

The Dynamics of Young Businesses: Importance for Growth and Measurement Challenges

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Remarks by Chairman Ben Bernanke, August 31, 2006

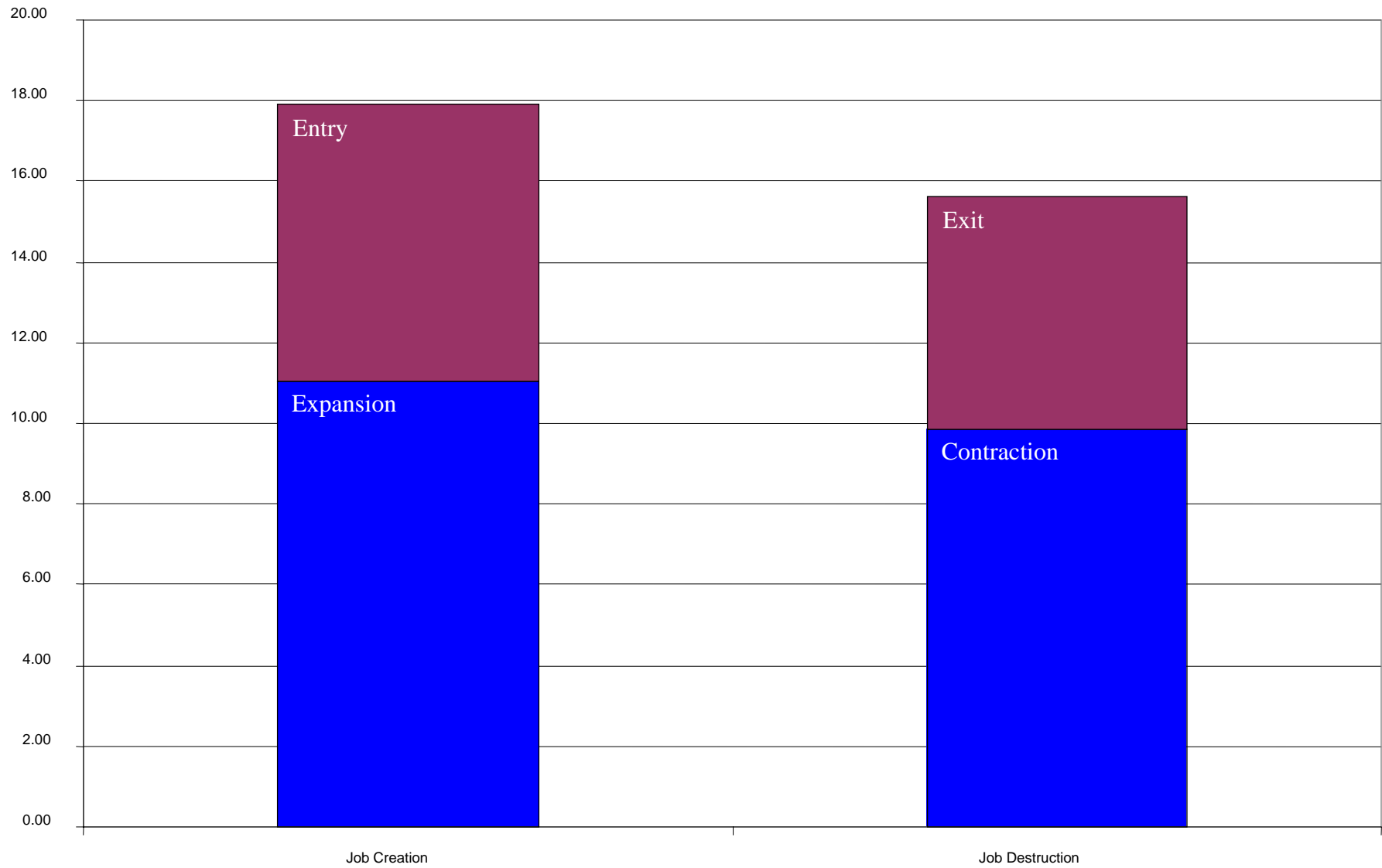
One leading explanation for the strong U.S. productivity growth is that labor markets in the United States tend to be more flexible and competitive, market characteristics that have allowed the United States to realize greater economic benefits from new technologies. For example, taking full advantage of new information and communication technologies may require extensive reorganization of work practices, the reassignment and retraining of workers, and ultimately some reallocation of labor among firms and industries. Regulations that raise the costs of hiring and firing workers and that reduce employers' ability to change work assignments ...may make such changes more difficult to achieve.

Overview

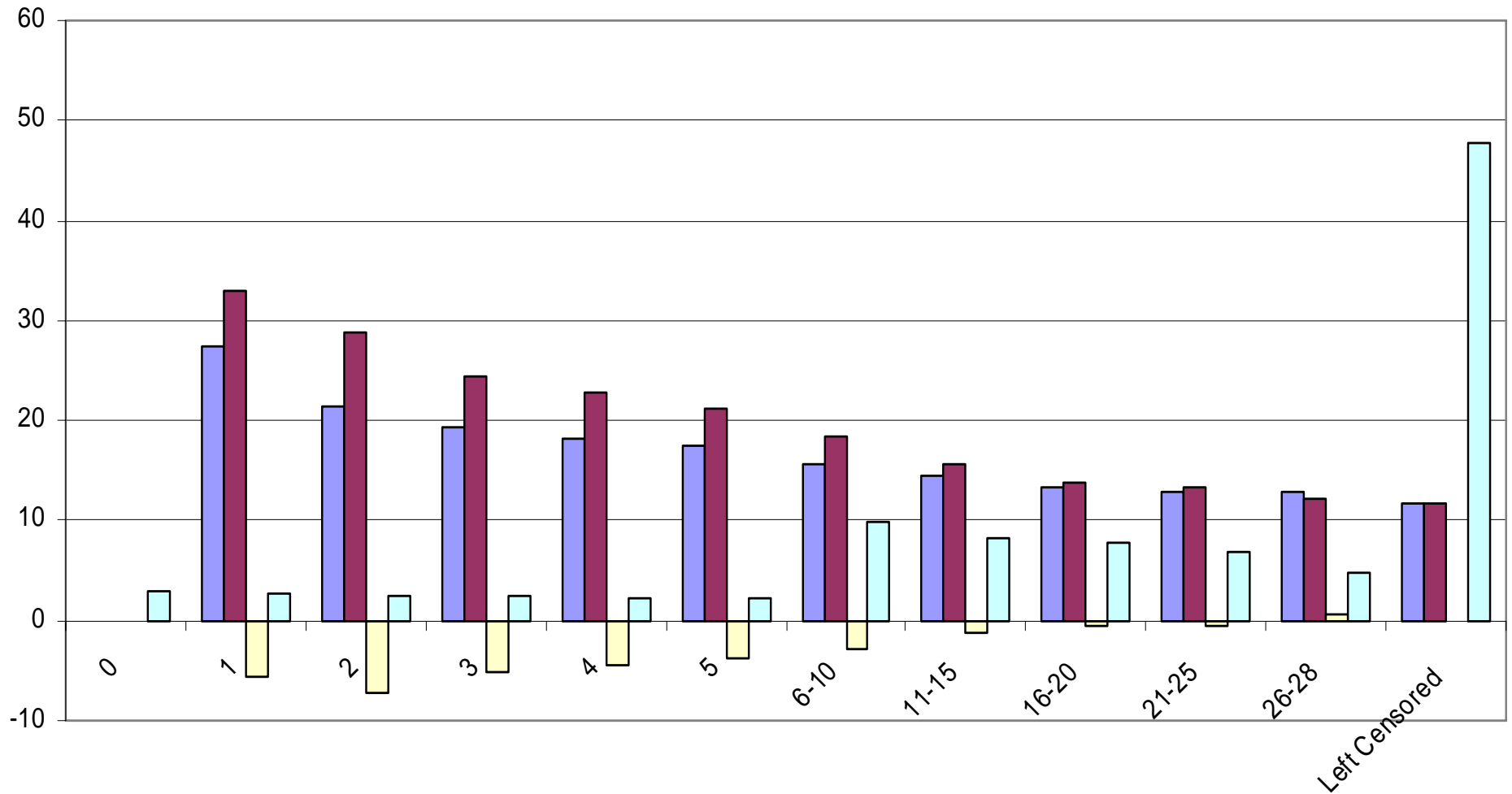
- Healthy, market economies are dynamic
 - High pace of churning of businesses, jobs and workers
 - Churning of firms, jobs and workers is productivity enhancing
 - Market selection yields exit of less productive firms and establishments
 - ***Young and small businesses play a fundamental role in these dynamics***
 - ***Young and small businesses have higher than average net growth rates and are much more volatile than large and mature businesses***
 - Uncertainty, experimentation, learning and selection play important role
 - Businesses experimenting with new products, processes, locations and responding differentially to common and idiosyncratic shocks).
 - Intangible capital expenditures and stocks appear to be high – and arguably young businesses play an important role
- Objective of Talk: Discuss what we know and don't know about these dynamics with special focus on the role of young businesses – a challenge is that statistical agencies have traditionally focused on large, mature businesses

