# Informal Labor Markets in Times of Pandemic: Evidence for Latin America and Policy Options

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\* The views expressed here are those of the authors and do not necessarily reflect those of Banco de México or its Board of Governors. This project was sponsored by the Inter-American Development Bank. Leyva declares having worked for this project ad honorem.

#### Outline of the Talk

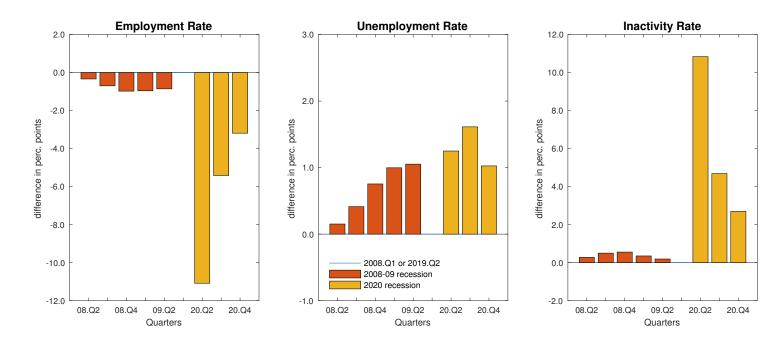
The COVID pandemic and the related confinement policies acted as an unprecedented shock to labor markets

Three questions that we address in this project:

- How were labor markets in Latin America affected?
  - ... starting from the evidence for Mexico and extending it to other LAC
  - Role of the participation and informality margins
  - Comparison with past recessions
  - Heterogeneity inside the labor force (age, gender, sector, ...)
- What can we say about the nature of the shocks affecting these economies?
- What type of labor market policies could help to speed-up the recovery?

### Mexico: A Tale of Two Recessions

#### Mexico: Evolution of Labor Market Rates in Two Recessions

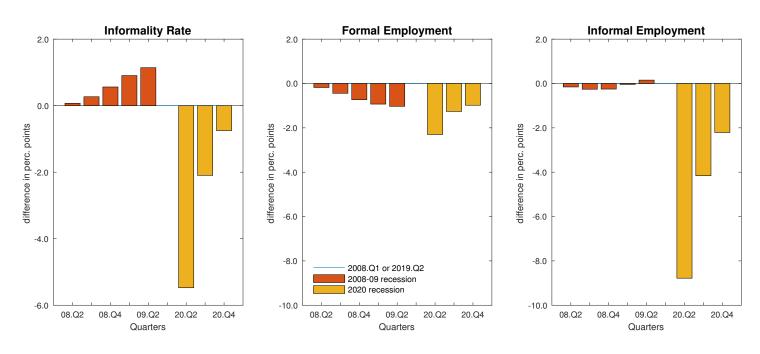


Relative to past recessions, in this pandemic we observe

- Large fall in employment in the first quarter (2020.Q2)
  - ... mirrored by a decline in the participation rate
- Rapid recovery in the second half of 2020

### Mexico: Informal Employment and Informality Rate

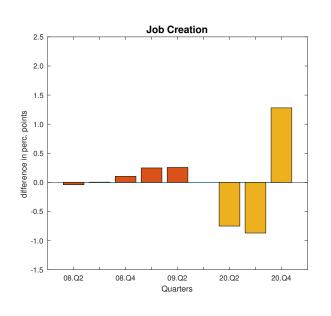
#### Mexico: Evolution of Informality Rate in Two Recessions

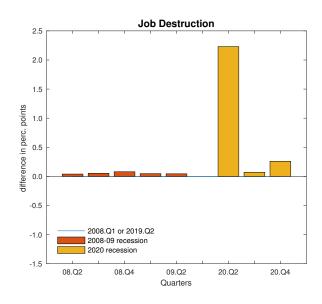


- Unprecedented fall in the informality rate during the pandemic recession
  - ... driven by a huge decline of informal employment in 2020.Q2
- Recovery of employment in second half of 2020
  - ... with a rebound in the informality rate

#### Mexico: Job Creation and Job Destruction

Mexico: Job Creation and Destruction in Two Recessions (% of POP)





- Employment contraction in 2020.Q2 driven almost entirely by job destruction
- Job destruction has receded by the end of 2020
  - ... while job creation plays a major role in the recovery of employment

