

## EXPLORING THE EFFECTS OF INTERNATIONAL FINANCIAL LINKAGES ON ECONOMIC STABILITY AND EXPANSION

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### Abstract

*Expansion and economic development are habitually used to depict financial or cost stability as well as economic stability. Like previous hypothetical and observational studies, this one investigates how FDI affects the host country's economic development. The PMG/ARDL model has received little attention in previous experimental research, despite its practical benefit in analyzing the short- and long-term effects of FDI. Here we take a look at how FDI has impacted the GDP growth of nations in Sub-Saharan Africa. Panel data from 10 countries in Sub-Saharan Africa were analyzed from 2000 to 2020. Utilizing the PMG/ARDL model, the impact of FDI on economic development was examined both in the short and long term. We used the panel unit root test and panel cointegration test to enhance the model's evaluation. The results demonstrate that FDI has a positive and substantial influence in the long run, even though it is quantitatively insignificant in the near term. Foreign direct investment fosters supported economic development, according to the study's findings. Therefore, Sub-Saharan African countries should prioritize attracting FDI.*

**Keywords:** *Financial Linkages, Economic Stability, Economic Growth, PMG/ARDL Model, Africa, Foreign Direct Investment.*

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## 1. INTRODUCTION

Should the quest for financial stability be a strategy objective? Is it conceivable to seek after the objective of financial stability notwithstanding more conventional approach targets like money related and economic stability, which are much of the time characterized concerning expansion of total costs and economic development, separately? Does financial stability adversely affect conditions for expansion and development? Will Gross domestic product and expansion be diversely influenced by financial stability across more limited and medium-longer time skylines? Does the proficiency of the money related transmission instrument rely upon the condition of the financial framework? One significant discussion with respect to the pre-emergency time frame is whether banks' expanded gamble taking was supported by the low money related strategy rates.

Following the line of economic emergencies that have happened during the last part of the 1990s, especially the Asian Emergency and the later Worldwide Emergency, these strategy issues have been the subject of huge thought by financial experts and specialists. A huge group of writing with a scope of perspectives on the point has emerged during the time spent attempting to track down replies to these strategy issues. Riskless resources become less engaging when transient loan costs are low, and this could prompt a yield mission, especially by financial establishments with brief time frame skylines. Low transient loan fees may therefore empower risk-taking more than low long haul financing costs in light of the fact that to intense organization troubles in banks and a dependence on momentary getting. It is generally recognized that there is nobody right definition for financial stability, rather than money related and economic stability.

However, the shortfall of an agreement perspective hasn't prevented business analysts from figuring out the financial stability objective. Business analysts have leaned toward down to earth concerns, drawing illustrations from the contortions to genuine areas across the nations as far as potential creation misfortune and authentic joblessness associated with financial instability all through the emergency periods. Considering this, the objective of financial stability is looked for fully supported by powerful, strong, and stable establishments, compelling and serious business sectors, and productive financial estimating perspectives. Financial foundations are currently dependent upon a stricter administrative system following the worldwide emergency, which is as

per global guidelines like the Basel prudential guidelines in regards to CAMEL markers. It's fascinating to take note of that few issues have emerged with the Basel prudential guidelines since their foundation in the last part of the 1980s. The favourable to cyclicity of bank markers, or the commonly supporting input between the financial framework and the genuine economy that can irritate financial and business cycles, has drawn consideration from Borio et al. Various insightful works have fought that the administrative construction that originated before the worldwide financial emergency was deficient on the grounds that it was dominantly cantered around "macroprudential" measures, which were planned to turn away the costly breakdown of individual financial establishments.

