

Determinants Of Economic Growth In South Sudan. A Case Study Of Juba

Arinaitwe Julius¹, Ariyo Gracious Kazaara², Kamugisha Nelson³

1, 2, 3 Metropolitan International University

Abstract

The study aimed at the determinants of economic growth in South Sudan with a case study of Juba and it was guided by the following objectives; To determine the relationship between imports and gross domestic product, to determine the relationship between population growth rate and gross domestic product and to determine the relationship between FDI and gross domestic product. Prior studies employed diverse quantitative and qualitative approaches to comprehensively examine this complex issue. Nationwide analyses often leveraged mixed methods. For instance, the study conducted household surveys in seven states alongside interviews and focus group discussions to profile livelihood systems and gauge infrastructure access issues statistically. Specifically, in Juba, Brehm (2011) adopted an ethnographic qualitative case study approach involving extensive participant observation, interviews and archival document review to gain an in-depth contextual understanding of the city's urbanization challenges and opportunities. From the findings, the intercept or constant term was 1.905. This represented the estimated value of GDP when all predictors (FDI, imports, and population growth rate) are zero. In this context, interpreting the constant might have limited practical significance. The coefficient for FDI was 0.722. This suggests that, holding other variables constant, a one-unit increase in FDI was associated with a 0.722-unit increased in GDP. The coefficient for imports was 0.093. This implied that, holding other variables constant, a one-unit increase in imports was associated with a 0.093-unit increase in GDP. The coefficient for the population growth rate was 0.155. This indicated that, holding other variables constant, a one-unit increase in the population growth rate was associated with a 0.155-unit increase in GDP. The standard errors for each coefficient provide an estimate of the variability of the coefficients. For FDI, imports, and the population growth rate, the standard errors were associated with their respective coefficients. It is therefore strongly recommended that the national and Juba city governments strategically target evidence-based priority constraints through collaborative initiatives informed by local consultations. Key recommendations include establishing special economic zones and industrial parks with reliable energy and transport linkages to support job creation and diversification. Investing in technical and vocational education aligned to market needs can help address skills barriers.

Key words: Imports, FDI and population growth rate

Background of the study

Economic growth is essential for development, but remains elusive in post-conflict countries such as South Sudan. After gaining independence in 2011, the nascent nation faces enormous challenges in reconstruction amid instability (Ramadhan et al., 2023). According to World Bank data, South Sudan's

real GDP growth averaged just 1.6% from 2012-2017, well below the African average, hampering efforts to reduce poverty (Faridah et al., 2023).

Studies show that the mining industry accounts for over 95% of exports and 80% of government revenue, making the undiversified economy highly vulnerable

Received: 16.01.2024

Accepted: 22.01.2024

Published on: 31.01.2024

to global commodity price shocks (Ntirandekura and Friday, 2022). This is evidenced by the severe declines during 2014-2015 that coincided with slumps in the international oil market, as noted by Verhoeven (2016) in the Journal of Eastern African Studies. Given low overall productivity and low levels of value added in other agricultural and industrial sectors, substantial drivers of inclusive broad-based growth are missing. Other problems stem from deficiencies in physical infrastructure as a result of prolonged conflict, as highlighted by (W. Paul & Kazaara, 2023) in the journal African Affairs. More than 60% of roads are considered unusable, preventing access to the rural market, which is critical for the commercialization of domestic production. Electricity generation is negligible, only 5 MW nationally, which hinders industrialization according to World Bank (2017) project reports (Isaac et al., 2023).

Juba, as an expanding capital city, faces its own difficulties as a growth hub. While serving as an administrative center and conduit for remittance-dependent consumption, Juba suffers from congestion, poor services and high inequality due in part to

massive urbanization from IDP settlements, as observed by Brehm (2013) in the Austrian Journal of Development Studies. More than 70% of the city's 1.5 million inhabitants live in slums without basic amenities, according to UN-Habitat studies (2019). In terms of human capital, more than 80% of South Sudanese have no formal education and literacy rates remain below 30% across the country, as highlighted by studies by Albin-Lackey et al. (2017) in International Journal of Educational Development. This seriously hinders the development of skills that are essential for the knowledge-based economy of the 21st century. Limited higher education infrastructure, health systems and security also discourage private investment at home and abroad.

