Technical Change and Productivity

Panel: How can data help lift productivity performance?
Stats NZ’s Longitudinal Business Database (LBD) is a large research database containing de-identified microdata about businesses.

The LBD contains business-centric microdata from various Stats NZ surveys and government agencies. For more information about data in the LBD, see www.stats.govt.nz/lbd.

The Integrated Data Infrastructure (IDI) complements the LBD with microdata about people and households. For more information about data in the IDI, see www.stats.govt.nz/idi-data.

**Innovation data**
- Business Finance Survey – 2004
- Government Assistance Programmes – 1994 to 2013
- Innovation Survey – 2003
- Intellectual Property Office – 1972 to 2014
- Research and Development Survey – 1996 to 2016

**Business financials data**
- Annual Enterprise Survey – 1999 to 2016
- Business Activity Indicator (GST) – 1999 to 2016
- IR10: Inland Revenue Tax-filed financial accounts – 1999 to 2016

**Agriculture data**
- Agricultural Production Survey – 2002 to 2016

**International trade and tourism data**

**Business practices data**
- National Survey of Employers – 2014 to 2015
- Manufacturing Energy Use Survey – 2006

**Employment data**
- Employer-Employee Tax (from IDI) – from 1999

Stats NZ operates a five-safes environment, balancing privacy and confidentiality with data insights. For information about applying to use the LBD or to learn about how we keep the data safe, see www.stats.govt.nz/lbd.
Why we need more Firm level-based analysis of productivity?

Creating a dataset for Asia-Pacific

Filippo di Mauro
National University of Singapore
Business School

Chairman of CompNet

NZ Productivity Commission
Wellington
13 February 2018
The rational of firm-level perspective

- Firm performance distribution is very disperse and asymmetric.
- Most firms are around an “average” LOW performance,
- and only a few which are very productive in the “right-tail” of the distribution (the so called “happy few”)

Evolution of labor productivity distribution in France
Manufacturing sector - firms with 20+ employees

Why do economists care about firm heterogeneity?

Because they want resources (capital and labour) reallocated from low to high productive firms, to increase the economy aggregate performance
Firm performance is heterogeneous within/across sectors and countries

Firm productivity distribution in manufacturing (2006-12)

- Germany
- Spain
- France
- Italy

→ This is VERY relevant when measuring the effects of policies

→ ……including Monetary Policies

Sources: ECB staff calculations based on CompNet data, Eurostat data and Statistical office of Germany – AFiD-Panel data for Germany.
Note: Re-scaled so the mean of the distribution equals GDP per capita.
Data refers to the 20E sample.
### Dataset

- **What’s Included:**
  - Productivity Indicators
  - Financial Indicators
  - Labour Indicators
  - Markup Indicators
  - Trade Indicators
  - Joint Distribution

- **Firms**
  - Across 60 sectors

- **Time Covered**
  - Varies with each country

### Coverage: Asia-Pacific

<table>
<thead>
<tr>
<th>Country</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia ID</td>
<td></td>
</tr>
<tr>
<td>Vietnam VN</td>
<td>Vietnam Enterprise Surveys, 2000-2015</td>
</tr>
<tr>
<td>Malaysia MY</td>
<td>Malaysian census data, every 5 years, 2000-2010</td>
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<td>Korea KR</td>
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<td>Australia AU</td>
<td>Business Longitudinal Analysis Data Environment (BLADE), 2001-2015</td>
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<td>New Zealand NZ</td>
<td>Longitudinal Business Database, from 1999</td>
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<td>India IN</td>
<td>Prowess database, 1988-2016</td>
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<td>Turkey TR</td>
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<td>China CN</td>
<td>Innovation Data of China, 1992-2015</td>
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<td>Singapore SG *</td>
<td>Annual Census of Manufacturing Activities, 2002-2015</td>
</tr>
</tbody>
</table>
TIMELINE AND MILESTONES

FIRST EVENT
Singapore
JUNE 2017

SECOND EVENT
Tokyo
JANUARY 2018

Data collection started
FEBRUARY 2018

Report be published
JUNE 2018

THIRD EVENT
Singapore
SEPTEMBER 2018
Thanks for your attention

Www.comp-net.org
Five broad categories of variables are available…

<table>
<thead>
<tr>
<th>Productivity and allocative efficiency</th>
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<td>Labor productivity</td>
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<td>Implicit interest rate</td>
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<tr>
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**Example of joint distributions**

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**Example type of question:**

Are low productive firms in a country-sector characterized by higher credit constraints?
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