To safeguard the financial framework in general, it was suggested that the administrative system focus on a "macroprudential" move toward in this specific situation. Thus, the IMF made the Financial Sufficiency Pointers structure, which consolidates macroeconomic, financial market, and totalled miniature prudential pointers. With an emphasis on fundamental gamble and stability, the new Basel III system has embraced a macroprudential approach directly following the emergency. The new administrative structure has started a lot of conversation. It is recommended in many spots that Basel III's fixing of the administrative structure — which incorporates expanded necessities for capital, liquidity, and different elements — could undermine macroeconomic stability. Inside this system, research has recognized that macroeconomic obstructions might differ across arising and industrialized countries because of aberrations in their financial and economic structures. Consequently, trying to give a summed-up perspective on the point, exact exploration has duplicated, focusing on cross-public encounters and public settings.

### **1.1.Objectives of the Study**

- To concentrate on what foreign direct investment means for Sub-Saharan African economies.
- To use panel co-reconciliation and panel unit root tests to determine the factors' long-term relationship.

## **2. LITERATURE REVIEW**

**Batuo, M. (2018)** embraced a review to break down the linkages between economic development, financial turn of events, financial progression, and financial instability in 41 African nations all through the timeframe traversing from 1985 to 2010. The information recommend that the presence of financial turn of events and financial progression decidedly affects the instability of the financial framework. This is the end that can be drawn from the discoveries. Furthermore, the discoveries recommend that economic development diminishingly affects financial instability, with the extent of this decrease being more noteworthy during the pre-advancement time frame in contrasted with the post-progression time frame.

**Mjojo, A. (2021)** An examination on three key inquiries was completed by him. The following are the issues that are tended to in this article: (I) as to the macroeconomic linkages with regards to Sub-Saharan Africa, is there a relationship in the drawn out between genuine economic turn of events and the chose financial factors of credit to Gross domestic product, bank loaning store spread, and securities exchange costs? Does this relationship exist? (ii) What sort of an effect does the shock that was achieved by the permission of Skillet African Banks have on the stability of the homegrown financial area in the Southern African Republic? What sort of an effect does the shock that was achieved by the political business cycle have on the stability of the financial foundations in the sub-Saharan African area?

**Wu, S. (2023)** saw that as upstream-downstream group ties bring about a drop in the expansionary passages made by worldwide endeavours into a foreign country. Then again, downstream-upstream linkages lead to an expansion in expansionary sections. The way that organizations and groups are attached to each other negatively affects the ties that are getting looked at. Our exploration likewise exhibits that the expansionary section of worldwide organizations decidedly affects their presentation, with the impact being diminished by the institutional settings of the nations in which they work. This is the sort of thing that we found through our exploration. By considering the unique relationship that exists between endeavours, groups, and organizations, the discoveries of this examination lead to a more intensive comprehension of the mind-boggling nature of worldwide creation organizations. Basically, this exploration was directed to research the connection between these three substances.

**Turner, G. (2015)** depicted the immediate courses that the Australian financial framework uses to interface with worldwide business sectors and the subsequent impacts on monetary soundness. To begin with, the huge Australian-possessed banks actually own a sizable measure of unfamiliar resources, like significant openings to New Zealand and the quickly growing Asian market as of late. Second, while post-emergency monetary record changes ought to fortify banks' strength to expected future shocks in the worldwide subsidizing market, Australian banks actually reserve a piece of their nearby exercises abroad. Third, worldwide saves money with tasks in Australia have the influence to influence monetary security despite the fact that they hold an extremely unassuming piece of the business banking area. This paper was given in a prior variant at the twentieth Melbourne Cash and Money Gathering.

**Nasir, M. A. (2015)** provided a new perspective on the problems of financial instability and stability, with a focus on economic growth and price stability in particular. This research aimed to build a vector error correction model that included an incentive reaction capacity evaluation in order to conduct an accurate assessment of six pillars of financial stability using an informational index for the UK spanning from 1985 (Q1) to 2008 (Q2). The findings highlighted significant strengths for a non-emergency system's financial and economic stability. Some of the points covered were the following: the strengths of the securities exchange in relation to the real economy, the fact that expansion does not contribute to real economic development, the economy's responsiveness to yields, the positive role of credit creation within a non-emergency system, the impact of swapping scale appreciation on purchasing power, and the expected marks of linkage between sovereign obligation movement and general cost levels.

