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Will killing zombie companies injure demand for skills? Privatization, technology choice, and skilled labor employment in a transitional economy

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Abstract

To sustain long-run growth, developing economies must accumulate human capital. Individual schooling investments depend in part on the skill premium (the relative wage for skilled labor), and this in turn depends on the economy-wide demand for skills relative to unskilled labor.

Capital investment increases skilled labor demand through complementarity of capital and skills in production. In transitional economies, however, the distribution of investment among firms is also important, as allocative inefficiency caused by policies that favor some firms relative to others has effects similar to a lower aggregate investment rate.

We build a model in which state-owned firms enjoy privileged access to capital while private firms are crowded out. Consequently, state firms are more capital-intensive and thus more likely to adopt skill-intensive technologies. We show that this creates a development policy dilemma, since reforms that diminish state firms' advantages could reduce aggregate skilled labor demand and the skill premium if too few private firms switch to skill-intensive technologies.

Econometric estimates using enterprise-level data from Vietnam confirm propositions generated by the model. Relative to private firms, state firms have higher fixed capital stocks but lower variable capital costs and employ more skill-intensive technologies. Also as predicted, we find a U-shaped relation between production scale and skill-intensity: many private firms (which are mostly small) are limited to labor-intensive techniques and increase output simply by adding unskilled labor, whereas larger firms are more likely to operate at a scale at which it is profitable to employ more skill-intensive and more efficient technologies.

Vietnam's current trade negotiations with the EU and Trans-Pacific Partnership countries include proposals to reduce preferential treatment for state firms. Our empirical estimates suggest, though not definitively, that such a move would result in a net increase in aggregate skilled labor demand. However, reforms should be part of a broader policy package aimed at ensuring that returns to skills increase even if some of the country's largest employers of skilled labor contract.

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1. Introduction

The importance of human capital and skills development for economic growth and development is well known. Human capital investment is thought to be especially critical for developing economies seeking to avoid falling into a middle-income trap. To promote human capital, governments often focus on supply-side interventions, for example by building schools and training teachers. These measures to improve school access and quality may be important means to raise enrollment rates (e.g. Duflo 2001). But the incentive to invest in skills—that is, the *demand* for education—is equally important. If physical capital and skills are complements in production then in the aggregate, the skill premium is increasing in the capital stock. As a result, policies and institutions that affect the rate of investment are likely also to have consequences in the market for skills—influencing, for example, individual decisions on education and training.

While there is a significant literature on aggregate capital-skills complementarity, it is quite common in developing and transitional countries that the *distribution* of capital investments is also important. This is because in relatively shallow financial systems, capital markets display imperfections of a variety of kinds. Nowhere is this more evident than in economies where government policy operates to direct investment toward a subset of favored industries, thereby crowding out others.

Vietnam is often cited as a successful case of liberalization in a transitional economy. It has experienced rapid economic growth since the 1990s, when it embarked on an ambitious program of economic reform. However, the impressive pace of reform in trade, foreign investment and labor markets has not been matched in domestic markets for land and capital, nor in the reform of the state-dominated system of enterprise ownership. Recent rapid growth of private sector and foreign-invested activities notwithstanding, Vietnam's state-owned enterprises and trading companies retain privileged access to domestic credit from the state-owned banking system. State banks, in turn, engage heavily in "policy lending", or the systematic favoring of state-owned enterprises in the allocation of domestic credit.

Vietnam's state firms have also been relatively well insulated from the country's broader program of economic reform. During the early reform period a large number of (mainly smaller)