The Secular Decline in Business Dynamism in the U.S.

CAED, April 2012

By

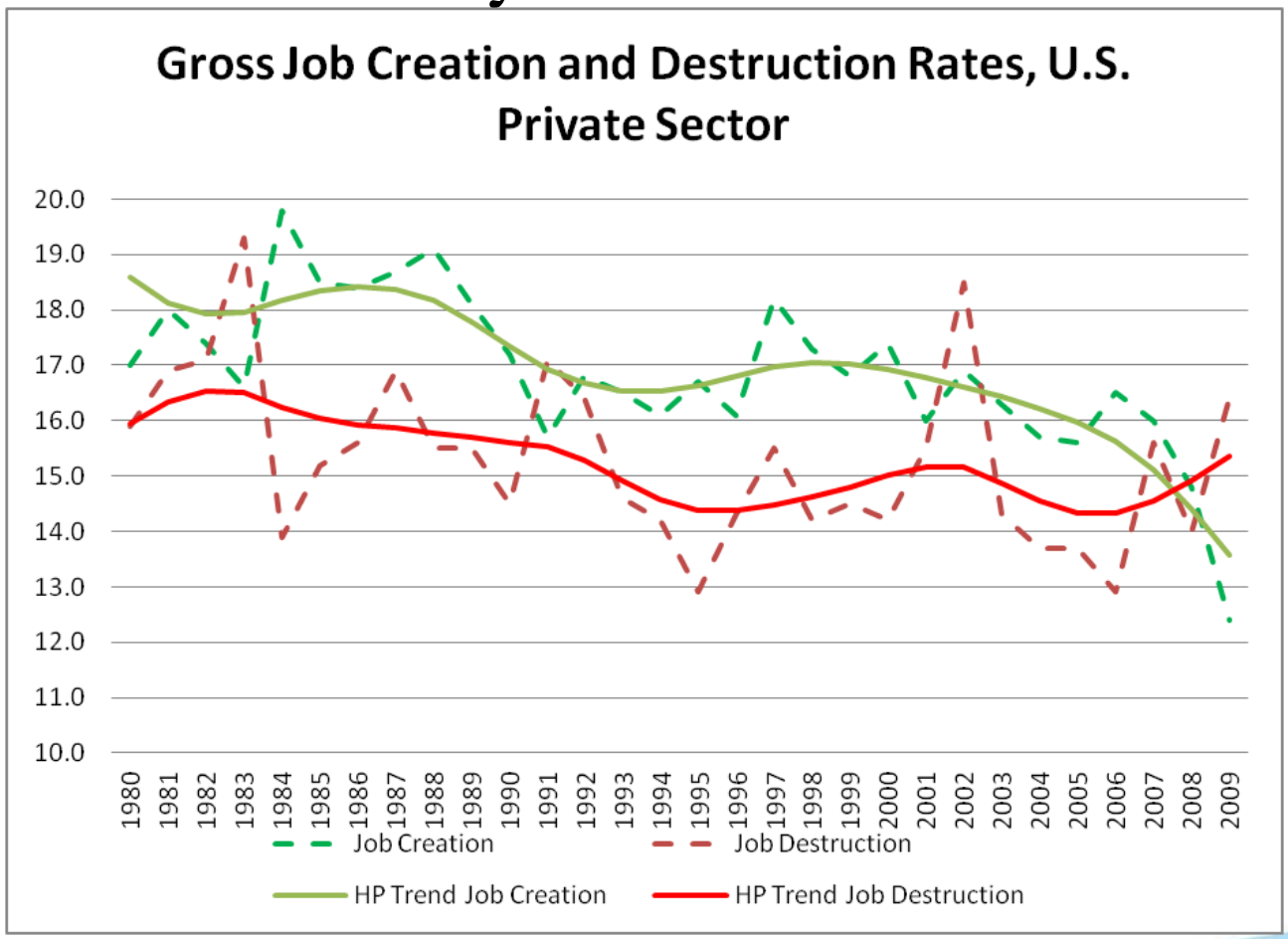
John Haltiwanger, University of Maryland
Ron Jarmin, U.S. Census Bureau
Javier Miranda, U.S. Census Bureau

We thank the Kauffman Foundation for financial support. Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau. All results have been reviewed to ensure that no confidential information is disclosed.

Overview

- US economy is very dynamic
  - Job Creation/Job Destruction
  - Reallocation
  - Productivity Growth
- Startups and young firms play an important role in this
  - Disproportionally add jobs to the economy
  - Young firms that survive increase productivity
- Some recent evidence suggest declining dynamism. But is decline a source of concern?
  - Depends on factors
- We investigate drivers and trends

