Explaining the performance of countries: what role does the business environment play?

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Business environment and performance

- Widely believed that institutional features of a country affect the performance of firms
- As barriers to doing business vary widely across countries and regions, also argued that business environment affects aggregate performance
- Simply put: countries and firms facing ‘better’ business environments can also be expected to perform better
  - Significant theoretical and empirical literature supporting these assertions
- Paper uses ‘Doing Business’ dataset to look at the robustness of these assertions

Business environment and performance: country level analysis

- Doing Business covers 175 countries; has been implemented every year since 2003

- Uses template questionnaire administered to ‘experts’ and collects information on ten sets of indicators plus giving an aggregate ranking

  - Indicators include: starting a business; employment regulation; enforcing contracts; getting credit; closing a business

- Assumed that there are underlying linear and monotonic relationships

  - DB indicators assumed to be positively related to performance when included additively in a regression

  - Also assumed that institutional frictions expected to have a similar impact irrespective of country’s level of development and sectoral specialisation

Measuring the business environment: some correlations

- First step: how correlated are DB indicators with each other (Table 4)
  - Find that limited correlation for high income countries and correlations decline monotonically with income – entirely absent in low income countries
  - Is it likely that indicators are measuring unrelated phenomena – implausible given underlying motivation and structure?
- Second step: how much correlation within groups? (Table 5)
  - Find that there is relatively little within-group correlation; surprising given that components aim to measure dimensions of the same issue
- Third step: how much correlation between DB indicators and income itself (Table 6)
  - Find that there is very little correlation between DB and GDP per capita for whole sample and for income groups: DB not proxies for income
- Fourth step: relate DB indicators to intermediate outcomes (Table 7)
  - Find that in most instances striking absence of any raw association; same when using income groups

Business environment: country and firm measures – how correlated?

- **Do country and firm level indicators give broadly consistent responses?**
  - **Firm data are from World Bank Enterprise Surveys dataset with n≥30,000 for 75 countries for 1999-2006**
- **We relate DB measures to those most closely matched in WBES dataset for full sample and by income category (Table 8)**
  - **In baseline estimates, controls included for industry, size, age of firm, shares of workforce with secondary education; also lag of PPP GDP; DB indicators entered individually**
- **We find some correlation but far from complete and some are perversely signed**
  - **More ‘objective’ measures – such as trading across borders & time to import or export – are largely uncorrelated**
- **Why this lack of correlation? Large variation in firm level data within countries; more variation within-industry than between-industry – large subjective component**
  - **Difficult to judge which series carry better information**

Business environment and performance: a primitive country level analysis

- Causality assumed to be from institutions to performance
  - This raises obvious issues of endogeneity
- Performance can be measured by country level growth but also by intermediate indicators
  - For example; Constraints in starting a business →Firm & Job creation (-); Investment (-); Informal economy (+); Corruption (+); Tax revenues (-)
- Simple growth estimation;

$$Growth = \ln(GDP_{2005} / GDP_{2003}) = \alpha + \beta \ln(GDP_{pc,2003}) + \gamma DB_{2003} + \delta X + \varepsilon$$

Business environment and performance: country level results

- Growth regressions include the available DB indicators entered separately and then jointly
- No statistically significant association between aggregate growth and DB indicators can be found
  - But: this may be due to small number of observations on time; lags and limited number of variables for 2003
  - Issue of reverse causality cannot be addressed – lack of instruments

Business environment and performance: country level results

- Second approach: we relate intermediate outcomes to DB indicators (plus controls)

- Estimated (a) with only one DB category and (b) with all relevant DB indicators included

- Controls include log of PPP adjusted GDP; GovExp/GDP and secondary school enrolment
  - Results (see Table 3) show few statistically significant associations
    - Better legal rights are positively associated with private credit, capital inflows and FDI; absent for private bank credit
    - Better private and public registry coverage positively associated with higher private credit – but unstable
    - Investment unrelated to most DB indicators
  - In general, little that is robust & hard to argue that causality runs from institutions to, say, better credit & stock market development

Business environment and performance: results

- Third approach: we relate firm level measures of performance (growth in revenues per worker) to DB (Table 11)
  - Again, problems with lack of data points and reverse causality – but DB on RHS possibly exogenous to firm
  - Clear mis-specification: forced to use past measures of performance against current measures of constraints
- Estimation by OLS + controls (industry, firm size, ownership, age, share of workers with secondary education, lagged log PP adjusted GDP per capita)
- When entered individually some DB indicators have predicted sign & significance (mainly in middle and high income countries); entered jointly, variables mostly switch signs or lose significance
- DB constraints are relatively weak and unstable predictors of firm level performance
- Same conclusion holds when relating other outcome measures to DB

Why does the business environment explain so little?

- Possible explanations include:
  - *Mismeasurement*
    - For example; firm and country level measures of constraints are not actually consistent
    - Sample selection issues – if many constraints only most entrepreneurial will be at work
    - Country level measures based on average representative firm
    - Subjective bias – small numbers of ‘expert’ opinions
  - *Indicators may be incomplete and/or too specific*
    - For example, credit and enforcing contracts in DB; absence of indicators on R&D and technology adoption

Why does the business environment explain so little?

- *Underlying relationships may be more complex and non-linear*
    - For example, constraints to productive activity may differ across income groups – thresholds of income per capita or other indicators – such as labour force or equity market size – may affect whether constraints matter or not
- *Identification strategy may be inappropriate*
    - In Commander and Svejnar (2008) we have been careful to address endogeneity/causality issues in the firm analysis by using IV

Measures of the business environment and policy

- Are indicators of the business environment good guides to policy?
- Some evidence from Doing Business that all indicators have improved in a substantial share of countries in all regions (Table 7); relatively few negative changes
- With sub-sample of indicators, appears that changes are also mostly consistent (Table 8)
- But it is hard to pin down whether changes occur as a consequence of publication or endogenous preferences of local policy makers or other factors, such as technology

Measures of the business environment and policy

- With cross-country rankings, does bad ranking mean an institution is bad in absolute terms, absent benchmark values?

- Which institutions are more important (e.g., start-up costs may be more important than enforcing contracts??

    - More detailed country specific analysis required

- Some Doing Business indicators clearly depend on location – incentives to improve trade institutions will depend on ex ante external trade shares

- How to set priorities in reform? Eliminating all distortions will be rarely feasible; partial reforms may have unexpected consequences

- Quality of measurement: error – as signalled by inconsistencies - may lead to wrong diagnosis

Conclusion

- Paper looked at the part played by the business environment – as measured by *Doing Business* - in explaining the performance of countries and firms

- Country and firm level indicators prove to be very weakly correlated

- Little evidence of country (*Doing Business*) indicators explaining performance when using growth or intermediate outcomes

- Firm level data from the transition countries with IV estimation similarly finds little impact of business environment measures once country, year and sector fixed effects are introduced

    - Country effects clearly capture other sources of cross-country heterogeneity rather than a single factor, such as the institutional environment

- Why so little explanatory power? Possible reasons include mis-measurement; mis-specification; complexity and non-linearity

- With respect to policy, not clear how indicators should affect the ordering of reform priorities or particular weights attached to specific policy actions