambia, Ghana, and Sierra Leone requires significant financial complexity from foreign direct investment.

Touray (2020) employed the ARDL model to examine the relationship between income and foreign direct investment in the Gambia, taking into consideration both the short-term and long-term dynamics of FDI inflows.

The study found that the effect of foreign direct investment (FDI) on growth in The Gambia varies over time. While the long-term effects seem promising, the short-term effects are negative. From 1981 to 2010, Orji et al. (2014) also looked at four West African nations: Sierra Leone, Ghana, Nigeria, and Gambia. According to their research, regional productivity growth is influenced by external capital inflows in all their forms. Taking into account variations in FDI inflows, Lensink and Morrissey (2006) investigated the relationship between growth and FDI.

Even though their conclusions were not totally reliable, they found that FDI volatility consistently has a negative effect on growth. Additional research demonstrating the detrimental impact of long-term investment on economic growth lends credence to this study (Sarkar 2007). The empirical study by Görgülü and Akçay (2015) supports the notion that FDI may hinder growth.

They found that, for the full sample, FDI inflows have no discernible impact on growth overall after analyzing data from 49 developing nations between 1991 and 2009. It does, however, demonstrate that FDI hinders the development of host African nations.

Remittances and Growth

The money that migrants send home is known as remittances, and it is a significant source of wealth for poor nations. Their effect on economic growth, however, is a complicated matter with both advantages and disadvantages. According to Imai et al. (2012), labor force participation, total factor productivity, and capital accumulation are the three main ways that remittances affect growth.

The Long-Run Effects of Remittances on Economic Growth are Widely Debated

There is much discussion on how remittances affect economic growth in the long run. Cazachevici et al. (2020) used a quantitative survey to analyze 538 estimates from 95 research in order to determine how remittances affect growth. They discovered that roughly 40% of the research indicates that remittances have a beneficial influence on economic growth, whereas the remaining 40% find no discernible benefit.

The remaining 20% indicate an adverse influence. However, the findings suggest bias in publication towards reporting positive outcomes. Addressing this bias through advanced techniques, the average impact remains positive, but it is economically negligible.

Notably, remittances drive growth significantly Asia than in Africa. Investigating how remittance inflows relate to economic growth in The Gambia using yearly data between 1996 and 2019, Jallow (2023) observed that remittances positively and substantially influence the growth of the Gambian economy. The Granger causality test results exhibit significant causality across the short-run and long-run periods. These findings highlight the significance of remittances as a critical driver of growth in the country.

Dual Gap and Growth

The Gambia struggles with deficiencies in foreign exchange, investment, and human capital, just as other developing nations. Addressing these structural shortcomings through the strategic recruitment of foreign capital, as well as through the facilitation of skills transfer and technological dissemination, is essential to achieving sustained growth. The twofold gap concept acknowledges that a lack of technology and capital-intensive items, as well as insufficient production capacity, result in limited export potential. Therefore, the goals of foreign capital inflows are to boost export potential, eliminate trade imbalances, close the savings-investment gap, and increase productive capacity.

Anis et al. (2014) used the dual gap approach to examine the relationship between foreign capital inflows and the expansion of the Pakistani economy between 1976 and 2011. They found that while FDI helps close the savings gap, the foreign exchange gap tends to widen as a result of weak macroeconomic conditions and the massive importation of investment goods to support the local manufacturing sector.

According to Aremu et al.'s (2014) study on the Nigerian economy, the savings and foreign exchange disparities have an impact on economic productivity over the long run, with the savings gap closing with time.

Although FDI has contributed to closing these disparities, it has also encouraged imports, which could cause the foreign exchange rate gap to grow. In their own research, Blomstrom (1986) and Globerman (1979) As a result, the study highlights how important it is for emerging countries to carefully direct foreign invest mt into industries that encourage domestic investment while avoiding the exclusion of indigenous capital.

