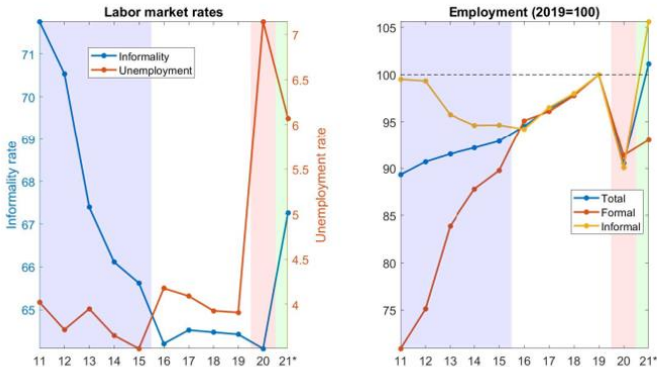


# Labor informality, monetary policy and the Covid-19 pandemic

Alan Ledesma and Carlos Montoro

Differentiated periods in the dynamics of the labor market

- 2011-2015
- 2016-2019
- 2020
- 2021



Source: INEI

Important heterogeneity in the dynamics of formal and informal sectors:  
**¿Relevant for the design of monetary policy?**

## Informality

- Excessive regulations and taxes from governments with little capacity to enforce them  
→ Informality: [Loayza \(1996\)](#)

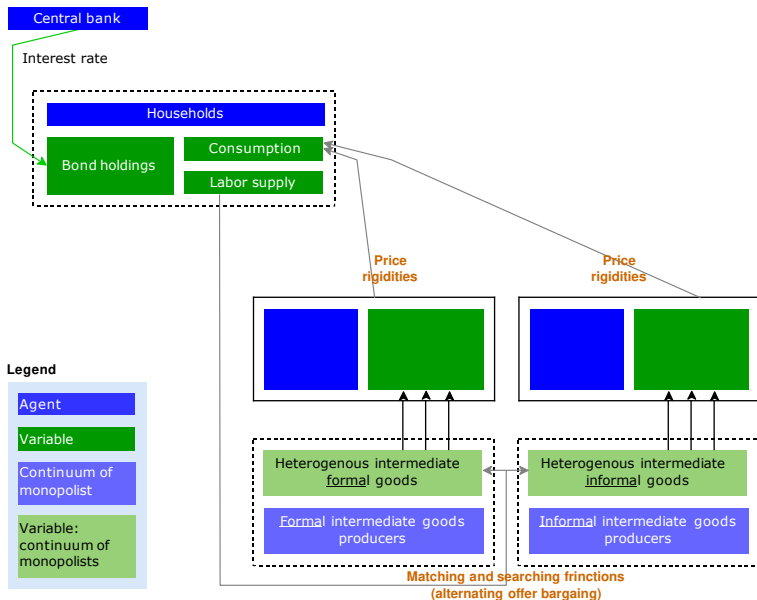
## Empirical evidence

- Buffer effect of informal employment: [Bovi \(2007\)](#), [Carillo & Pugno \(2004\)](#), [Bowler \(2006\)](#), [Bosch \(2006\)](#) and [Bosch & Maloney \(2008\)](#) – la flexibility comes at a cost
- During the pandemic: reduced participation and informality with a significant recovery expected [Leyva & Urrutia \(2020\)](#)

## DSGE

- Multi-sector model with optimal policy - [Guerrieri et al. \(2021\)](#): Heterogeneity in production with various policy implications
- NK + informality (M&S) - [Castillo & Montoro \(2010\)](#) and [Ospina \(2013\)](#): Buffer effect of informal employment
- NK + informality (M&S) + credit friction and optimal policy - [Alberola y Urrutia \(2020\)](#) and [Batini et al. \(2011\)](#): Informal sector may mitigate inflation volatility; however, monetary policy is less effective
- Alternative to Nash's wage bargaining robust to Nash's criticism [Shimer \(2005\)](#), [Hall & Milgrom \(2008\)](#) and [Christiano et al. \(2016\)](#)