Average Job Creation and Destruction Rates for U.S. Private

Sector, 1977-2005

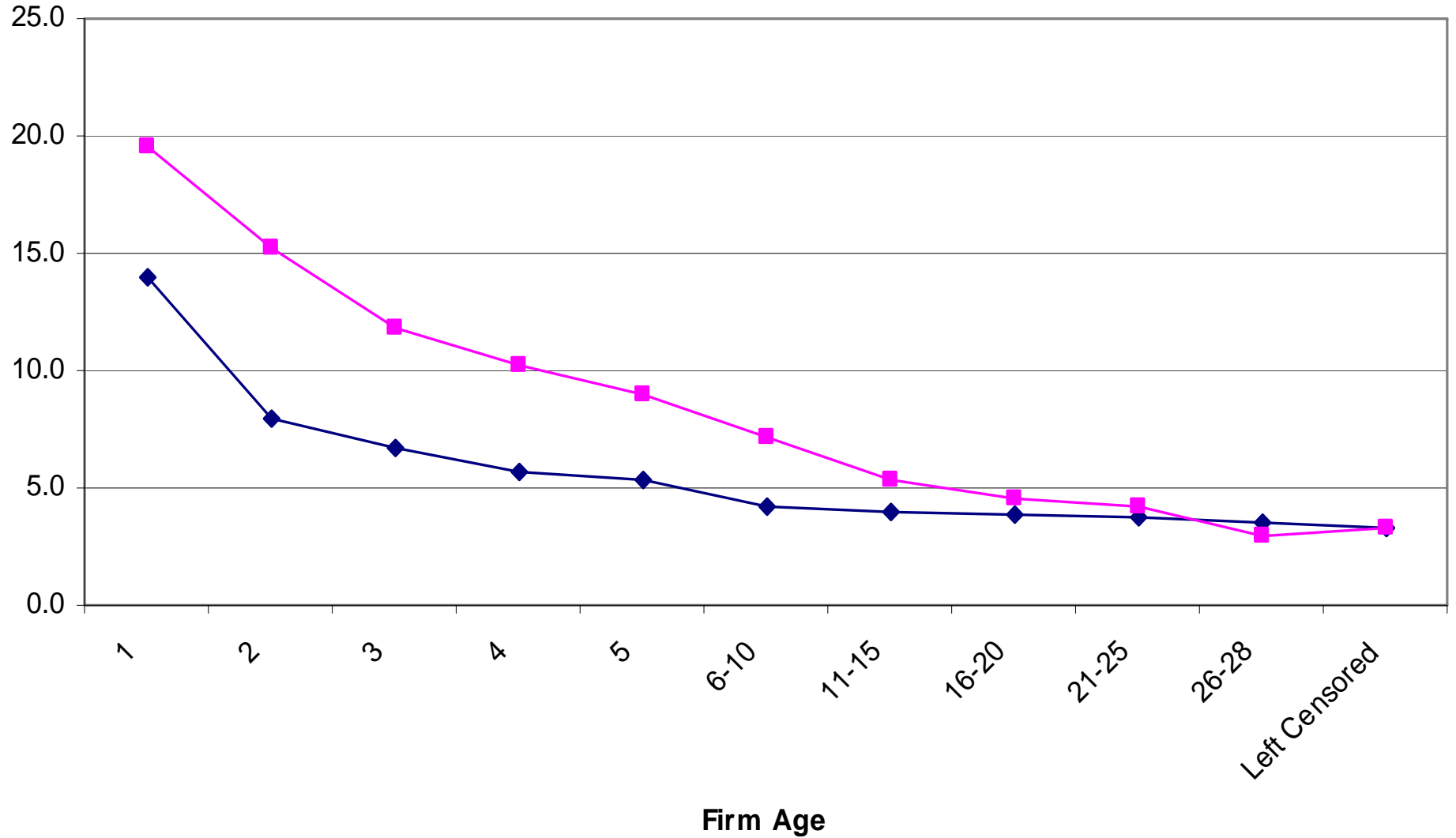


Average Job Flows for Establishments by Firm Age, 1987-2005



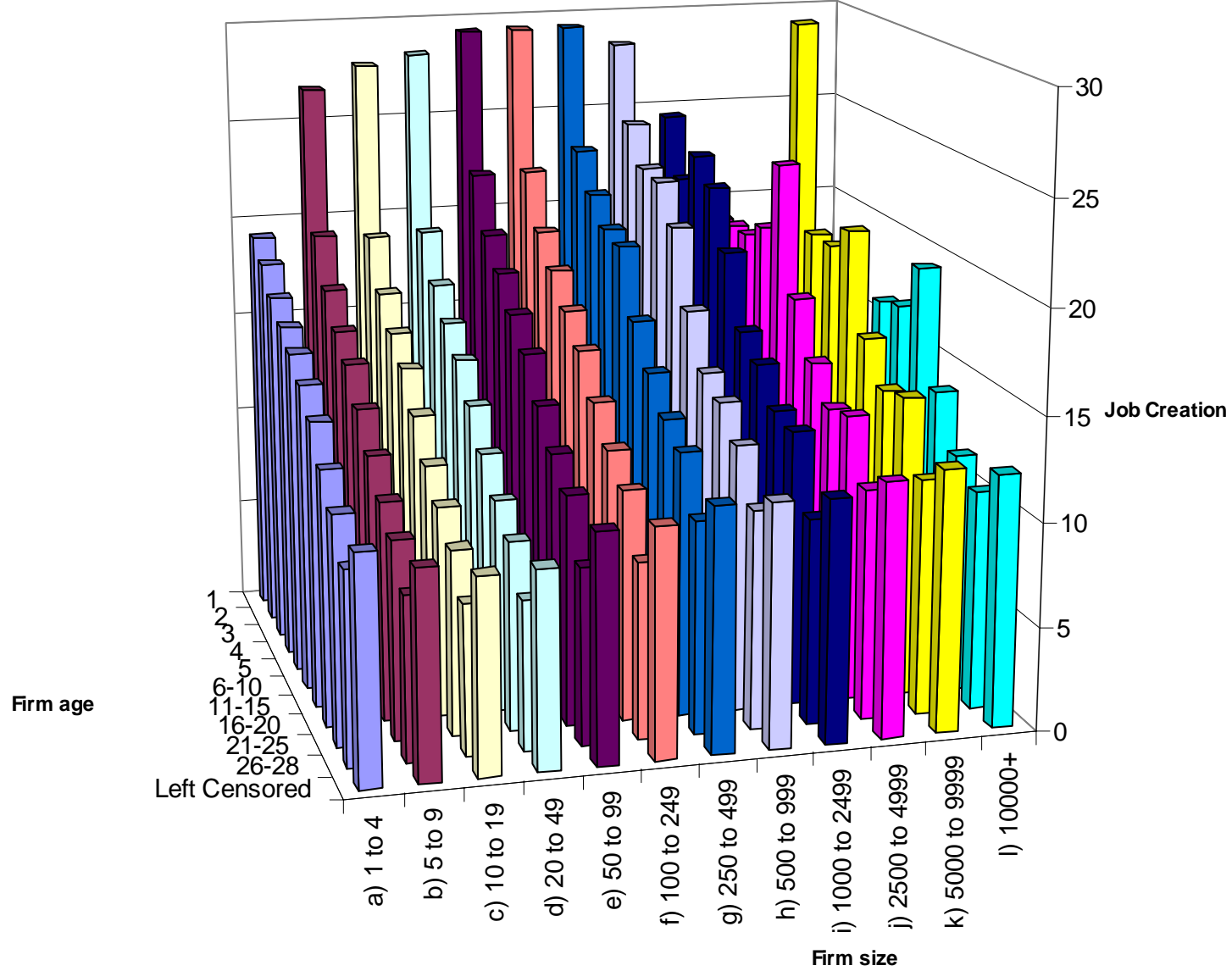
Creation Destruction Net Employment Share

