



Impacts of COVID-19 on Firms in Access to Inputs and Final Sales is Likely to Impact VAT Enforcement and Revenues

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December 2, 2021



- I. Overview of study
- II. Findings
- III. Implications for VAT and tax policy



Policy Issue

COVID-19 pandemic and lockdown measures have impacted tax revenues globally

- In the least developed countries, sustainable revenue sources needed to fund short and long-run investment and recovery programs
- Tax setting with distinct features
 - Limited enforcement resources available to tax authorities
 - Evasion and informality complicate responses to tax policy
 - Many entrepreneurs operating on small margins

Questions for Tax Policy:

1. What implications do the pandemic and lockdown measures have for VAT revenues in low-income countries?
2. How can enforcement best respond to balance tax burden on struggling firms and need for revenues to fund recovery?

Setting: Rwandan Firms

- January 2021 Survey of Rwandan firms tracking impacts of COVID-19 pandemic
 - Partnership with the Ministry of Finance and Economic Planning (MINECOFIN)
 - Supported by PEDL Initiative on Economic Impacts of Coronavirus
- **Sample:** Active firms in tax net in February 2020
 - Phone surveys with nationally representative sample of 1,468 firm owners
 - Large, medium, and small firms
 - Collected contemporaneous and retrospective measures
- **Focus:** Economic responses to pandemic and lockdown in the near and long term
 - (1) Operational challenges and adaptations
 - (2) Impact on supply chains
- **VAT Implications:** Direct impacts on taxpayers and effects that pass through supply chains

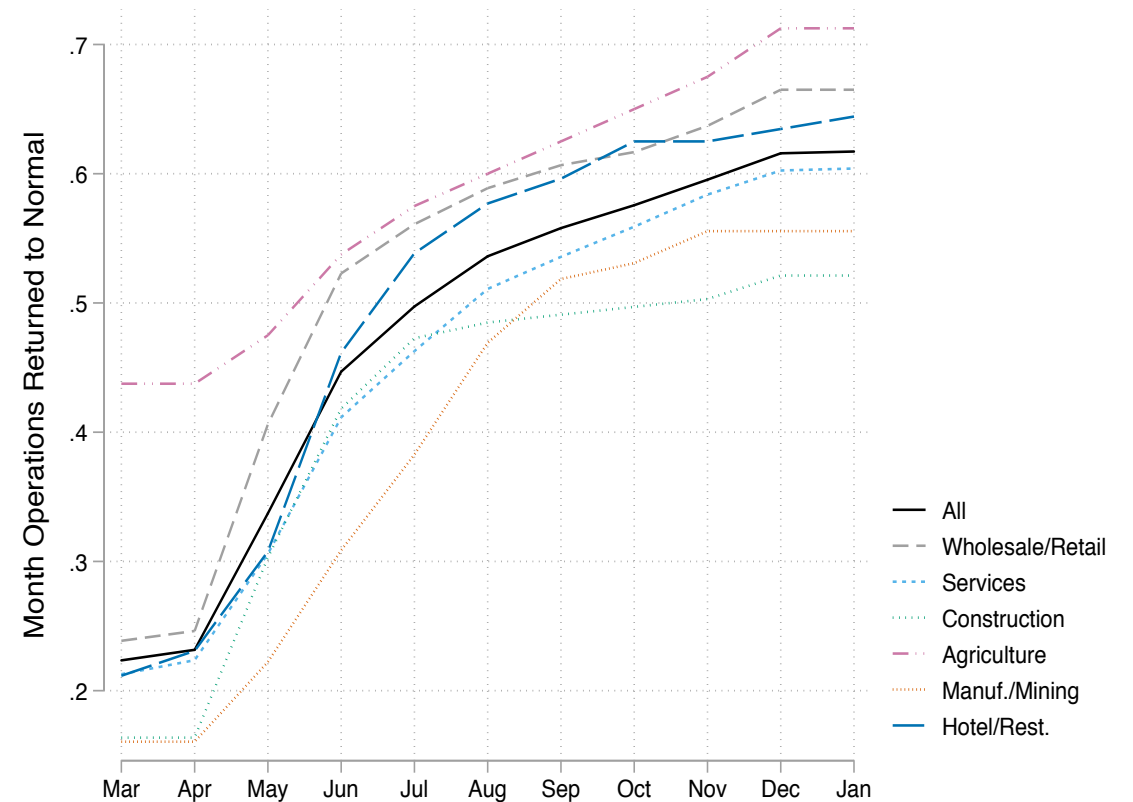
Return to Normal Operations

Short-run

- Strict lockdown in March-May 2020: curfew and travel bans
- 79% of firms at least temporarily closed
- Half of firms resume normal operations by June 2020

