

# Economic Impacts of COVID-19 on Small and Medium Enterprises in Latin America

June 8, 2022



**Lab for  
Inclusive  
FinTech**

## Acknowledgements

- **Main principal investigators:** Paul Gertler (UC Berkeley), Sean Higgins (Northwestern), Ana María Montoya (U Chile), Eric Parrado (IDB), and Raimundo Undurraga (U Chile)
- **Post-Doc:** Maikol Cerda
- **Additional collaborators:** Patricia Yañez (IDB Invest), Irani Arráiz (IDB Invest), and María Paula Gerardino (IDB)
- **Project managers:** Elisabeth Earley and Alma Osorio
- **Research assistants:** César Landín, Shirley Redroban, Carlos Restituyo, Luis Román, Alexis Salazar, and Piero Zanocco
- **Funders:** Lab for Inclusive FinTech, Inter-American Development Bank (IDB), IDB Invest, J-PAL, and WeForLAC



## Motivation

- The COVID-19 crisis had a large impact on small and medium enterprises (SMEs)  
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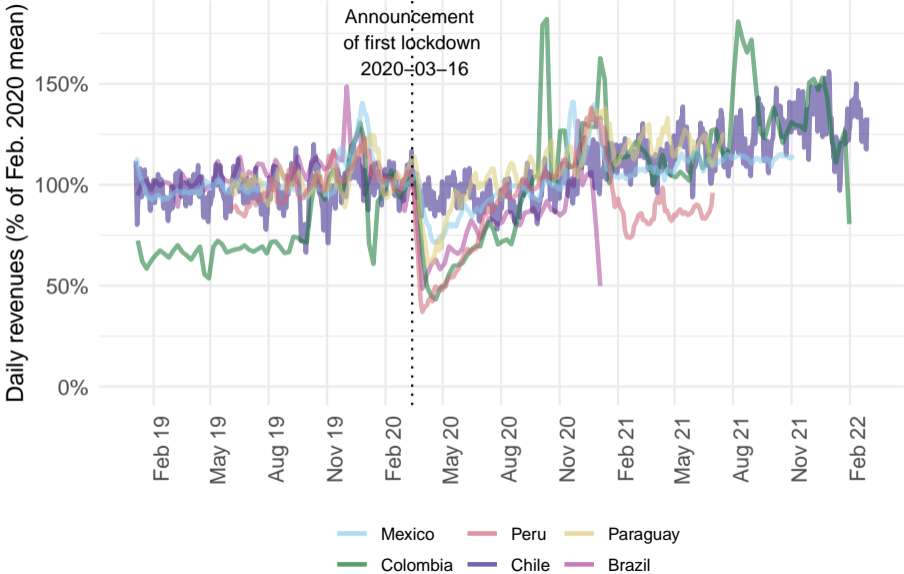
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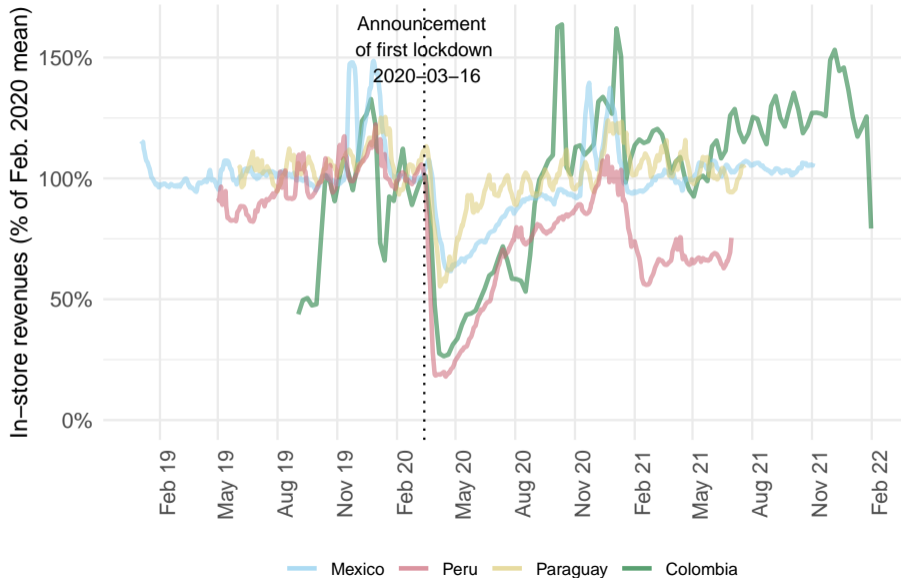
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- We partnered with large banks and financial institutions in six countries in Latin America to obtain these data
  - Brazil
  - Chile
  - Colombia
  - Mexico
  - Paraguay
  - Peru