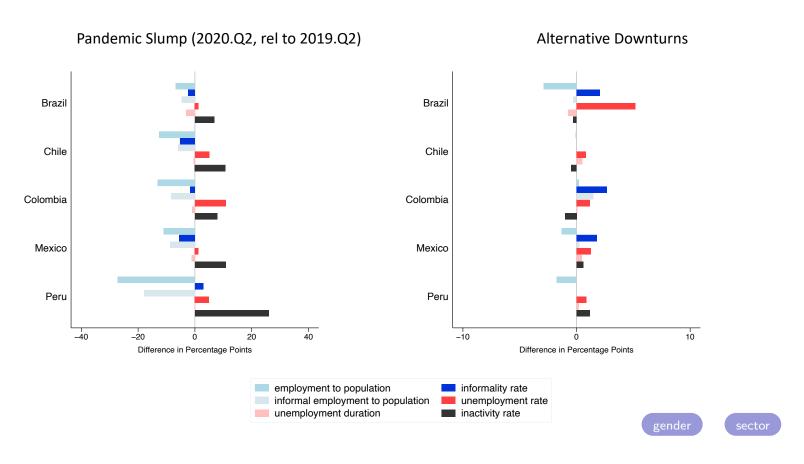
#### Mexico: Additional Findings

- Bigger role for two non-conventional margins at the onset of the pandemic
  - Increase in temporary layoffs, in particular from the informal sector
  - Increase in absent employees, more so in the formal sector
  - ... fading away by the end of 2020

table

- A larger impact of the pandemic on women, younger workers, and in contact-intensive sectors (services)
- However, the fall in informality is not driven by a composition effect only

### Latin American Labor Markets during the Pandemic



- We confirm observed changes in labor markets for Mexico for 2020.Q2
  - Large drop in overall employment, linked to decline in participation rates
  - Sizable decline in informality rate (one exception: Peru)

#### A Model of Informal Labor Markets

Key elements of the model

- Small open economy subject to technology and interest rate shocks
  - Endogenous participation (leisure choice)
  - Formal and informal (self-employed) sectors
  - Matching frictions in the formal labor market

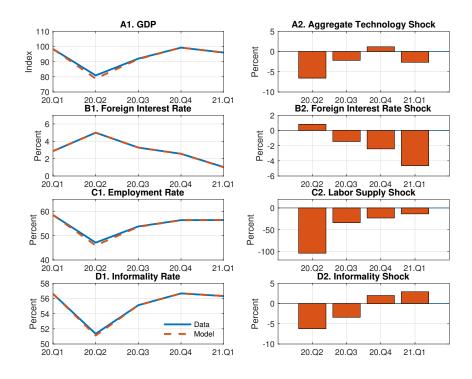
Baseline model calibrated to Mexican data before the pandemics



- Extended model with two new shocks
  - A shock to labor supply (disutility of work parameter)
  - A sector-specific productivity shock (*relative* informality parameter)

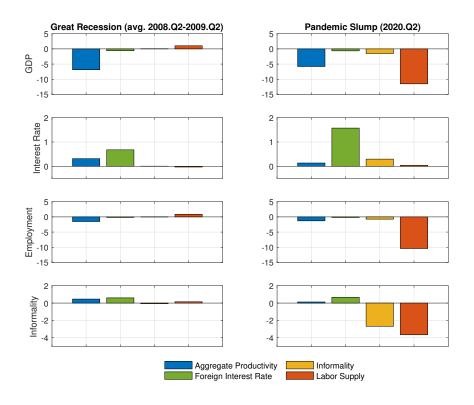
These shocks are reduced-form representations of the impact of COVID-19

#### Accounting Exercise: Shocks Recovered



• Accounting exercise: recover shocks that rationalize the behavior of GDP, interest rate, employment, and informality rate up to 2020.Q4

### Accounting Exercise: Contribution of Shocks



- Huge role for the "new" shocks in accounting for the fall in output, employment and the informality rate
  - ... in contrast to the 2008-09 Great Recession

### Policy Options: Summary of Results after One Year

Policy	Employment	Informality	GDP	Fiscal Cost	Size	
Instrument	Rate	Rate	GDF	% GDP		
No Policy Intervention	-1.72	0.33	-1.84	_		
Payroll Tax Cut	0.00	-5.57	4.18	7.49	19.9	
Hiring Subsidy	0.00	-5.57	4.18	0.23	53.4	
Informal Income Subsidy	0.00	3.73	-1.61	4.13	11.0	

- Payroll tax cuts and hiring subsidies incentivize job creation in the formal sector
  ... reducing informality and fostering labor productivity
- Hiring subsidies are more cost-effective in promoting formal employment
- Informal income subsidies incentivize informal employment
  - ... dragging productivity and GDP in the recovery

#### Policy Options: Some Caveats

- Our framework does not allow for a feedback from policies to the pandemic itself
  - Would require an epidemiological model
- The model ignores distributional issues
  - Representative household
  - No role for income protection of poor households
  - Would require heterogeneous-agents framework (with incomplete markets)
- Separations in the model are exogenous
  - No role for policies protecting existing formal jobs
  - Would require model of heterogeneous firms

#### **Conclusions**

- The pandemic recession is different from previous downturns
  - Larger drop in employment, quicker recovery
  - Informal sector affected the most on impact, rapid rebound
  - Job destruction to inactivity plays a key role in the initial fall in employment
- The pandemic and the related confinement policies affects the labor market through several channels
  - Labor supply vs. demand (wages?)
  - Sector-specific shocks to contact-intensive activities
- Policies to incentivize the recovery of employment should focus on formal job creation
  - How to target this particular margin?