By January 2021

- 38% yet to return to normal
- Manufacturing, mining, and construction firms most affected, agricultural least affected
- 10% reporting that the business remains closed due to challenges with COVID
- 2.5% permanently closed



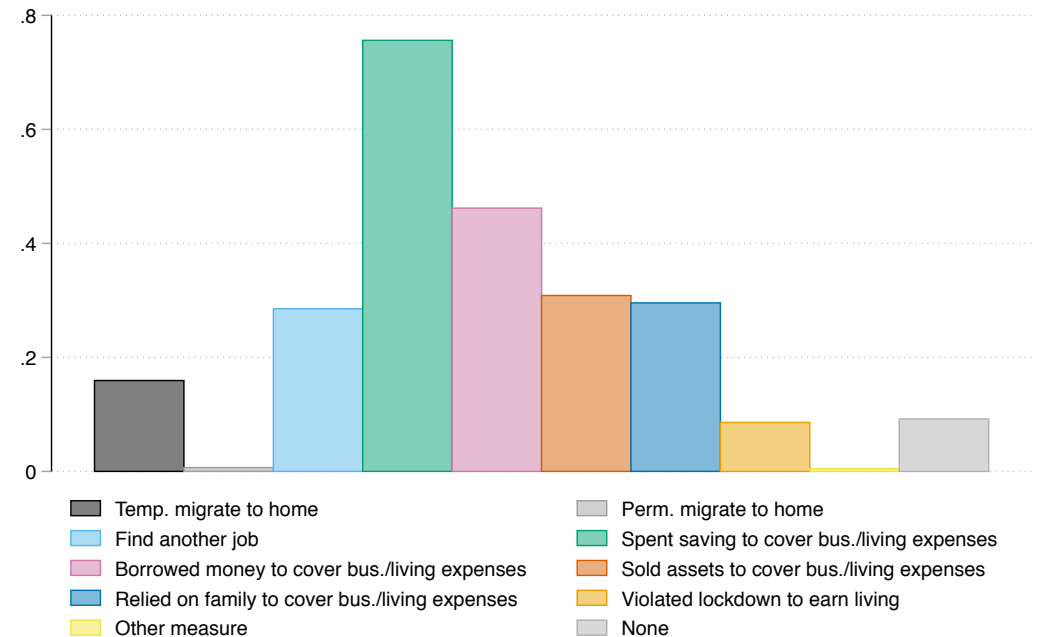
How Firms Coped

Operational adjustments

- Shift to phone and internet (50%)
- Changing hours of operation (50%), or physical arrangement, prices, delivery services (30-40%)

Keeping business afloat

- Starkest finding: reliance on savings and new credit
 - 75% of firm owners reported spending savings to cover business or living expenses
- 49% of firms report new borrowing since the start of lockdown measures in 2020
 - Family/friends (27%), banks (17%), supplier credit (7%)
 - Suggests in the longer-run ability to cope with shocks is reduced



