Unlocking the Full Potential of Digital Merchants

Lessons from Round 2 of the COVID-19 Digital Merchants Surveys
Executive Summary

- E-commerce is an inclusive landscape where people from various demographic backgrounds can participate as entrepreneurs.

- E-commerce helps to provide a relatively stable source of income. Only 16% of merchants experienced a decline in sales during the first year of the pandemic. This is much less than 86% of businesses in Indonesia who reported decrease in YoY sales.

- However, some e-commerce merchants face challenges which prevent them from growing their businesses or even make them inactive over time.

- The first challenge is the lack of time. e-commerce merchants who allocate more time are associated with higher sales figures. However, many e-commerce merchants are constrained by childcare responsibilities. These groups would benefit from access to childcare support. Other paid work – whether by choice or necessity – has also limited their time spent on their e-commerce business.

- The second challenge is on financing. Many e-commerce merchants need loans to fund their purchase of inputs and inventory. Digital/Fintech loans are rising in popularity although lack of understanding and awareness of such loans and cost associated with loan-taking hampers their adoption. These groups would benefit from improving digital financial inclusion and literacy.

- The third challenge is the lack of business knowledge and digital skills. This should be tailored to sellers’ experience levels. Targeted programs are needed to improve business knowledge and skills across different types of merchants.
E-commerce is an inclusive landscape where people from various demographic background can participate as entrepreneurs.

**INDONESIA COVID19 OBSERVATORY: DIGITAL MERCHANT SURVEY**
On top of being inclusive, E-commerce is a relatively stable source of income—only 16% of Shopee’s online merchants experienced decreasing sales during the 1st year of pandemic, compared to 86% of firms that report decrease in YoY sales[1].

Even between 2020 and 2021, only 12% of merchants experienced a decline in sales, while 14% experienced an increase in annual sales.

However, a majority of merchants stated that they face constraints to spend more time in online business…
... and some of them became inactive sellers.

- About one fifth of merchants are not actively trying to sell online.
- Inactive merchants **lack working capital** or are **busy with other works** as well as **being discouraged due to lack of sales**.
What are key challenges faced by e-commerce merchants?

- Time constraints
- Financing issues
- Business Knowledge & Digital Skills
#1: Time constraints

- Around 1 in 4 merchants works up to 3 hours daily, another one third works between 3 -6 hours daily, while the rest (45%) of merchants work full -time or close to full -time in e-commerce.

- The amount of time allocated to e-commerce is positively correlated with **annual sales**.

![Pie chart showing time spent on e-commerce](chart.png)

### 2021 Sales Level by Time Spent Daily Categories

<table>
<thead>
<tr>
<th>Time Spent Daily</th>
<th>Sales Level</th>
<th>Less than IDR 30 million</th>
<th>IDR 30 - 120 million</th>
<th>IDR 300 million - 2.5 billion</th>
<th>More than 2.5 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 3 hours</td>
<td>1.9%</td>
<td>10.5%</td>
<td>4.3%</td>
<td>13.5%</td>
<td>16.0%</td>
</tr>
<tr>
<td>&gt;3 to 6 hours</td>
<td>2.6%</td>
<td>2.6%</td>
<td>2.6%</td>
<td>16.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>&gt;6 to 9 hours</td>
<td>3.3%</td>
<td>3.3%</td>
<td>3.3%</td>
<td>16.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>&gt;9 to 12 hours</td>
<td>6.9%</td>
<td>6.9%</td>
<td>6.9%</td>
<td>16.7%</td>
<td>5.0%</td>
</tr>
<tr>
<td>More than 12 hours</td>
<td>7.6%</td>
<td>7.6%</td>
<td>7.6%</td>
<td>17.5%</td>
<td>7.6%</td>
</tr>
</tbody>
</table>
#1: Time constraints

- Not all merchants are able to spend more time taking care of their e-commerce business.

- Limitation to time allocated to e-commerce is largely related to **non-e-commerce paid work** (39%), followed by **childcare responsibilities** (24%).

- Students are constrained by their study, while workers by their paid jobs, whether it is by choice or necessity, and homemakers by their childcare responsibilities.

### Constraints on spending time on e-commerce

- Non e-commerce related paid work: 39%
- Caring for child(ren): 24%
- Never experienced any: 17%
- Studying/training/other educational/training activities: 14%
- Other unpaid work: 10%
- Caring for elderly: 8%
- Others, please specify: 4%
- Constraints on internet access (e.g. expensive) or other digital device issues: 10%

**INDONESIA COVID-19 OBSERVATORY: DIGITAL MERCHANT SURVEY**
#1: Time constraints

- Around 24% of merchants reported that they face time constraints in e-commerce due to childcare responsibilities. This is significantly more prevalent among female (35%) rather than male (10%) merchants.

- Because of childcare issues, around 15% of merchants have turned down business opportunities.

- The main issue revolves largely around finding childcare support that is high quality and affordable for all merchants of different backgrounds.