# Structure



## Legend

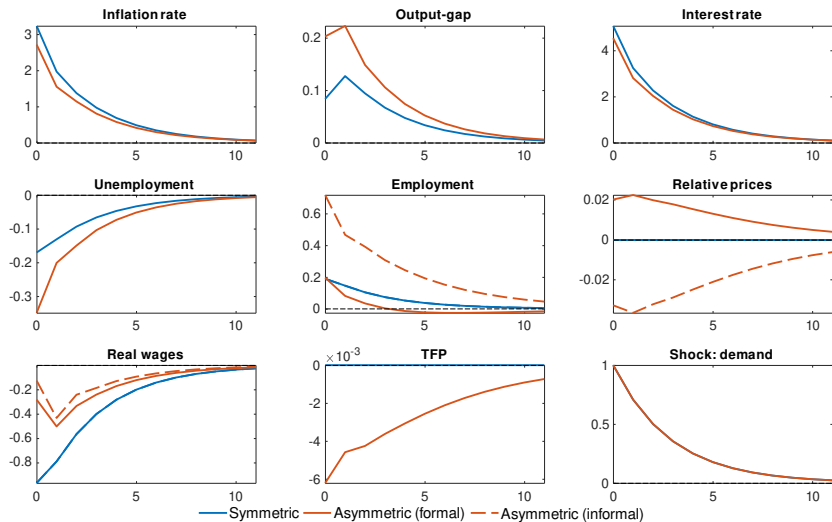
Agent

Variable

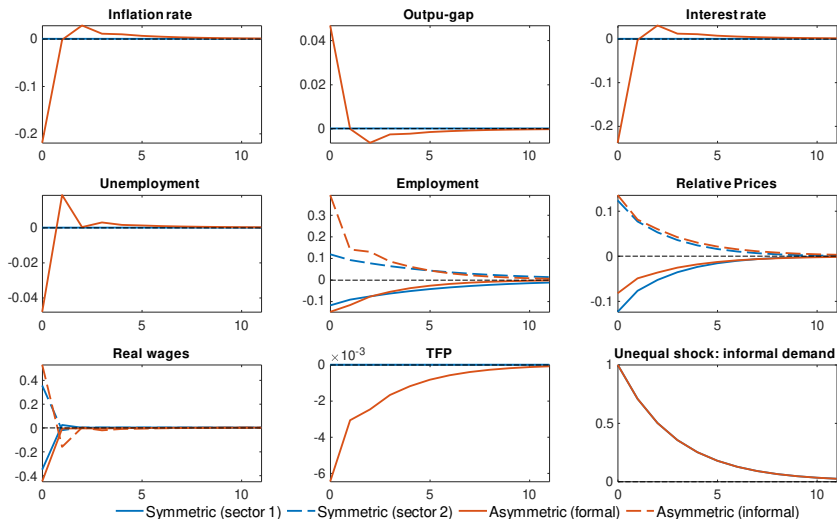
Continuum of monopolist

Variable: continuum of monopolists

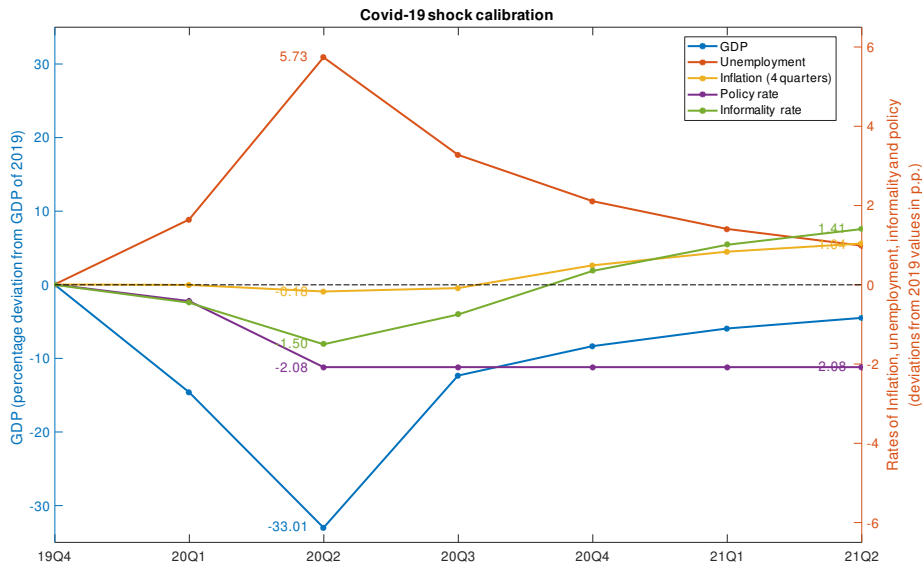
# Aggregated demand shock: buffer effect of informal sector



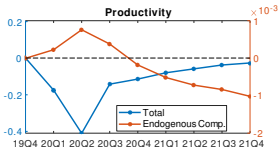
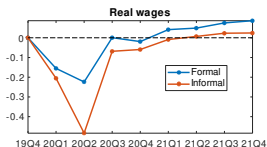
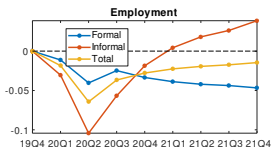
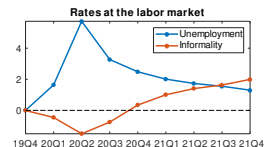
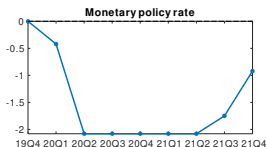
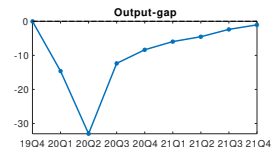
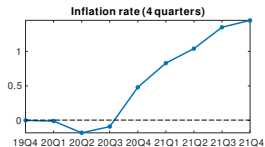
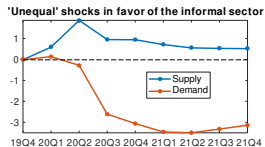
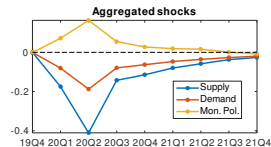
# “Unequal” demand shock in favor of the informal sector



# COVID-19-like shock: calibration



# COVID-19-like shock: implications



## Conclusions

- Heterogeneity induced by informality is relevant:
  - Large informal sector
  - Cycles of different characteristics
  - Implications for policy design
- Heterogeneous shocks are relevant in this context
- The model replicates labor market events observed during the pandemic

## Pending agenda

- Endogenous destruction of work
- Evaluate other wage bargaining alternatives
- Optimal policy