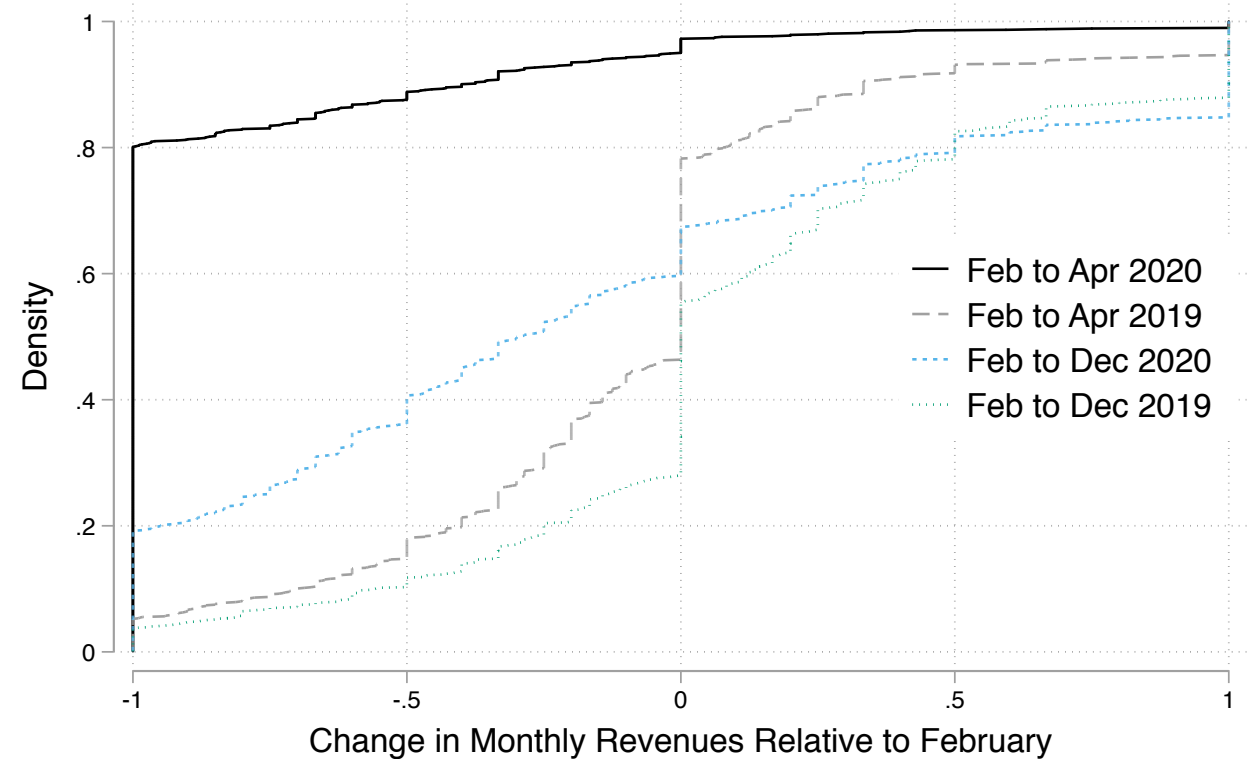
Impact on Revenues and Employment

Average firm

- Laid off 25% of its workforce
- Expected 26% decline in annual earnings

Compared to 2019

- 30% more firms saw decline in monthly revenues between Feb and Dec 2020



Kolmogorov-Smirnov 2020 vs. 2019 p: Feb-Apr = 0.001, Feb-Dec = 0.001

Implications for VAT Revenues and Enforcement

Emerging evidence from LMICs suggests pandemic impacts on firms and revenues severe (Bachas, Brockmeyer, and Semelet 2020)

- Projected loss in tax revenues from corporate sector of 1.5% baseline GDP
- Revenue shock smaller in poorer countries due to smaller formal sector
 - Forecast an 11.9% reduction in VAT revenues in Rwanda (0.4% GDP)

Lessons from survey

1. Supply chain linkages mediate impacts on VAT
2. Value in tailoring enforcement by size and sector
3. Understanding welfare implications of tax policy vital