**Samour, A. (2022)** announced the UAE has not analysed the impacts of financial turn of events, economic development, and FDI on sustainable power utilization. The new method of bootstrap autoregressive dispersed slack and Granger causality examination are utilized to analyse the long- and transient connections between economic development, FDI, financial turn of events, and environmentally friendly power utilization in the UAE from 1989 to 2019. The paper presents its vital discoveries and strategy suggestions for UAE policymakers utilizing assessing techniques. This study demonstrates the way that financial turn of events, FDI, and economic development

can help UAE sustainable power use. Accordingly, financial advancement in the UAE is important to keep away from financial dangers that undermine financial market stability and the REC. For feasible energy improvement in the UAE, authorities ought to advance green money and increment financing for environmentally friendly power energy advancements.

**Dhal, S. (2011)** utilized a vector auto-relapse model including yield, expansion, financing costs, and a financial area stability record. Capital sufficiency, resource quality, the board effectiveness, income, and liquidity factors structure the financial stability record. Financial stability and macroeconomic records like creation, expansion, and loan fees have a genuinely critical bi-directional Granger block causal connection, as per our exact review. The drive reaction capability of the VAR model gives captivating perspectives. Financial stability, development, and expansion might be connected medium-term. Second, financial stability might prompt more grounded development, gentler loan fees, and less danger to cost stability in the medium to long haul. Third, economic stability or result development can support financial stability. Fourth, expansion or value instability could hurt financial stability. Fifth, financial stability works on money related transmission. At long last, financial stability could help creation development and lower expansion.

### **3. RESEARCH METHODOLOGY**

#### **3.1. Data type and source**

The appraisal involved adjusted board information from 10 nations in Sub-Saharan Africa from 2000 to 2020. Everything was given from the World Progression Marker 2021 informational collection. Factors relating to the accessibility of information were thought about while choosing these 10 Sub-Saharan African countries; those without exhaustive information on important variables were barred from the examination. This rundown incorporates the accompanying nations: Côte d'Ivoire, Guinea-Bissau, Eswatini, Gabon, South Africa. Additionally, different nations that have been completely analyzed in this exploration incorporate Rwanda, Senegal, Sudan, Sierra Leone, and Madagascar.

#### **3.2.Data Analysis and Specification of Model**

As indicated by this examination, exchange transparency, populace development, gross capital creation, settlement inflows, and foreign direct investment all impact Gross domestic product per capita development. The ARDL model utilizes mean gathering, dynamic fixed impact, and pooled mean gathering assessors. The PMG/ARDL model, which Pesaran et al. proposed, was utilized in the study. This model was picked in light of the fact that it fits well with the informational index that was utilized for the examination. While considering bunch contrasts in mistake differences and short-run coefficients, the pooled mean gathering assessor expects that long-run coefficients are something very similar. Its viable advantage lies in its capacity to yield information for the short-run elements of some random nation, considering the amount of time-series perceptions accessible for each occurrence.

Regardless, to determine if MG, DFE, and PMG are significantly different, the Hausman test should be used. After that, the research used the Hausman test to choose the right assessor.

$$y_{it} = \sum_{j=1}^p \gamma_{ij} y_{i,t-j} + \sum_{j=0}^q \beta'_{ij} X_{i,t-j} + \mu_i + \varepsilon_{it} \quad (1)$$

Assuming I is the nation (I = 1,2,3..... N) and t is the time (t = 1,2,3..... T);  $X_{it}$  (k x 1) is the logical variable vector of Gathering I.  $\mu_i$  is the correct impact.  $\gamma_{ij}$  is the scalar that addresses the coefficients of the slack ward variable.  $\beta_{ij}$  are the k x 1 coefficient vectors.  $\varepsilon_{it}$  is the mistake term. The following is a way to express the error correction model for the re-defined ARDL (p, q, q..... q):