# COVID-19 Reduced SME Revenues Across Latin America



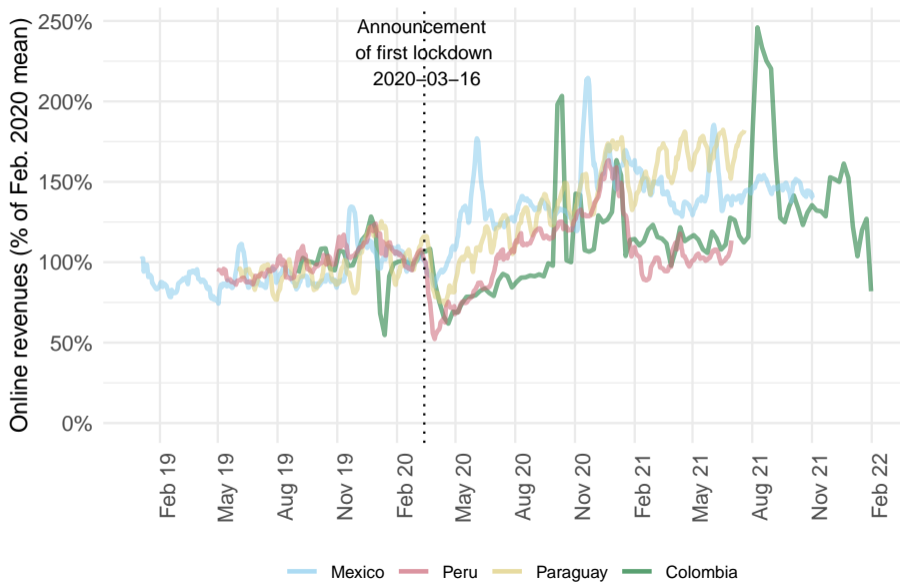
## **COVID-19 and the Shift to Online Transactions**

# In-Store Sales: Larger Dip and Slower Recovery

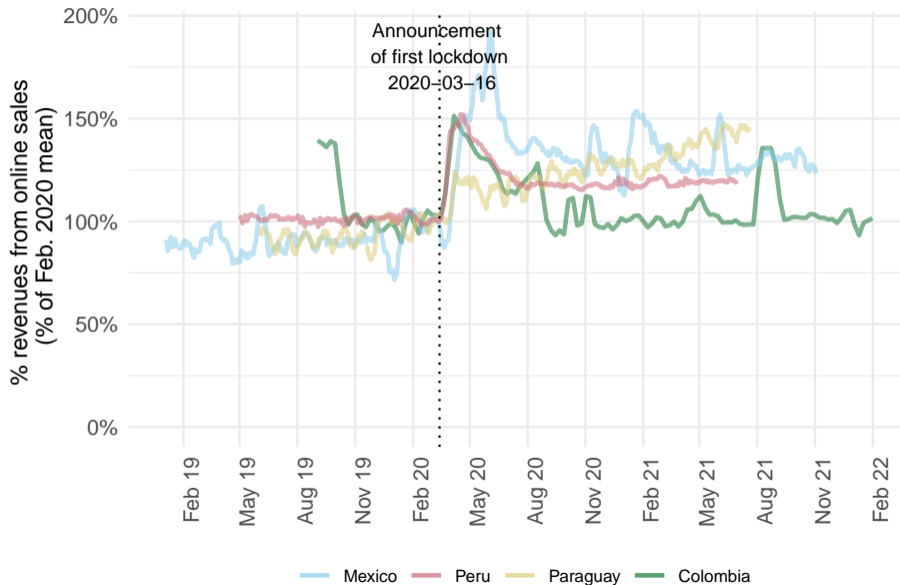




# Increase in Online Sales



# Lasting Shift from In-Store to Online Sales



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- SMEs benefit from financial technologies through higher sales and profits (Higgins, 2020)
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- Exploit variation in ability to shift to online transactions during pandemic

# **Economic Impact of Government-Backed Loans on SMEs during the COVID-19 Crisis: Evidence from Chile**

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- Most banks did not lend to the most impacted SMEs that may benefit most
  - Because of the high risk of default due to the crisis
- Governments around the world implemented government-guaranteed loan programs which reduced the risk faced by banks by partially or fully guaranteeing loans to SMEs

## This Project

- Chilean government expanded their government-guaranteed SME loan program (FOGAPE) in June 2020
  - FOGAPE program started in 1980
  - \$14B in loans during COVID compared to annual average of \$1B in non-crisis years

