Discussion of Bacchetta, Benhima and Poilly : *"Corporate Cash and Employment"*

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"*New Developments in Business Cycle Analysis : The Role of Labor Markets and International Linkages*"
Norges Bank, 20th June 2014

In a Nutshell

Observation

- US corporate cash ratio $\uparrow$ and employment $\downarrow$ after financial crisis

Question

- How do firms' financial constraints affect employment ?

What the paper does

- Provide statistics on US corporate cash and employment
- Develop macroeconomic model to explain observed patterns

Findings

Data

- Negative correlation between cash ratio and employment
  - Over time : US annual data 1980-2011
  - Across firms : US firm-level data 1980-2011 (Compustat)

Model

- Financial constraints on firms
  - Credit constraint to pay for capital
  - Cash-in-advance (CIA) constraint to pay for wages
- Exogenous shocks
  - Idiosyncratic shocks and aggregate shocks
  - Aggregate shocks to technology, credit and external liquidity
- Liquidity and technology shocks generate observed -ve comovement

Assessment and Overview of Discussion

A well-rounded paper which has all one wants, namely :

- It addresses a timely policy question
- It documents a new stylised fact...
- ... and proposes a theoretical model to explain this stylised fact

Nice : it merges firm-level evidence with a macro model

Is the US special ?

Is stylized fact valid also for other (European) countries ?

- Differences in firm financing
  - European firms rely more on bank loans
  - $\Rightarrow$ cyclical behaviour of cash ratio may depend (also) on bank lending
- Differences in labour markets
  - Higher employment adjustment costs
  - $\Rightarrow$ firing costs may represent larger constraint than cash holdings

Data Source

Data source : Compustat

- Small fraction of all firms in economy
  - Database contains $N \approx 10,000$ firms. Sample : $N = 5,133$ firms
  - Dun & Bradstreet Inc. contains $N \approx 135m$ firms active in US
- Limited to firms listed on stock market
  - Equity as a source of financing $\Rightarrow$ affects cash ratio ?
  - In the model, firms have cash and debt, but no equity
- Special relative to other firms ?
  - In sample, median firm has $n_t = 4,800$ employees $\Rightarrow$ pretty big !
  - Siemer (2013) : small firms with $n_t < 50$ account for 30% of aggregate employment