---

**Number of Child Dependents**

- No children: 39%
- 1 child: 27%
- 2 children: 24%
- 3 children: 8%
- More than 3 children: 2%

---

**Issues: Finding care that is:**

- Affordable: 7%
- High quality: 6%
- Matches a work schedule outside Monday-Friday daytime hours: 1%
- Convenient location: 3%
- Emergency/back-up/sick child basis: 3%
- Has open slots (not filled up): 1%
- Flexible to accommodate changing work shifts: 3%

---

**Issues due to Child Care**

- Turn down business opportunity: 15%
- Missed full day of work: 3%
- Distracted: 8%
- Been late for work: 9%
- Cannot attend work-related training: 8%
- Missed part of the middle of a work shift: 10%
- Stopped working earlier: 3%
While most merchants rely on savings to fund their business, a significant share also takes loans, with fintech as one of the most popular sources of lending.

- Fintech is one of the most popular sources of loan, even more popular than commercial banks.
- Fintech loan takers tend to be younger, higher educated and have larger businesses than those who did not take any fintech loans.
Digital loans are quite popular, but cost of loans and weak financial literacy may hamper its potential for helping online businesses

• Among those who have taken loans, they use them **for buying more inventory**, however, 1 out of 5 use the loan also for non-business use such as **personal expenses**.

• **Cost of loans, lack of understanding and awareness** of digital loan products are barriers for merchants to take digital loans.

### Why no loan? (Only those who did not take digital loan)

- Don't meet other requirements: 39%
- Other, please specify: 14%
- Once applied but rejected: 16%
- Not aware of the product: 17%
- Don’t understand the product: 10%
- Interest rate is high: 9%
- No need: 8%

### How do you use the loan? (Only those who took digital loan)

- To buy more inventory: 56%
- To pay or hire employees: 2%
- To invest in machinery/equipment: 9%
- To do additional marketing: 12%
- To pay off other debts: 14%
- To pay overheads (rent): 22%
- For personal expenses: 17%
- To pay or hire employees: 9%
- Other, please specify: 4%
No one size fits all: different types of sellers appear to benefit from different types of business tools and strategies to improve sales.

For example, new merchants seem to gain greater sales from setting prices strategically themselves while merchants who have stayed longer gained more from improving customer services.

Note: Bars represent coefficients of ordered logit regression. Coefficients are interpreted as log-odd to be in a higher-sales level category—positive coefficients mean that the respective attribute is correlated with higher annual sales, vice versa. Circled bars denote statistically significant attributes.
However, a large share of merchants are not well prepared by trainings and skills-upgrading before selling in e-commerce...

- Statistical tests suggest that those who had prior learning would record higher annual sales.
- However, a large share of merchants never has prior learning on e-commerce before.
- Among the most popular learning source is unpaid private mentoring (by family/friends/other), followed by reading online/offline resources.
Among all merchants, **help with sales and marketing** are the most popular type of assistance expected by merchants to help them improve their online sales performance, followed by **better internet access** and **digital skills and knowledge**.

Around 23% also reported that **better access to loans and fundings** could help with their sales performance. This is consistent with earlier findings that lack of funds to buy inputs was cited as one of the key constraints.

**What would help you to sell online?**

- Help with sales and marketing: 38%
- Better internet access (affordability and reliability): 26%
- Digital skills/knowledge/training: 26%
- Better access to loans / funding: 23%
- Incentives to transform business and find new markets: 19%
- Cheaper and more reliable logistics service: 19%
- Help with business knowledge: 20%
- Reduced government red tape: 9%
- Help with operational management: 10%
- Nothing can help to ease my business: 9%
- Others, please specify: 1%
Policy priority areas to support digital merchants

- Time constraints due to childcare issues, especially among female merchants
- Financing issues: lack of awareness, financial literacy, nonproductive uses
- Lack of business knowledge and digital skills needed for e-commerce

- Support access to affordable and high-quality childcare
- Improve digital & financial literacy for better understanding of the benefits, risks and terms
- Target programs to improve business knowledge and skills
Acknowledgements

World Bank
Putu Sanjiwacika Wibisana
Research Analyst

Maria Monica Wihardja
Economist

Utz Johann Pape
Senior Economist

Sea Ltd
Santitarn Sathirathai
Group Chief Economist

Bradford Tao Loh
Research Analyst

Zhao Yao Lam
Public Policy Lead
Annex 1: Survey Design

1. A 20-minute survey

2. Blasted through Shopee In-Apps

3. Opened between February 24^{th}-March 8^{th}, and collected response from 17,479 respondents

4. Analyzed the survey using calibration rake weighting techniques to represent the target population by:
   - Provincial location
   - November 2021 sales on Shopee (proxy for online business size)

5. Two sets of weights are used:
   - Representative to the whole population
   - Representative to each subgroup

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Description of Population</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Existing merchants (Joined before 2021, &gt;= 30 transactions)</td>
<td>4,494</td>
</tr>
<tr>
<td>B</td>
<td>Inactive / Dormant merchants (Joined before 2021, &lt; 30 transactions)</td>
<td>5,226</td>
</tr>
<tr>
<td>C</td>
<td>New Merchants</td>
<td>7,759</td>
</tr>
</tbody>
</table>

Note: * Balance tests are conducted to see differences in age, number of dependents, gender, education level attainment and employment status between 1^{st} and 2^{nd} round samples. Results suggest significant statistical differences in most of characteristics.
Annex 2: Calibration Rake/RIM Weighting

Due to the high rates of non-responses and attrition in online surveys, the distribution of responses is often quite different from that of the target population.