Employment Dynamics by Firm Age, 1987-05

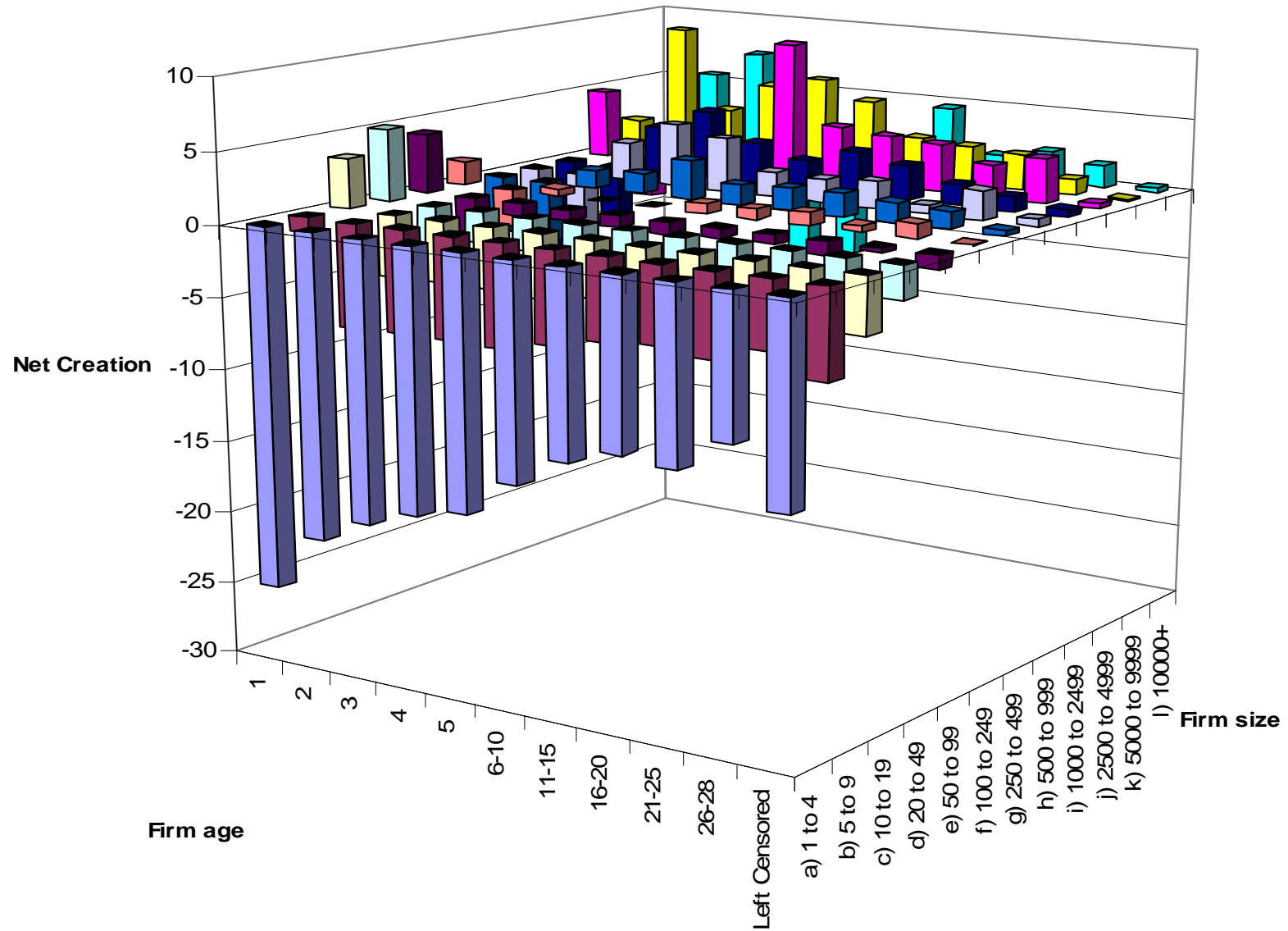


◆ Net(Survivors) ■ Job Destruction from Exit

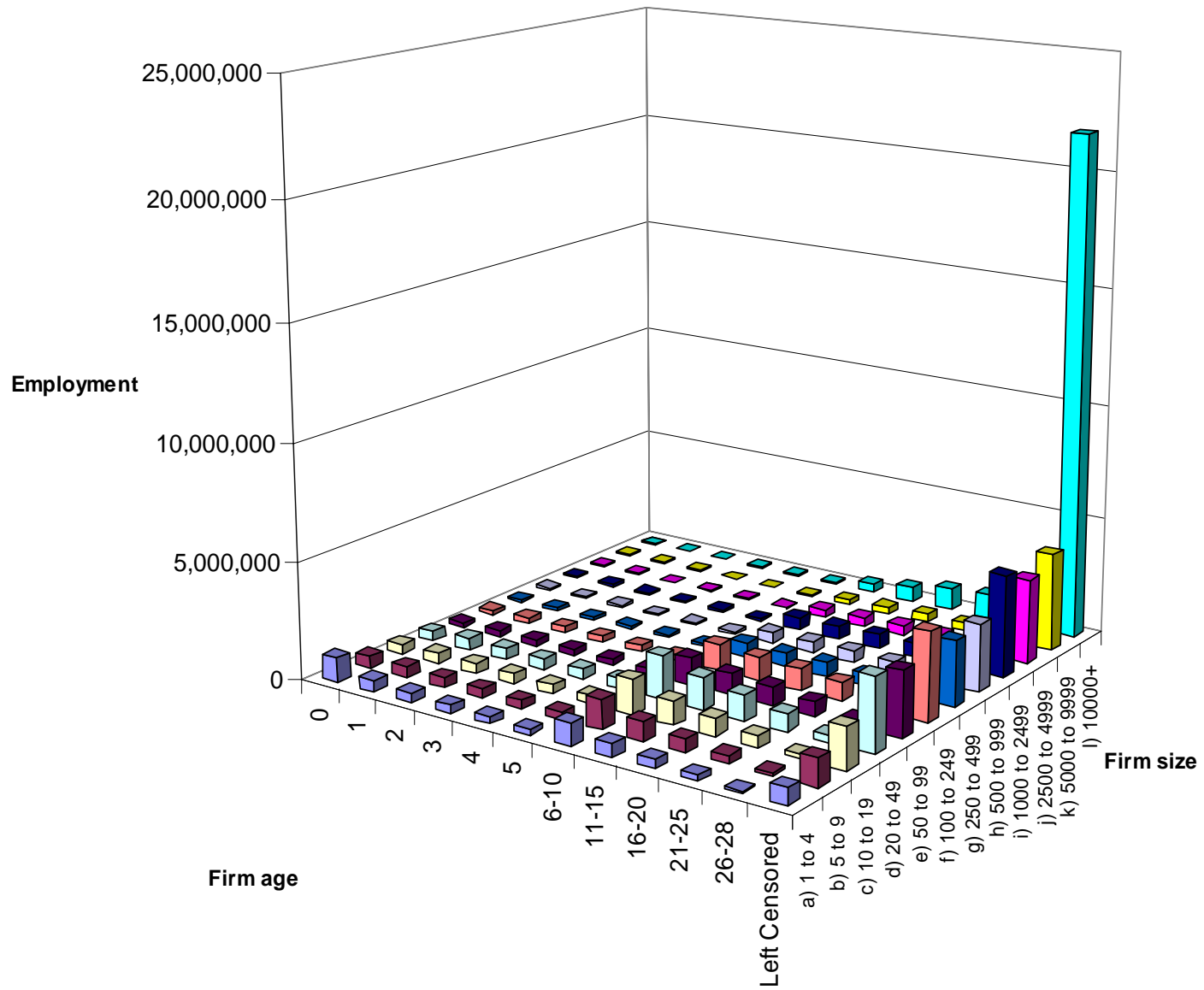