Could use business registry data : Amadeus for euro area

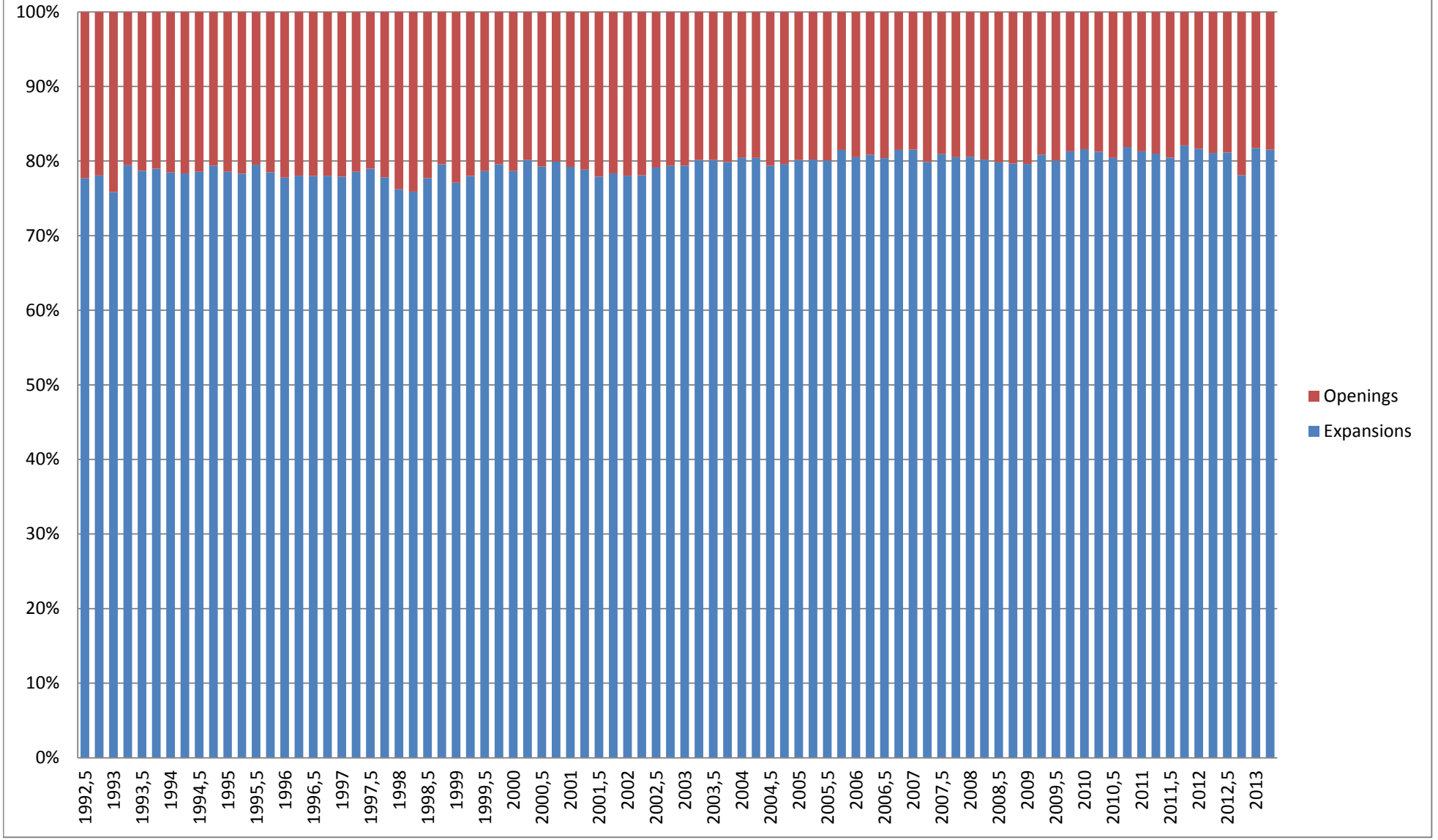
Extensive Margin : Firm Turnover

Only firms active during whole period 1980-2011

- In US, firm entry & exit account for around 20% of job creation & destruction, respectively. Proportion roughly constant over time. See Davis and Haltiwanger (1990), Spletzer (1998). *[Figures 1a,b]*
- Importance of young firms for aggregate job flows *"...employment by firms up to the age of five fell by 4.2 million between 2006 and 2010, accounting for more than half of the decline in aggregate employment."* Sedlacek and Sterk (2014)
- Important effect of external financing constraints on employment through firm entry/exit during Great Recession. Siemer (2013)

