

# Worker and Firm Dynamics

Thomas Walsh

European University Institute

PhD Thesis Defence

22 May 2023

## Three standalone chapters in Labour Economics and Firm Dynamics

1. How are job search behaviours and outcomes affected by the indirect threat channel of benefit sanctions?
2. How does sectoral volatility impact the effectiveness of monetary policy?
3. How does firm heterogeneity affect network propagation effects in fiscal spending multipliers?

## Job Search and the Threat of Unemployment Benefit Sanctions

## Unemployment Insurance:

- smoothes consumption while searching
- insurance-incentive tradeoffs

## Sanctions policy tool to blunt the tradeoff:

- partial or complete stop of transfers for (e.g.) low search effort
- smoothing with less moral hazard
- jobseekers create worse matches ("market insurance")

## Channels:

- direct: punishment via budget constraint
- **indirect: threat, deterrent via expectations**
  - much larger group!
  - e.g: if 10% ever sanctioned, 9X larger

## Research Question:

- How does the threat of unemployment benefit sanctions affect job search behaviour and outcomes?

⇒ exploit sanctioning rate variation across localities following reform in UK in difference-in-differences design

- **New stylised facts:** average local sanction threat early in unemployment spell:
  - explains medium run earnings losses from jobloss
  - associated with higher search effort
  - no difference in long-run employment
- **A novel identification** exploits policy reform in UK in 2012
  - compare districts which increase sanctioning strongly to similar districts which leave sanction rate unchanged

## Effects of Reform on Exit:

- Treated districts have faster exits from unemployment
- Back-of-envelope: Direct/Indirect effects = 20% / 80% of total
- Mostly driven by UE flows

## Stability of matches formed:

- Faster matching comes at cost of higher future unemployment risk
- Higher number of expected unemployment spells
- Lower likelihood to reach employment tenure milestones of 1/2/3ys

## Sectoral Volatility and the Investment Channel of Monetary Policy (with Ozgen Ozturk)

# Chapter 2: Sectoral Volatility and the Investment Channel of Monetary Policy

with Ozgen Ozturk

**Firms' investment is key transmission from monetary policy to real economy.**

- Firm heterogeneity shapes the aggregate response in a number of dimensions (Ottonello, Winberry (2020), Jeenas (2019), Cloyne, Ferreira, Froemel, Surico (2019))
- we focus on **firm risk**= dispersion in idiosyncratic productivity shocks



# Chapter 2: Sectoral Volatility and the Investment Channel of Monetary Policy

with Ozgen Ozturk

**Firms' investment is key transmission from monetary policy to real economy.**

- Firm heterogeneity shapes the aggregate response in a number of dimensions (Ottonello, Winberry (2020), Jeenas (2019), Cloyne, Ferreira, Froemel, Surico (2019))
- we focus on **firm risk**= dispersion in idiosyncratic productivity shocks

**Idiosyncratic firm risk matters for investment:**

- idiosyncratic shocks are **major source of variation**
- idio. volatility affects the triggering of **extensive margin** of lumpy adjustments

# Chapter 2: Sectoral Volatility and the Investment Channel of Monetary Policy

with Ozgen Ozturk

## Research Question:

- How does the dispersion of firm-level shocks affect the investment channel of monetary policy?

# Chapter 2: Sectoral Volatility and the Investment Channel of Monetary Policy

with Ozgen Ozturk

## Research Question:

- How does the dispersion of firm-level shocks affect the investment channel of monetary policy?

Our exercises have two stages

- Constructing firm-level productivity, and aggregate to get second moments
  - Compute second moments of firm level productivity shocks at the sector and sector-year

# Chapter 2: Sectoral Volatility and the Investment Channel of Monetary Policy

with Ozgen Ozturk

## Research Question:

- How does the dispersion of firm-level shocks affect the investment channel of monetary policy?

Our exercises have two stages

- Constructing firm-level productivity, and aggregate to get second moments
  - Compute second moments of firm level productivity shocks at the sector and sector-year
- Dynamic monetary policy analysis
  - Regressing firm investment on an identified monetary policy shock interacted with our measures of volatility
  - Making comparisons across sectors with high and low overall volatility (mining vs retail)
  - Following a sector over time, comparing when its volatility is high vs low (mining in 2010, 11, ...)