DATA AND METHODOLOGY

Data

This study uses the dual gap viewpoint to investigate the connection between foreign capital inflows and growth in The Gambia. The analysis makes use of secondary data from the Penn World Table (PWT 10.01) and the World Bank WDI database.

Given data limitations and consistency considerations, it analyzes the remittance and foreign direct investment components of foreign capital inflows, enabling a thorough examination of their growth consequences.

Methodology

The long-term dynamics between the dependent and independent variables are analyzed in this study using the DOLS and FMOLS approaches. By using a dual gap framework this strategy goes beyond conventional techniques like ARDL and basic OLS models.

These techniques help reduce problems like sample size bias and autocorrelation that can skew results, and they are especially well suited for smaller datasets, which are common in developing nations like The Gambia.

The study starts with the conventional augmented CobbDouglas production function framework that incorporates human capital and builds upon earlier work done in other nations and regions by Fambon (2013) and AdusahPoku & Bekoe (2018) by utilizing a more robust framework and sophisticated techniques. In general, the production function looks like this:

$$GDP = AK^{\alpha}H^{\beta}L^{1-\alpha-\beta}$$

In this case, GDP stands for actual gross domestic product, K for capital stock, H for human capital, and L for the entire labor force. Remittances and foreign direct investment (FDI) are included in the term A. It is assumed that A is how foreign money affects economic growth.

$$A = f(FDI, REM)$$

Incorporating this expression into the production function results in the following formulation:

$$LNGDP = f(LNCAPITAL, LNLABOR, FDI, REM, HC)$$

To account for the dual-gap hypothesis, the econometric model is augmented as follows:

$$LNRGDP = \beta_0 + \beta_1 LNCAPITAL + \beta_2 LNLABOR + \beta_3 FDI + \beta_4 REM + \beta_5 HC + \beta_6 LNSAVIN + \beta_7 LNIMEXP + \varepsilon$$

where labor (LNLABOR), capital stock (LNCAPITAL), FDI, remittances (REM), and human capital (HC) are the independent variables and real GDP (LNRGDP) is the dependent variable. LNIMEXP represents the foreign exchange gap, whereas LNSAVIN captures the saving gap, both of which meet the dual-gap requirement. The constant term is denoted by β_0 , whereas the error term is represented by ε . To reduce data skewness, all variables—aside from FDI, REM, and HC—are transformed into natural logarithms.

Since a human capital index represents HC while FDI and REM are expressed as a percentage of GDP, they are not included in the logarithmic translation. By normalizing the distribution, this adjustment enhances the data's suitability for analysis and raises the accuracy and dependability of the regression's findings.

The variables' descriptions, measurements, and anticipated indications are shown in Table 1. The savings gap and the foreign exchange deficit are predicted to have a negative influence on economic growth, whereas the majority of variables are likely to have a positive impact.

Table 1: Description and Measurements of Variables

Variables	Description	Measurement	Expected sign
LNRGDP	Real GDP	constant 2017 US\$	
LNCAPITAL	Capital Stock	% GDP	Positive
LNLABOR	Number of People Engaged	Share of population	Positive
FDI	Foreign Direct Investment, net Inflows	% GDP	Positive
REM	Remittances Inflows	%of GDP	Positive
HC	Human Capital	Human capital index	Positive
LNINSAV	Savings - Investment	%of GDP	Negative
LNIMEXP	Imports – Exports	%of GDP	Negative

Source: Author's calculations based on data provided

Model of econometrics

The econometric methods used to evaluate the long-term relationships between the variables under investigation are described in this section. Dynamic Ordinary Least Squares (DOLS) and Fully Modified Ordinary Least Squares (FMOLS) are two complementing techniques used in the analysis to provide solid and trustworthy outcomes. To ensure that good econometric methods are applied for the estimations, the methodology also involves preliminary unit root testing and cointegration analysis to

assess the stationarity of the variables and confirm the existence of long-run correlations. A parametric method for estimating long-term associations between integrated variable seven when those variables show varying integration orders the Dynamic OLS (DOLS) estimator was first presented by Stock and Watson (1993).