$$\Delta y_{it} = [y_{i,t-1} - \lambda'_i X_{i,t}] + \sum_{j=1}^{p-1} \gamma_{ij} \Delta y_{i,t-j} + \sum_{j=0}^{q-1} \beta'_{ij} \Delta X_{i,t-j} + \mu_i + \varepsilon_{it} \quad (2)$$

within this context, y represents the GDP per capita growth rate, X is a set of rational variables (such as population development, exchange transparency, FDI, etc.), and  $\theta_i$  is the coefficient of the change rate according to the long-term  $\lambda'_i$ ; handle the set of long-term relationships; the

blunder rectification term is  $[y_{i,t-1} - \lambda'_i X_{i,t}]$ , and the short-run dynamic coefficients are  $\gamma_{ij}$  and  $\beta'_{ij}$ .

#### 4. DATA ANALYSIS

The end aim of this research was to investigate the relationship between FDI, gross capital arrangement, and the growth of GDP per capita as independent variables, exchange receptiveness, settlement inflows, and populace development. Depictions of the factors, estimations, and the signs that are expected are displayed in Table 1.

**Table 1:** Variable, estimations, anticipated signs, and depictions

Variables	Depictions	Estimations	Anticipated Signs
Gdppdr	Gross domestic product per capital development rate	%	
Fdi	Foreign direct investment	% of GDP	+
Gca	Gross capital arrangement	% of GDP	+
Exreness	Exchange receptiveness	% of GDP	+
Setin	Settlement inflows	% of GDP	+
Popd	Populace development	%	-

##### 4.1. Root test of Panel unit

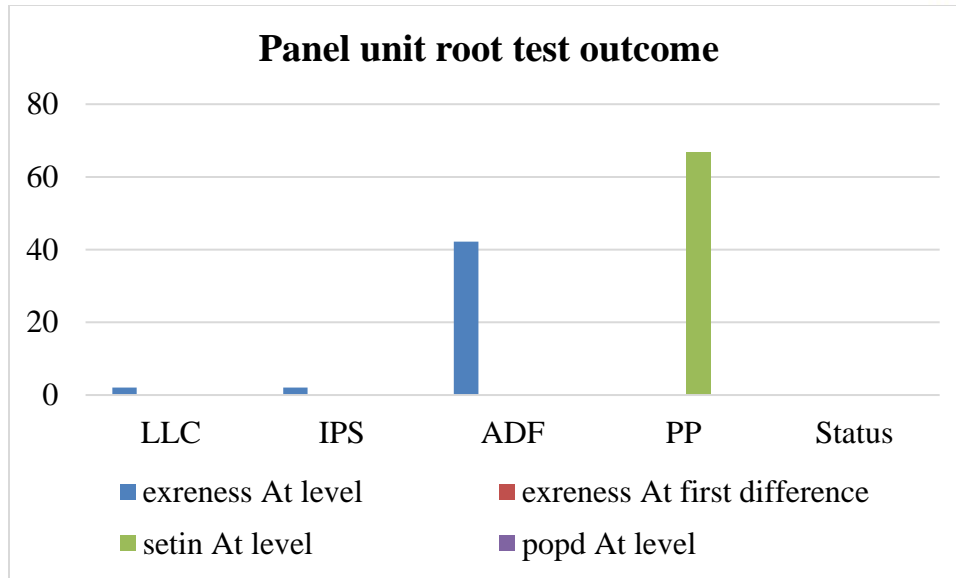
Panel unit root trial Before conducting the experimental assessment, it is crucial to determine if the factors that are included are fixed. In order to use the PMG/ARDL assessment, factors should



be consistent at I(0) and I(1), but not at I(2) and higher, according to Pesaran et al. This examination used the following tests: Levin, Lin, and Chu; and the Expanded Dickey Fuller, Phillip-Perron, Im, Pesaran, and Shin. Table 2 demonstrates that all factors are fixed at level, except for exchange receptiveness. Along these lines, I(0) addresses Gross domestic product per capita development rate, gross capital arrangement, settlement inflows, and populace increment. Exchange receptiveness, in any case, stays steady at the principal contrast. The results of all LLC, IPS, ADF, and PP components demonstrate that exchange receptiveness is fixed at initial contrast. It is possible to evaluate the PMG/ARDL Model with all parameters set to I(0) and I (1).