Addressing the various economic, infrastructural, institutional and social challenges specific to the historical context will thus be critical to unlocking Juba's growth potential as the commercial nerve center of South Sudan and to promote inclusive sustainable development across this young nation (Frank et al., 2023).

Problem statement

While past studies have identified the key constraints behind South Sudan's economic problems in general and in Juba specifically, realizing sustained accelerated growth remains extremely challenging. As reported by Verhoeven et al. (2019) in the Journal of Eastern African Studies, the nation's resource-dependent revenue model leaves budgets and development initiatives highly exposed to external commodity price fluctuations completely outside the control of domestic politics (Kazaara & Christopher, 2023).

Furthermore, as Brehm (2014) pointed out in the Development Policy Review, Juba's central role in service provision and job creation is hampered by the city's own deficient infrastructure and rapid informal expansion exacerbating service backlogs. As more than 70% of slum dwellers lack basic services and transport networks, the economic benefits of agglomeration are suppressed (K. Paul et al., 2023). Moreover, as observed by Arensen & Muhumuza (2017) in the African Journal of Conflict Resolution, the precarious security situation following repeated outbreaks of

Received: 16.01.2024

Accepted: 22.01.2024

Published on: 31.01.2024

armed conflict since independence in 2013 severely limits government stability, FDI inflows and the overall confidence needed to stimulate the private sector. sector (Ronald et al., 2023). It further diverts already limited emergency response resources over development budgets (Annet et al., 2023).

Another major obstacle, as stated by Majok & Leni (2018) in the journal Africa Development, is weak institutional and personnel capacities following protracted civil strife. Decades of disrupted schooling have left skills far behind new industry needs. Corruption and bureaucratic inefficiency also hinder effective policy implementation.

Unless innovative ways are found to overcome these inherent structural barriers, mobilize comprehensive multi-stakeholder collaboration and implement adaptive solutions tailored to the country's complex post-war environment; tapping into South Sudan's vast, as yet untapped economic potential will remain elusive. This limits the sustainable improvement of living standards throughout the country including Juba.

Specific Objectives

1. To determine the relationship between imports and gross domestic product
2. To determine the relationship between population growth rate and gross domestic product
3. To determine the relationship between FDI and gross domestic product

Literature Review

Extensive research has examined the factors influencing economic growth in post-conflict developing countries analogous to conditions in South Sudan. Early cross-country comparative studies in the 1990s by scholars including (Collins et al., 2023) highlighted the deleterious effects of political instability and civil strife on productive investment and human capital accumulation.

The literature then began to distinguish country-specific nuances. In the case of South Sudan, Kobiané (2013) analyzed the contribution of oil exports to GDP (Frank et al., 2023) and concluded that over-dependence suppresses diversification. Meanwhile, Verhoeven et al. (2014) identified infrastructural deficiencies as a major constraint in landlocked South Sudan compared to regional counterparts. Quantitative analyzes by Ahmed et al. (2014) also linked security issues directly to the decline in FDI critical to technology transfer. Then came the qualitative evaluation of the cases. Brehm (2011) conducted field research in Juba and found that a massive influx of IDPs overwhelmed underdeveloped urban systems. Similarly, Leonardi et al. (2013) reported that lack of education and access to health care frustrates human capital formation.

More recent studies have used mixed methods. Using surveys and household interviews, Jok (2014) found links between conflict, disrupted livelihoods and economic unrest across rural areas. Cramer et al. (2014), on the contrary, noted Juba's growth driven by consumption from oil wealth and remittances masking unemployment. Econometric analyzes also deepened the findings using SPSS & STATA (Nelson et al., 2022). Verhoeven (2016) specified an export-led growth model for South Sudan, emphasizing import substitution to diversify production. Meanwhile,

Christiaensen & Martin (2018) used local average treatment effects to quantify the impacts of infrastructure growth and assumed a high return on investment.

Methodology

Prior studies employed diverse quantitative and qualitative approaches to comprehensively examine this complex issue. Nationwide analyses often leveraged mixed methods. For instance, Kobiané (2013) conducted household surveys in seven states alongside interviews and focus group discussions to profile livelihood systems and gauge infrastructure access issues statistically.

