

# DOES A WEAK FINANCIAL SECTOR INHIBIT THE BENEFITS OF FDI?: EVIDENCE FROM GUYANA

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# BACKGROUND

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- ✘ While FDI may be beneficial, a well-developed financial sector critical to experiencing benefits through spill overs and backward linkages
- ✘ Hermes and Lensink (2003) – theoretical model
  - + Lowers cost of financing
  - + Lowers risk of undertaking firm expansion
  - + Better management of inflows – mobilizing savings and channelling to productive investments
- ✘ Empirical studies find that countries with strong financial sectors (FS) experience benefits from FDI; however, in countries with weak FS, FDI dampens economic development (Hermes and Lensink, 2003; Alfaro et al., 2003)
- ✘ Policy advice: Develop FS first before promoting FDI!
  - + Is this necessarily true?

# ROLE OF FS NOT WELL UNDERSTOOD

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- ✘ Cross-country evidence interpreted as in countries with poor FS, FDI diminishes growth. However, not clear whether negative impact of FDI failure of poor FS, or whether poor FS is accompanied by other bad factors that also inhibit FDI being beneficial (corruption, environmental degradation)
- ✘ To the extent that other factors matter, cross-country studies may overstate how strong FS needs to be before FDI beneficial
- ✘ Possible that in a country with an initially poor FS that also undertakes reforms to promote benefits of FDI in LR economic development (ED), FDI may be beneficial at much lower level of FD than that suggested by cross-country studies



# WHY IMPORTANT?

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- ✘ Determining whether a strong fs is indeed a requirement for FDI to be beneficial is important for crafting LR developmental policies
- ✘ If a strong FS (as suggested by literature) is required, then FS may be considered a pre-condition (policy advice before is relevant).
- ✘ If on the other hand, benefits accrue at lower levels of FS development, then a poor developing country (DC) should focus on promoting FDI and FD simultaneously.
  - + Importantly, FS should not be seen as a barrier
- ✘ In case of SIDS, thought that economic activity needed first before FS able to develop (where enterprise leads, finance follows - Robinson)
- ✘ To the extent this is the case for SIDS, undertaking FS development particularly difficult without first having something on which to anchor the economy

# MAIN INNOVATION IN THIS PAPER

- ✘ We assess whether and to what extent FS development has affected FDI-ED nexus in Guyana
  
- ✘ Guyana interesting for several reasons
  - + Mid 1970's – primary commodities doing well; gov't nationalized many enterprises, perhaps as a means of capturing more benefits
  - + By late 1970's – commodity market fallout posed challenge for economic growth
  - + Early 1980's – started privatising state entities to address inefficiencies and raise capital
  - + Mid 1980's – Economic Recovery Program (Monetary Reform and Financial Development)
  - + Throughout late 1980's and beyond – explicitly promote FDI
  
- ✘ FS reforms not willingly made – imposed as conditionalities by multilateral agencies
  
- ✘ No empirical work on whether ERP, FDI promotion, and FS development in particular worked in the context of FDI-ED link

# ECONOMIC MODEL

- × Follow model of Ang (2008)

$$+ G_t = f( FDI_t, F_t, FDI_t * F_t ) \dots \dots \dots (1)$$

- × G – Economic development (real GDP per capita)
- × FDI – Real foreign direct investment per capita (inflows)
- × F – Financial development index constructed by PCA
  - + (1) Liquid liabilities (LL), the ratio of M3 to GDP, to capture the extent to which the financial sector is able to provide transaction services (i.e. financial deepening/depth); (2) Private sector credit as a fraction GDP (PC), to proxy for the efficiency of the financial sector in translating deposits to investment (Levine, 1997); (3) Deposit bank assets to total banking system assets (DM) which indicates the relative importance of banks in the financial system (intuition is that banks are ‘more likely to provide financial functions than central bank’ (Levine 1997) ; and, (4) Bank deposits to GDP (BD) to capture how well banks can attract savings
- × Coefficient on FDI captures effect of FDI outside interaction with FS (may be positive or negative)
- × Coefficient on interaction term captures whether FS important in enhancing effect of FDI on ED (positive)
- × Coefficient on F captures effect of FS development outside role in mediating FDI-ED link (may be positive or negative)
- × Date taken from WDI and span period 1981-2014
- × Include dummies: 1992, 1993, 2005/2006



# METHODOLOGY & ESTIMATION

- ✘ *Three-step process*
  - + *Assess stationarity properties of data*
  - + *Determine cointegration*
  - + *Assess LR and SR causal linkages*
  
- ✘ *Determine cointegration and estimate LR equation using two methods*
  - + *Traditional Johansen approach*
  - + *ARDL approach*