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- Due to limited funds, could not offer loans to all newly eligible firms
  - Randomized loan offers to half of 10,072 SMEs

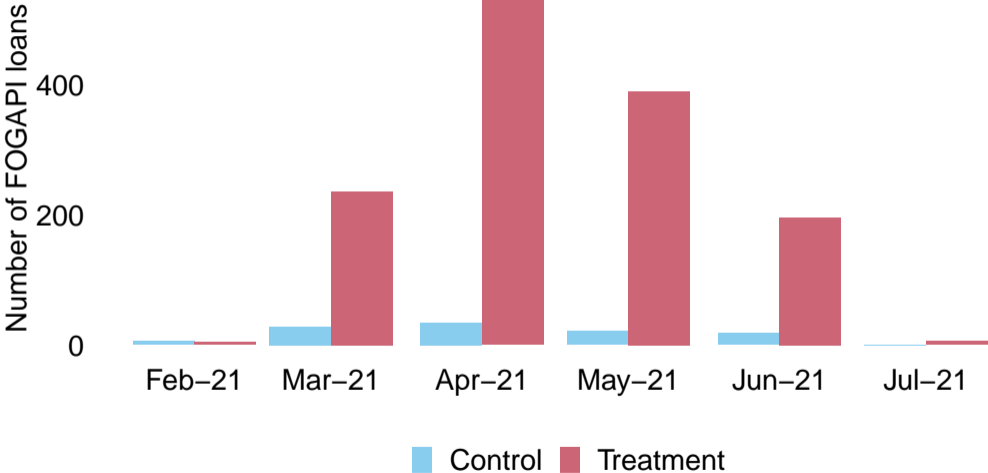
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- Loans disbursed between February 23, 2021 and July 1, 2021

## Loan Take-Up and Average Loan Amounts

| <b>Group</b> | <b>N</b> | <b># loans</b> | <b>Take-up rate</b> | <b>Average loan amount (USD)</b> |
|--------------|----------|----------------|---------------------|----------------------------------|
| Treatment    | 5,069    | 1,377          | 27.2%               | \$15,055                         |
| Control      | 5,003    | 107            | 2.1%                | \$25,197                         |

# Loan Take-Up Over Time



## Firm Characteristics and Balance

- Other firm characteristics balanced across control and treatment groups

| Variable                      | N      | Control mean      | Mean diff.        | Mean diff (strata FE) |
|-------------------------------|--------|-------------------|-------------------|-----------------------|
| Log deposits per month        | 10,072 | 1.906<br>(0.016)  | 0.007<br>(0.022)  | 0.007<br>(0.020)      |
| Log total liquidity per month | 10,072 | 2.599<br>(0.023)  | 0.033<br>(0.033)  | 0.041<br>(0.029)      |
| Years since account opening   | 10,052 | 10.813<br>(0.097) | -0.018<br>(0.137) | -0.022<br>(0.135)     |
| Business account              | 10,069 | 0.746<br>(0.006)  | 0.001<br>(0.009)  | 0.002<br>(0.009)      |
| Firm located in capital       | 10,007 | 0.520<br>(0.007)  | 0.001<br>(0.010)  | 0.001<br>(0.010)      |
| Female owner                  | 9,658  | 0.324<br>(0.007)  | -0.013<br>(0.010) | -0.012<br>(0.010)     |



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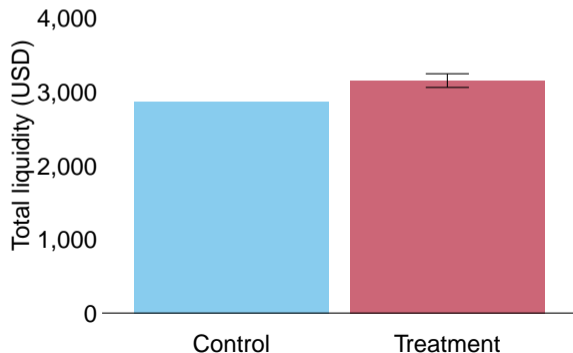
- Firm economic sectors balanced across control and treatment groups