By including the variables' lags, it mitigates certain biases caused by simultaneousness and small samples (Kurozumi & Hayakawa 2009).

Asymptotically efficient and unbiased estimates are provided by DOLS, and its limitations aid in residual abnormalities and serial correlation correction (Herzer et al. 2006; Stock & Watson 1993).

The Dynamic OLS estimator can be derived through the following equation:

$$y_t = \alpha + bX_t + \sum_{i=-k}^{i=k} \theta_i \Delta X_{t+i} + \varepsilon_t$$

The FMOLS technique was also used to analyze the long-term correlations between the variables in order to support the findings of the DOLS model and address any potential flaws.

Even when the variables are I (1), suggesting first-order integration, the FMOLS approach, which was first devised by Phillips and Hansen (1990), is excellent at estimating cointegrating connections. Similar to DOLS, the FMOLS has the benefit of consistently producing findings, even when working with limited datasets. It successfully handles endogeneity, serial correlation problems, and possible measurement mistakes, guaranteeing the long-term dependability of the connection estimates (Agbola 2013; Bashier & Siam 2014).

The FMOLS estimator is represented as:

$$\hat{\theta}_{\text{FMOLS}} = \left(\sum_{t=1}^T Z_t Z_t' \right)^{-1} \left(\sum_{t=1}^T Z_t Y_t^+ - T \begin{bmatrix} \lambda_{12}^+ \\ 0 \end{bmatrix} \right)$$

Where Z_t denotes the cointegrating vector, capturing the equilibrium relationship among variables. The term $\sum_{t=1}^T Z_t Z_t'$ forms the covariance matrix of the independent variables, with its inverse scaling the estimates properly. The bias adjustments $\sum_{t=1}^T Z_t Y_t^+ - T \begin{bmatrix} \lambda_{12}^+ \\ 0 \end{bmatrix}$ address endogeneity and serial correlation by modifying the dependent variable Y_t^+ and the covariance term λ_{12}^+ .

The estimator is derived by minimising a weighted sum of squared residuals, where the weights are based on the long-run covariance matrix $\hat{\theta}$. After evaluating the variables' stationarity using unit root tests, we will proceed with cointegration tests to establish whether any long-term equilibrium relationships exist. The long-run parameters will then be assessed using DOLS and FMOLS techniques.

Results and discussions Unit root test When conducting empirical research based on time series, determining the stationarity of the variables is essential. This can be done by determining whether the variables have a stable mean, variance, and trend over time. Failure to test for stationarity risks a possibility of obtaining results that are not reliable. Augmented Dickey-Fuller (ADF) and Phillip-Perron tests are used in this regard.

Table 2: Unit Root Test at Level

Variable	Augmented Dickey-Fuller	Phillips-Perron
	Constant Constant & Trend	Constant Constant & Trend
LNRGDP	1.303 -2.285	-2.105 -3.087
LNCAPITAL	-1.7350.468	-1.517 2.202
LNLABOR	-2.157-1.594	-2.825* -1.143
FDI	-1.475 -2.832	-1.846 -3.218*
REM	0.363-1.545	-0.358 -2.183
HC	-0.950-2.401	-1.423 -1.523
LNSAVIN	-5.898*** -6.397***	-5.898***-6.397***
LNIMEXP	-1.542 -2.246	-1.613 -2.101

Notes: (***), (**), and (*) represent statistical significance at 1%, 5%, and 10% levels, respectively, indicating rejection of the null hypothesis of non-stationarity.

