Dissertation Abstract

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Chapter 1 – Market Failures and Misallocation: The Costs of Factor and Financial Market Failures in Rural Thailand

My job market paper measures the misallocation of land, labor, and capital between firms. Earlier research suggests misallocation may explain why countries like India and Thailand are much poorer than the U.S., but existing work cannot link misallocation to its causes. I develop a method to measure and separate misallocation caused by factor and financial market failures. With perfect markets each firm's optimal allocation depends only on two sets of parameters: its productivity and the common production function. I use a dynamic panel approach to estimate the parameters and calculate the optimal allocation. I define the increase in output from optimal reallocation to be the total misallocation from factor and financial market failures. To separate the cost of each market's failure I exploit how factor markets govern the firm's mix of inputs. When factor markets are perfect, a firm can optimally divide its spending between inputs. By perfecting each firm's mix of inputs while holding its scale constant, I place a lower bound on the aggregate gains from perfecting factor markets, and by then perfecting scale I place an upper bound on the gains from subsequently perfecting financial markets. I then decompose aggregate output into three components: an aggregate production function, average firm-level productivity, and the efficiency of factor allocations. The decomposition lets me calculate the counterfactual path of aggregate output if factor allocations had not improved.

My method only works in a setting where factor and financial market failures cause all misallocation, and I apply it to survey data from Thailand's rice sector because rice production fits the assumption well. I find surprisingly little misallocation. The overall cost is 15 percent of output in 1996 and falls to 4 percent by 2008. By then most misallocation comes from factor markets rather than financial markets. Decreases in misallocation contributed little to growth in aggregate rice output relative to growth from factor accumulation and rising average productivity. A quasi-experimental credit program reduced misallocation by a statistically significant but small amount, and as expected the program worked almost entirely by improving financial markets. My results suggest that imperfect markets need not cause much misallocation. They also suggest earlier work on misallocation, which focuses on credit constraints, may have been wrong to ignore factor market imperfections.

Chapter 2 – Risk and Economic Under-Specialization: Why the Pin-Maker Grows Cassava on the Side

My second chapter explores the fundamental idea that specialization is efficient and tests between two theories of why households in poor countries do not specialize. According to one theory the poor do not specialize because relying on one income source is risky. The other theory assumes a household cannot grow any one business without making a lumpy investment, forcing it to run many small businesses.

I build a model of risky income and test its predictions by measuring the response of Thai rice farmers to riskier prices. Households in the model pay fixed costs to enter economic activities and enter more when their primary activity becomes riskier. I test the prediction by identifying the households in a monthly panel who expect a rice harvest soon. Higher volatility in the price of rice raises the riskiness of their income. By comparing farmers who expect a harvest to farmers who do not and to non-farmers, I identify the causal effect of riskier income on specialization. I confirm that risk causes households to enter more activities. Since the mean and variance of the rice price change the number of economic activities without directly affecting current revenue, I can use them as instruments for the number of economic activities. Two-stage least squares confirms that a failure to specialize lowers household revenue, the opposite of what a simple OLS regression would find. Next I exploit a quasi-experimental credit program to test whether, as the lumpy investment theory predicts, a relaxation of credit constraints decreases the number of activities. I find no evidence to support this alternative theory. The results suggest imperfect insurance forces households to under-specialize, and their many businesses may be less a sign of entrepreneurial spirit than of costly self-insurance. Relatively small loans do not solve the problem, but better insurance might.

Chapter 3 – Factional Favoritism, Close Elections, and Bribery in Rural India

The third chapter of my dissertation uses a regression discontinuity design to test whether households who voted for the loser of an Indian village council election pay more bribes than households who voted for the winner. Rural Indian households can only get government services through local bureaucrats who sometimes demand bribes. Bureaucrats must obey politicians elected to the village council, of whom the council president is especially influential. Anecdotal accounts say a newly elected president may use the bureaucracy against her opponents: those who voted against her or those who affiliate with her opponent. I link each household's report of how many officials it had to bribe to the outcome of the previous election. I assign each household the vote share of the candidate the head of household voted for. When its vote share crosses 50 percent a household switches from the losing to the winning side. I exploit the discontinuity to identify how much more often a losing household must bribe officials for services. Losers must bribe 17.6 percentage points more officials than winners and are 41 percentage points more likely to have to pay any bribes. I verify the result is not driven by inaccurate and biased vote reports by measuring the bribes a household pays when a candidate with the same last name---a rough proxy for a family connection---wins the election. The results are similar.