**Table 2:** Panel unit root test outcome

Variables	Test	LLC	IPS	ADF	PP	Status
gdppdr	At level	7.28***	09.55***	200.052***	353.45***	I (0)
fdi	At level	2.17***	4.86***	90.05**	152.03***	I (0)
gca	At level	3.70***	2.34***	84.27***	100.84***	I (0)
exreiness	At level	2.10	2.10	42.202	62.77**	I (1)
exreiness	At first difference	8.21***	12.75***	260.48**	514.18***	
setin	At level	3.80***	1.35***	82,79	66.84	I (0)
popd	At level	11.68***	13.10***	269.09***	100.22***	I (0)



**Figure 1:** Panel unit root test outcome

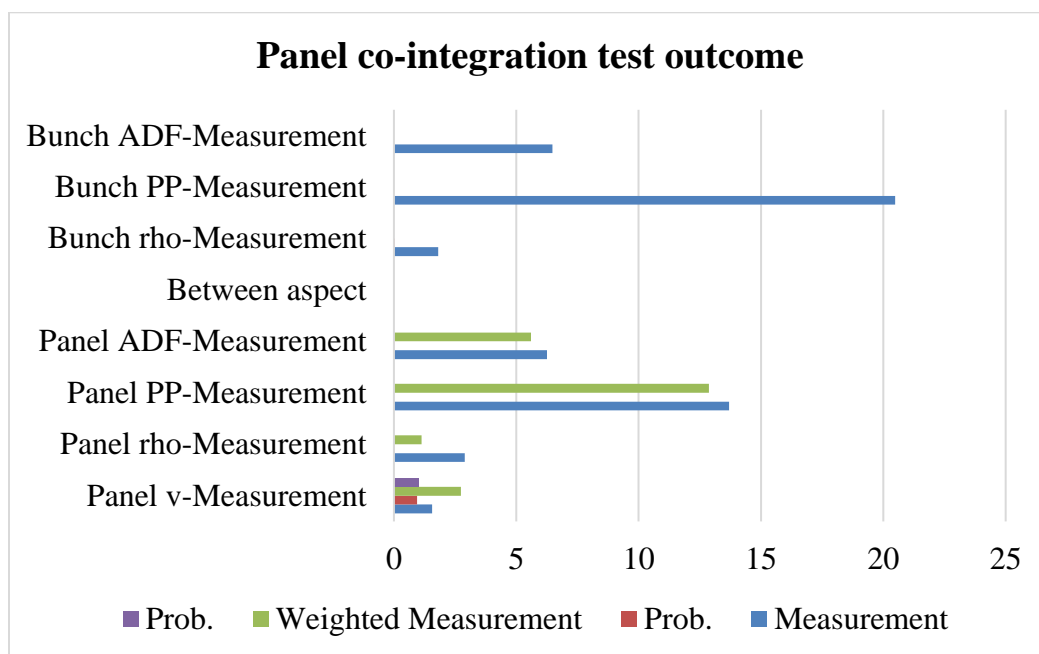
#### 4.2.Co-integration test of Panel

In order to determine if the elements are related in the long run, the panel co-joining test is useful. Most of the outcomes, both inside and across angles, are huge, as displayed in Table 3, which dismisses the misleading speculation. Thus, the Pedroni co-reconciliation test uncovers a drawn-out connection between factors.

