
Session: Growth and Productivity

Discussion

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Organizational Barriers to Technology Adoption

Atkin, Chaudhry², Khandelwal, Verhoogen

- Paper studies the role of technology diffusion
 - Experiment in Pakistan-soccer balls.
- First Phase: in May 2012
 - Randomly allocated the new technology to a subset of 35 firms (“tech drop” group).
 - 18 firms (the “cash drop” group): cash equal to the value of the new die (US\$300).
 - 79 firms (the “no drop” group): nothing.
 - In the first 15 months of the experiment: few firms had adopted, even among the tech-drop group.
- Anecdotal evidence from a number of firms suggested that workers were resisting the new die, including by misinforming owners about the productivity benefit of the die.

Second Phase: September 2013

- 31 tech-drop firms that were still in business
- A treatment group (A group) : 15 firms
 - Gave reminder and explained to the owner the issue of misaligned incentives + offered an incentive-payment treatment:
- A control group (B group): 16 firms
 - A reminder about the benefits of the die and an offer of another demonstration of the cutting pattern.
- 10 firms accepted and in 2 tests could not be performed.
 - 8 accepted the incentive-payment intervention, and 5 subsequently adopted the new die/ Non of B.

General Comments

- Fascinating exercise
- Was the new process approved endorsed by Fifa?
- Questions experiment / Implications
 - Relat. small number.

Timing, Risk, Exit

- 15 months: is this enough time to observe change?
 - In general
 - “Seasonal” products. (Do you want to risk not delivering product/delays and miss Brazil 2014 fever?)
 - It was a great World Cup!
- “In 1995, there was a child-labor scandal in the industry in Sialkot. Firm owners were initially quite distrustful of us in part for that reason.
 - Could distrust explain lack / delay of adoption?
- More or less prone to experiment (with foreigner)?
- What is the turnover? (31 firms survived/selection)
 - If expected turnover is high, why would you invest in technology that may take a while to give (uncertain to owner) benefits in relatively short time.
 - Various calculations of savings but the time frame of accruing them is not so clear (owner can't know before trying, costs of switching, doing things differently).

Management

- What is the ownership structure?
 - Owner=manager or just puts money?
- Why doesn't the owner monitor? Why is he misinformed by workers?
 - How come he needs to be explained that workers have diff. incentives?
 - Why can't owner mandate? (Fire if not adopt)
 - » There is some evidence that management did not matter but ...
- Objective of the firm?
 - It is not to be the most technically advanced per se.
 - Some version of income/profits for owners
 - What would give the owner more:
 - Old tech with old payment or new tech with modified payment that pays a bonus?
 - And how long would one be expected to be higher?

Workers

- Are people hired under different compensation system different?
 - How do wages compare?
- But overall, the arguments makes sense (Isabella's answer).
 - Workers don't need to be part of a formal union to understand threat to their job or collude.
 - More generally, most wages are not contingent (literature).

Risk Sharing

- An early literature (Baily, 1974; Azariadis, 1975) views the employment relation not as a sequential spot exchange of labor services, but as a long-term relations that allow risk sharing;
 - Labor services are traded for an insurance contract that protects workers from random, publicly observed fluctuations in their marginal revenue product.
 - Risk-averse workers deal with risk-neutral entrepreneurs (asymmetric info can give similar results).
 - The worker is able to reduce the fluctuation in his labor income and the employer is able to increase his average profit.
- Azariadis, Costas., and Joseph Stiglitz., "Implicit Contracts and fixed Price Equilibria", *The Quarterly Journal of Economics*, Vol.XCVIII 1983 Supplement.
- Azariadis, Costas, "Implicit contracts and underemployment equilibria", *Journal of Political Economy*, 1975.
- Baily, M., "Wages and employment under uncertain demand", *Review of Economic Studies* 41, 37-50, 1974.

Making Do with What You Have

Amodio and Di Maio

- This paper investigates one specific mechanism through which conflict affects economic activity.
- Using a unique establishment-level dataset of Palestinian firms, the authors compare outcomes and input usage over time across districts.
- Firms operating in high conflict districts have significantly lower total and per-worker value of output compared to other firms in the same sector.
 - More intensive in imported materials and had higher average output value in pre-conflict years.

Comments

- I'm not a conflict economist.
- Specific comments and some general ones
- How many firms per district/sector?
 - Quality of the data?
 - Biases in measurements.

Identification?

- Fatalities are endogenous (in general) more so in this sort of terrorist type setting.
 - Use of civilians as human shield.
 - Willing to die/kill others.
- Firms in the area potentially also part of the terrorist groups/plots.
- Closure of border: Products did make their way across the border.
 - Smuggling of guns and weapons through tunnels
- What is the purpose of their activities (maximize profits?)
 - How does it depend/change with political situation?

Generalization?

- And thus, how much can be generalized to other conflicts?
 - Honduras: Highest per capita murder rates in the planet
 - 2012: 90+ per 100,000; 8 million people. (Source WB)

Key Sectors in Economic Development: Julio Leal

- Paper looks at the effects of misallocation in interconnected sectors (using IO tables).
 - Analysis calibrated to Mexico.
- Role of linkages in development: Hirschman (1958).
- Little comments/general questions.

Little Comments

- “If the productivity of refined petroleum is low, this affects gasoline production, which in turn affects transportation, which affects trade, which affects back to the production of refined petroleum products, and so on.”
- Question. If the productivity of refine product is so low, why don't they import refine oil, gasoline?
 - Role of trade?
 - Open economy adjustment to I-O (Antràs and Chor, Econometrica).
- “Consider the following example. Two sectors with large markups are Education and Real Estate. Note, however, that Real Estate has a large degree of influence, while Education does not. “
 - Is this measuring Education as production process? How about role of educated people/externalities?

Model-Calibration

- The question is quantitative, not qualitative.
 - Parameter values/estimates: Sensitivity.
 - 2 digit IO versus 4 digit; IO for service sector.
- Model is firm level. Calibration industry level
 - Why not get firm level data?
 - Lack of diversification issue when few/large firms, not many/small firms.
 - Alfaro, Antràs, Conconi and Chor (2015): combine firm-level + IO information.
- Bigger question: How much of this additional source of misallocation explains differences in income?
 - Accumulation of resources (education/capital) versus misallocation.
- Additional reference: “ Linkages and Economic Development” by Dominick Bartelme, Yuriy Gorodnichenko - #21251 (EFG ITI ME PR)

Thanks