# METHODOLOGY & ESTIMATION - VECM

$$\Delta ED_t = a_1 + \alpha_{11}ECT_{t-1} + \sum_{j=1}^{p-1} \theta_{1j}\Delta ED_{t-j} + \sum_{j=1}^{p-1} \gamma_{1j}\Delta I_{t-j} + \sum_{j=1}^{p-1} \pi_{1j}\Delta F_{t-j} + \sum_{j=1}^{p-1} \rho_{1j}\Delta(IxF)_{t-j} + \varepsilon_{1t} \quad (1.1)$$

$$\Delta I_t = a_2 + \alpha_{21}ECT_{t-1} + \sum_{j=1}^{p-1} \theta_{2j}\Delta ED_{t-j} + \sum_{j=1}^{p-1} \gamma_{2j}\Delta I_{t-j} + \sum_{j=1}^{p-1} \pi_{2j}\Delta F_{t-j} + \sum_{j=1}^{p-1} \rho_{2j}\Delta(IxF)_{t-j} + \varepsilon_{2t} \quad (1.2)$$

$$\Delta F_t = a_3 + \alpha_{31}ECT_{t-1} + \sum_{j=1}^{p-1} \theta_{3j}\Delta ED_{t-j} + \sum_{j=1}^{p-1} \gamma_{3j}\Delta I_{t-j} + \sum_{j=1}^{p-1} \pi_{3j}\Delta F_{t-j} + \sum_{j=1}^{p-1} \rho_{3j}\Delta(IxF)_{t-j} + \varepsilon_{3t} \quad (1.3)$$

$$\Delta(IxF)_t = a_4 + \alpha_{41}ECT_{t-1} + \sum_{j=1}^{p-1} \theta_{4j}\Delta ED_{t-j} + \sum_{j=1}^{p-1} \gamma_{4j}\Delta I_{t-j} + \sum_{j=1}^{p-1} \pi_{4j}\Delta F_{t-j} + \sum_{j=1}^{p-1} \rho_{4j}\Delta(IxF)_{t-j} + \varepsilon_{4t} \quad (1.4)$$

Where:  $ECT_{t-1} = ED_{t-1} + (\beta_{21}/\beta_{11}) I_{t-1} + (\beta_{31}/\beta_{11}) F_{t-1} + (\beta_{41}/\beta_{11}) I \times F_{t-1}$

Lagged difference terms capture short-run dynamics



# METHODOLOGY & ESTIMATION - ARDL

$$\begin{aligned} \times \quad \Delta ED_t = & a_1 + \beta_1 ED_{t-1} + \beta_2 I_{t-1} + \beta_3 F_{t-1} + \beta_4 (I \times F)_{t-1} + \sum_{i=1}^{m-1} \theta_{1i} \Delta ED_{t-i} + \\ & \sum_{i=0}^{m-1} \gamma_{1i} \Delta I_{t-i} + \sum_{i=0}^{m-1} \pi_{1i} \Delta F_{t-i} + \sum_{i=0}^{m-1} \rho_{1i} \Delta (I \times F)_{t-i} + \xi_{1t} \quad (2.1) \end{aligned}$$

Where:  $ECT_{t-1} = ED_{t-1} + (\beta_2/\beta_1) I_{t-1} + (\beta_3/\beta_1) F_{t-1} + (\beta_4/\beta_1) I \times F_{t-1}$

Lagged difference terms capture short-run dynamics

# RESULTS – FOR BREVITY

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- ✘ All variables  $I(1)$
- ✘ Both Johansen and ARDL bounds test showed evidence of one cointegrating relationship
- ✘ Diagnostics hold

# RESULTS - LR EQUATION

Model	Cointegrating Equation	ECT Coefficient
VECM (5,5,5,5)	$ED = -5.52^{***}FDI - 46.73^{***}F + 0.42^{***}FDI * F + 4035.61$ <p style="text-align: center;">(0.000)      (0.000)      (0.000)</p>	-0.219* (0.056)
ARDL (5,5,5,5)	$ED = -5.13FDI - 39.12^{**}F + 0.39^{***}FDI * F + 3408.70$ <p style="text-align: center;">(0.111)      (0.044)      (0.005)</p>	-0.466*** (0.0001)

Also find LR causality from FDI and FDI\*F to ED

No SR causality



# DISCUSSION AND IMPLICATIONS

- ✘ Direct effect of FDI negative
  - + Plausible given most FDI to natural resource sector
- ✘ Indirect effect of FDI through interaction with FS positive
  - + Plausible given most developmental strategy
- ✘ F impact negative
  - + Plausible given weaknesses in FS
- ✘ Overall, FDI net beneficial on ED for entire period
  - + Importantly, even with a weak FS, FS impacting FDI-ED

# POLICY IMPLICATIONS

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- ✘ FS development working, along with FDI promotion strategy
  - + Importantly, strong FS not necessarily pre-condition – work on FS development along with a suite of economic development strategies
  
- ✘ If Guyana is to benefit from future FDI in LR, actively promoting FS development may be important in
  - + Enhancing impact of FDI
  - + Mitigating dampening effect of FS on ED (outside of FDI)
  
- ✘ In case of Guyana, identifying harmful channels through which FDI impacts ED important, as well as policies to reduce these harmful channels
  
- ✘ Implication in local context – strategy of privatising inefficient state entities must be accompanied by promotion of more efficient and relevant FDI, along with FS reforms that stimulate private sector