

**Comments on “FDI and the Dark Side of Decentralization”
by Sebastian Kessing, Kai Konrad, and Christos Kotsogiannis**

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1. Summary

- This paper reports empirical evidence on the effects of various aspects of decentralization on FDI. This is an interesting question. The paper provides a detailed background discussion of the literature and potential effects according to theory.
- The central part of the paper develops an empirical strategy:
 - The FDI annual flow from a source country to a host country is proxied by the “number of firms acquired by firms from the source country in the host country” (counts of cross border acquisitions, CBAs).
 - In this way it is possible to use data from up to 74 source countries and 177 host countries for 7 years (1997–2003).
 - The basic empirical equation is a knowledge-capital regression model as in Carr, Markusen & Maskus (2001) and others, to which decentralization variables are added as extra regressors.
 - The regression is exponential because the dependent variable is a count.

- The main decentralization variables are:
 - 1) the number of government tiers (*TIERS*),
 - 2) the ratio of sub-national government expenditures to total government expenditures, and
 - 3) the ratio of sub-national tax revenues to total tax revenues.
- The estimated effect of *TIERS* is negative, as predicted by theoretical considerations, and this is the “dark side” of decentralization.

2. Assessment

A welcome contribution to the empirical assessment of decentralization

- This paper contains a lot of useful discussion and empirical results on an issue of policy relevance. It is nicely written and I enjoyed reading it.
- The contribution of the paper is empirical: The finding of a negative association between the no. of government layers and FDI after controlling for country differences.
- Since FDI itself is positively associated with growth, the policy implication is that the no. of government levels should be reduced “wherever possible”.
- Most of the limitations of the exercise are related to problems with data that hamper credibility, but there are also additional aspects that could be explored with the existing data.
- I review some data limitations and I provide some suggestions for further analysis and interpretation.

3. Data issues

Lack of data on FDI flows

- The choice of dependent variable is problematic.
- One problem is that CBA is only a part of FDI (excludes firm creation) and we do not know how the CBAs share of FDI depends on decentralization and other variables.
 - Thus, the reported estimates compound the effects of decentralization on FDI and the effects of decentralization on the CBA/FDI ratio.
- The other problem is that counts of CBAs are used as opposed to the value of the investments.
 - True, the censoring of values of CBA deals is very severe, but aside from necessity, there are no good reasons for using counts of CBAs as the dependent variable.
- But from the perspective of evaluating decentralization, CBA counts could be regarded as an outcome of interest in its own right. After all, it is also associated with growth.

Lack of variation in policy regimes

- Results are based on cross-sectional comparisons: differences in FDI associated with differences in no. of tiers.
 - So it is the effect of “being in a situation with so many government levels” that we are looking at, as opposed to the before-after effect of undergoing decentralization.
 - The latter is a closer notion to the policy effect of interest.
- The fact that results are cross-sectional (together with lack of instrumental variables) diminishes their causal credibility, because they are sensitive to unobserved country differences that cause both FDI and TIERS.

4. The policy effect of decentralization

- *TIERS* has a statistically significant negative effect on FDI, but how large is this effect? Is it economically plausible?
- The form of the estimated model is

$$\overline{CBA}_{(TIERS)} = e^{-0.4*TIERS+CONTROLS}$$

If we ask what is the change in average CBA from eliminating one tier, we get

$$\frac{\overline{CBA}_{(R-1)}}{\overline{CBA}_{(R)}} = \frac{e^{-0.4*(R-1)+CONTROLS}}{e^{-0.4*R+CONTROLS}} = e^{0.4} = 1.5$$

- So according to the model, the number of expected CBAs becomes 50 percent larger when one government tier is removed, which is a very large effect. Probably too large.
- Another problem with this effect is that it is homogeneous in dimensions we might expect it not to be. I list some of them.

Different effects at different margins

- At the moment the FDI effects of going from, say, 6 to 5 tiers or from 2 to 1 tier are constrained to be the same, but it would be nice to see if there is evidence of different effects at different margins.
- One check is to restrict the sample to countries with only 3 or 4 tiers, which amount to nearly 80 percent of all countries. In this way we can see if the effect is unduly affected by outliers.
 - There are only 7 countries with 6 tiers, all in the same region (Kenya, Tanzania, Uganda, Ghana, Gabon, Cameroon, and Senegal).
 - At the other end, there are only 10 countries with less than 3 tiers, all very small ones like Iceland, Uruguay, Slovenia, Bahamas or Jamaica.
- Another possibility is to include $TIERS^2$ as an additional regressor.

Cross-country dependence

- The theoretical predictions implicitly hold the amount of decentralization in other countries constant.
- Empirically, this creates the possibility that decentralization in one potential host country affects FDI in another. Also, spacial clustering in no. of tiers suggests that the effects of *TIERS* may differ depending on the neighbors' situation.
- One way of addressing this issue is to divide the world in broad regions and include an interaction of *TIERS* with average *TIERS* in the region.

Other interactions and optimal decentralization

- The effect of *TIERS* on FDI may vary with country size, political culture, diversity, or with the nature of decentralization.
 - e.g., the effect may be different depending on whether decentralization goes alongside with fiscal decentralization or not.
- In fact, the policy discussion in the paper suggests an interest in the effects of the nature of decentralization as much as in decentralization itself.
- Taken *prima facie*, the paper estimates suggest that the less decentralization the better. A different policy perspective is to presume an optimal degree of decentralization and seek its empirical characterization (searching for “U shapes”).

5. Econometric remarks

- The controls include variables that vary over time, such as GDP or exchange rates. Because of this I would not consider regressions in time series averages even if *TIERS* only has cross-sectional variation, as doing so diminishes the effectiveness of time-varying controls and may be a source of biases.
- There are nearly 7500 country pairs and more than 22000 data points in the panel. The error terms of a given host country are likely to be correlated, and so are the errors for a given pair over time. Standard errors that treat these errors as independent may be overoptimistic. So it is important to allow for clustering in these dimensions.
- Figure 1: To what extent is it capturing a positive correlation between country size and number of tiers? I would re-do it using residuals from regressions on country size, which is closer in spirit to the regression results reported later in the paper.

Harmless simplifications: easier to understand techniques

- What is the fraction of zeros? If there are no zeros in CBAs one could use a log linear model.
- Over-dispersion may be a problem for Poisson probabilities but not for estimates of the conditional mean, which are robust to distributional misspecification. In fact, they are more robust than estimates from the negative binomial model.