A cell weighting approach (e.g. provincial location in the column and business size in the row) can be used to assign a weight to each cell in the sample of the online survey so that the weighted total of each cell becomes identical to the target population.

Rake/RIM weighting is used to reweight sampled when the cell-level values of the true distribution are unavailable, but row and column totals are provided. It is an iterative procedure that focuses on one feature at a time to make the marginal distribution of the sample in terms of that feature identical to that of the target population, then proceeding to the next features, and repeating the process until convergence is achieved:

Step 1: Calculate the weighted totals of the cells from the survey
Step 2: Compare those totals against the total from the auxiliary data
Step 3: Rake across by dividing the total of the rows in the auxiliary data by the total from the survey data. Multiply the values in each cell of the respective rows. The total in the rows now match those in the auxiliary data
Step 4: Rake down (similar to rake across by using columns instead of rows)
Step 5: Repeat process until convergence is reached
Step 6: Divide the raked totals by the weighted totals from the survey data. Apply these weights to each cell.
Annex 3: Econometric Exercise

Are business practices related to sales performance? To answer this question, we use econometric method (ordered logit regression) with the following specification:

\[ y_i = \beta A_i + \gamma IC_i + \theta BC_i + \epsilon \]

Where:
- \( A_i \) is a vector of personal attitudes measures
- \( IC_i \) is a vector of individual characteristics, including gender, age, education level, activity (employment status), number of children dependences, and hours spent daily on e-commerce
- \( BC_i \) is a vector of business characteristics, which includes number of employees, separate bookkeeping, existence of offline business, years selling online, and last year’s sales level
- \( y_i \) indicates sales indicators, measured using two variables:
  1. Average sales level from 2019 to 2021, and
  2. Change of sales level between 2019-2020 and 2020-2021 (positive number means higher sales level)
### Annex 3: Econometric Exercise

- Customer service is the only significant business practices aspect that explains the increase in sales level, but only for 2019-2020 period.
- At 2020-2021 period, no business practice aspect is significantly related to changes in sales level for older businesses.
- But for newer business (2019 onward), adjusting own prices is significantly associated with better sales performance.

<table>
<thead>
<tr>
<th></th>
<th>Adjusting own prices</th>
<th>Customer service</th>
<th>Inventory management</th>
<th>Product copywriting</th>
<th>Self development - e-commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Adjusting own prices</td>
<td>-0.0353</td>
<td>-0.0244</td>
<td>-0.016</td>
<td>-0.030</td>
<td>-0.029</td>
</tr>
<tr>
<td>(-1.70)</td>
<td>(-1.15)</td>
<td>(-0.75)</td>
<td>(-0.94)</td>
<td>(-0.91)</td>
<td>(-1.07)</td>
</tr>
<tr>
<td>Customer service</td>
<td>0.0555*</td>
<td>0.0541*</td>
<td>0.0706**</td>
<td>0.0686*</td>
<td>0.0734*</td>
</tr>
<tr>
<td>(2.48)</td>
<td>(2.40)</td>
<td>(3.07)</td>
<td>(2.290)</td>
<td>(2.420)</td>
<td>(3.050)</td>
</tr>
<tr>
<td>Inventory management</td>
<td>0.199***</td>
<td>0.165***</td>
<td>0.0875***</td>
<td>-0.009</td>
<td>-0.005</td>
</tr>
<tr>
<td>(10.19)</td>
<td>(8.38)</td>
<td>(3.57)</td>
<td>(-0.34)</td>
<td>(-0.17)</td>
<td>(-0.06)</td>
</tr>
<tr>
<td>Product copywriting</td>
<td>0.0399</td>
<td>0.018</td>
<td>0.0338</td>
<td>-0.021</td>
<td>-0.027</td>
</tr>
<tr>
<td>(1.53)</td>
<td>(0.67)</td>
<td>(1.25)</td>
<td>(-0.58)</td>
<td>(-0.74)</td>
<td>(-0.79)</td>
</tr>
<tr>
<td>Self development - e-commerce</td>
<td>0.0277</td>
<td>0.00348</td>
<td>-0.0244</td>
<td>0.037</td>
<td>0.037</td>
</tr>
<tr>
<td>(1.38)</td>
<td>(0.17)</td>
<td>(-1.18)</td>
<td>(1.190)</td>
<td>(1.140)</td>
<td>(0.540)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Char.</td>
<td>9178</td>
<td>9178</td>
<td>9178</td>
<td>4134</td>
<td>4134</td>
<td>4134</td>
<td>4134</td>
<td>4134</td>
<td>4134</td>
<td>2015</td>
<td>2015</td>
</tr>
<tr>
<td>Business Char.</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

N 9178 9178 9178 4134 4134 4134 4134 4134 2015 2015 2015

* p<0.05, **p<0.01, *** p<0.001