Comments on "A Half Century of Stagnation: Labour Productivity in Ontario's Gold Mining Industry"

Discussant

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The 51st Annual Conference of the Canadian Economic Association

Antigonish, Nova Scotia

June 2-4, 2017

Outline

- A summary of the paper
- Comments
- Lessons for productivity measurement
- Implications for policy drivers of productivity growth

Summary: objectives and method

- Objective
  - to examine the sources of labour productivity growth in Ontario's gold mining industry for 1920 to 1970.

- Method
  - aggregate productivity growth is decomposed into: contribution from productivity growth at existing mines, reallocation effect of labour across existing mines, and the effect of entry and exit.
  - The decomposition results are used to provide insights on the causes of productivity growth: the changes in gold price, government subsidies, war.

Summary: data sources and main findings

- Data source:
  - micro data on gold mines.

- Main findings:
  - The relative importance of growth of continuing firms, entry and exit for productivity growth depends on the external environments, for example:
  - When there is a sudden and permanent increase in the price of gold by 70% in 1934, small mines with marginal deposits entered, and existing mines extracted the ore bodies of lower quality which became profitable. This process reduced aggregate labour productivity.

Comments on data sources

- To assess the quality of the micro data used for the paper, the authors should compare statistics on output, employment, and labour productivity derived from the micro data with aggregate statistics for the gold mining sector.
  - any break, similar trend?

Comments on measurement

- The paper used three measures of labour productivity: ounces of gold per worker, tons of ores milled per worker, revenue per worker.

  - Revenue per worker is a not a appropriate measure of labour productivity.

  - The paper may want to use a more comprehensive measure -- multifactor productivity which relates the production of gold to production inputs including labour, intermediate inputs, physical capital and natural capital.

Comments on main findings

- The results are sensible and have important implications for productivity measurement and policies.

Implications for productivity measurement in the resource extraction sectors

- Lesson one: to better understand this productivity trend in the resource extraction sector, we will need micro data on mines and decompose aggregate productivity growth into productivity growth and innovation taking place at different types of mines (young vs old mines, large vs, small, incumbents and entrants)

- Lesson two: the decline in the quality of ore bodies is a big part of he overall decline in productivity in the mining sector.

Implications for the policy drivers of productivity growth

- Policies matter for productivity growth.
  - For example, the paper finds that rigid labour market policies act as barriers to the reallocation of workers towards more efficient mines and thus has a negative effect on the growth in productivity.