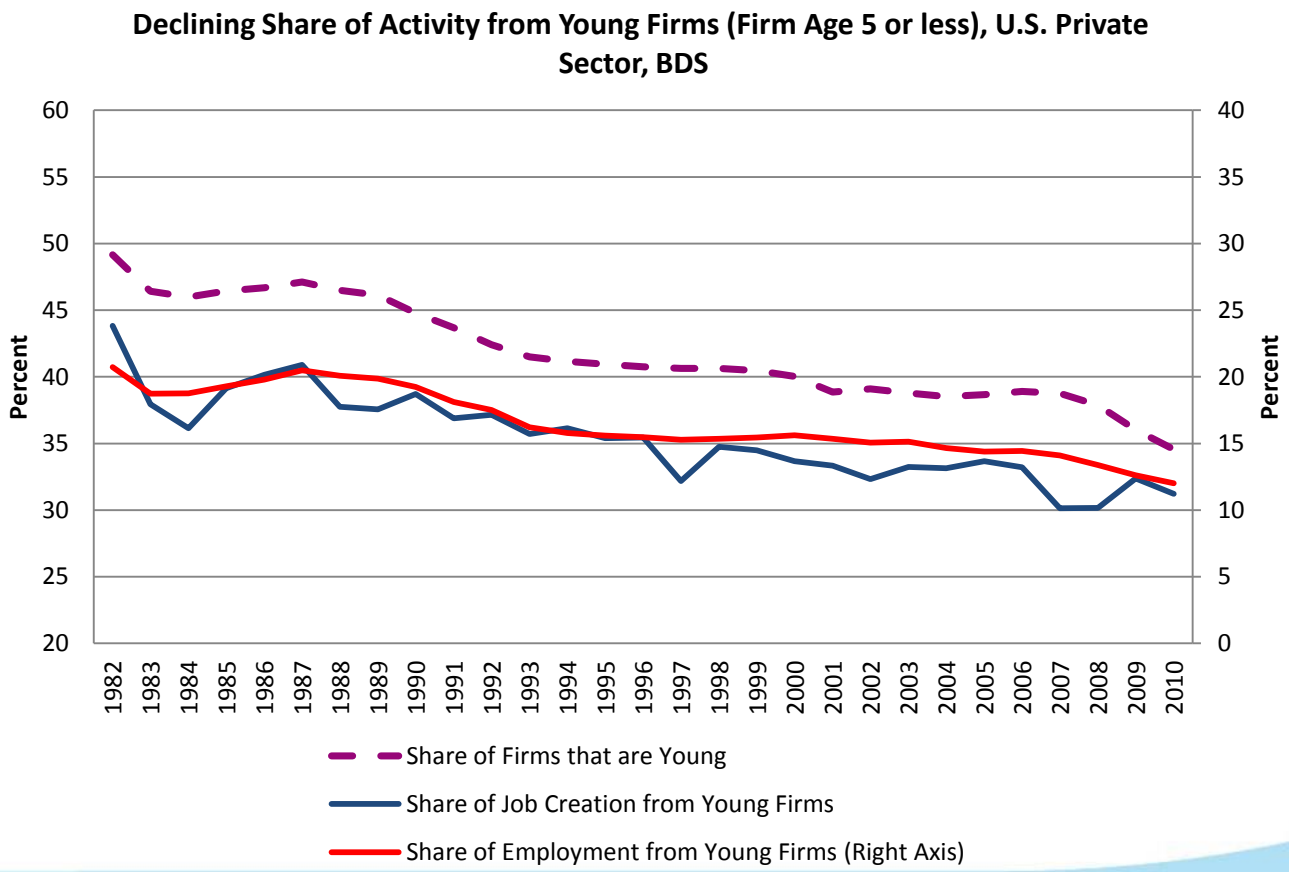
Secular Decline in U.S. Business Dynamism



United States Census Bureau
Economic Statistics

Source: Census BDS Data

Secular Decline in U.S. Business Dynamism: Young Firms



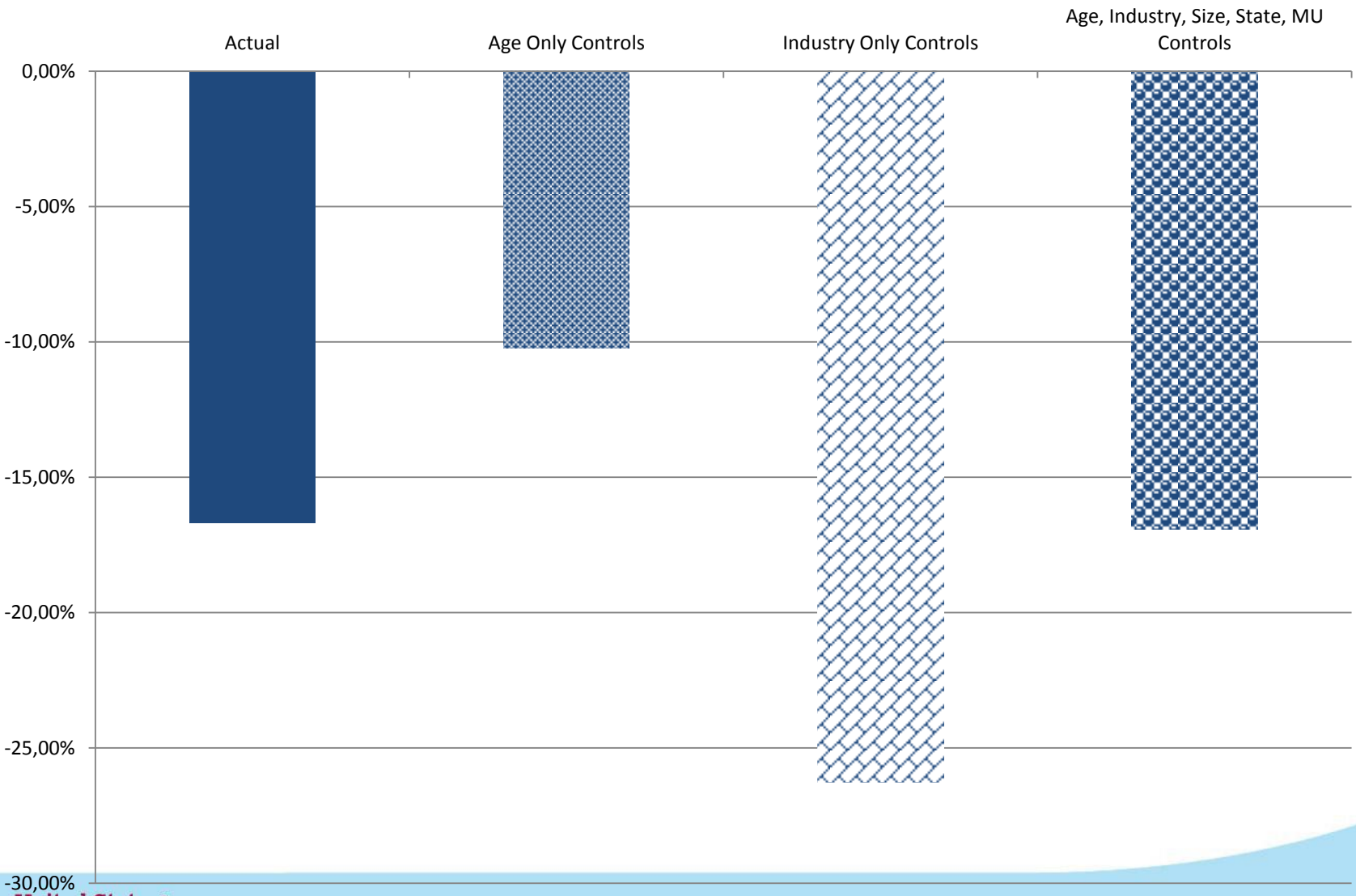
United States Census Bureau
Economic Statistics

