IMPACT OF FOREIGN DIRECT INVESTMENT ON IMPORTS AND EXPORTS OF SUB-SAHARAN AFRICA ECONOMIES

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MOTIVATION

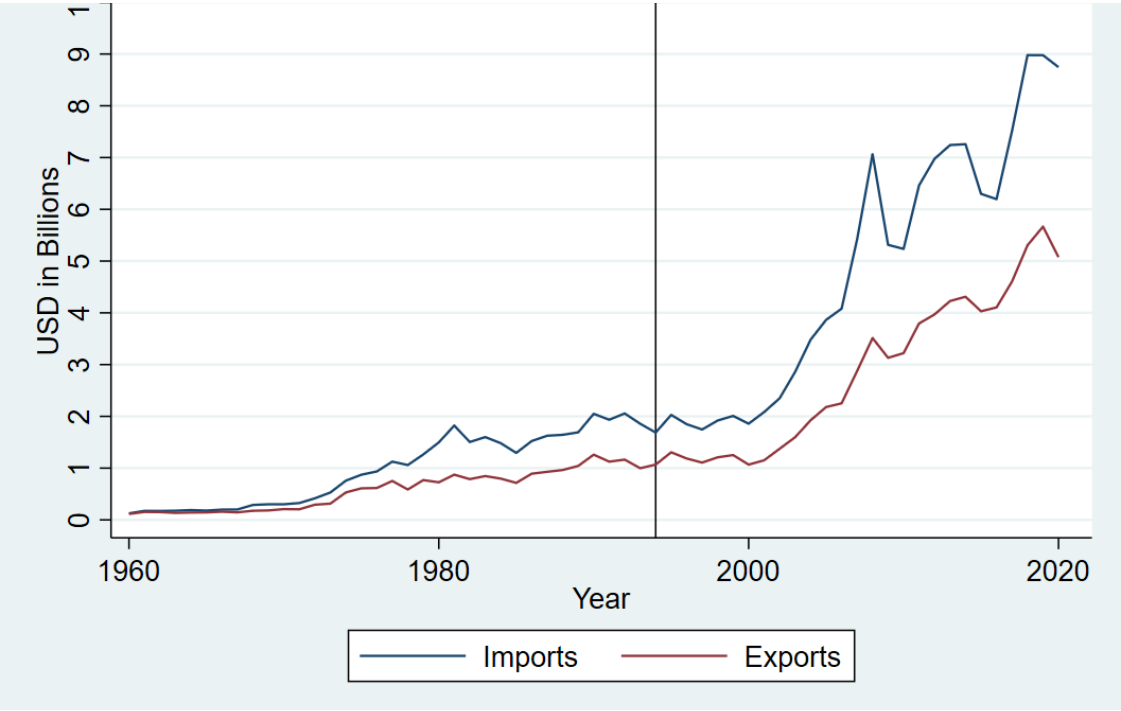
Globalization and Trade liberalization made FDI a key player in developing countries's growth strategies

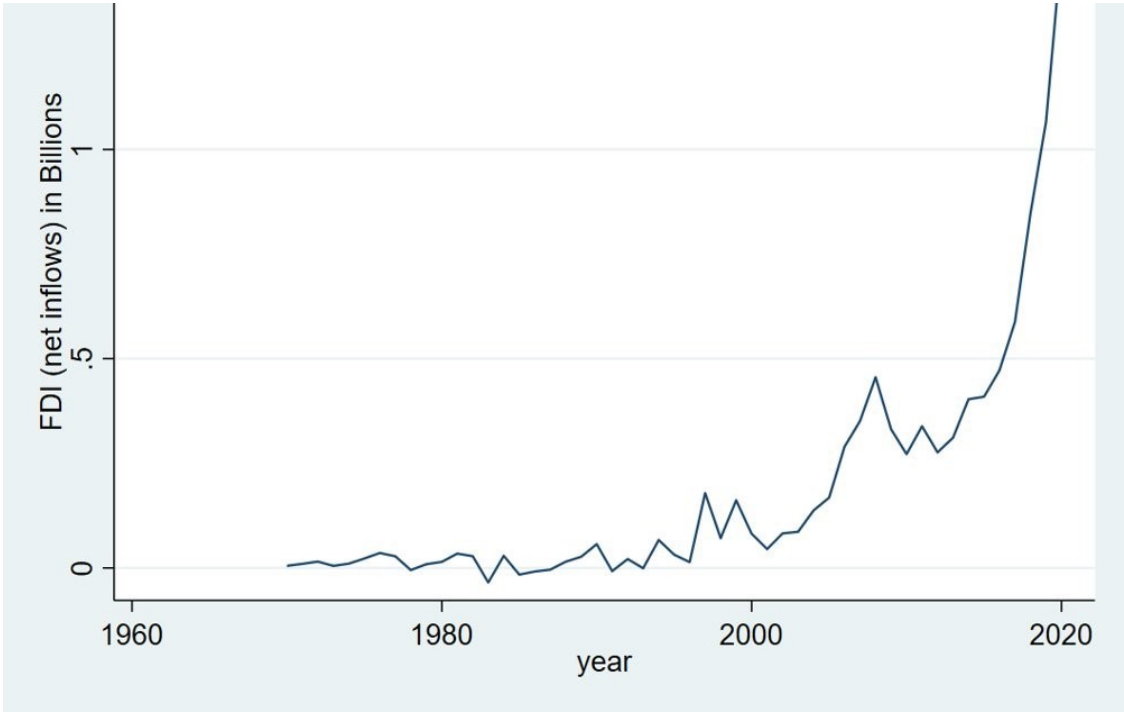
Since the 1990s, Senegal and many African economies implemented a series of structural reforms to attract foreign capital

FDI inflows to Senegal more than doubled from US$168m in 2005 to US$345m in 2015.

