Firms and Technology

Introductory course:
The Economics of COVID-19 in Developing East Asia and the Pacific
November 2021
Roadmap of the Presentation

• Do crises weed out the worst & leave the best firms?
• What is the impact? Within firms, across firms, across sectors?
• How can policy help?
How pandemic affected private sector?

- Multipronged negative shock:
  - Supply shock
  - Demand shock

- Mitigated by:
  - Public support
  - Technology
Is a crisis a good selector?

• Not necessarily!
  • In the past, strong firms have been weeded out along with weaker firms
  • Exit of good firms/job losses may mean loss of intangible assets
Is this time different?

How has the pandemic affected sales, employment & technology adoption?

- Within firms
- Across firms, within a sector
- Across sectors
Within firms:
Smallest firms were hardest hit, larger firms more resilient

Changes in sales and employment

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>-50</td>
</tr>
<tr>
<td>Small</td>
<td>-30</td>
</tr>
<tr>
<td>Medium</td>
<td>-20</td>
</tr>
<tr>
<td>Large</td>
<td>0</td>
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Changes in labor productivity

<table>
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<tr>
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<th>Percent</th>
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<tbody>
<tr>
<td>Micro</td>
<td>0.4</td>
</tr>
<tr>
<td>Small</td>
<td>0.2</td>
</tr>
<tr>
<td>Medium</td>
<td>-0.2</td>
</tr>
<tr>
<td>Large</td>
<td>-0.4</td>
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Within firms:
Rapid adoption of technology…
Within firms:
…but technology is not equally adopted

Use of platforms for supply chain management

- Percent of firms
- 80%
- 60%
- 40%
- 20%
- 0%

- Small
- Medium
- Large

Use of platforms for internal processes

- Percent of firms
- 100%
- 80%
- 60%
- 40%
- 20%
- 0%

- Small
- Medium
- Large
Across firms:
Least productive firms fire more and hire less over the pandemic

<table>
<thead>
<tr>
<th>Job destruction contribution</th>
<th>Job creation contribution</th>
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<tbody>
<tr>
<td>25% least productive firms</td>
<td>25% least productive firms</td>
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<tr>
<td>Quartile 2</td>
<td>Quartile 2</td>
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<td>Quartile 3</td>
<td>Quartile 3</td>
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<tr>
<td>25% most productive firms</td>
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</tbody>
</table>
Across sectors:
East Asia & Pacific firms create fewer jobs over the pandemic

Job destruction rate

Job creation rate

Percent
0
10
20
-10
-20
-30
-40
Accom. & Food
Manufacturing
Other Services
Retail & Wholesale

EAP

Percent
0
5
10
15
20
Accom. & Food
Manufacturing
Other Services
Retail & Wholesale

EAP
ROW
Who receives policy support?

- **Many firms** unaware of available support even by summer 2020

- Reach of support is uneven

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**Bar chart:**
- Indonesia: 20% Not aware of policies, 60% No support for other reasons, 20% Received policy support
- Vietnam: 20% Not aware of policies, 60% No support for other reasons, 20% Received policy support
- Philippines: 20% Not aware of policies, 60% No support for other reasons, 20% Received policy support
What can be done?

• Which firms should be supported?

• How to support firms and not slow down reallocation of resources to more productive uses?
Conclusion

• Historic crises don’t always promote productive reallocation
• COVID hit the smallest firms the hardest
• Accelerated digital adoption – but best firms adopting more sophisticated technologies
• Policy support should minimize misallocation