Gross Job creation Rates: By firm age and size, 1987-2005



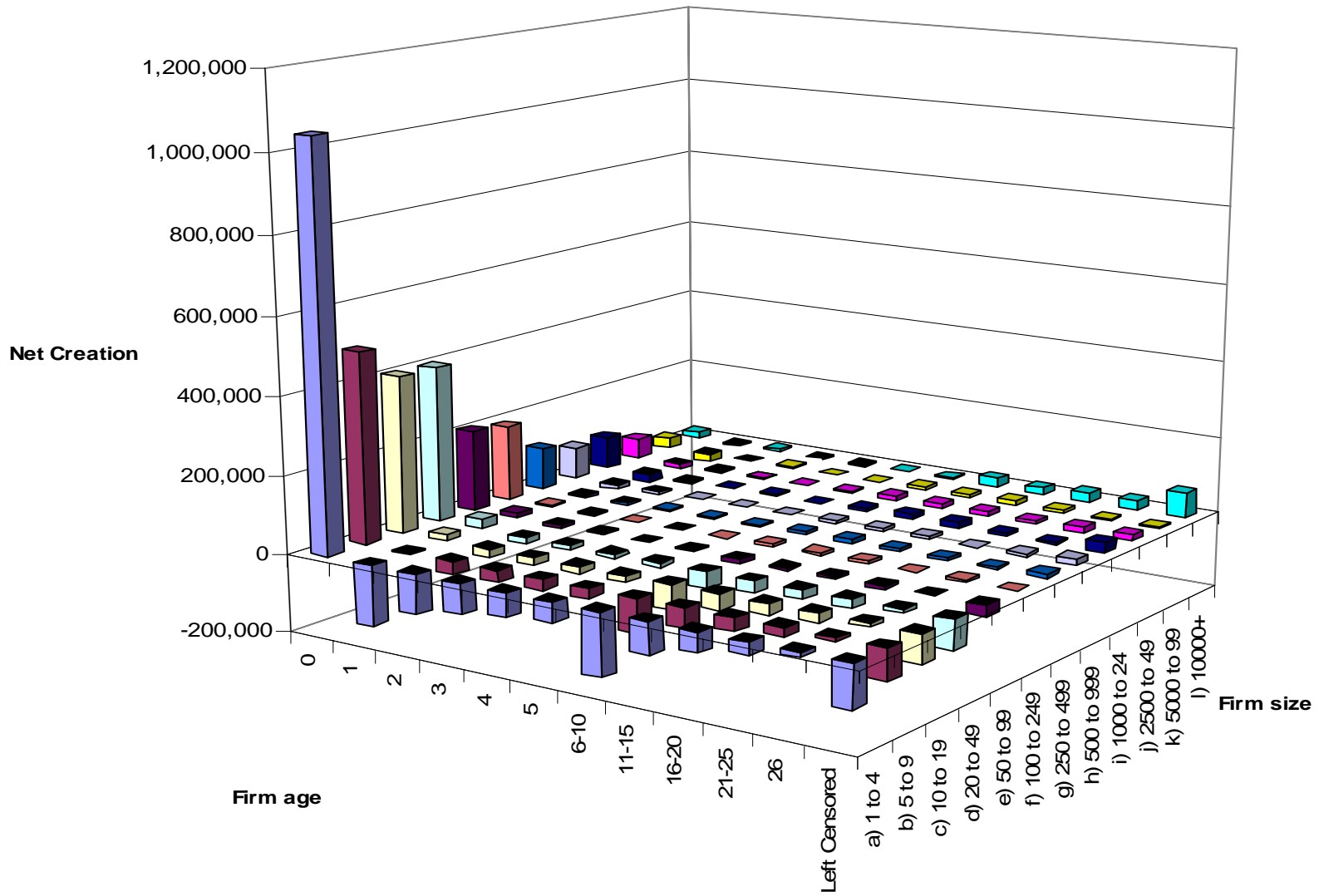
Net Job creation Rates: By firm age and size, 1987-2005



