What affects firm productivity?

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Motivation

- ▶ Why are some firms more productive than others?
- ▶ Even within narrowly defined industries, good firms can produce twice as much output per input as bad firms (Syverson 2004, 2011).
- Productivity differences are persistent over time and affect many aspects of a firm's life (e.g., exporting, wages).
- ▶ Robust finding across countries and over time.

What interventions can improve firm productivity?

- 1. Access to capital and technology:
 - Access to imported materials (Halpern, Koren and Szeidl 2015) and imported technology (Halpern, Hornok, Koren and Szeidl 2018) improves firm productivity. (Hungary, manufacturing)
- 2. Worker training:
 - ▶ Worker training works even in large state-owned enterprises (Das, Krishna, **Lychagin** and Somanathan 2013). (India, steel)
- 3. Management intervention:
 - ▶ Management training improves productivity (Bloom et al 2011). (India, textile)
 - ▶ Manager meetings increase sales (Cai and Szeidl 2017). (China, trade)

Network effects in firm performance

- 1. Spatial proximity matters for export/import behavior (**Bisztray**, **Koren** and **Szeidl** 2017, Hungary) and innovation (**Lychagin** 2016, USA, software).
 - ► Targeted interventions work better.
- 2. Business meetings (Cai and Szeidl 2017) increase firm revenue (China, trade).
 - Aim to faciliate meetings and interactions.
- 3. How do firms find clients and suppliers? (**Békés**, **Koren**, Muraközy and **Telegdy** 2018) (Hungary, Romania, Slovakia, manufacturing)

Training improves performance

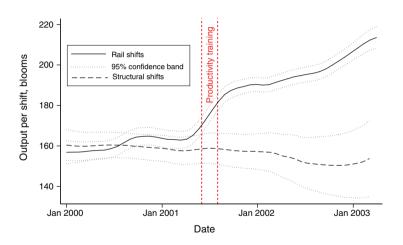
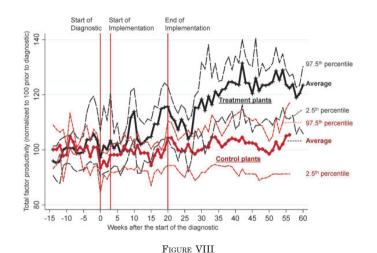


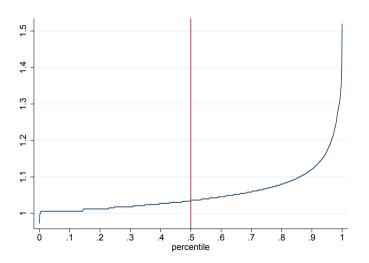
FIGURE 1. EFFECT OF PRODUCTIVITY TRAINING ON OUTPUT PER SHIFT

Management improves performance



Total Factor Productivity for the Treatment and Control Plants

Social multiplier of intervention



Summary

- 1. Training interventions raise productivity.
- 2. Interventions should be targeted at dense nodes in networks.
- 3. If possible, aim to increase interactions.