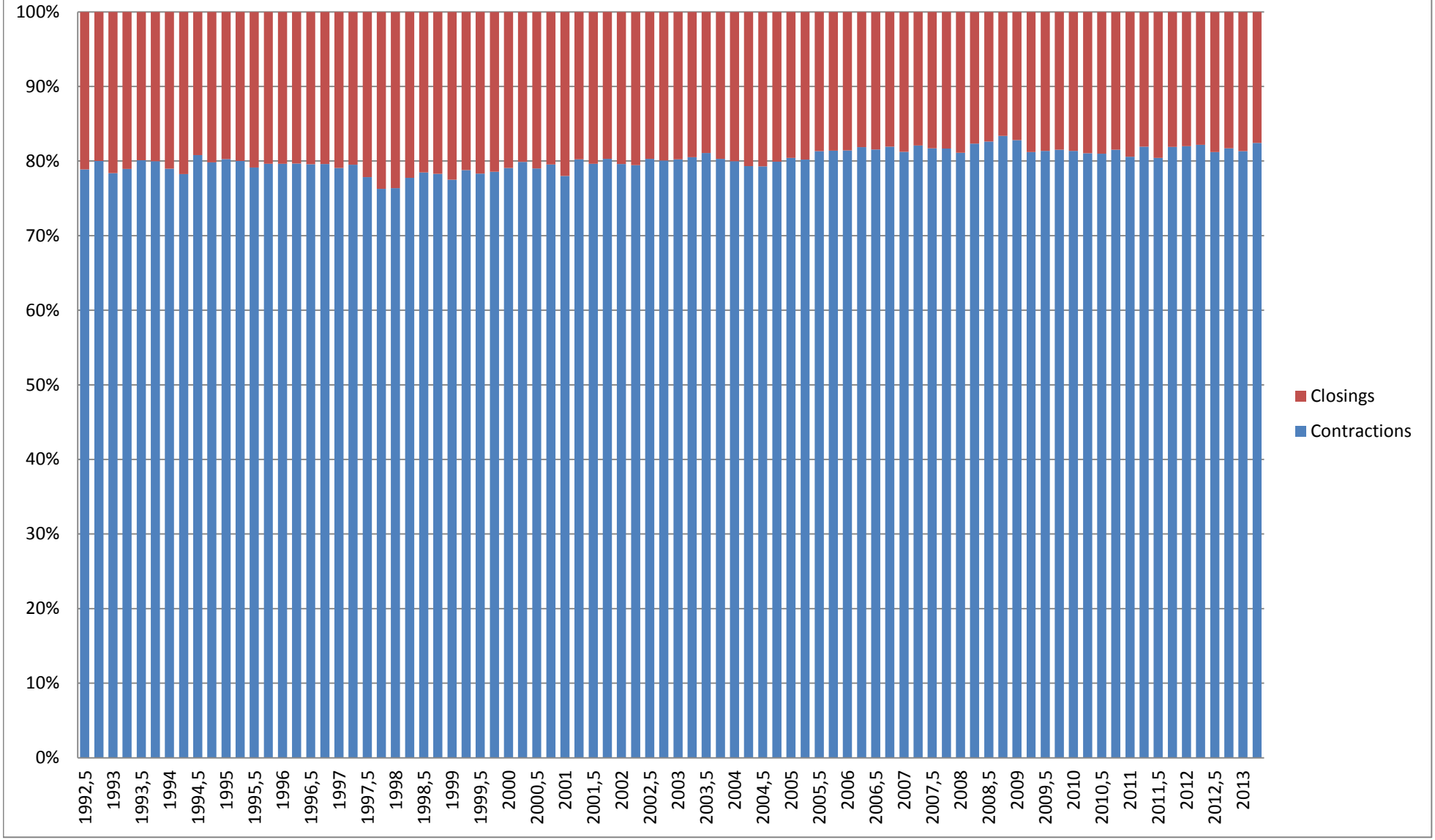
US Gross Job Gains: Openings vs. Expansions

Source: Business Employment Dynamics, Bureau of Labor Statistics, http://data.bls.gov/cgi-bin/dsrv?bd



US Gross Job Losses: Closings vs. Contractions

Source: Business Employment Dynamics, Bureau of Labor Statistics, http://data.bls.gov/cgi-bin/dsrv?bd



Firm Size (1)

"...we drop the 10% largest firms"

- 'Largest' in terms of sales, workforce, market share...? Specify. Appendix states that firm size measured as $log(assets)$.
- In fact, firm size often defined in terms of employment. See e.g. Henly and Sanchez (2009)
- Dropped firms account for which proportion of workforce? In 2006, largest firms ($n_t > 1,000$) employed 13% of all workers (Henly and Sanchez, 2009)
- Not so standard in firm-level analysis (trade, IO) where firm heterogeneity is key