Source: Census BDS Data

Changing Composition Effects?

- Does Changing Composition of U.S. Businesses Account for Secular Patterns?
  - Industry, Size, Age, State, and MU Status
  - 8 size classes, 7 age classes, 295 NAICS, 50 States + DC, SU/MU (aprox. 261,000 cells per year)
- Method:
  - Employment-Weighted Fixed Effect Regressions
  - Residual Year Effects tell us extent to which patterns reflect composition effects
  - Separately for startups and continuer firms
- Composition effects balance each other out

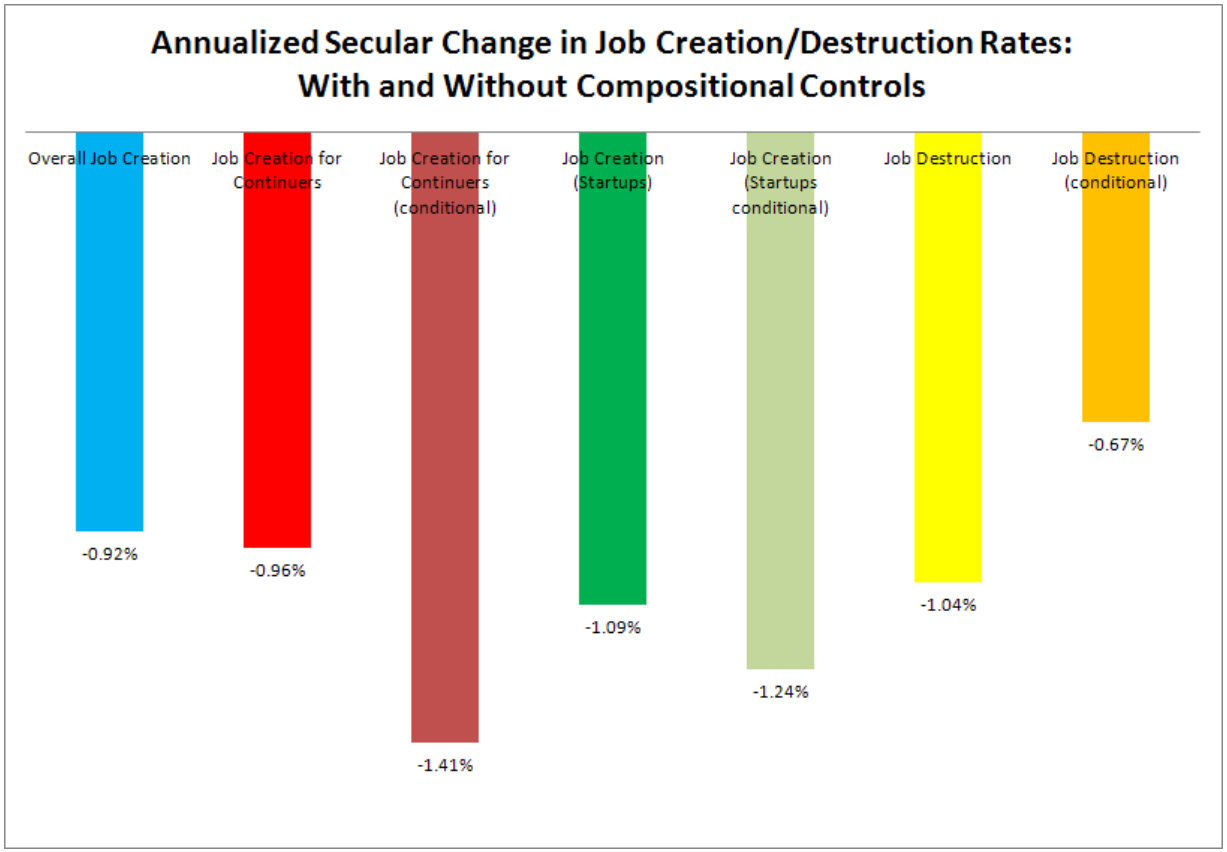
Balancing Out of Age vs. Industry Effects on Job Creation



Source: Haltiwanger, Jarmin and Miranda (2012)

United States™ Census Bureau
Economic Statistics

Controlling for Composition Effects



- Composition effects can't explain observed trends
- We have a bigger puzzle after controlling for observable

Other Explanations: What is the role of changing population, regulatory environment, finance?