**Table 3:** Results from a panel co-integration test

Tests	Measurement	Prob.	Weighted Measurement	Prob.
<b>Inside aspect</b>				
Panel v-Measurement	1.557	0.9402	2.733	0.997
Panel rho-Measurement	2.895	0.0017	1.124	0.015**
Panel PP-Measurement	13.697	0.0000	12.875	0.0000
Panel ADF-Measurement	6.250	0.0001	5.608	0,0000***

Between aspect			
Bunch rho-Measurement	1.807	0.0350	
Bunch PP-Measurement	20.478	0.0000	
Bunch ADF-Measurement	6.472	0.0000	



**Figure 2:** Panel co-integration test outcome

## 5. CONCLUSION

This research looked at the impact of FDI on the economic development of countries in sub-Saharan Africa. The assessment used modified panel data from 10 countries in Sub-Saharan Africa from 2000 to 2020. The research used the pooled mean gathering assessor to measure the ARDL model because it considers the examination of both the short- and long-term consequences of FDI on economic development. The research employed panel unit root and panel co-mix tests independently to verify the factors' stationarity and the factors' long-term association. Furthermore, there is positive factual importance to exchange receptivity and gross capital development over the

long term. Developments in population, openness to exchange, FDI, gross capital creation, and settlement inflows are currently not meaningful in a quantifiable way. After that, the research concludes that FDI could eventually have a beneficial and substantial impact, but only in the long run.

## REFERENCES

1. Alfaro, L. (2003). *Foreign direct investment and growth: Does the sector matter*. Harvard Business School, 2003, 1-31.
2. Batuo, M., Mlambo, K., & Asongu, S. (2018). *Linkages between financial development, financial instability, financial liberalisation and economic growth in Africa*. *Research in International Business and Finance*, 45, 168-179.
3. Berik, G., Rodgers, Y. V. D. M., & Seguino, S. (2009). *Feminist economics of inequality, development, and growth*. *Feminist economics*, 15(3), 1-33.
4. Dhal, S., Kumar, P., & Ansari, J. (2011). *Financial stability, economic growth, inflation and monetary policy linkages in India: An empirical reflection*. *Reserve Bank of India Occasional Papers*, 32(3), 1-35.
5. Ferguson, R. W. (2007). *International financial stability (No. 9)*. Centre for Economic Policy Research.
6. Fernandes, M., & Samputra, P. L. (2022). *Exploring linkages between food security and economic growth: a Systematic mapping literature review*. *Slovak Journal of Food Sciences*, 16.
7. Ijaz, S., Hassan, A., Tarazi, A., & Fraz, A. (2020). *Linking bank competition, financial stability, and economic growth*. *Journal of Business Economics and Management*, 21(1), 200-221.
8. Liu, X., Ali, Q., Yaseen, M. R., Sarkodie, S. A., Makhdum, M. S. A., & Khan, M. T. I. (2024). *Attaining global peace and tourism competitiveness: linkages between tourism, security measures and economic stability*. *Kybernetes*.
9. Mjojo, A. (2021). *Macro-financial linkages and banking stability in sub-Saharan Africa (Doctoral dissertation, Loughborough University)*.

10. Nasir, M. A., Ahmad, M., Ahmad, F., & Wu, J. (2015). *Financial and economic stability as 'two sides of a coin' Non-crisis regime evidence from the UK based on VECM. Journal of Financial Economic Policy*, 7(4), 327-353.
11. Overton, M., & Bland, R. (2017). *Exploring the linkage between economic base, revenue growth, and revenue stability in large municipal governments. Lincoln Institute of Land Policy.*
12. Pauly, L. W. (2009). *The old and the new politics of international financial stability. JCMS: Journal of Common Market Studies*, 47(5), 955-975.
13. Samour, A., Baskaya, M. M., & Tursoy, T. (2022). *The impact of financial development and FDI on renewable energy in the UAE: a path towards sustainable development. Sustainability*, 14(3), 1208.
14. Turner, G., & Nugent, J. (2015). *International linkages of the Australian banking system: Implications for financial stability. JASSA*, (3), 34-43.
15. Wu, S., Huang, X., Fan, D., Li, Y., & Su, Y. (2023). *Cluster linkages in the global production networks: Exploring the impacts on the expansion of emerging market multinationals. Transportation Research Part E: Logistics and Transportation Review*, 171, 103039.

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