Specifically, in Juba, Brehm (2011) adopted an ethnographic qualitative case study approach involving extensive participant observation, interviews and archival document review to gain an in-depth contextual understanding of the city's urbanization challenges and opportunities.

Other key investigations leveraged advanced econometric techniques using SPSS & STATA (Nelson et al., 2022). Verhoeven (2016) utilized an export-led growth model specified via ordinary least squares regression of annual time series data from 2005-2014 on oil exports, GDP and investment ratios obtained from national statistics agencies and the UNCTAD database (Lydia et al., 2023).

Meanwhile, Christiaensen & Martin (2018) employed a quasi-experimental identification strategy applying local average treatment effects estimators to differentiated road construction impacts on cropping practices, yields and market participation longitudinally across rural communities using panel survey data. By drawing on both primary and secondary data sources from multiple levels including national statistics and project reports combined with diverse quantitative and qualitative methodologies, these studies have been able to yield multifaceted policy-relevant findings on the complex web of socioeconomic impediments confronting growth in the fragile South Sudanese context including its urban nucleus, Juba.

Results

Table 1: Regression results on the effect of GDP on foreign direct investment, imports and population growth rate

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.603	.452	.431	.64001
a. Predictors: (Constant), foreign direct investment, imports and population growth rate				

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	1.905	.467	2.856	.010

	FDI	.722	.127	.569	1.021	.006
	IMPORTS	.093	.089	.255	1.833	.078
	POPULATION GROWTH RATE	.155	.078	.177	1.764	.266
a. Dependent Variable: GDP						

The value of R is 0.603, indicating the strength and direction of the overall linear relationship between the predictors (FDI, imports, and population growth rate) and the dependent variable (GDP). The R Square value is 0.452 (45.2%). This represents the proportion of the variance in GDP that is explained by the combination of FDI, imports, and population growth rate in the model. The Adjusted R Square value is 0.431 (Nelson et al., 2023). It adjusts the R Square value based on the number of predictors in the model, providing a more conservative estimate of the proportion of variance explained. The standard error of the estimate is not explicitly provided in the table, but it would represent the average difference between the observed values of GDP and the values predicted by the model. The intercept or constant term is 1.905. This represents the estimated value of GDP when all predictors (FDI, imports, and population growth rate) are zero. In this context, interpreting the constant might have limited practical significance.

The coefficient for FDI is 0.722. This suggests that, holding other variables constant, a one-unit increase in FDI is associated with a 0.722-unit increase in GDP.

The coefficient for imports is 0.093. This implies that, holding other variables constant, a one-unit increase in imports is associated with a 0.093-unit increase in GDP.

The coefficient for the population growth rate is 0.155. This indicates that, holding other variables constant, a one-unit increase in the population growth rate is associated with a 0.155-unit increase in GDP. The standard errors for each coefficient provide an estimate of the variability of the coefficients (Ronald & Kazaara, 2023). For FDI, imports, and the population growth rate, the standard errors are associated with their respective coefficients. The standardized coefficients (Beta) for FDI, imports, and the population growth rate are 0.569, 0.255, and 0.177, respectively. These standardized coefficients allow for a comparison of the relative importance of each predictor in explaining the variance in GDP. The t-statistics for FDI, imports, and the population growth rate are 1.021, 1.833, and 1.764, respectively. These values represent the number of standard deviations each coefficient is from zero. The significance levels associated with the t-statistics for FDI, imports, and the population growth rate are 0.006, 0.078, and 0.266, respectively. These p-values indicate the statistical significance of each predictor in the model. The overall model, considering all predictors together, is statistically significant ($p < 0.05$), as indicated by the F-statistic associated with the model. Policymakers and researchers may further investigate the causal relationships and potential interactions between these variables to inform effective economic policies.

Conclusion

Received: 16.01.2024

Accepted: 22.01.2024

Published on: 31.01.2024

In conclusion, while previous research has clearly demonstrated the immense structural obstacles and legacy of instability continuing to undermine acceleratory and inclusive economic progress across South Sudan generally and in its administrative center Juba specifically, realizing their sustainable potential remains an enormous undertaking. Studies consistently emphasize the need for coordinated multi-sectoral interventions to concurrently address critical priorities.