- Demographics
  - Changing demographics can affect churning of workers, human capital and in turn firm outcomes.
  - Changing demographics can affect startup rates
- Financial Markets
  - Banking consolidation might make it harder for small/young business to find financing
  - Large banks might be better able to diversify risk
- Business climate
  - Regulatory/institutional environment could introduce distortions that affect business dynamics, startups, and growth
- Other within cell trends?
- NOTE: We use Panel VAR to deal with endogeneity and reverse causality. Looking at innovation shocks as residuals from lag model.

Identification Issues

- Multi-collinearity, omitted variables, and causality?:
  - Our approach is to focus on whether we can find covariates that reduce decline in estimated year effects.
    - Not concerned about individual coefficients on specific variables but rather whether broad classes of variables account for changes.
  - To avoid reverse causality we use a Panel VAR approach with a rich lag structure.
    - Imposes minimum assumptions on the system.
    - Allows for contemporaneous and lagged interdependence amongst multiple time series.
    - We can examine the dynamic employment and job flow response associated with (orthogonal) innovations in explanatory variables.
  - Estimate dynamic response functions.

Panel VAR

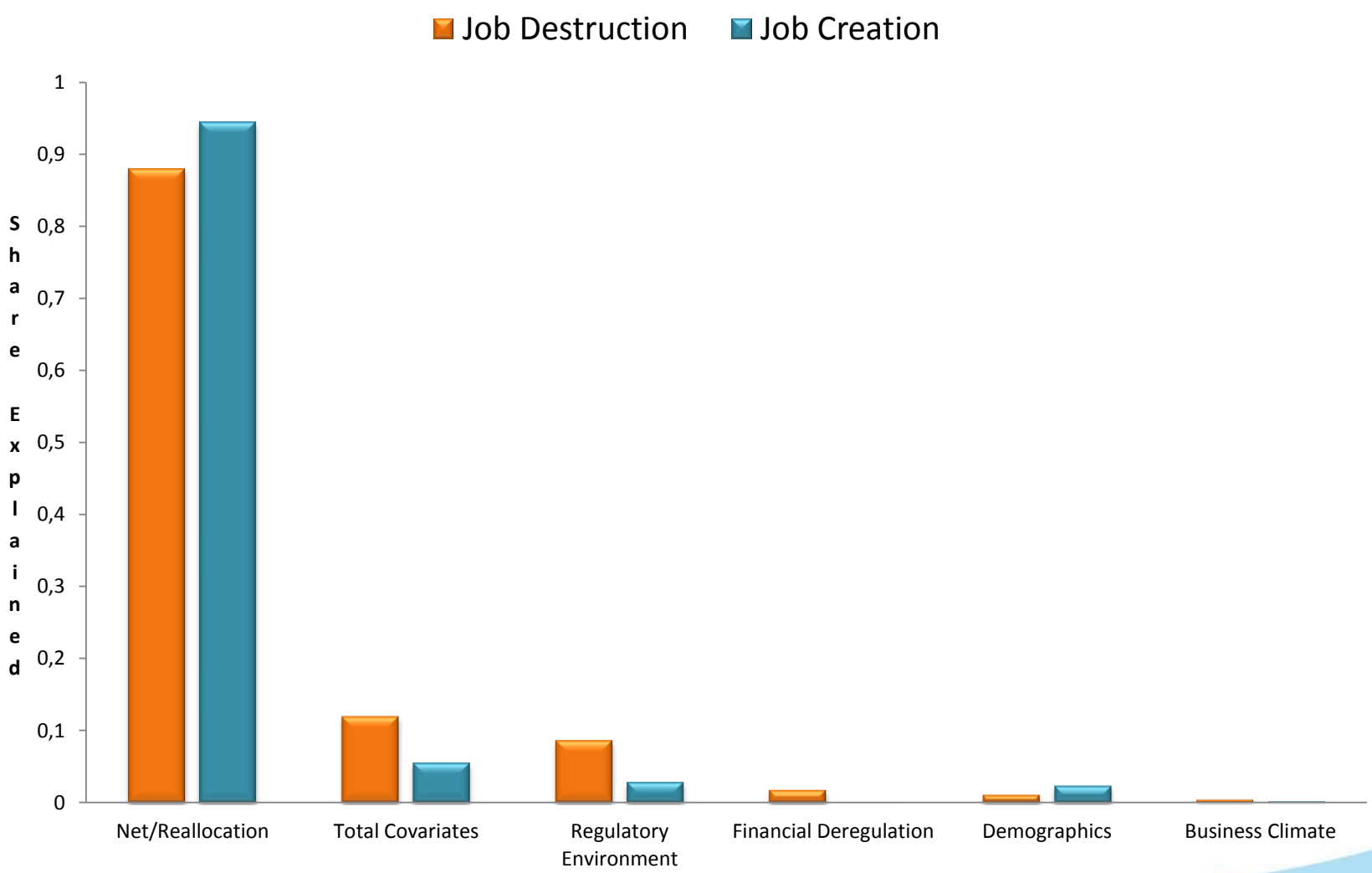
- $$Y_{st} = A(L)Y_{st} + State_s + Year_t + \varepsilon_{st}$$