Table 3: Unit Root Test at First Difference

Variable	Augmented Dickey-Fuller	Phillips-Perron
	Constant Constant & Trend	Constant Constant & Trend
LNRGDP	-6.809*** -6.852***	-4.343*** -4.160***
LNCAPITAL	-0.707** -3.814**	-0.824** -2.104**
LNLABOR	-2.703** -3.451**	-0.734** -1.562**
FDI	-4.951** -4.882***	-7.638*** -7.569***
REM	-3.613*** -3.934**	-8.853*** -9.259***
HC	-3.161** -3.538**	-3.161** -4.143***
LNSAVIN	-11.519*** -11.375***	-11.519*** -11.375***
LNIMEXP	-5.947*** -6.565***	-7.127*** -7.570***

Notes: (***), (**), and (*) represent statistical significance at 1%, 5%, and 10% levels, respectively, indicating rejection of the null hypothesis of non-stationarity.

Tables 2 and 3 present the results of the unit root test in levels and the first differences of the Phillip-Perron and Augmented Dickey Fuller (ADF) tests, respectively. Since they were important to this investigation, trends and constants were incorporated into these tests. Only the log of the savings gap (LNSAVING), both with and without a trend component, contradicts the null hypothesis that a unit root is present, as seen by the data in Table 2.

Every other variable is not stationary. The null hypothesis of non-stationarity was rejected at the 5% significance level when unit root tests were performed on the first order differences of all variables, as shown in Table 3. This suggests that the series display integration at order one, I (1).

Test of cointegration, with the exception of the savings gap (LNSAVING), all variables exhibit non-stationarity in levels according to the unit root tests (ADF and Phillips Perron). Since stationarity is induced by first differencing, the series are primarily I(1), with LNSAVING being I(0).

The long run correlations were observed using the Autoregressive Distributed Lag (ARDL) bounds testing approach because of the mixed orders of integration. Despite short-term volatility, cointegration analysis finds long-term equilibrium relations for nonstationary time series (Studenmund 2006).

This method determines if variables, even in the face of short-term variations, show convergent behavior over long periods of time. The ARDL bounds test is used to check for cointegration when taking into account variables with different orders of integration. This method works especially well for examining correlations between variables that show varying degrees of stationarity.

Table 4: ARDL F-Bounds Cointegration Test

F-Bounds Test Null Hypothesis: No Levels Relationship		
Test Statistic	Value	Significance
F-Statistic	10.63039	10%
K	75%	2.033 1.3
	1%	2.32 3.5
		2.96 4.26

Source: Researcher's calculation using E-Views 12

As shown in Table 4 At all significance levels (10%, 5%, and 1%), the computed F statistic of the Autoregressive Distributed Lag (ARDL) bounds test surpasses the critical bounds. We reject the null hypothesis that there is no level link since the F statistic of 10.63039 is greater than the upper bound critical values (I(1)) at 1% of significance (4.26). Consequently, it is generally known that there is a long-term correlation between economic growth and independent variables. To reinforce this understanding, the study's model will be calculated appropriately.

Empirical Findings A regression analysis was carried out to determine the nature of the link after the cointegration test verified a long-term association between the variables for The Gambia. Because of their applicability to small sample sizes and their capacity to yield accurate long run parameter estimates irrespective of integration levels or the existence of cointegration, the DOLS and FMOLS procedures were employed. Their selection is further supported by the fact that these techniques are widely applied in many economic domains.

In addition, numerous studies have successfully used these techniques to analyze comparable or dissimilar interactions (Ramirez 2023; Khatir & Güvenek 2021; Refaei & Sameti 2015). Therefore, utilizing the dual-gap paradigm, DOLS and FMOLS were used in this study to examine the dynamic link between economic growth and foreign capital inflows during the years 1980–2023.

