COVID-19 impact on firms in Indonesia: Panel analysis from wave 1 to wave 3 of Business Pulse Survey
Results from the Covid-19 Business Pulse Survey
COVID-19 Business Pulse Survey in a Nutshell

• **Aim:** Monitoring COVID-19 impacts on firm operations and expectations

• **Frequency:** Every quarter for 4 rounds

• **Sectoral coverage:** 3 strata:
  – Manufacturing
  – High value-added services
  – Creative economy and tourism

• **Firm size (as of January 2020):**
  – Micro: less than 5 workers
  – Small: 5-19 workers
  – Medium: 20-99 workers
  – Large: 100 or more workers

• **Round 1:** June 15, 2020 – June 23, 2020
  – Sample: 850 firms

• **Round 2:** October 16, 2020 – November 4, 2020
  – Sample: 716 firms (or 84.2%) of round 1 firms. 134 respondents (15.8%) from round 1 could not be contacted or refused to be interviewed in round 2.

• **Round 3:** March 5, 2021 – March 26, 2021
  – Sample: 658 firms (or 91.3%) of round 2 firms. 58 from wave 2 could not be contacted or refused to be interviewed in round 3.

• **Data collection method:** phone survey
Key results from Business Pulse Survey Wave 3

- **Consistent with the contraction of GDP in Q1 2021 (QoQ), firms also experienced sales drop between October 2020 and March 2021**
  - Compared to October 2020, sales in March 2021 dropped by 15%. This drop was partly contributed by seasonality and lower demand (proxied by mobility index)
  - Micro firms and firms in the creative and tourism sector still experienced the highest sales drop → Demand in this sector remains low due to pandemic and some mobility restriction.

- **In March 2021, financial pressure slightly increased for large firms.**
  - Share of large firms reported difficulty in paying loans, rent, and utilities increased in March 2021.
  - In the same period, more micro-firms reported difficulty in paying wages.

- **Recovery speed is associated with several firm’s characteristics**
  - Investment in digital equipment and software in the previous wave is positively associated with sales changes in the current wave.
  - Export status is positively associated with the speed of recovery → a global economic recovery may increase the international demand.

- **This recovery also has an association with hiring and firing of workers.**
  - An improvement of sales performance positively correlates with higher hiring probability.
  - Optimistic expectation on future sales is associated with lower firing probability.

- **More firms receive assistance from the government**
  - Share of firms that received assistance increased from 48% in October 2020 to 59% in March 2021.
  - Almost all large firms received assistance. More micro, small, and medium firms received assistance in March 2021.
  - This assistance correctly targeted the badly hit firms → The higher the YoY sales drop in the previous period is, the higher the probability of receiving assistance in the current period.
92% of firms were open in March 2021: **2%** up from October 2020

- 85% of firms were open in October 2020 and in October 2020. 7% of previously closed firms were open in March 2021, resulting in 92% of firms being open.
- 3% of firms remained closed in October 2020. 5% of previously open firms were closed in March 2021, resulting in 9% of firms being closed.
- More than 98% of closed firms in March 2021 are from creative and tourism sector.
On average, fewer firms experienced financial pressure to cover most operational cost

Share of firms that in the last month have experienced one of these instances or undertaken one of these actions in June 2020, October 2020 and March 2021

- Reduced labor cost: Jun-20 63%, Oct-20 42%, Mar-21 32%
- Difficulty in repaying loans/credit: Jun-20 27%, Oct-20 23%, Mar-21 16%
- Difficulty in paying wages: Jun-20 25%, Oct-20 18%, Mar-21 22%
- Difficulty in paying utilities: Jun-20 24%, Oct-20 13%, Mar-21 10%
- Difficulty in paying rent: Jun-20 17%, Oct-20 13%, Mar-21 10%
- Filed for bankruptcy: Jun-20 8%, Oct-20 3%, Mar-21 0%
Compared to October 2020, sales in March 2021 dropped by 15%

Sales drop between Round 2 and Round 3

<table>
<thead>
<tr>
<th>All firms</th>
<th>Creative economy and tourism</th>
<th>Strata</th>
<th>High value-added services</th>
<th>Manufacturing</th>
<th>Size</th>
<th>Micro</th>
<th>Small-medium</th>
<th>Large</th>
<th>Management dominance</th>
<th>Male dominant</th>
<th>Female dominant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-15%</td>
<td>-9%</td>
<td>-2%</td>
<td>-20%</td>
<td>-8%</td>
<td>-10%</td>
<td>-16%</td>
<td>-15%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. The strata (statistical subpopulations) of this survey are creative economy and tourism, high value-added services and manufacturing.
2. A firm is categorized as female dominant if 50% or more of its managers/owners are female.
3. Characteristic of female-dominant firm: Within all firms in creative economy and tourism, 58% are female dominant firms. Within all micro firms, 63% are female dominant firms.
This sales drop can be explained by lower demand proxied by lower mobility rate in February 2021

Note:
Activities mobility consists of retail and recreation, transit station, and workplace
More large firms reported difficulty in paying loan, rent, and utilities; wage payment became an issue for more micro firms in March 2021.