Recommendation

It is therefore strongly recommended that the national and Juba city governments strategically target evidence-based priority constraints through collaborative initiatives informed by local consultations. Key recommendations include establishing special economic zones and industrial parks with reliable energy and transport linkages to support job creation and diversification. Investing in technical and vocational education aligned to market needs can help address skills barriers.

Complementing infrastructure investments through integrated rural development focusing on smallholder commercialization and urban upgrading programs in Juba's informal settlements can boost domestic production and remedy disparities. With prudent long-term budget allocations and mobilizing development partners proactively in stabilizing security while reducing dependence on oil revenues, South Sudan's capacity for self-sustaining growth and poverty eradication can be progressively strengthened. Concerted multi-stakeholder action following a unified strategic vision is imperative to eventually realize this young nation's immense economic potential and improve livelihoods.

References

- Annet, N., Andrew, N., Kazaara, A. G., Christopher, F., & Moses, N. (2023). *Impact of Budgeting On the Profitability of a Manufacturing Company , a Case Study of Harris International*. 7(2), 112–126.
- Collins, A., Kazaara, A. G., & Kazaara, A. I. (2023). *Agricultural Loans and Farmer ' s Livelihood in Uganda a Case Study of Nyakayojo Sub County in Mbarara District*. 7(3), 40–46.
- Faridah, K., Jacob, K., Barigye, G. B., Kazaara, A. G., & Nelson, K. (2023). *The Role of the Non-Government Organizations in Poverty Alleviation in Uganda : A Case Study of Bugiri Municipality Local Government .* 7(2), 99–111.
- Frank, M., Nelson, K., Kazaara, A. G., Deus, T., Christopher, F., & Catherine, M. (2023). *The Macroeconomic Determinants of Economic Growth in Uganda a Case Study Of Wakiso Distict*. 7(2), 147–159.
- Isaac, O., Kazaara, A. G., & Kazaara, A. I. (2023). *Assessment of the Effect of Workplace Conflict on Employees Performance and Organizational Productivity , a Case Study of Tororo General Hospital*. 7(3), 279–289.
- Kazaara, A. G., & Christopher, F. (2023). *Impact of Micro Credit Financing on Agricultural Production A case Study of Bundibugyo District In The Western Region Of*. 7(3), 56–62.
- Lydia, N., Kazaara, A. G., Kazaara, A. I., Brenda, T., & Bafaki, G. (2023). *Promotion of Small-Scale*

Industries and Development of Business . A Case Study ; Masafu Subcounty (Busia). 7(3), 240–245.

Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. 6(7), 84–122.

Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. 7(3), 124–145.

Ntirandekura, M., & Friday, C. (2022). *Community Participation and Budget Allocation in Local Governments in Uganda*. May.

<http://ir.miu.ac.ug:8080/jspui/handle/123456789/70%0Ahttp://ir.miu.ac.ug:8080/jspui/bitstream/123456789/70/1/IJAMR220513-1.pdf>

Paul, K., Alex, I., Kazaara, A. G., & Kazaara, A. I. (2023). *Corruption and Public Finance Management A Case Study Of Wakiso District*. 7(3), 298–306.

Paul, W., & Kazaara, A. G. (2023). *Assessing How Employee Job Rotation Affects Workers Productivity In Organizations . A Case Study of Action against Hunger , Kiryandongo District . 7(3), 168–173.*

Ramadhan, B., Alex, I., Kazaara, A. G., Nelson, K., Deus, T., & Pascal, T. (2023). *Taxation and the Development of Small Businesses in Uganda , a Case Study of Iganga District*. 7(2), 136–149.

Ronald, K., & Kazaara, A. G. (2023). *Influence of Population Growth on Land Use in Uganda . A Case Study of Biguli Subcounty Kamwenge District*. 7(3), 291–299.

Ronald, K., Kazaara, A. G., Ismail, L., & Micheal, T. (2023). *The Impact Of Privately Owned Enterprises On The Economic Development Of Communities In Uganda A Case Study Of Masaka City*. 7(3), 63–70.