Table 5: Regression Results

VARIABLES	DOLS	FMOLS
LNCAPITAL	1.3862** (0.6233)	1.4722** (0.5640)
LNLABOR	-2.1791*** (0.7584)	-1.6304** (0.7019)
FDI	0.1264*** (0.0257)	0.1186*** (0.0231)
REM	0.0776*** (0.0190)	0.0709*** (0.0171)
HC	4.4635*** (1.2023)	3.8936*** (1.0837)
LNSAVIN	-0.0359 (0.0837)	-0.0304 (0.0761)
LNIMEXP	-0.3643** (0.1389)	-0.3276** (0.1257)

Notes: (***), (**), and (*) represent statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors are in parentheses. LNRGDP: Real GDP, LNCAPITAL: Capital Stock, LNLABOR: Labor, FDI: Foreign Direct Investment, REM: Remittance, HC: Human Capital, LNSAVIN: Savings Gap, and LNIMEXP: Foreign Exchange Gap.

Table 5 shows the outcomes of the FMOLS and DOLS calculations. At the 5% level, the LNCAPITAL coefficients for both DOLS (1.3862) and FMOLS (1.4722) are positive and significant, indicating that a rise in capital stock

supports growth in The Gambia. This result is in line with traditional growth theories, which postulate that increased capital accumulation investments encourage productive endeavors. These empirical research (Maksimova2024; Hejuan et al. 2018; Osundina & Osundina 2014; Syed et al. 2014) are also consistent with the study's findings. On the other hand, in both models, LNLABOR has a statistically significant negative effect on LNRGDP at the 1% and 5% levels. This inverse link highlights the prevalence of informal work, which accounts for 63% of the labor force in the Gambia, and raises the possibility of labor market inefficiencies, which would limit productivity. Economic growth and job creation have been negatively impacted by the limited shift of employment to higher productivity industries and businesses (World Bank, 2024). Indeed, when workers move to industries with higher productivity levels, economic growth and job creation are aided.

Therefore, the results highlight the need for labor market changes or improvements in labor quality in order to guarantee the growth of the Gambian economy. Both remittances (REM) and foreign direct investment (FDI) have large and beneficial effects on growth; at the 1% level, their coefficients range from 0.0709 to 0.0776 for REM and from 0.1186 to 0.1264 for FDI. The importance of foreign capital flows and the diaspora's contributions to the Gambian economy are emphasized by this. By starting operations, foreign companies can directly increase production and generate new jobs. and immediately increase output by starting operations and growing activities. Furthermore,

the Gambia can take use of the potential that foreign direct investment (FDI) offers to support wider economic expansion by cultivating an atmosphere that is conducive to business. The capital-augmenting hypothesis, which holds that outside funding enhances local savings and eases capital limitations in developing nations, is supported by this study. Additionally, it supports earlier findings (Orji et al. 2014; Hussain & Haque 2016; Sunde 2023). It also highlights how important remittances are to supporting The Gambia's growth, maybe by boosting household spending, investment, and financial inclusion. Similar findings were also made by Meyer & Shera (2017), Ceesay (2020), and Jallow (2023).

With significant coefficients of 4.4635 for DOLS and 3.8936 for FMOLS at the 1% level, human capital (HC) also stands up as a crucial component. This reaffirms how crucial skill development and education are to promoting economic progress in the Gambia. Given possible problems with domestic investment and trade imbalances, the negative coefficients for LNSAVIN and LNIMEXP imply that larger savings and foreign currency gaps are harmful to GDP growth. At the 5% level, the LNSAVIN coefficients are statistically insignificant despite being negative. This supports the notion that a wider disparity indicates a lack of domestic funds to fund investments, which could impede economic growth. With coefficients of 0.3643 for DOLS and 0.3276 for FMOLS, which are both significant at the 5% level, the foreign exchange gap (LNIMEXP), on the other hand, exhibits a considerable negative influence on growth. This implies that economic growth is hampered by larger trade imbalances or foreign exchange disparities. When imports outpace exports, the deficit widens and the nation experiences a lack of foreign exchange.

This shortage of foreign exchange may limit the importation of necessary supplies, machinery, and draw materials for companies to function and expand. The potential advantages of trade liberalization may be overshadowed by the underutilization of local resources and the failure of free trade to achieve both internal and external balance when growth is constrained by foreign exchange shortages. The Gambia can improve economic growth by reducing the foreign exchange gap and fostering a more favorable business climate.