Share of firms on financial distress over firm size

<table>
<thead>
<tr>
<th></th>
<th>Jun-20</th>
<th>Oct-20</th>
<th>Mar-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty in paying loans</td>
<td>25%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>Difficulty in paying wages</td>
<td>20%</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Difficulty in paying rents</td>
<td>19%</td>
<td>16%</td>
<td>11%</td>
</tr>
<tr>
<td>Difficulty in paying utilities</td>
<td>28%</td>
<td>23%</td>
<td>12%</td>
</tr>
</tbody>
</table>
In March 2021, 54.4% of firms claimed no problem in accessing finance; 8% increased from October 2020. Market uncertainty remained the major constraint for accessing finance.
Only 20% of firms needed loan adjustment in March 2021: a 6% reduction from situation in October 2020.
Access to finance and loan adjustment were more problematic for firms with more female managers.

Share of firms on accessing finance March 2021

- No problem: 54.4%
- Some problems in accessing finance: 45.6%

Share of firms on loan adjustment March 2021

- No outstanding loan: 57.4%
- Have a loan, need adjustment: 19.4%
- Have a loan, not need adjustment: 23.1%
In March 2021, 59% of firms reported receiving government assistance; an 11% increase from October 2020.
Almost all large firms received assistance and more MSME received assistance in March 2021.

Higher percentage of firms with more female managers received assistance in both wave 2 and 3.
While program awareness increased, **non-eligibility was still the main reason** for not getting government assistance.

Note: BPUM = Cash transfer for micro and small firms; Subsidy for BPJS = Subsidy for premium of compulsory health insurance and worker insurance; Subsidi upah = cash transfer to workers in coordination between firms and the Government.
### Large firms received *Subsidi Upah* and BPJS subsidy; more MSME received BPUM and electricity subsidy

![Program beneficiaries chart](chart.png)

<table>
<thead>
<tr>
<th>Category</th>
<th>Oct-20</th>
<th>Mar-21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BPUM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>16%</td>
<td>25%</td>
</tr>
<tr>
<td>Small-medium</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Large</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Electricity subsidy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>24%</td>
<td>31%</td>
</tr>
<tr>
<td>Small-medium</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>Large</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Credit assistance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>13%</td>
<td>19%</td>
</tr>
<tr>
<td>Small-medium</td>
<td>9%</td>
<td>18%</td>
</tr>
<tr>
<td>Large</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Fiscal assistance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Small-medium</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Large</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Subsidy upah</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>33%</td>
<td>34%</td>
</tr>
<tr>
<td>Small-medium</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>Large</td>
<td>30%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Subsidy for BPJS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Small-medium</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Large</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Note: BPUM = Cash transfer for micro and small firms; Subsidy for BPJS = Subsidy for premium of compulsory health insurance and worker insurance; Subsidi upah = cash transfer to workers in coordination between firms and the Government.*
Badly hit firms have a higher probability of receiving government support...

Note:
1. **significant at 1% confidence level, *significant at 5% confidence level, # significant at 10% confidence level.
2. Bar represents marginal effect at-means after logit of receiving assistance.
3. If a firm experiences a sales drop, YoY sales change will be negative. The more negative the YoY sales change is, the harder the impact of the crisis is.
Large firms and firms in high-value added sector also have higher probability of receiving assistance *(relative to each reference groups)*

Probability of receiving assistance relative to each reference categories

- Creative economy and tourism\(^\ast\) **\(-7\%\)**
- Manufacture **\(0\%\)**
- Small-medium **\(10\%\)**
- Large**\(***\) **\(30\%\)**

**Note:**
1. **\(***\) significant at 1% confidence level, **\(**\) significant at 5% confidence level, \(^\ast\) significant at 10% confidence level.
2. Bar represents marginal effect at means after logit of receiving assistance.
Expectation of future sales is negatively correlated with probability of firing; improved sales from Round 2 to Round 3 is significantly associated with higher hiring probability.

Firing probability

Hiring probability

Note:
(1) *** significant at 1% confidence level, ** significant at 5% confidence level, * significant at 10% confidence level.
(2) Bar represents marginal effect at-means after logit of receiving assistance
(3) We control for size, strata, and province.
(4) The data was collected before Ramadhan and Eid 2021.

Indonesia Covid-19 Business Pulse Survey
Compared to domestic oriented firms, exporting firms have experienced faster recovery rates.