1. Supply Chains and VAT

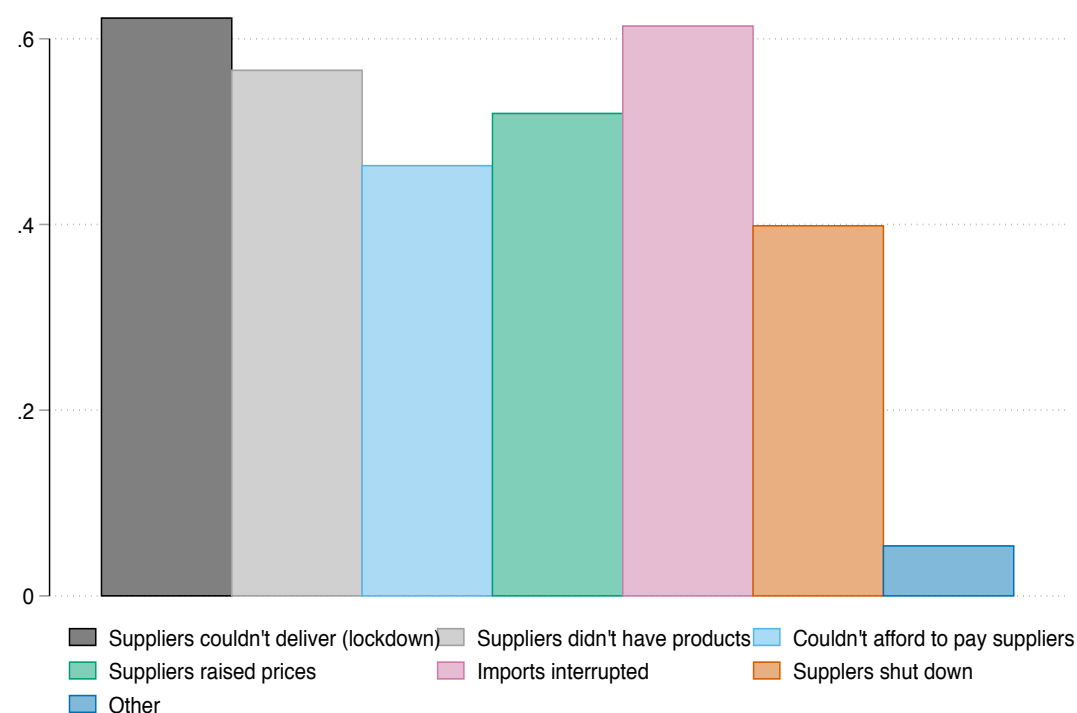
Production network channels

- Shocks to firms pass to clients and suppliers
- Evasion incentives may change
 - E.g., Cost of formal supplier inputs rises → shift to informal suppliers

In survey, **55% of firms** still report difficulty getting supplies in January 2021

Diverse causes

- Interprovincial travel bans constrain delivery (63%)
- Lack of supply (57%) or higher prices (53%)
- Imports interrupted (62%)



1. Supply Chains and VAT

Implications for revenues and enforcement

- Pandemic-driven shifts in supply chains may be sticky
 - Return to pre-pandemic revenues may not materialize, e.g., if shift to informal suppliers substitutes for formal/foreign suppliers in long-run
- “Isolated” economic impacts may **pass through** to others
 - In Rwanda, <10% of formal firms import, but 97.5% depend (indirectly) on imported inputs
 - Disruptions in international supply chains
 - Loss of VAT at the border
 - But also among clients through production/evasion responses