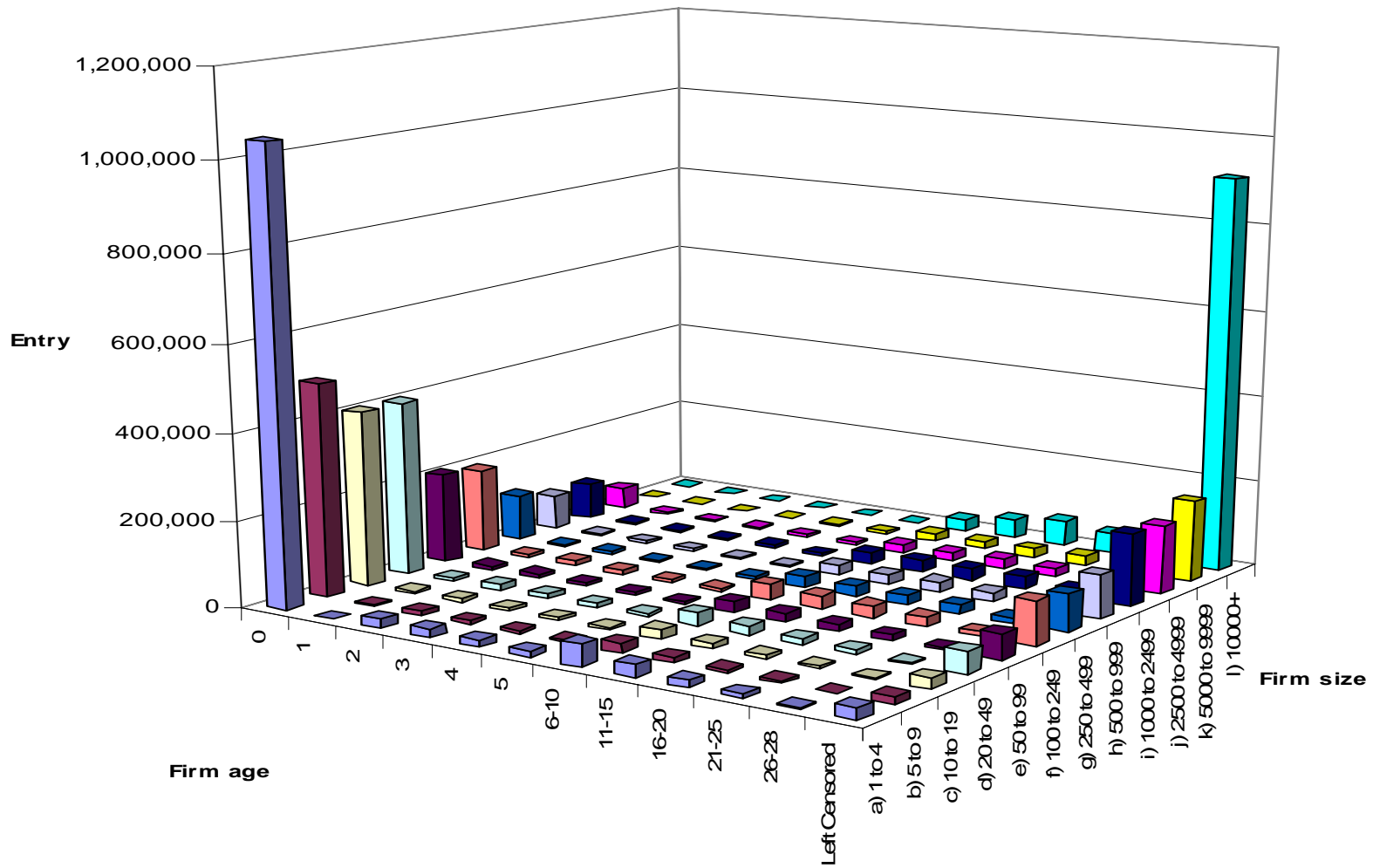
Average Employment by Firm Age and Size, 1987-2005



Net Job Creation (number of jobs), by firm age and size. 1987-2005



Average Job Creation from Establishment Entry (Numbers of Jobs): By firm age and size, 1987-2005



Productivity Dispersion and Frictions

- Large dispersion across producers in productivity within same industry
 - Interquartile range of labor productivity within narrow manufacturing industries is 66 log points
 - For TFP, range is 29 log points
 - Patterns are robust to even narrower segments and distinguishing between revenue productivity (including price dispersion) and physical productivity
 - Interquartile range of labor productivity within narrow retail trade industries is 57 log points
- What accounts for this persistent dispersion?
 - Frictions in adopting new technologies, opening up new facilities, adjusting capital and labor, transporting goods and product differentiation

Frictions and Reallocation

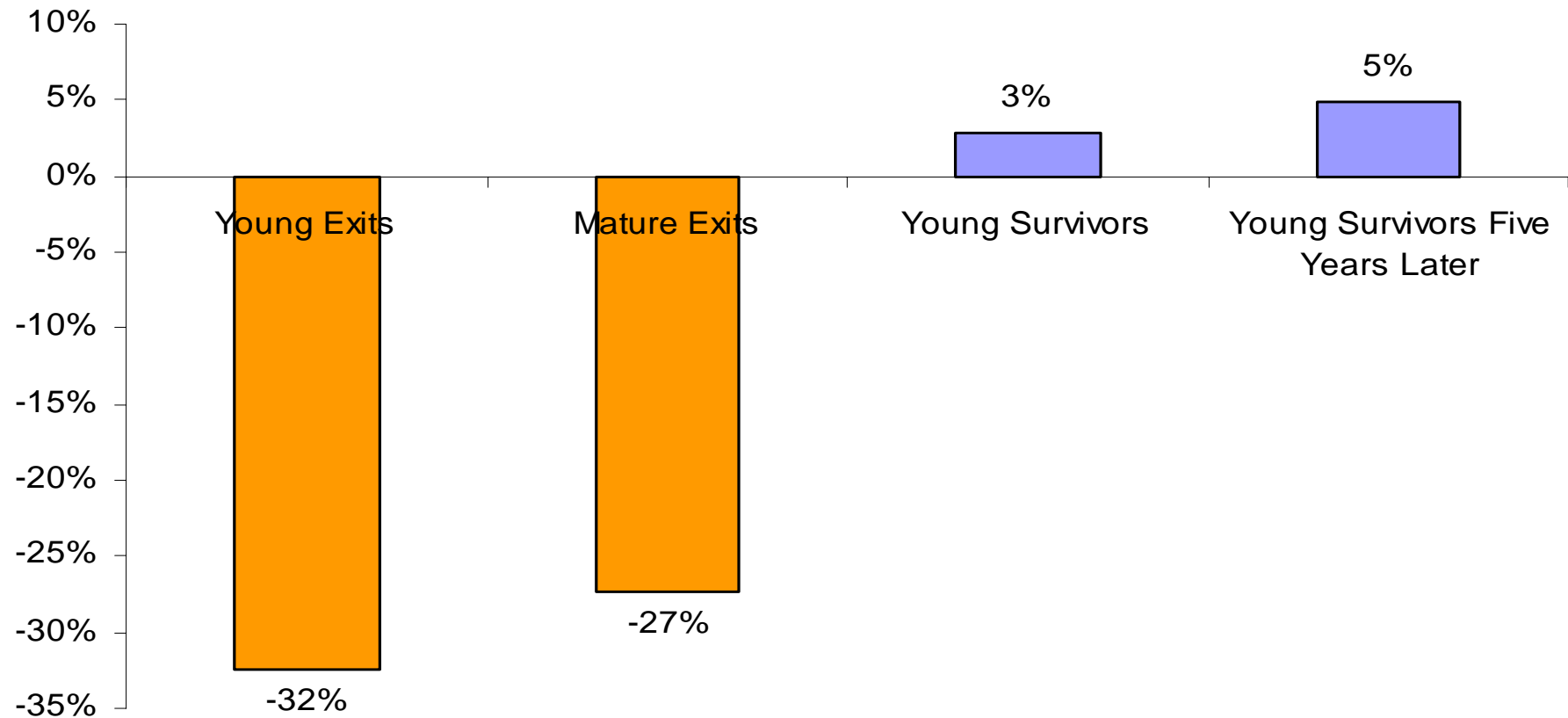
- But market forces act to move resources from less productive to more productive businesses
- The churning of jobs and businesses is a reflect of this ongoing creative destruction that is productivity enhancing
- Young Businesses play a critical role in this churning and the productivity enhancing nature of this churning.