CONCLUSION AND POLICY RECOMMENDATION

This study uses the dual gap approach to examine how foreign capital inflows impact economic growth in The Gambia. A key theoretical framework for understanding how developing economies deal with two basic constraints the savings investment gap and the foreign exchange gap was established by Chenery & Strout (1966) with their dual-gap model. According to this hypothesis, inflows of foreign capital can bridge these disparities and spur economic expansion. The Gambia's unique status as a tiny, open economy dealing with each of these gaps makes this study significant. Policymakers in the nation must comprehend how capital inflows and growth are related. The Economic Recovery Program (ERP), a comprehensive adjustment program intended to restore

financial stability and lay the groundwork for long-term economic recovery, was introduced by Gambian authorities in June 1985. The nation's growth performance has remained unstable in spite of these efforts. The research aims to provide empirical insights to guide policy decisions to improve the efficacy of capital inflows in promoting long-term economic development, as it is the first study to empirically examine these dynamics in The Gambia. This research is especially important for theoretical understanding and policy formulation since, although Sunde (2023) and Odhiambo (2022) have previously examined similar links in other countries, none of them expressly applied the dualgap paradigm to The Gambia. The contradictory findings in the body of current research also highlight how intricate the connection is between growth and capital inflows. Some research, like Tang & Bundhoo (2017) and Shahbaz & Rahman (2010), find negative effects of capital inflows on growth, while others, including Cazachevici et al. (2020) and Ehigiamusoe & Lean (2019), claim favorable results.

The dynamic and significant impact of capital stock on economic growth is consistent with traditional growth theories, highlighting the role that capital accumulation plays in promoting productive endeavors. Conversely, the negative correlation between labor and growth draws attention to important inefficiencies in the Gambian labor market, especially the prevalence of informal employment. To improve labor productivity and ease the transition to higher productivity industries, this necessitates focused policy initiatives. The analysis shows how crucial foreign investment has been to The Gambia's economic growth. Growth is strongly positively impacted by both FDI and remittances, indicating that methods to draw in foreign investment by creating a welcoming business environment and utilizing contributions from the diaspora may be a key factor in the nation's development. Another important factor influencing progress in The Gambia is human capital. Its substantial beneficial impact on GDP indicates that policies aimed at improving educational quality and accessibility, encouraging vocational training, and cultivating skill acquisition are essential for increasing productivity and supporting sustained economic growth. By giving human capital development first priority, The Gambia can produce a workforce that is more knowledgeable and flexible, better able to spur innovation and contribute significantly to the economy's overall competitiveness.

The difficulties of having insufficient foreign currency reserves are further highlighted by the detrimental effects of trade imbalances, which are mirrored in the foreign exchange deficit. By creating a diverse and export focused economy, this trade gap might be reduced while also assisting business operations and easing the burden of limited foreign exchange. Despite showing a negative impact on GDP, the savings gap seems to be negligible. It continues to highlight the necessity of stronger domestic savings systems to fund investments and promote a positive business climate for the economic growth of The Gambia. These results suggest that a diverse strategy addressing the important growth drivers highlighted in this study is necessary for a complete approach to economic development in The Gambia. In addition to creating an atmosphere that encourages remittance in flows—possibly through financial sector innovations and diaspora engagement initiatives—policymakers should prioritize luring foreign direct

investment through targeted incentives and regulatory reforms. In the same way, significant investments in education and skill development programs should be made in order to improve the accumulation of both human and physical capital.

It is also critical to address fundamental labor market inefficiencies, maybe through formalization plans, labor market reforms, and programs that help people move from low wage to higher productivity industries. Furthermore, reducing trade imbalances requires careful management of the foreign exchange gap, perhaps through import control procedures and export promotion plans. By putting these policy initiatives into practice, The Gambia will be able to develop a more robust and dynamic economic ecosystem that supports inclusive and long-term growth trajectories.

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