- We contribute new findings that show significant heterogeneity in the investment channel of monetary policy transmission depending on the dispersion of idiosyncratic TFP shocks

- We contribute new findings that show significant heterogeneity in the investment channel of monetary policy transmission depending on the **dispersion of idiosyncratic TFP shocks**
- **Comparing sectors** of different levels of dispersion of idiosyncratic TFP shocks → more volatile sectors respond less to monetary policy shocks
- **Within sectors**, changes in sectoral volatility through time → more volatile times associated with less responsiveness to monetary policy

- We contribute new findings that show significant heterogeneity in the investment channel of monetary policy transmission depending on the **dispersion of idiosyncratic TFP shocks**
- **Comparing sectors** of different levels of dispersion of idiosyncratic TFP shocks → more volatile sectors respond less to monetary policy shocks
- **Within sectors**, changes in sectoral volatility through time → more volatile times associated with less responsiveness to monetary policy

**Policy implication** → Monetary policy might be weakened in recessions - exactly when countercyclical stabilisation policies are most needed

## Government Spending in Firm-level Production Networks: Size versus Centrality (with Wolfram Horn)



# Chapter 3: Government Spending in Firm-level Production Networks

with Wolfram Horn

## Multipliers on gov spending in production networks:

- **Centrality**: many indirect trading partners, chain-reactions
- **Constraints**: pledgable gov demand can relax financial constraints

# Chapter 3: Government Spending in Firm-level Production Networks

with Wolfram Horn

## Multipliers on gov spending in production networks:

- **Centrality**: many indirect trading partners, chain-reactions
- **Constraints**: pledgable gov demand can relax financial constraints

## Who occupies a given node matters!

- Endogeneous formation: large, productive firms probably most central
- Facts: Government spending loads heavily on large, unconstrained, central firms

# Chapter 3: Government Spending in Firm-level Production Networks

with Wolfram Horn

## Multipliers on gov spending in production networks:

- **Centrality**: many indirect trading partners, chain-reactions
- **Constraints**: pledgable gov demand can relax financial constraints

## Who occupies a given node matters!

- Endogeneous formation: large, productive firms probably most central
- Facts: Government spending loads heavily on large, unconstrained, central firms

### Research Question:

- How does gov. spending propagate through production networks from recipient to supplier?
- How large are multipliers when we account for which types of firms occupy which nodes of the network?

# Chapter 3: Government Spending in Firm-level Production Networks

with Wolfram Horn

## Why is this important?

- Stimulus: transmission channels, aggregate multipliers
- (Re)distribution: are benefits diffuse or concentrated in a few players
  - related to rise of intangibles and "own inputs" production?
  - compare Google to General Motors?

# Chapter 3: Government Spending in Firm-level Production Networks

with Wolfram Horn

## Why is this important?

- Stimulus: transmission channels, aggregate multipliers
- (Re)distribution: are benefits diffuse or concentrated in a few players
  - related to rise of intangibles and "own inputs" production?
  - compare Google to General Motors?

## What do we contribute?

- Firm-level approach to network multipliers focuses on granularity/idiosyncratic government spending
- Joint analysis of network shape and firm characteristics

- We present novel facts about the joint distribution of firm size, gov procurement, network position, and financial constraints

- We present novel facts about the joint distribution of firm size, gov procurement, network position, and financial constraints
- We find pass-through of own-procurement-response to supplier of  $\sim 60\%$
- However, we document a clear size gradient in responsiveness to procurement receipt, centrality, and constrainedness

- We present novel facts about the joint distribution of **firm size, gov procurement, network position, and financial constraints**
- We find pass-through of own-procurement-response to supplier of  $\sim 60\%$
- However, we document a clear **size gradient** in responsiveness to procurement receipt, centrality, and constrainedness

→ Findings can **reconcile why macro multipliers** are much more modest than implied by micro-level