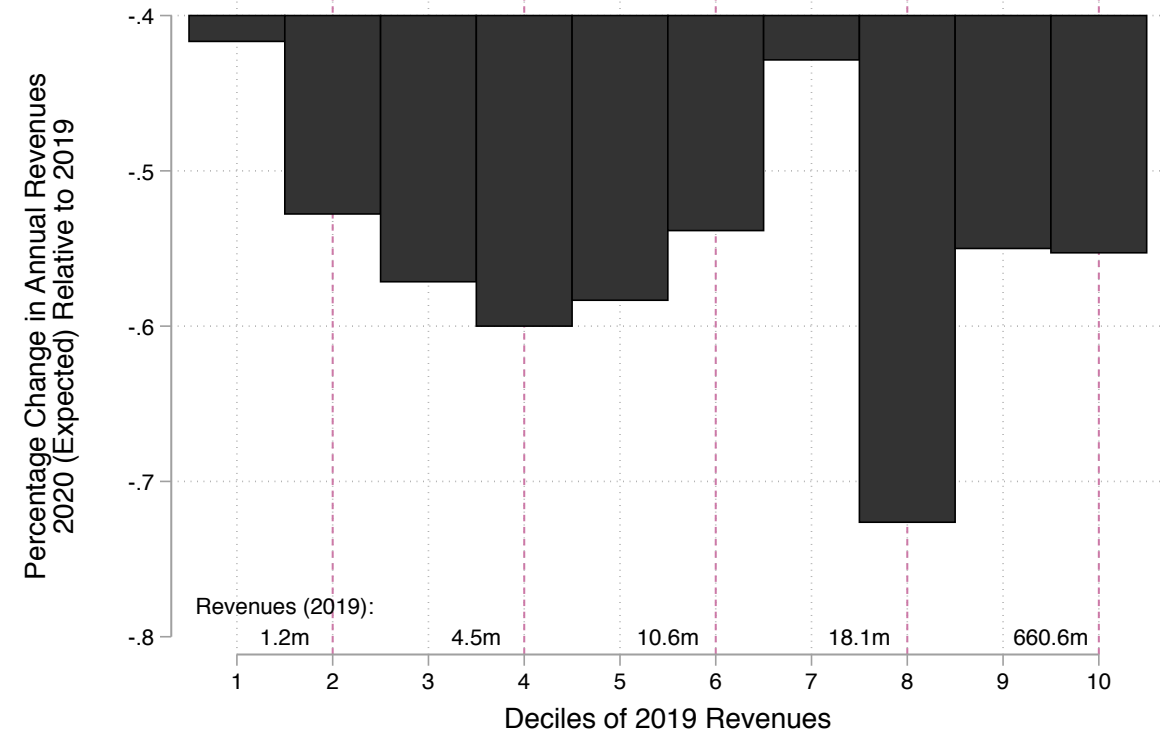
2. Targeting Enforcement

VAT enforcement often targeted

- Focus on "high-risk" sectors or types
- Yet risks conflating heterogeneous economic shocks with evasion

Distribution of impacts

- Medium-sized and large firms most impacted



2. Targeting Enforcement

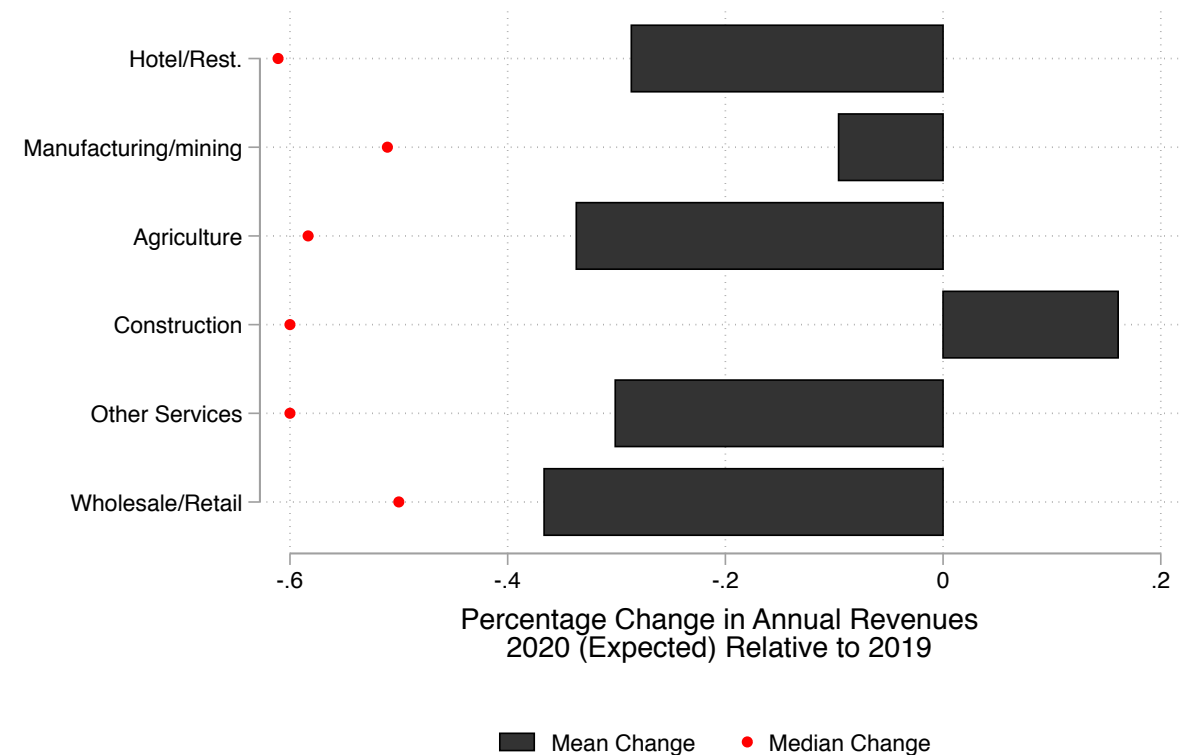
VAT enforcement often targeted

- Focus on "high-risk" sectors or types
- Yet risks conflating heterogeneous economic shocks with evasion

