Unlocking the Full
Potential of
Digital Merchants

*Lessons from Round 2 of the
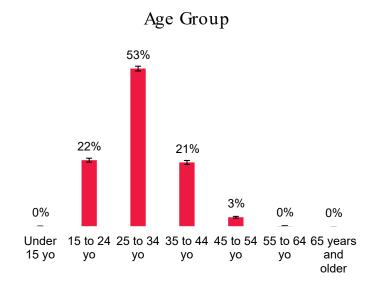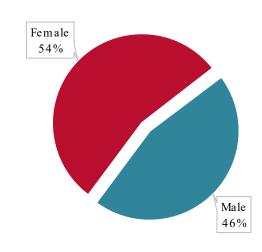COVID19 Digital Merchants Surveys*
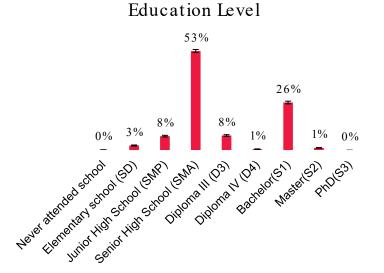
THE WORLD BANK
IBRD • IDA

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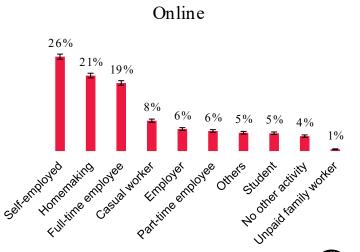
E-commerce is an inclusive landscape where people from various demographic background can participate as entrepreneurs.

Age Group

0%	22%	53%	21%	3%	0%	0%
Under 15 yo	15 to 24 yo	25 to 34 yo	35 to 44 yo	45 to 54 yo	55 to 64 yo	65 years and older

Gender

Female 54%

Male 46%

Education Level

Never attended school	Elementary school (SD)	Junior High School (SMP)	Senior High School (SMA)	Diploma III (D3)	Diploma IV (D4)	Bachelor(S1)	Master(S2)	PhD(S3)
0%	3%	8%	53%	8%	1%	26%	1%	0%

Main Activity apart from Selling Online

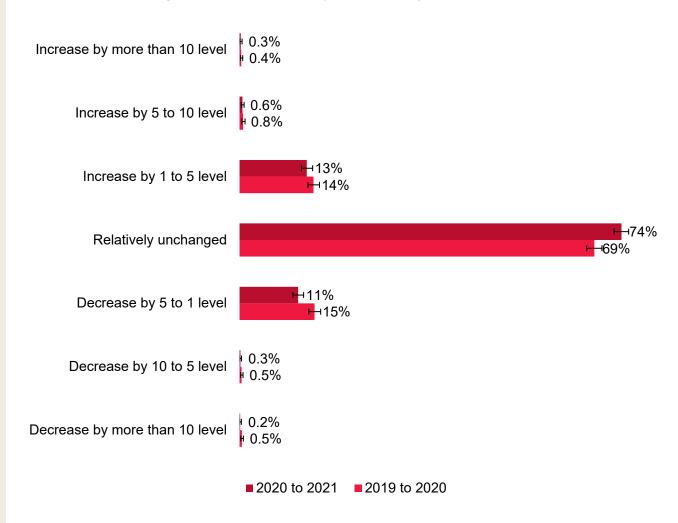| Self-employed	Homemaking	Full-time employee	Casual worker	Employer	Part-time employee	Others	Student	No other activity	Unpaid family worker
26%	21%	19%	8%	6%	6%	5%	5%	4%	1%

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.

[1] World Bank COVID-19 Business Pulse Survey, 2020. Link to publication.

Changes in Sales level, only those who joined before 2019

Category	2020 to 2021	2019 to 2020
Increase by more than 10 level	0.3%	0.4%
Increase by 5 to 10 level	0.6%	0.8%
Increase by 1 to 5 level	13%	14%
Relatively unchanged	74%	69%
Decrease by 5 to 1 level	11%	15%
Decrease by 10 to 5 level	0.3%	0.5%
Decrease by more than 10 level	0.2%	0.5%

■ 2020 to 2021 ■ 2019 to 2020

Note:
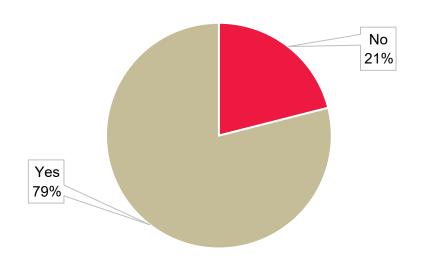Respondents indicate their sales level by choosing one of 20 interval categories.