Sales change between round 2 and round 3 and exporter status

Note:
(1) *** significant at 1% confidence level, ** significant at 5% confidence level, * significant at 10% confidence level.
(2) Samples limited to small-medium and large firms
(3) A firm is categorized as an exporter if at least 20% of its output are exported in 2019
(4) In the estimation, we control for size, strata, and province
Firms that invested in digital equipment and/or software in round 2 positively correlate with sales performance in round 3.
Policy implications

**Improve the impact of existing policies:**
- Improve the effectiveness of the current support through **better communication, including on eligibility.**
- Contain the spread of COVID19 pandemic through (1) enforcement of health protocol in public space and (2) accelerate the administration of COVID19 vaccination program in Indonesia.
  - The success in containing COVID19 (measured in a lower number of new cases) improves average mobility.
  - Changes in mobility positively correlates with sales changes.
- Improve **ease of access to existing programs** for micro, small, and medium sized firms.
  - Subject to budget availability, expand the eligibility of government supports.
- Improve **targeting of the loan restructuring program to viable firms** with sufficient disclosure on the criteria banks use to assess creditworthiness and with a clear exit strategy.
- Expand the **role of regulated microfinance institutions** to serve micro enterprises in creative economy and tourism.

**Consider new/adjusted policies:**
- Strengthen the insolvency framework to increase uptake by firms, particularly the smaller ones. This requires: (i) reducing the costs associated to insolvency proceedings; (ii) simplifying the legal framework by revising the Bankruptcy law; (iii) considering the introduction of out-of-court restructurings to allow firms, in particular SMEs, to access the insolvency system more efficiently.
- Increase competitiveness in the global market through a significant elimination of policies that may increase cost of production.
  - Government of Indonesia needs to induce the rise of new exporting firms by improving competitiveness in the global market by significantly reducing cost of production such as elimination of un-necessary trade barriers for importing input of production.
COVID-19 Business Pulse Survey in a Nutshell (further details)

**Scope:**
- COVID-19 impacts on firm operation’s status (closed, temporarily closed, open, and if so, for how much longer; sales and hiring/firing).
- Expectations and uncertainty of businesses.
- Firm feedback on hypothetical and received government support measures/policies.
- Adjustment mechanisms in the business process (use of internet, etc.).

**Instrument:**
For international comparability, the instrument builds on the global standardized COV-BPS. We added specific questions for Indonesia’s COV-BPS.

**Sampling Methodology**
- 3 strata: manufacturing, high value-added services sector and creative economy and tourism sectors.
- Total sample size is calculated using the economic census 2016 and directory of medium and large firms 2007.
- Primary sample is selected using random sampling from each strata-substrata-province.
- Replacement for an unavailable primary sample is drawn from the same strata, sub-strata and province.
- Note: COV-BPS findings are likely a lower bound (of negative impact) given that firms that are closed have a lower likelihood of responding.
- The second round is panel data of the first round.

**Sampling Frame**
Data from the Occupational, Employment and Vacancy Survey (OEVS) collected in early 2020.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Source</th>
<th>Firm size</th>
<th>Geographical coverage</th>
<th>OEVS samp l e Size</th>
<th>COV-BPS Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>Manufacturing Directory 2017</td>
<td>Medium and Large</td>
<td>North Sumatera, West Java, Banten, Central Java, East Java, South Sulawesi</td>
<td>843</td>
<td>280</td>
</tr>
<tr>
<td>Service-High Value Added</td>
<td>Economic Census Directory 2016</td>
<td>Medium and Large</td>
<td>Java and Bali</td>
<td>1481</td>
<td>285</td>
</tr>
<tr>
<td>Creative economy and tourism</td>
<td>Economic Census Directory 2016</td>
<td>Micro, Small, Medium and Large</td>
<td>Java and Bali</td>
<td>1547</td>
<td>285</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Survey rounds</th>
<th>Period of survey</th>
<th>Total sample</th>
<th>Not interviewed sample (to round 3)</th>
<th>Unbalanced panel sample (to round 3)</th>
<th>Balanced panel sample (to round 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 2</td>
<td>Oct 14, 2020 – Nov 6, 2020</td>
<td>1381</td>
<td>58</td>
<td>716</td>
<td>658</td>
</tr>
<tr>
<td>Round 3</td>
<td></td>
<td>1360</td>
<td>0</td>
<td>658</td>
<td>658</td>
</tr>
</tbody>
</table>

*Micro: less than 5 workers; Small: 5-19 workers; Medium: 20-99 workers; Large: 100 or more workers.*
Summary of sample in round 3: (1) the exit rate is 8.1% (round 2 – round 3); (2) no significant difference in several outcomes between firms that remain in the sample and those that exit (sales changes, sales drop, and status); (3) no significant difference in sample structure (size and strata)
Increase in activities mobility positively correlate with sales change from round 2 to round 3.

Note:
(1) *** significant at 1% confidence level, ** significant at 5% confidence level, * significant at 10% confidence level.
(2) In the estimation, we control for size, strata, and province
(3) Activities mobility consists of retail and recreation, transit station, and workplace