Distribution of impacts

- Medium-sized and large firms most impacted
- Wholesale/retail, services, and agriculture hit hardest

→ Possible to mistarget enforcement efforts



3. Welfare Implications

Tax policy balance

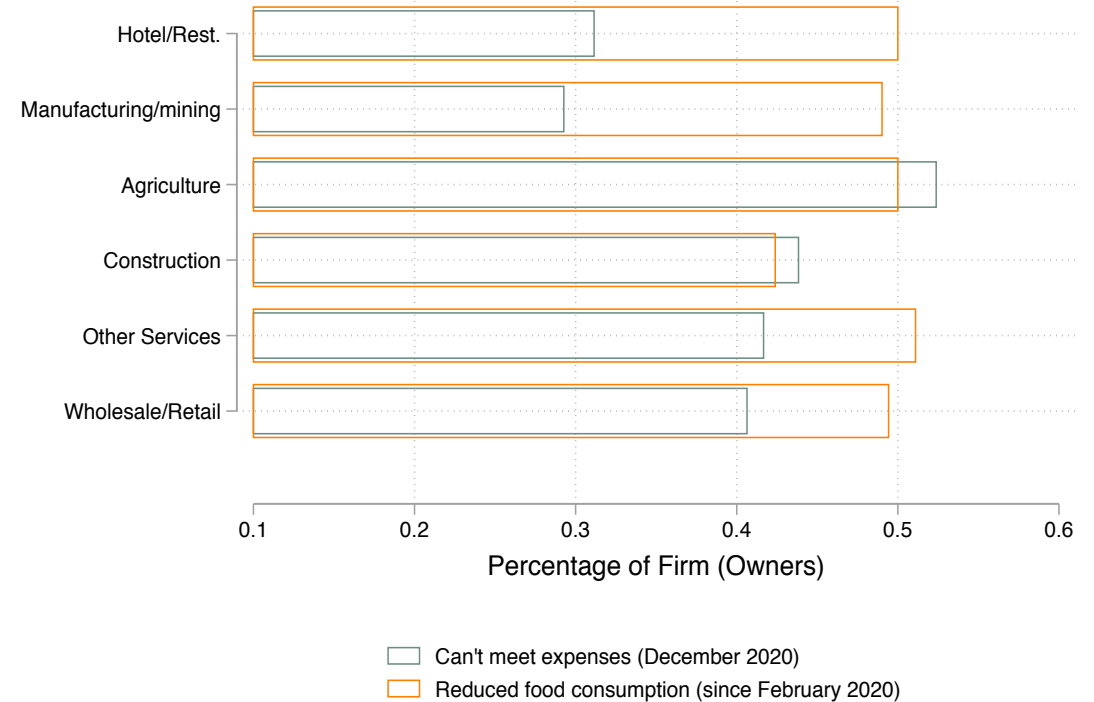
- Distortions/burden on firms
- Need for revenues to fund recovery
- Long-run sustainability of tax system

In LDCs, self-employment and small firms primary source of employment (World Bank 2011)

- In Rwanda, average profit margins small (USD\$1000/year)
- Most requested policy assistance in survey is tax deferral or relief

In survey, approximately 40% of firm owners could not meet expenses in December 2020

- 51% reduced food consumption since April 2020



Underscores value of recognizing tax policy impacts on livelihoods and firm survival (future tax bases)

Taking Stock

Scope of COVID-19's impact on tax revenues still emerging

- Tax policy responses now may be key to long-run revenue potential

Forecasting and responding to VAT impacts uniquely complicated

- Affected both by economic shocks to firms and changes in evasion incentives within supply chains

Evidence from Rwandan firms

1. Accounting for the structure of supply chains matters
2. Pandemic's mixed impacts on firms → inform enforcement targeting
3. Attention to tax policy effects on welfare/firm survival

Thank you!

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Policy brief: [PEDL C-19 Note](#)