Contribution of Net Entry to Productivity Growth (10-year horizon)

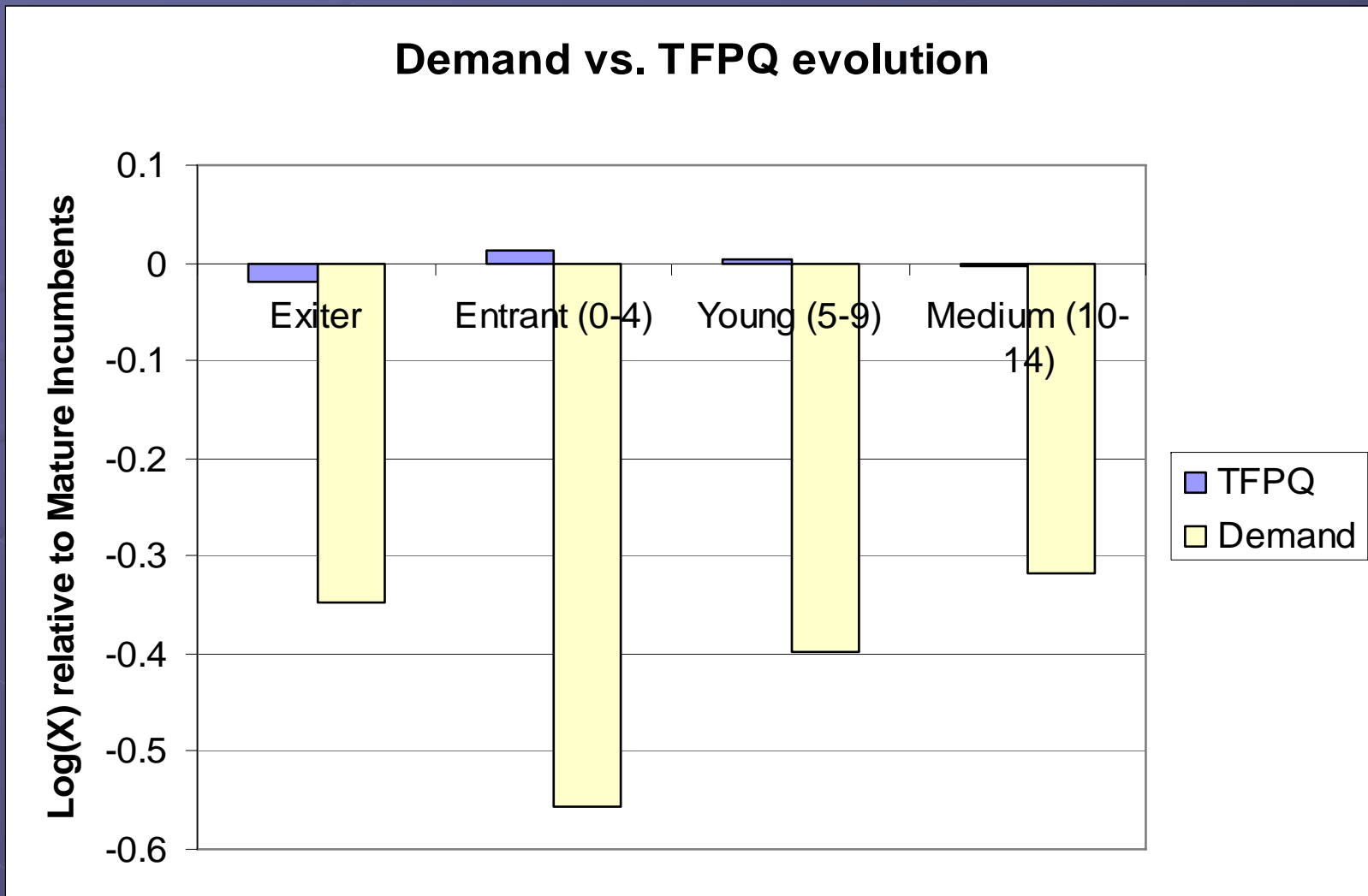


In Retail Trade, selection and learning effects play critical roles....

Productivity Relative to Mature Surviving Incumbents

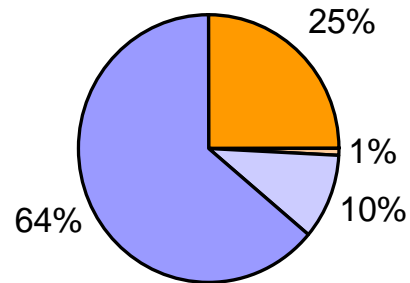


Learning about Demand as well?



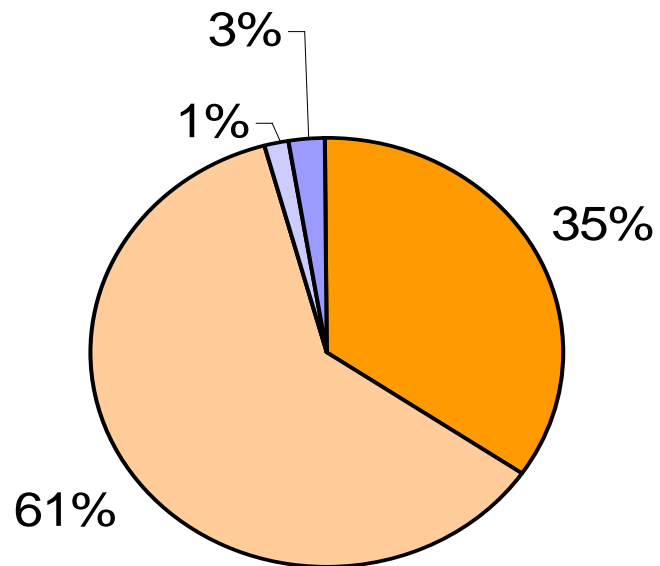
Young Businesses in more detail...