However, a majority of merchants stated that they face constraints to spend more time in online business…
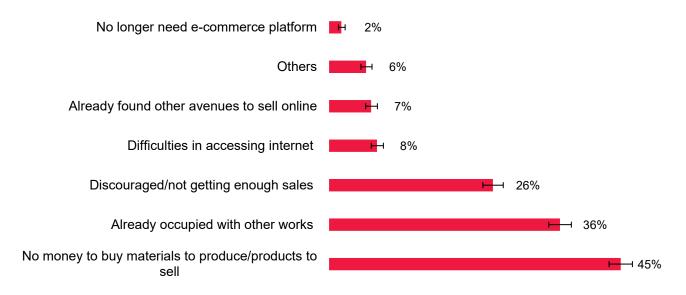
Share of Merchants With Time Constraints

No 17%

Yes 83%

... and some of them became inactive sellers.

Are you still actively trying to sell online?

No
21%

Yes
79%

Why not? (Only for those who are inactive)

No longer need e-commerce platform	2%
Others	6%
Already found other avenues to sell online	7%
Difficulties in accessing internet	8%
Discouraged/not getting enough sales	26%
Already occupied with other works	36%
No money to buy materials to produce/products to sell	45%

- 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

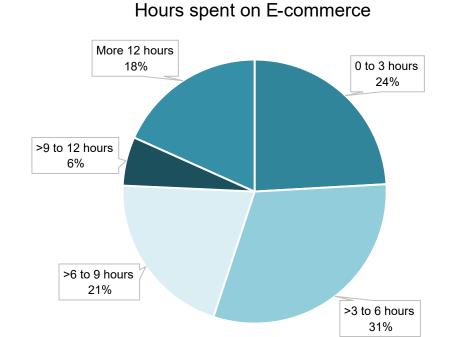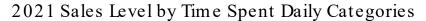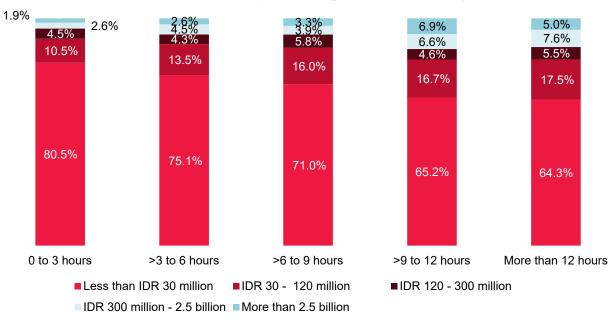**Business Knowledge & Digital Skills**

#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.**

Hours spent on E-commerce

- More 12 hours 18%
- 0 to 3 hours 24%
- >9 to 12 hours 6%
- >6 to 9 hours 21%
- >3 to 6 hours 31%

2021 Sales Level by Time Spent Daily Categories

	0 to 3 hours	>3 to 6 hours	>6 to 9 hours	>9 to 12 hours	More than 12 hours
More than 2.5 billion	2.6%	2.6%	3.3%	6.9%	5.0%
IDR 300 million - 2.5 billion	1.9%	4.5%	3.9%	6.6%	7.6%
IDR 120 - 300 million	4.5%	4.3%	5.8%	4.6%	5.5%
IDR 30 - 120 million	10.5%	13.5%	16.0%	16.7%	17.5%
Less than IDR 30 million	80.5%	75.1%	71.0%	65.2%	64.3%

Legend: ■ Less than IDR 30 million   ■ IDR 30 - 120 million   ■ IDR 120 - 300 million   ■ IDR 300 million - 2.5 billion   ■ More than 2.5 billion
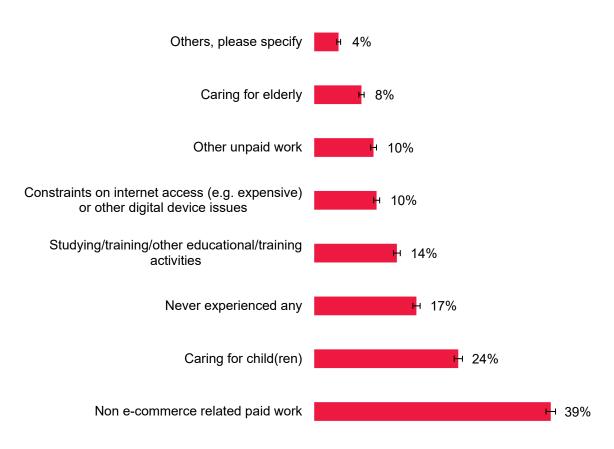
#1: Time constraints