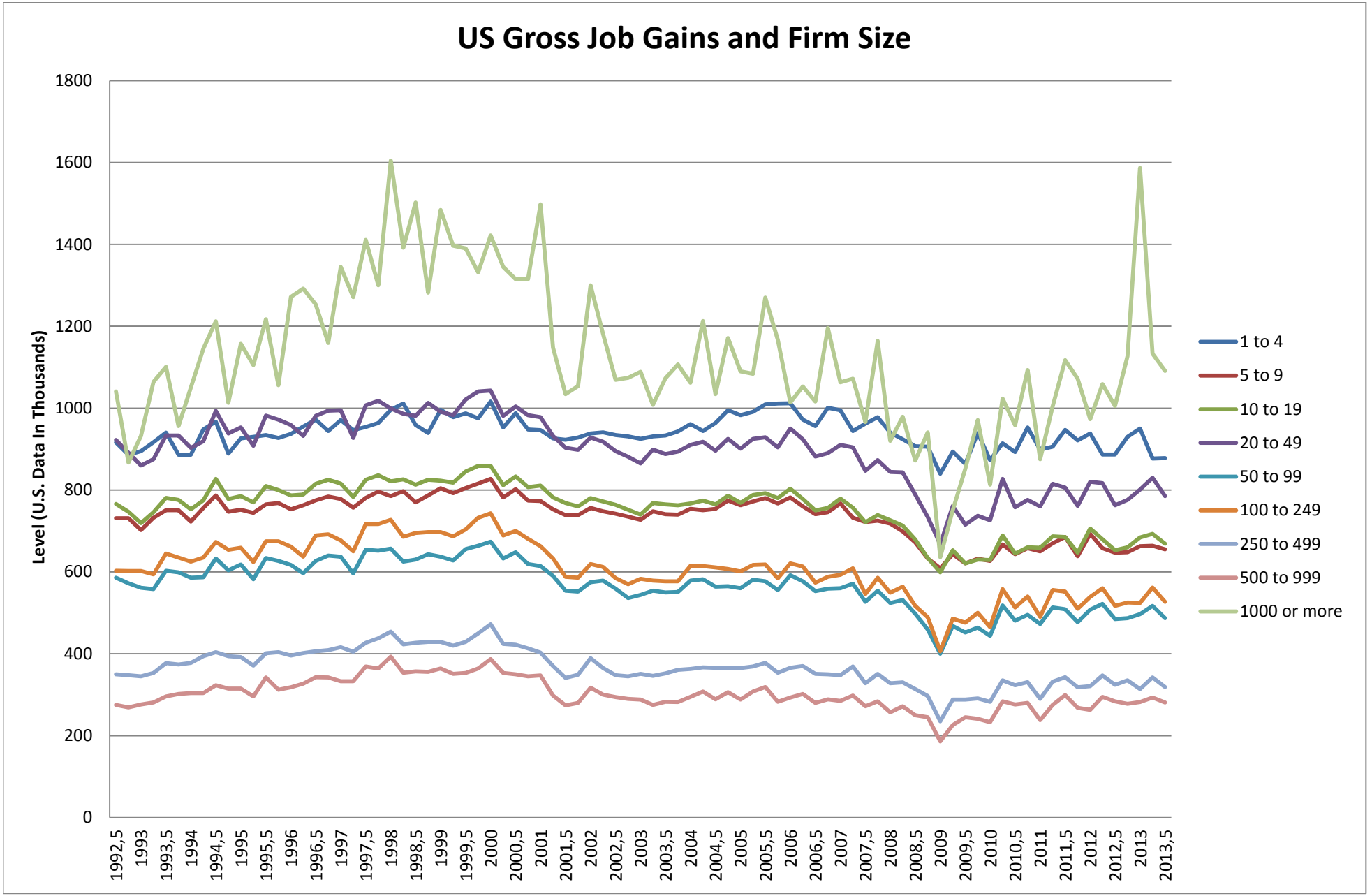
Firm Size (2)

Firm size matters for job flows

- Gross flows : very small and very large firms matter *[Figures 2a,b]*
- Net flows : net job gains by large firms have much larger amplitude than those by smaller firms *[Figure 3]*

Taking heterogeneity seriously

- Larger firms are more productive, more likely to export, less financially constrained