Distribution of Businesses by Business Type, 2000



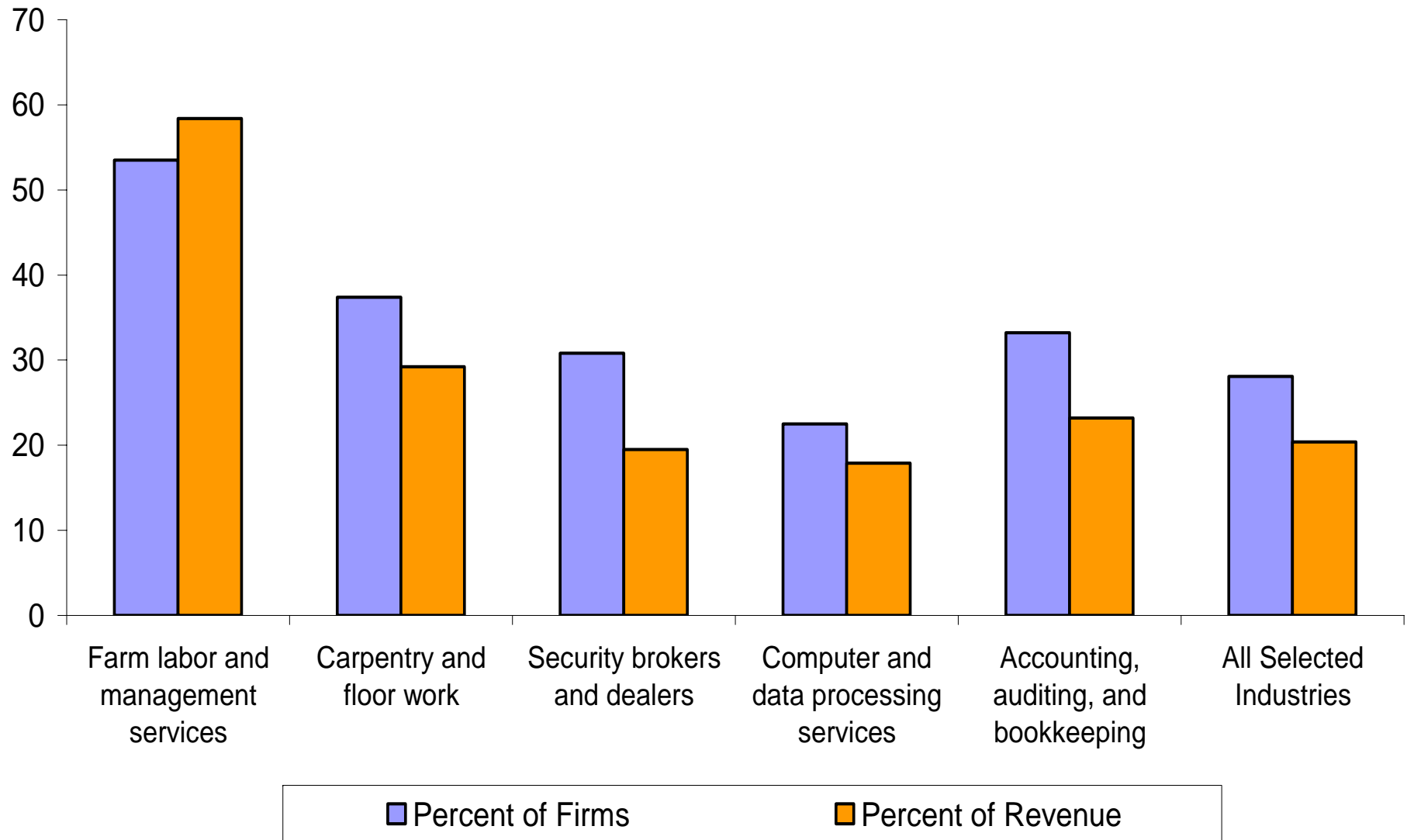
- Employer businesses (single establishment)
- Employer businesses (multiple establishments)
- Nonemployer businesses (partnerships or corporations)
- Nonemployer businesses (sole proprietorships)

Distribution of Revenue By Business Type, 2000

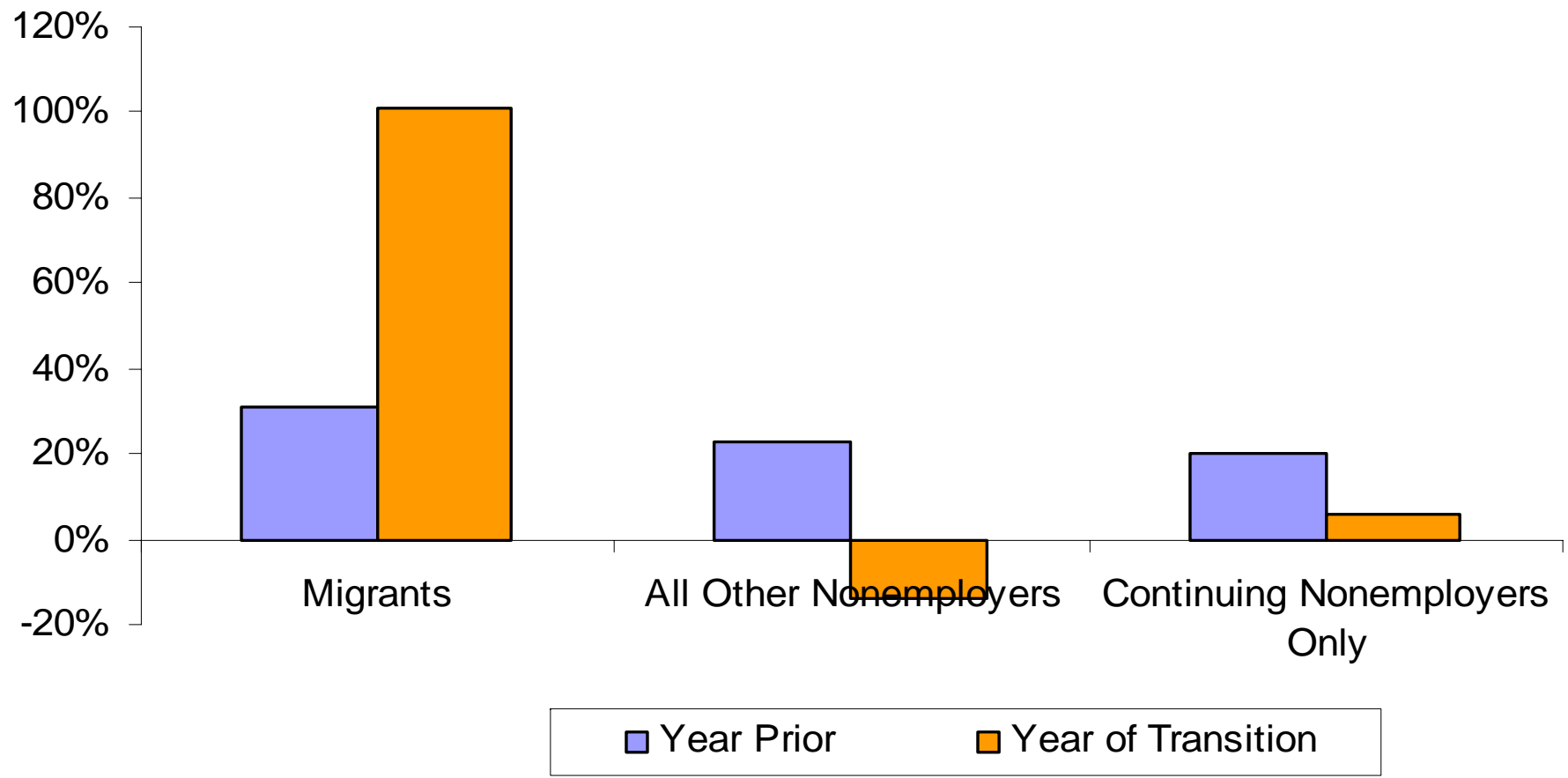


- Employer businesses (single establishment)
- Employer businesses (multiple establishments)
- Nonemployer (partnerships or corporations)
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Young Employers (0-3 years old) with Pre-history as Nonemployers



