

INVESTIGATING THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN AFRICA USING PANEL DATA

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1. INTRODUCTION

- ✓ Africa faces significant challenges and foreign direct investment may present a part of the solution.
- ✓ But the World Investment Report shows that FDI inflows to Africa is volatile (it fell by 41% in 2002) and is less than 1% of total FDI flows.
- ✓ Whilst African policymakers are intensifying their attempts to attract FDI, a first question should be; What determines FDI flows (or the lack thereof) to Africa?
- ✓ A number of recent studies exist and they emphasise the importance of policies.
- ✓ In this paper we re-investigate the determinants of FDI into Africa.
 - We follow a cross-country econometric approach using improved estimation techniques.
 - And focus on quantifying the significance of institutions and geography for FDI flows to Africa.



2. MODELLING THE DETERMINANTS OF FDI

- e Theories of FDI:
- e Following Driftfield (2002) we posit

$$\sum_{p=0}^N \left(\frac{1}{1+r} \right)^p \Pi_{t+p}^e = \phi_2 (X_{1i}; X_{2i})$$

FDI flows are determined by (i) country characteristics that are positively related with expected profits, (ii) negatively related with expected profits and (iii) past FDI flows.



3.1 Estimators

- Recent empirical studies estimate single period-averaged cross-country OLS regressions of the determinants of FDI flows to Africa.
- This approach has a number of limitations and we propose additional, alternative estimators:
 - The Least Absolute Deviation (LAD) estimator
 - Is used to deal with outliers.
 - The regression minimizes the absolute deviation around the median of the distribution of the dependent variable.
 - A one-step GMM estimator
 - Since FDI is a dynamic process and may tend to be persistent, this allows incorporation of dynamics into the model.
 - We employ Arellano and Bond's estimator.



3.2 Specifications

- ✓ The theories of FDI show that there is a vector of explanatory variables that affect FDI flows to Africa.
- ✓ The “standard” specification from recent empirical work:
 - ✓ (+) GDP growth.
 - ✓ (+) Openness – measured by the ratio trade/GDP.
 - ✓ (+) Infrastructure – measured by number of phones per 1000 pop.
 - ✓ (+) Market size / profitability – measured by 1/GDP.
 - ✓ (–) Political instability.
- ✓ Following Asiedu (2002) we estimate this standard specification but with some differences.
- ✓ Against the standard specification we compare specifications with policy variables, geography variables and institutional quality variables



3.2 Specifications

- e The policy specification:
 - o Is the standard specification along with
 - Domestic investment, and
 - Exports, as policy-determined variables.
- e The geography specification:
 - o The importance of geography...
 - o We use indicators such as malaria, land area, landlockedness, elevation and latitude to capture the importance of geography in determining FDI flows to Africa.



3.2 Specifications

- ☞ The institutions specification:
 - The importance of institutions...
 - We use a number of indicators:
 - Settler mortality and initial literacy rates for institutional quality.
 - Kaufman *et al.*'s (1999) instruments for governance, including regulatory burden and corruption and graft.
 - Ethno-linguistic heterogeneity for social capital.
- ☞ The specifications, their variables and sources of data are shown in appendix A.



4.1 LAD regression results

- ✓ The standard specification:
 - ✓ Growth per capita and openness matter for FDI.
 - ✓ We find a negative relationship between infrastructure and FDI, but it is insignificant once we control for institutions and geography.
- ✓ The policy specification:
 - ✓ The only significant policy-related variable is exports.
- ✓ The institutions specification:
 - ✓ Institutional quality, as a set of variables, explains FDI to Africa the best (pseudo $R^2=0.56$).
 - ✓ But only political stability has the expected sign.
- ✓ The geography specification:
 - ✓ Geography does matter, with latitude and elevation having a negative and significant impact.
- ✓ In the combined model:
 - Only exports are a significant determinant of FDI.



4.2 GMM results

- ✓ Government consumption, inflation, investment, governance and initial literacy were identified as determinants of FDI.
- ✓ But none of the geography variables are significant.
- ✓ With the dynamic estimator:
 - ✓ FDI was found to be significant with a lag of one period.
 - ✓ And government consumption and inflation affects FDI with a lag of one period.
- ✓ The p-value of the Sargan test is the highest for the combined model, suggesting that a combination of policy and institutional factors are the direct determinants of FDI to Africa.



5. CONCLUSIONS

- ✓ As with attempts to attract FDI, research into the determinants of FDI to Africa has recently been marked by increased efforts.
- ✓ This paper has attempted to broaden and deepen the enquiry:
 - ✓ By including institutions and geographical explanations of FDI, and
 - ✓ By using more advanced estimators.
- ✓ The results show that:
 - ✓ Geography does not seem to have a direct influence on FDI flows to Africa.
 - ✓ Good policies made by good institutions matter more – and this emphasizes the importance of NEPAD initiatives to ensure political stability and good governance.