US Gross Job Gains and Firm Size
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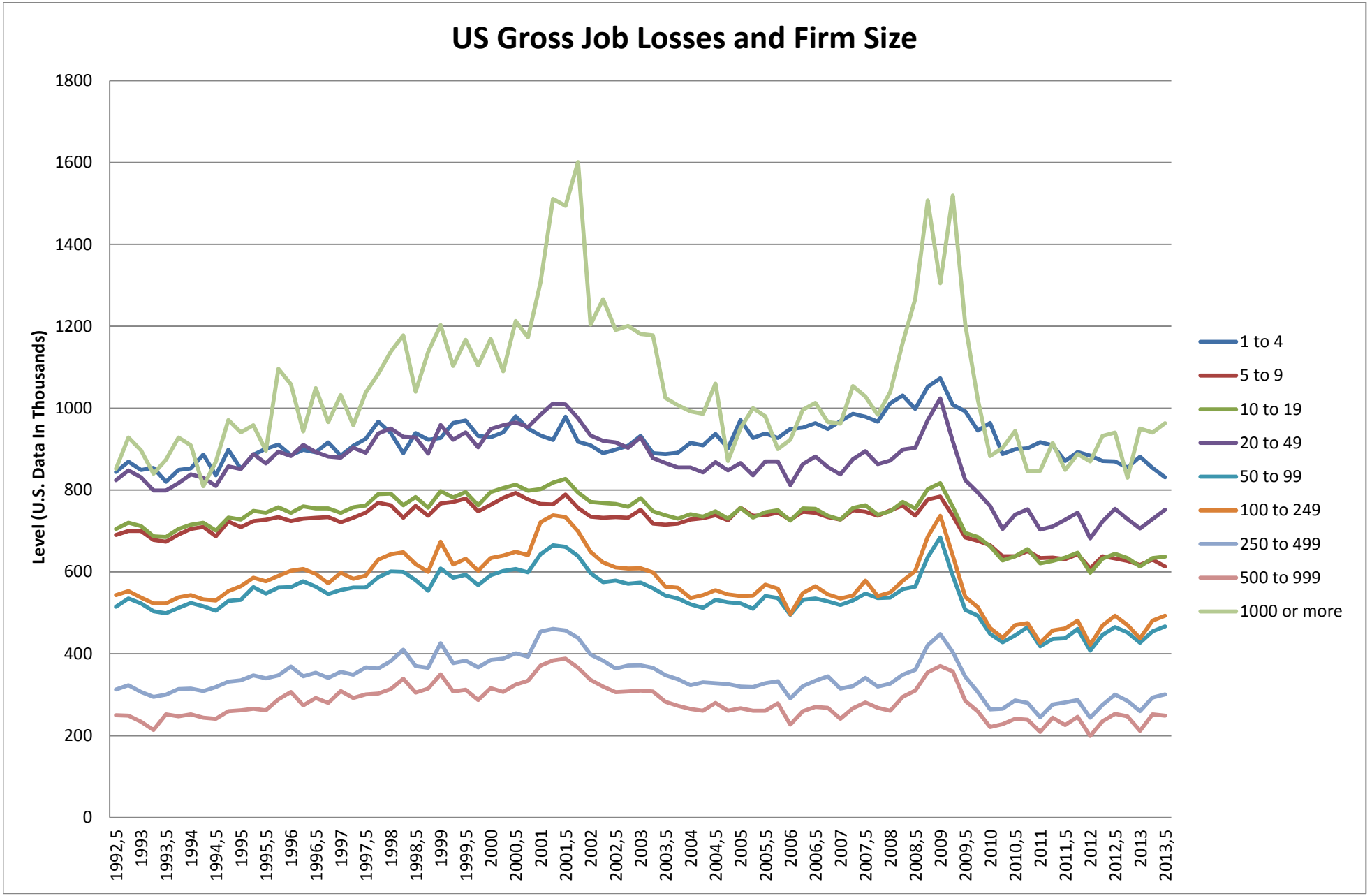
1000 or more