- 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

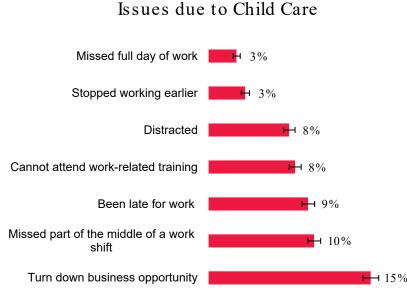|	
Others, please specify	4%
Caring for elderly	8%
Other unpaid work	10%
Constraints on internet access (e.g. expensive) or other digital device issues	10%
Studying/training/other educational/training activities	14%
Never experienced any	17%
Caring for child(ren)	24%
Non e-commerce related paid work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

#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.
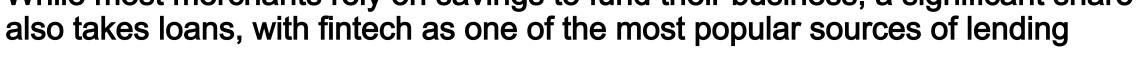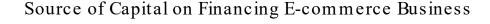
Number of Child Dependents

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

Issues: Finding care that is: ...

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

Issues due to Child Care

Missed full day of work	3%
Stopped working earlier	3%
Distracted	8%
Cannot attend work-related training	8%
Been late for work	9%
Missed part of the middle of a work shift	10%
Turn down business opportunity	15%

#2: Financing Issue

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

Source of Capital on Financing E-commerce Business

Severance/Pension	3%
In-kind transfer/endowments	3%
Lottery Club/Arisan	5%
Selling/Pawning assets	6%
Others	6%
Loans	22%
Savings	74%

- 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.

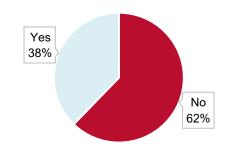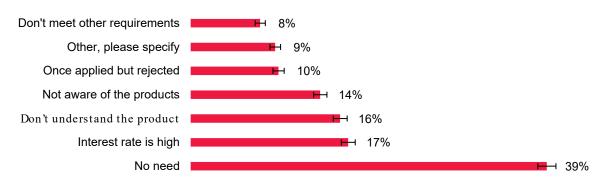| Loan from commercial bank	Loan from fintech	Other loans (interest-bearing)	Other loans (free of interest)
6%	9%	6%	7%

#2: Financing Issue

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.
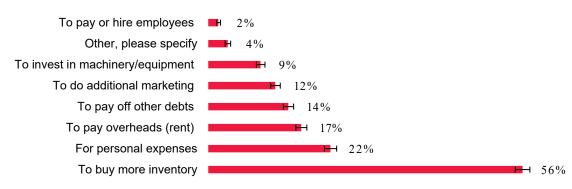
Taking loan from Digital Platform

Yes 38%

No 62%

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

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

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

To pay or hire employees	2%
Other, please specify	4%
To invest in machinery/equipment	9%
To do additional marketing	12%
To pay off other debts	14%
To pay overheads (rent)	17%
For personal expenses	22%
To buy more inventory	56%

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.
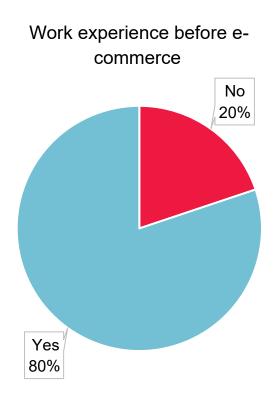

More likely to have higher sales

Merchants who started business before 2019:
Change in Sales Level 2019-2020

Merchants who started business before 2019:
Change in Sales Level 2020-2021

Merchants who started business 2019 onwards only:
Change in Sales Level 2020-2021

■ Adjusting own prices ■ Costumer service ■ Inventory management ■ Product copywriting ■ Self development - e-commerce

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.