Key points:

- Convert to MA representation using Choleski decomposition with ordering Y = {JD,JC, Fin Dereg,Env Reg, Bus Climate, Share Young Males}
- Reverse causality addressed by above causal ordering and lag structure.
  - Off-diagonals of residuals ε_{st} are small so ordering likely not critical (will investigate further)
- Combined impact of JD/JC innovations reflect state-level unobserved effects impacting net and reallocation in state

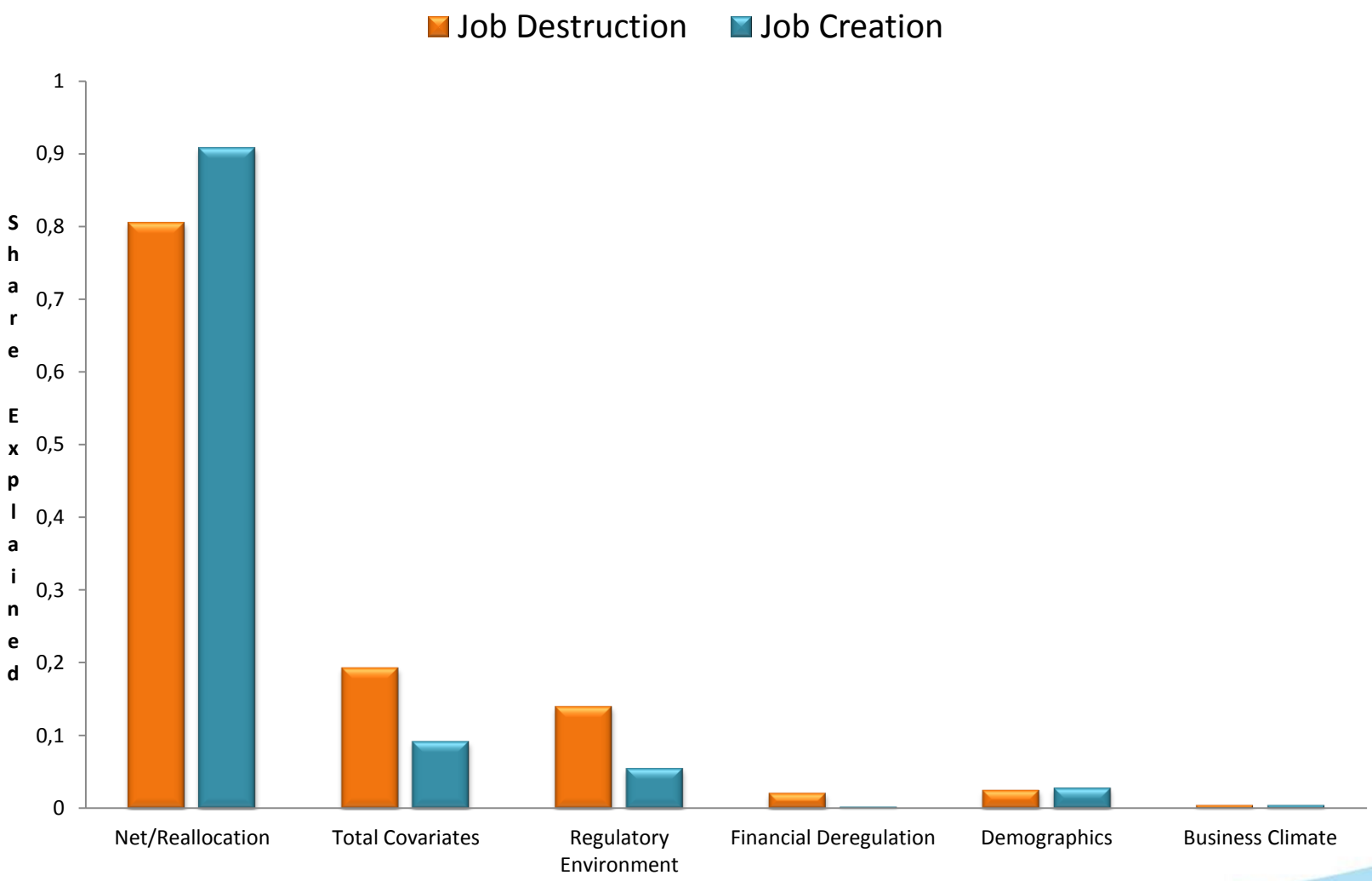
Variance Decomposition of Job Creation and Destruction