US Gross Job Losses and Firm Size
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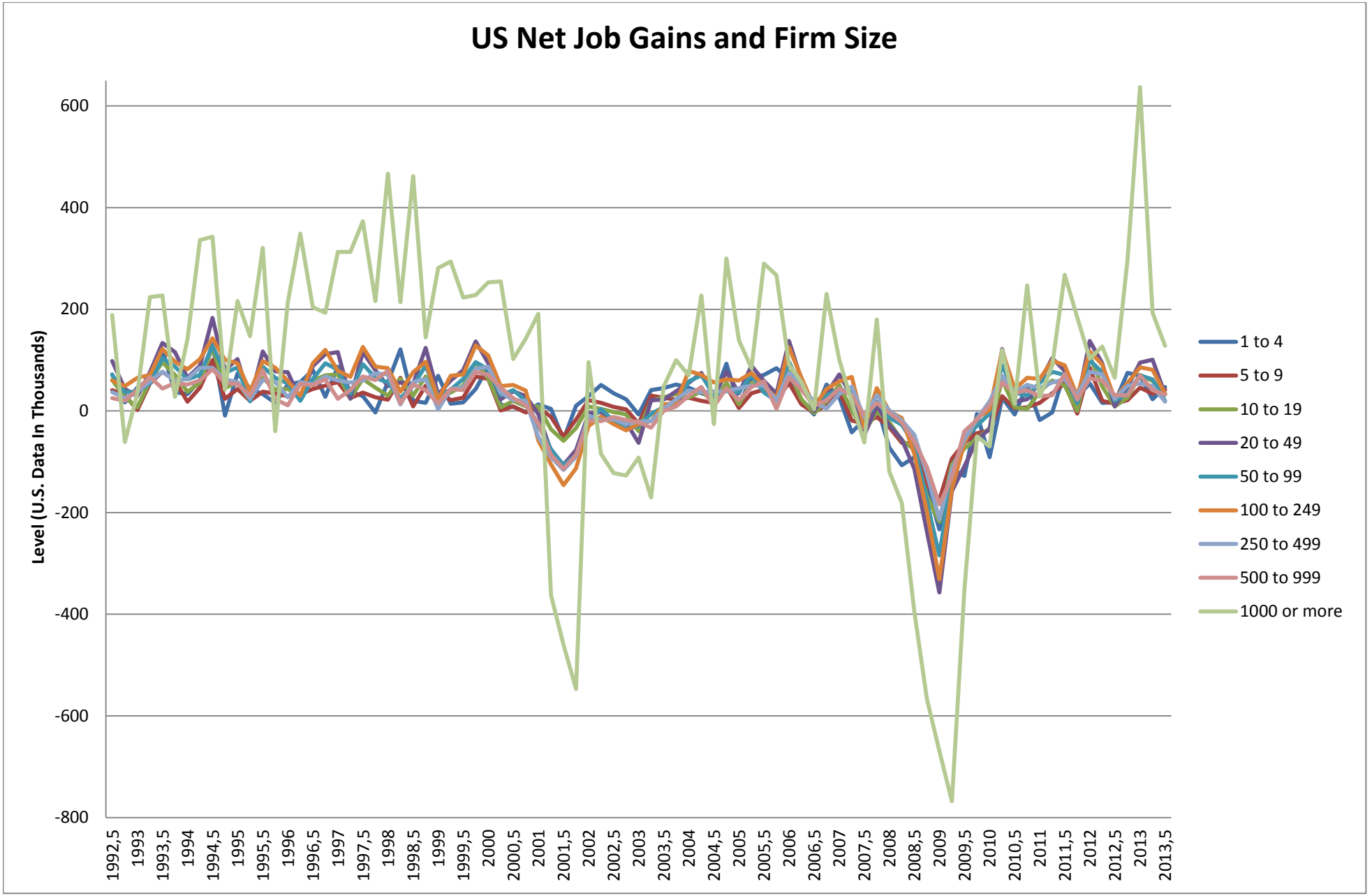
US Net Job Gains and Firm Size
Level (U.S. Data In Thousands)
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-600
-800
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Manufacturing vs Services

Testable model predictions

Output volatility

- Data : manufacturing more volatile than services
- Model : larger idiosyncratic shocks $\Rightarrow$ more volatile employment
- $\Rightarrow$ check whether manufacturing has more volatile cash ratio

Labor share

- Data : manufacturing has lower labor share than services
- Model : lower labor share $\Rightarrow$ lower liquidity needs
- $\Rightarrow$ check whether manufacturing has lower average cash ratio

Possibly interesting way to test/validate model

Labour Market

Employment adjustment costs

- Much more prevalent in Europe $\Rightarrow$ may dominate CIA constraint to finance wages $\Rightarrow \rho(cash_t, n_t) \downarrow$

Hours per employee

- Additional labor input margin $\Rightarrow \rho(cash_t, n_t) \downarrow$
- Short-time work and other policy instruments aimed at stabilizing employment $\Rightarrow \rho(cash_t, n_t) \downarrow$

Downward nominal wage rigidity

- May reinforce CIA constraint in downturn $\Rightarrow \rho(cash_t, n_t) \uparrow$ in recession

Financial Intermediation and Firm Survival

Financial intermediation

- Higher cash ratio in downturn may reflect reduced availability of bank loans $\Rightarrow \rho(cash_t, n_t) \downarrow$

Firm survival

- Precautionary cash holdings to prevent firm closing after particularly severe idiosyncratic shock (or string of shocks) $\Rightarrow \rho(cash_t, n_t) \uparrow$

Conclusion and Recommendations

Conclusion

- Very nice paper ; both empirical and theoretical contribution

Recommendations

- Data analysis could provide additional robustness checks
  - Compare with other (European) countries
  - Include more firms, non-listed firms, largest firms
  - Test model prediction through sector-specific analysis
- Model ignores features that could affect $\rho(cash_t, n_t)$
  - Employment adjustment costs and hours margin
  - (Downward nominal) wage rigidity
  - Financial intermediation and firm survival

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