Despite the growth in exports, Senegal's trade balance continues to record a deficit, which reached US$3bn in 2015

Key Takeaway: **Why do Senegal and most Sub-Saharan Africa countries have consistent trade deficits despite the inflows of foreign capital?**





TREND IN FDI, IMPORTS AND EXPORTS

Study	Years Covered	Outcome Variable	Countries in Sample	Results
Ndikumana, Verrick (2008)	1970-2005	Private Investment	38 Sub-Saharan Countries	Positive and significant
Decreuse, Mareek (2015)	1980-2000	Labor Share	98 Developing countries	Negative and Significant
Seyoum, Wu, Lin(2015)	1970-2011	Economic Growth	23 Sub Saharan Countries	Positive Granger Causal Relationship
Adams, (2009)	1990-2003	Economic Growth	42 African Countries	negative and not significant
Danh, Tin (2015)	1991-2011	Trade deficit	37 Asian countries	negative and significant

LITERATURE REVIEW

- Key Takeaway: **The literature on the impact of FDI on various development outcomes is sparse and show contradictory results**

VARIABLES DESCRIPTION

Variable	Source	Description
Real GDP for each country in the sample (GDP)	World bank data center	Real GDP in millions of dollars
World GDP excluding countries in sample (WGDP)		Real GDP in millions of dollars
Government expenditure (Gov)	World bank data center	Government expenditures in millions of dollars
Tariff rate (TR)	World bank data center	The tariffs that countries promise to impose on imports from other members of the World Trade Organization. Tariff rate is used to measure trade openness
Real Effective Exchange Rate (REER)	UNCTADstat	GDP deflator-based indices for REER with base year 2005
FDI Inflows (FDI)	UNCTADstat	Total inflows in millions of dollars
Imports (M)	World bank data center	Total imports in millions of dollars
Exports (X)	World bank data center	Total exports in millions of dollars

EMPIRICAL MODEL

- We use an autoregressive distributed lag model to run two regressions for imports and exports separately
- We first estimate the elasticities with one lag and contemporaneous values
- Then we estimate long run elasticities and compare them to the short run elasticities
- The advantage of such a model is that it allows us to compare short run and long run dynamics

$$\log M = \beta_0 + \beta_1 \cdot \log M_{t-1} + \delta_{1,1} \cdot \log FDI_t + \delta_{1,2} \cdot \log FDI_{t-1} + \delta_{2,1} \cdot \log GDP_t + \delta_{2,2} \cdot \log GDP_{t-1}$$
$$+\delta_{3,1} \log GOVEXP_t + \delta_{3,2} \log GOVEXP_{t-1} + \delta_{4,1} \log REER_t + \delta_{4,2} \log REER_{t-1}$$

$$\log X = \beta_0 + \beta_1 \cdot \log M_{t-1} + \delta_{1,1} \cdot \log FDI_t + \delta_{1,2} \cdot \log FDI_{t-1} + \delta_{2,1} \cdot \log GDP_t + \delta_{2,2} \cdot \log GDP_{t-1}$$
$$+\delta_{3,1} \log GOVEXP_t + \delta_{3,2} \log GOVEXP_{t-1} + \delta_{4,1} \log REER_t + \delta_{4,2} \log REER_{t-1}$$
$$+\delta_{5,1} \log WGDP_t + \delta_{5,2} \log WGDP_{t-1} + \delta_{6,1} \log TARIFFRATE_t + \delta_{6,2} \log TARIFFRATE_{t-1}$$

Key Takeaway: **The ARDL model and this specification allows us to compare short and long run effect of our explanatory variables on imports and exports**

RESULTS

Short Run Vs long run Analysis

- GDP: The GDP estimates took positive values for current dated values and negative values for the lagged variable. The long-run equations have strong positive elasticities on domestic GDP, with the export elasticity being even larger than the import elasticity. A 10% increase in domestic GDP results in a 12,5 % increase in exports, while a 10% increase in domestic GDP causes imports to only increase by 4,3%.
- FDI: FDI inflow elasticities are positive in both cases: a 10% increase in FDI inflows increases exports by 2,4% and imports by half that value. Therefore, increasing FDI inflows is about twice as effective increasing exports compared to imports. These results are consistent with our short-run estimates as far as policy implications
- REER: Both REER elasticities are large in magnitude and negative. While the negative coefficient in the export regression is consistent with economic theory, real effective exchange rate elasticities for imports are consistently negative over short run and long run analysis. The divergence of these results from the literature is noteworthy because they suggest that a “stronger” currency does not necessarily result in cheaper foreign goods.

POLICY IMPLICATIONS

- Although FDI inflows are undeniably effective at increasing a country's exports, the strong reliance of multinational enterprises on imported goods could have deteriorating repercussions on the trade balance.
- The positive and significant FDI coefficient for the import regression reveals that FDI in developing countries is heavily dependent on imported goods.
- Therefore, improving the trade deficit requires that FDI does not result in import dependency.

Key Takeaway: **African countries should be cautious in placing FDI at the heart of their development policies because it can have adverse effects on the trade balance and create import dependency which hinders local production of good and services**