Output Growth Rates of Firms Migrating from Nonemployers to Employers (compared to control groups)



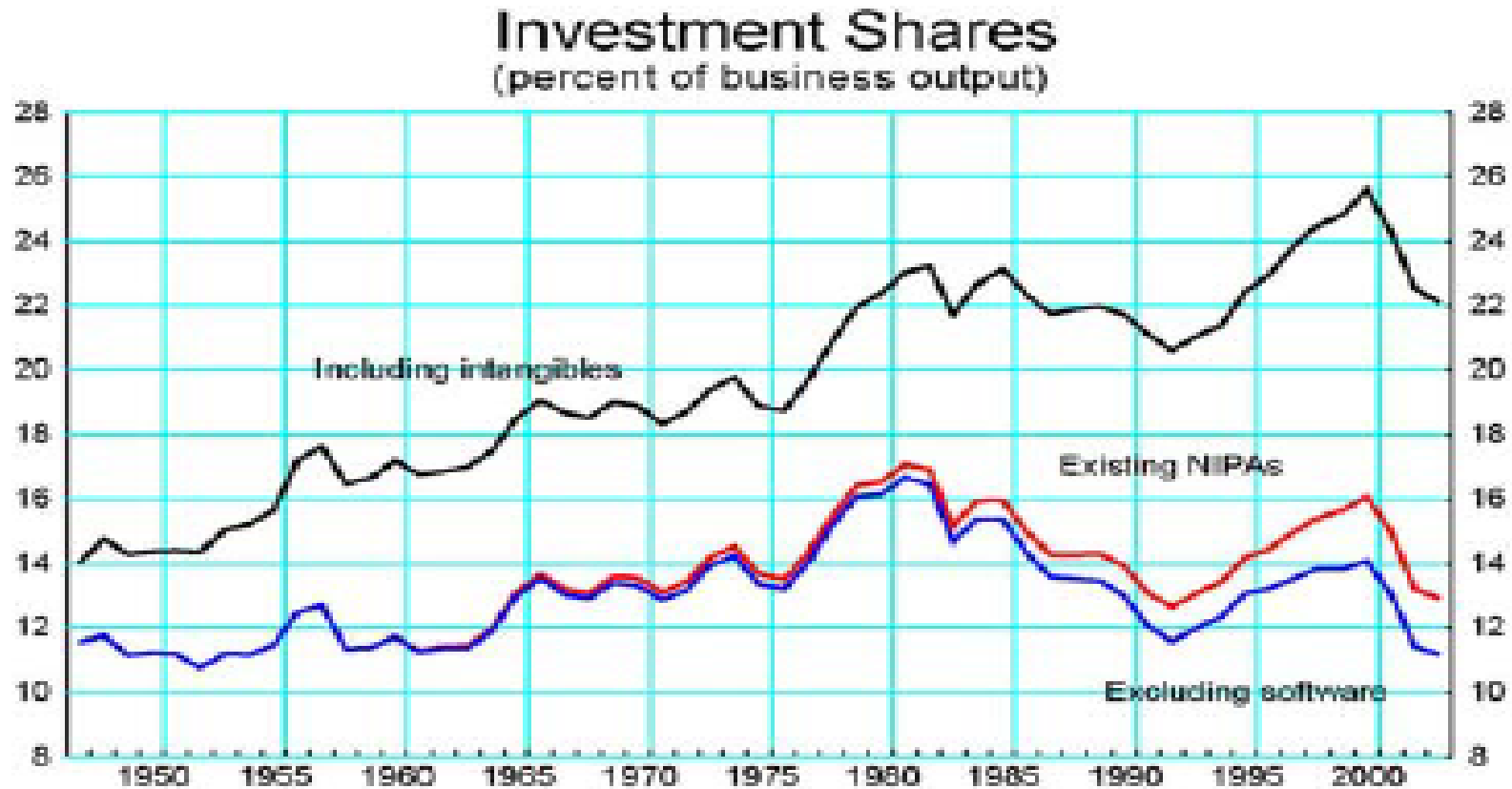
Open Questions?

- Where does life (as a new business) begin?
- What are the critical frictions impinging business formation and the dynamics of young businesses?
 - What is the role of market structure and institutions for the dynamics of young businesses?
 - Product, labor and capital markets?
 - Flexibility?
 - Financing?
 - Emerging economies:
 - Property rights, rule of law, graft and corruption, poorly functioning markets lead to a large, informal economy.

What is the role of firm dynamics for the measurement and understanding of intangible capital?

- Corrado, Hulten and Sichel (2007) take a broad view of intangible capital:
 - Expenditures by firms in current period for enhancing profitability in the future on factors other than tangible capital can be thought of as investment in “intangible capital”.
 - R&D (product and process innovation in the broadest of senses)
 - Advertising and Brand (relationship capital)
 - Human capital
- Much broader than product/process innovation questions on R&D surveys (or at least what is captured on such surveys).
 - How would JORDAN “We love teeth” (or how does JORDAN) respond to standard questions on R&D and innovation surveys?

Intangible investment in U.S.



Source: Corrado, Hulten and Sichel (2006)

Many measurement issues for intangible capital

- Currently taking a perpetual inventory approach
- Need expenditures, deflators and depreciation rates
- For intangible capital, difficult measurement and conceptual issues on all of these and many related to firm dynamics:
 - Aren't all firms and especially young firms devoting most of their resources to intangible capital?
 - Dotcoms in late 1990s infamous for positive expenditures and zero revenue
 - Most of these firms exit – implications for accumulation/depreciation?
 - But careful, is the experimentation process part of the accumulation of intangible capital?
 - Knowledge capital is accumulated/shared across firms
 - Carries over even if businesses fail – embodied in individuals?
 - Relationship capital is probably not
 - Even here – the experience of developing relationship capital for one business that fails is likely carried over to next business that entrepreneurs and employees move to...

What is the role of individual innovators/inventors in firm dynamics?

- Rich databases on innovators and inventors have been developed using patent data, citation data and the like.
- What is the role of these innovators/inventors for firm performance, startups, knowledge diffusion?
- Does the flexibility of the labor market, the churning of young and small businesses contribute to innovation and productivity growth via the mobility of innovators?
- High Priority Objective: Integrate business dynamics data, employer-employee matched data, and innovator databases.

Key Themes

- Growth is a noisy, complex process
 - High pace of churning of businesses and jobs
- Business formation is critical but so is business exit
 - Up or out dynamics of young businesses
- Business churning critical for productivity growth
- Understanding business formation is critical:
 - When does life for a new business begin?
- Investment in intangibles ubiquitous:
 - Arguably critical for observed up or out dynamics
 - What happens to intangibles when businesses exit?
 - What is the role of innovator/inventors in business formation and intangibles?
 - What is the role of individuals in the accumulation of the knowledge capital?