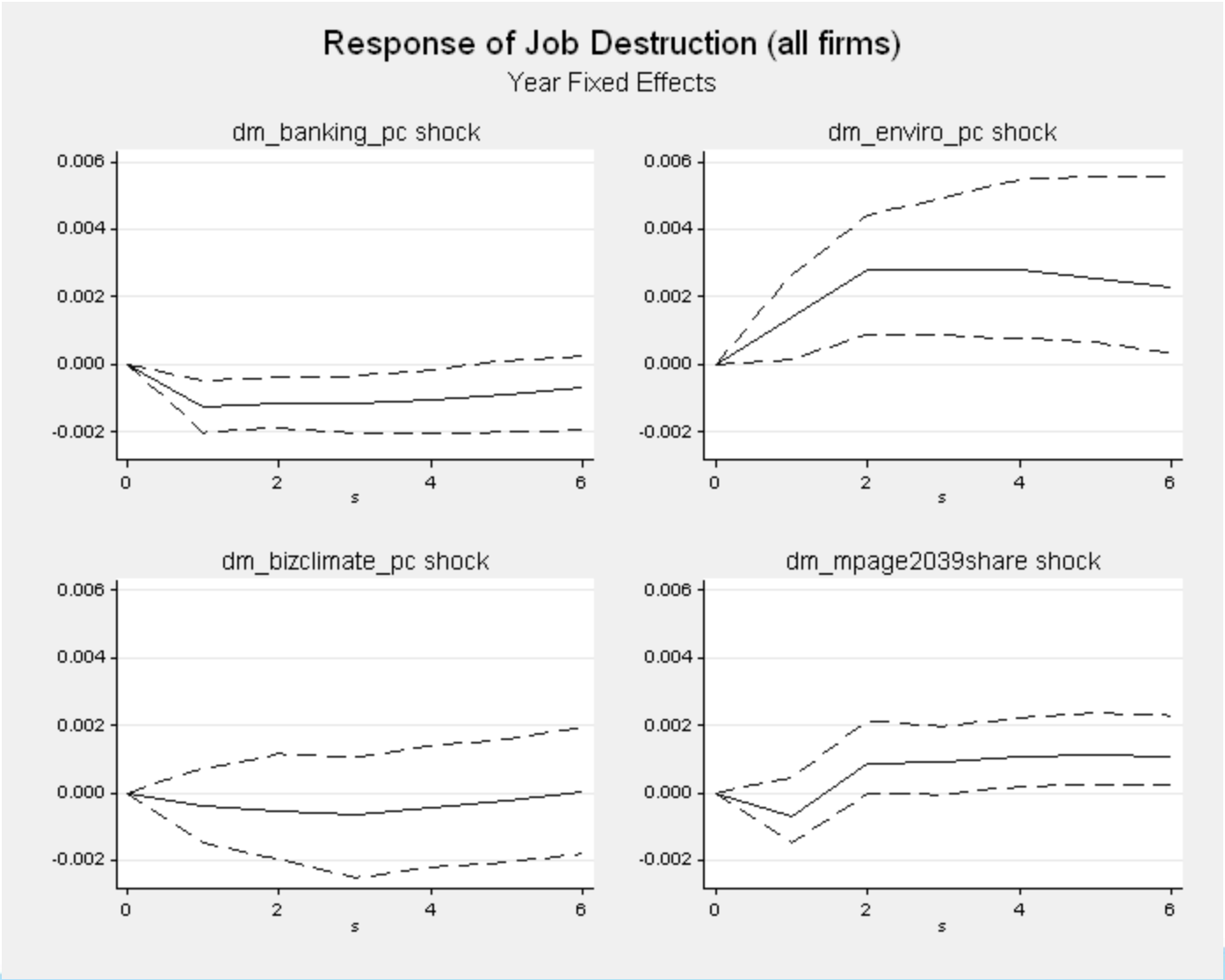
VAR 5 year effects with year controls

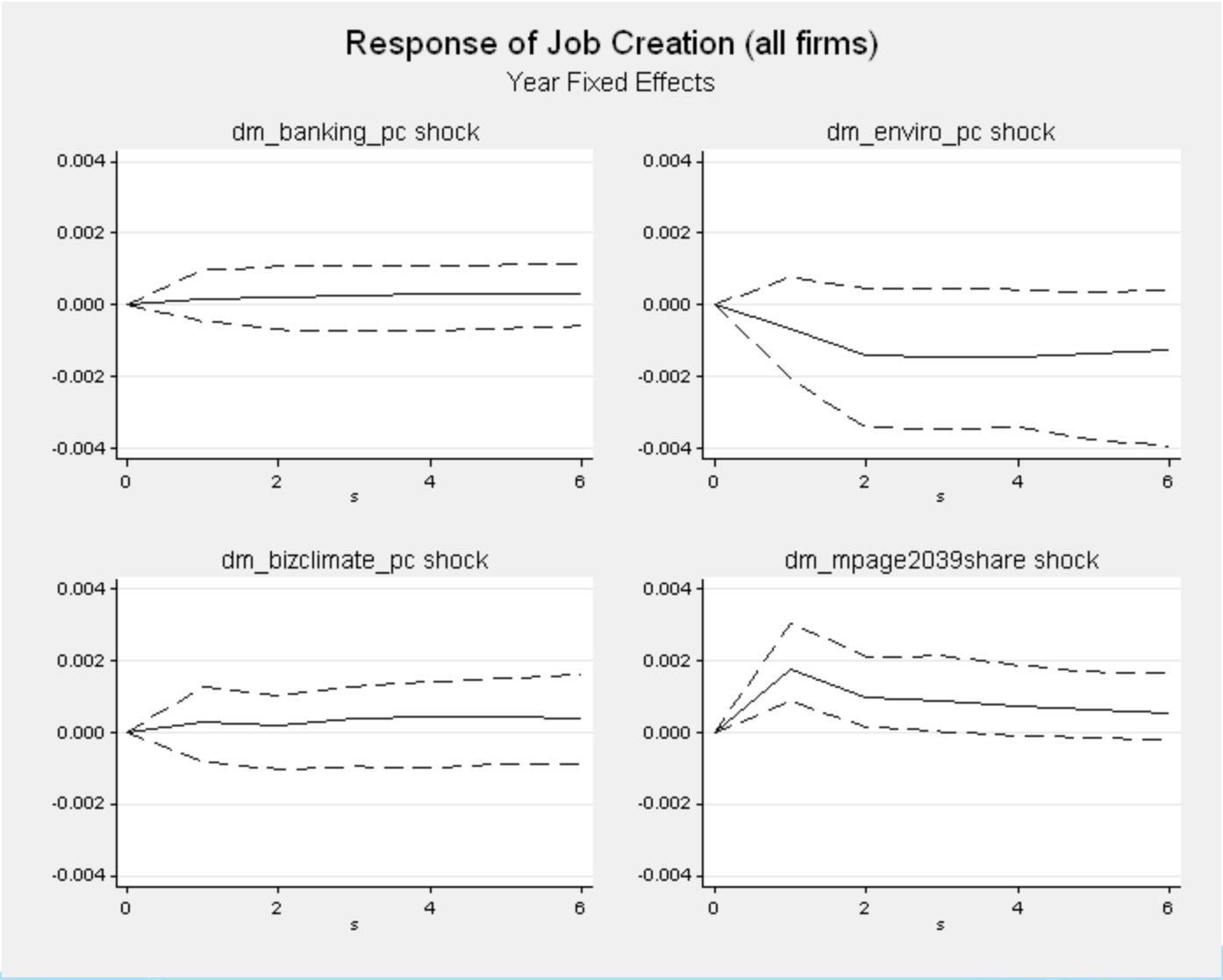


Variance Decomposition of Job Creation and Destruction

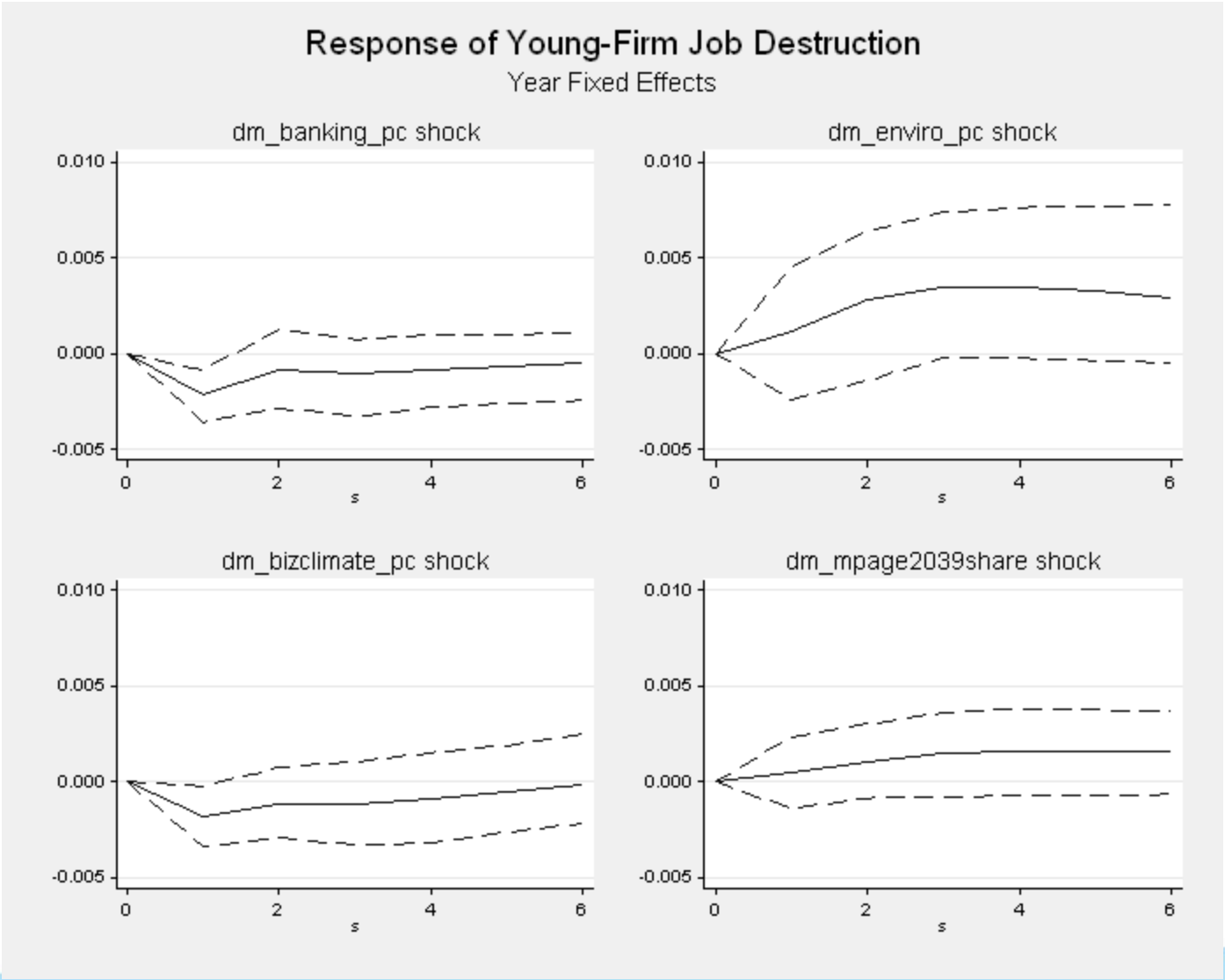
VAR 10 year effects with year controls

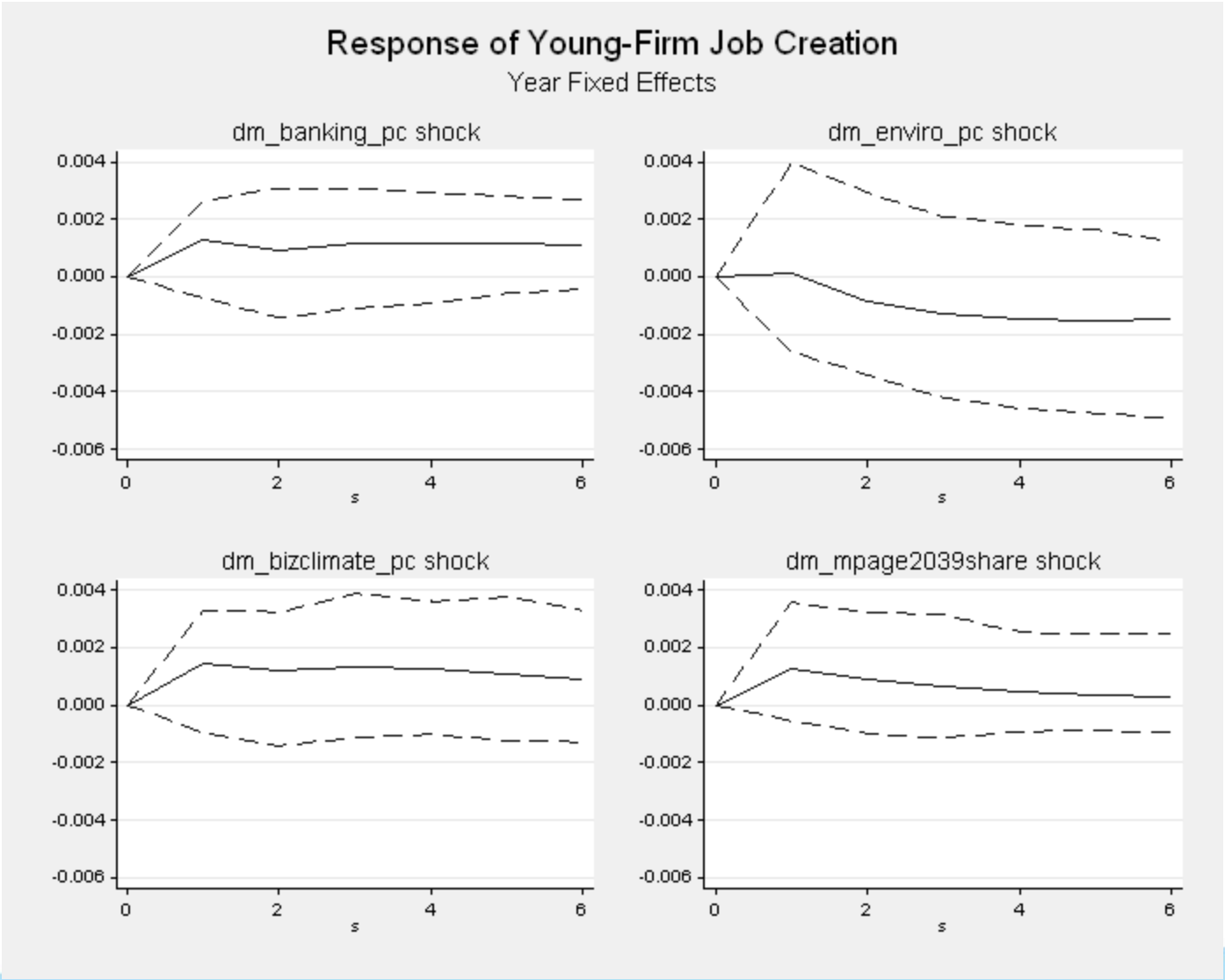



Response of Job Destruction (all firms)
Year Fixed Effects
dm_banking_pc shock
dm_enviro_pc shock
dm_bizclimate_pc shock
dm_mpage2039share shock
0.006
0.004
0.002
0.000
-0.002
0
2
4
6
s



United States Census Bureau
Economic Statistics


Response of Young-Firm Job Destruction
Year Fixed Effects
dm_banking_pc shock
dm_enviro_pc shock
dm_bizclimate_pc shock
dm_mpage2039share shock
0.010
0.005
0.000
-0.005
0
2
4
6
s


Response of Young-Firm Job Creation
Year Fixed Effects
dm_banking_pc shock
dm_enviro_pc shock
dm_bizclimate_pc shock
dm_mpage2039share shock
0.004
0.002
0.000
-0.002
-0.004
-0.006
0
2
4
6
s

Findings from Panel VAR

- Reallocation and creative destruction important in the US
  - between 80-94% of JC/JD.
- Covariates are relevant to explain JC/JD trends
- Tighter regulations that increase cost of doing business have dampening effect on job creation and increase job destruction (this last especially for young firms).
  - Regulatory environment: 3-9% after 5 years
- Aging of the population has a dampening effect on job creation and increase job destruction.
  - Demographics: 1-3%
- Financial deregulation less of an effect.
- Not exhaustive list at this point.

Summary

- US is very dynamic but declining trend
- Multiple factors at play
- Composition has effects particularly the aging of the population of firms but compensated by move towards more volatile industries
- Critical to understand factors underlying job creation/destruction in order to inform policy
- Preliminary evidence suggests regulatory environment and aging of the population appear to play some (but not a dominant) role.
  - Unobserved net/reallocation factors accounting for most of the variation.