Intangible Capital, Innovation, and Growth in China

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Introduction

- China's economic growth cannot be sustained by the reallocation of labor or investments in physical capital
- Increasing wages indicate scarcity of "cheap labor" (Fleisher et al., 2011)
- Falling returns to physical capital (Bai, Hsieh, and Qian, 2006)
- Future growth prospects will hinge on the accumulation of intangible knowledge capital (IKC) and human capital (Corrado, Hulten, and Sichel, 2005)

Objectives

- Estimate the relationship between IKC stock and the RCA index
- Explore potential differences in the productivity of IKC from different sources (i.e., domestic vs. foreign-invested enterprise)
- Assess the impact of IKC on productivity

Data

- Data are industry aggregates collected from statistical yearbooks published by China's National Bureau of Statistics (NBS).
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Methods

1. Estimate the relationship between IKC stock and TFP
   - Begin with two-way fixed effects specification
   - Check robustness with Levene-Fligner estimator to account for endogeneity
2. Estimate the relationship between IKC stock and the propensity of filing innovation patents
   - Focused on domestic innovation patents, as foreign patents may not represent true innovations
   - Estimate using a negative binomial model with fixed industry effects

Results

- Positive effect of domestic IKC on TFP most prominent in LF specifications
- Some evidence of inter-industry IKC spillovers

Conclusions

- Domestic investments in IKC increase the propensity to file innovation patents
- Also some evidence of inter-industry spillovers

References