| Variables       | Category                 | # Missing<br>N | Overall<br>N (% total) | Control<br>N (% total) | Treat<br>N (% total) | P-Value |
|-----------------|--------------------------|----------------|------------------------|------------------------|----------------------|---------|
| Economic sector | Agriculture              | 2,706          | 448 (6.1)              | 218 (6.0)              | 230 (6.2)            | 0.700   |
|                 | Construction             |                | 652 (8.9)              | 313 (8.6)              | 339 (9.1)            |         |
|                 | Education                |                | 91 (1.2)               | 45 (1.2)               | 46 (1.2)             |         |
|                 | Finance                  |                | 714 (9.7)              | 347 (9.5)              | 367 (9.9)            |         |
|                 | Healthcare               |                | 308 (4.2)              | 164 (4.5)              | 144 (3.9)            |         |
|                 | Manufacturing            |                | 632 (8.6)              | 297 (8.1)              | 335 (9.0)            |         |
|                 | Others                   |                | 1,126 (15.3)           | 563 (15.4)             | 563 (15.2)           |         |
|                 | Retail                   |                | 2,881 (39.1)           | 1,441 (39.4)           | 1,440 (38.8)         |         |
|                 | Social                   |                | 99 (1.3)               | 55 (1.5)               | 44 (1.2)             |         |
|                 | Transportation & tourism |                | 415 (5.6)              | 211 (5.8)              | 204 (5.5)            |         |
| Sample Size     |                          |                | 10,072                 | 5,003                  | 5,069                |         |

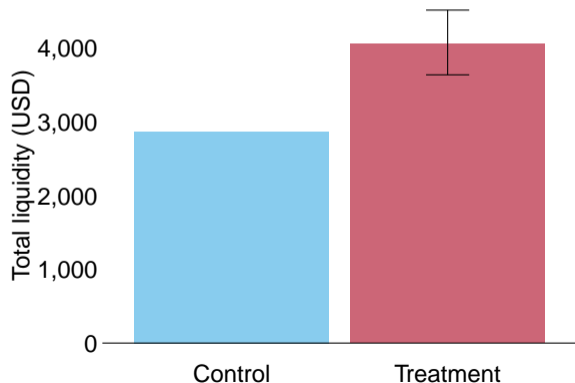
## Effect of Government-Backed Loans on Treated Firms' Liquidity

- FOGAPE loans led to an 10% increase in liquidity for all firms offered the loans, and a 41% increase in liquidity for firms taking up the loans

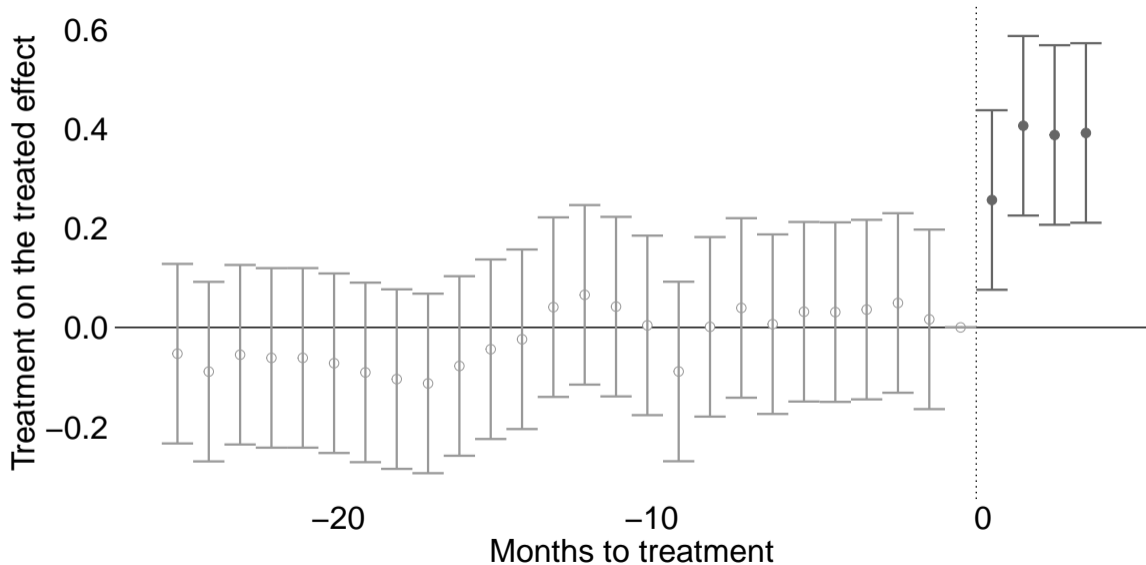
Intention to treat



Treatment on the treated



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## Next Steps: Impact of Government-Backed Loans On:

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  - Deposits (proxy of sales)
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- Surveys
  - Employment, wage bill – Employer-employee data missing informal employees which are common even at formal firms (Ulyssea, [2018](#))
  - Revenues – More detailed measure than proxy from banking data
  - Profits