13

#3: Business Knowledge & Digital Skills

However, a large share of merchants are not well prepared by trainings and skills -upgrading before selling in e   -commerce…

Work experience before e-commerce

No
20%

Yes
80%

Preparation before selling in e-commerce

Category	Value
Paid private mentoring	3%
Others	4%
Community meetings	8%
Offline seminars or workshops	10%
Online courses	14%
Reading online/offline resources (blogs, books)	26%
Unpaid private mentoring (by family/friends/other)	27%
Never have prior learning on e-commerce business	34%

- 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/others), followed by reading on/offline resources.

#3: Business Knowledge & Digital Skills

Business knowledge and digital skills are reported as critical to help improving sales.

- 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?

Others, please specify	1%
Reduced government red tape	5%
Nothing can help to ease my business	9%
Help with operational management	10%
Incentives to transform business and find new markets	19%
Cheaper and more reliable logistics service	19%
Help with business knowledge	20%
Better access to loans / funding	23%
Digital skills/knowledge/training	26%
Better internet access (affordability and reliability)	26%
Help with sales and marketing	38%

Policy priority areas to support digital merchants

Time constraints due to childcare issues, especially among female merchants → **Support access to affordable and high-quality childcare**

Financing issues: lack of awareness, financial literacy, nonproductive uses → **Improve digital & financial literacy for better understanding of the benefits, risks and terms**

Lack of business knowledge and digital skills needed for e-commerce → **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 24th-March 8th, 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)

   • Highest-selling product category in November 2021.

5. Two sets of weights are used:

   → Representative to the whole population

   → Representative to each subgroup

Target Population	Description of Population	Sample Size
A	Existing merchants (Joined before 2021, >= 30 transactions)	4,494
B	Inactive / Dormant merchants (Joined before 2021, < 30 transactions)	5,226
C	New Merchants	7,759

Note: * Balance tests are conducted to see differences in age, number of dependents, gender, education level attainment and employment status between 1st and 2nd 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.

	(1)	(2)	(3)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All Merchant Average Sales Level, 2019-2021			Merchants who started business before 2019 only						Merchants who started business 2019 onwards only		
				Change in Sales Level 2019-2020			Change in Sales Level 2020-2021			Change in Sales Level 2020-2021		
Adjusting own prices	-0.0353	-0.0244	-0.016	-0.030	-0.029	-0.034	0.001	-0.001	-0.004	0.109*	0.110*	0.112*
	(-1.70)	(-1.15)	(-0.75)	(-0.94)	(-0.91)	(-1.07)	(0.030)	(-0.02)	(-0.12)	(2.220)	(2.180)	(2.240)
Customer service	0.0555*	0.0541*	0.0706**	0.0686*	0.0734*	0.0914**	0.033	0.031	0.057	-0.028	-0.028	-0.029
	(2.48)	(2.40)	(3.07)	(2.290)	(2.420)	(3.050)	(0.940)	(0.890)	(1.670)	(-0.54)	(-0.53)	(-0.53)
Inventory management	0.199***	0.165***	0.0875***	-0.009	-0.005	-0.002	0.015	0.004	-0.007	0.000	-0.016	-0.034
	(10.19)	(8.38)	(3.57)	(-0.34)	(-0.17)	(-0.06)	(0.510)	(0.130)	(-0.20)	(-0.01)	(-0.32)	(-0.64)
Product copywriting	0.0399	0.018	0.0338	-0.021	-0.027	-0.028	0.056	0.051	0.049	-0.006	0.002	0.000
	(1.53)	(0.67)	(1.25)	(-0.58)	(-0.74)	(-0.79)	(1.420)	(1.270)	(1.200)	(-0.11)	(0.040)	(0.010)
Self development - e-commerce	0.0277	0.00348	-0.0244	0.037	0.037	0.018	0.001	-0.019	-0.036	-0.031	-0.038	-0.042
	(1.38)	(0.17)	(-1.18)	(1.190)	(1.140)	(0.540)	(0.020)	(-0.52)	(-1.01)	(-0.60)	(-0.70)	(-0.77)
N	9178	9178	9178	4134	4134	4134	4134	4134	4134	2015	2015	2015
Individual Char.	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Business Char.	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes

t statistics in parentheses
* p<0.05, **p<0.01, *** p<0.001