# Mexico: Two Non-Conventional Margins

	Overall Employment			Informal Employment		Formal Employment			
	% Change			% Change			% Change		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Great Recession	-2.3	-2.3	-2.4	0.7	0.8	0.3	-6.6	-6.4	-6.4
2019.Q2-2020.Q2	-29.4	-19.1	-7.2	-31.1	-26.8	-6.2	-26.7	-9.1	-8.5
2019.Q2-2020. <u>Q4</u>	-5.7	-5.5	-4.0	-6.6	-6.7	-4.2	-4.6	-3.9	-3.6
Relative to column 2:							•		
Great Recession	1.0	1.0	1.1	1.0	1.0	0.5	1.0	1.0	1.0
2019.Q2-2020.Q2	1.5	1.0	0.4	1.2	1.0	0.2	2.9	1.0	0.9
2019.Q2-2020. <u>Q4</u>	1.0	1.0	0.7	1.0	1.0	0.6	1.2	1.0	0.9

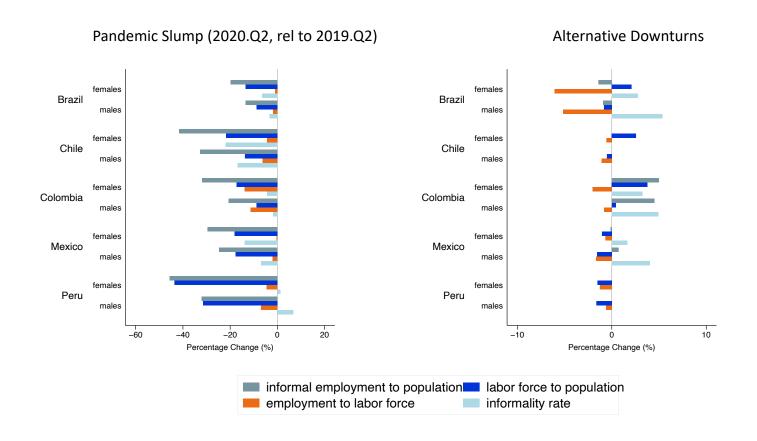
<sup>2:</sup> baseline employment rate (over population)



<sup>3:</sup> baseline employment rate plus temporary layoffs

<sup>1:</sup> baseline employment rate minus absent employees

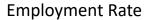
# Latin America: Employment by Gender during the Pandemic



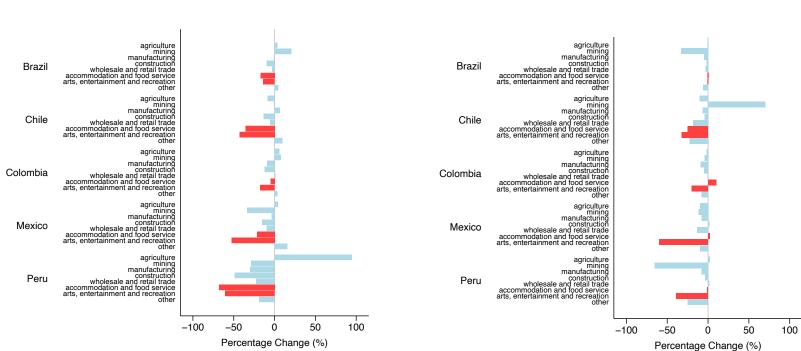


### Latin America: Employment by Sector during the Pandemic

#### Pandemic Slump (2020.Q2, rel. to 2019.Q2)



#### Informality Rate





### Model Calibration: Business Cycle Properties

Relative	Data	Model	Correlation	Data	Model
Volatility	1	2	with Output	3	4
$\sigma(Y)$	1.35	1.35	-	-	-
$\sigma(C)/\sigma(Y)$	0.93	1.01	Corr(C,Y)	0.97	0.85
$\sigma(I)/\sigma(Y)$	2.33	2.33	Corr(I,Y)	0.87	0.75
$\sigma(L)/\sigma(Y)$	0.40	0.40	Corr(L,Y)	0.67	0.99
$\sigma(l^s)/\sigma(Y)$	0.49	0.49	$Corr(l^s, Y)$	-0.56	-0.30
$\sigma(1+i^*)$	0.49	0.49	$Corr(1+i^*,Y)$	-0.23	-0.23

- The model reproduces by construction the volatilities of output, investment, employment and the informality rate
  - ... and the volatility and counter-cyclicality of the foreign interest rate

