

# Business Employment Dynamics: Birth/Death and Age/Survival

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Note: Any opinions expressed in this presentation are those of the author and do not constitute policy of the Bureau of Labor Statistics

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# What are Business Employment Dynamics (BED)?

- A set of statistics measuring changes in employment at the establishment level on a quarterly basis
  - ▶ Job churn
  - ▶ Creative destruction

# What are the BED?

- Source: BLS Quarterly Census of Employment and Wages (QCEW)
  - ▶ Administrative data from Unemployment Insurance filings (ES-202 Program)
  - ▶ Covers 98% of non-farm payrolls
    - 9.1 million establishments
    - 130 million employment

# What are the BED?

## ■ BED Scope

- ▶ Private sector, excludes private households
  - 6.8 million establishments
  - 107 million employment
- ▶ QCEW microdata is longitudinally linked to create a time series

# What are the BED?

- BED statistics break down the underlying dynamics of net employment change into the numbers and rates of gross jobs gained and gross jobs lost
  - ▶ Gross job gains
    - Expansions
    - Openings
      - **Births**
  - ▶ Gross job losses
    - Contractions
    - Closings
      - **Deaths**

# BED Data Series Available

- National Total Private
- National NAICS Sector
- National Firm Size
- State Total Private
- Size of Employment Change (National)
- Annual (National/State)
- **Birth Death (National/State)**
- September 2003
- May 2004
- December 2005
- August 2007
- September 2008
- May 19, 2009
- **May 19, 2009**

# Available Birth/Death Data

- Birth data are available for the most recent quarter
  - ▶ 3rd Quarter of 2009
- Death data are available with a three quarter lag
  - ▶ 4th Quarter of 2008
- National and State series
  - ▶ Number of Establishments
  - ▶ Employment
  - ▶ Levels
  - ▶ Rates
  - ▶ Seasonally Adjusted
  - ▶ Unadjusted

# BED Birth Definition

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- Establishments that appear for the first time on the longitudinal database with positive employment in the third month, or
- Establishments with positive third month employment in the current quarter and zero employment in the third month of the previous four quarters



# BED Death Definition

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- Establishments that disappear from the longitudinal database, or
- Establishments with zero employment in the third month of four consecutive quarters following the last quarter with positive employment
- *There is always a lag of three quarters for the publication of these data as we must wait to determine whether the establishment is a death*

# Birth/Death Analysis

- What are the national and regional trends?
- What trends are births and deaths exhibiting during the current recession?
- What do birth and death rates tell us about entrepreneurial activity?

# Birth Trends

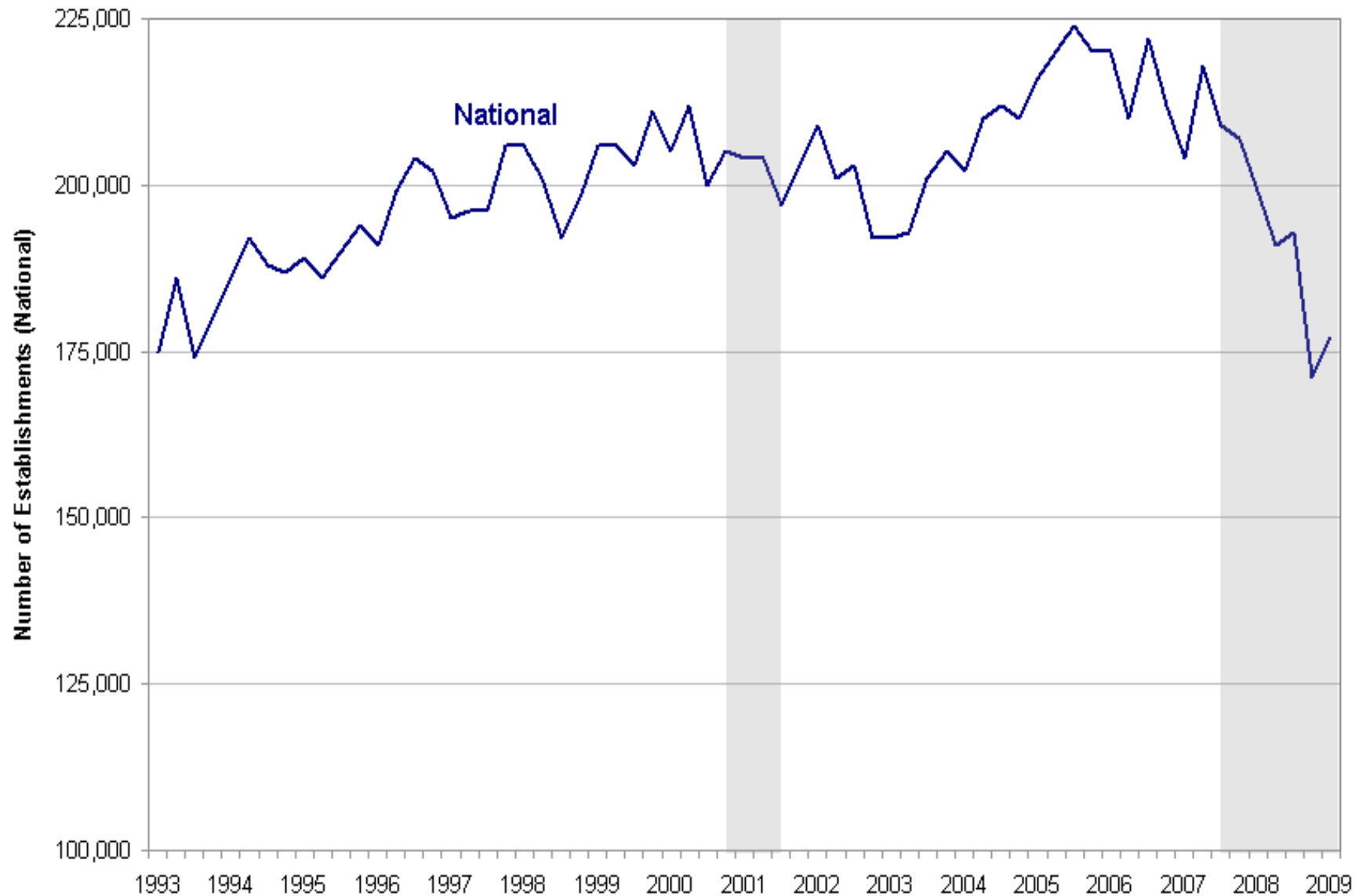
- **National and Regional trends**
  - ▶ Number of births has risen over time
  - ▶ Number of jobs created by births is falling
  - ▶ Indicates that births today are smaller on average

# Birth Trends

- National and Regional trends
  - ▶ **Number of births has risen over time**
    - Driven by the Southern and Western regions

# Private Sector Establishment Births

## Seasonally Adjusted, United States 1993Q2-2009Q2

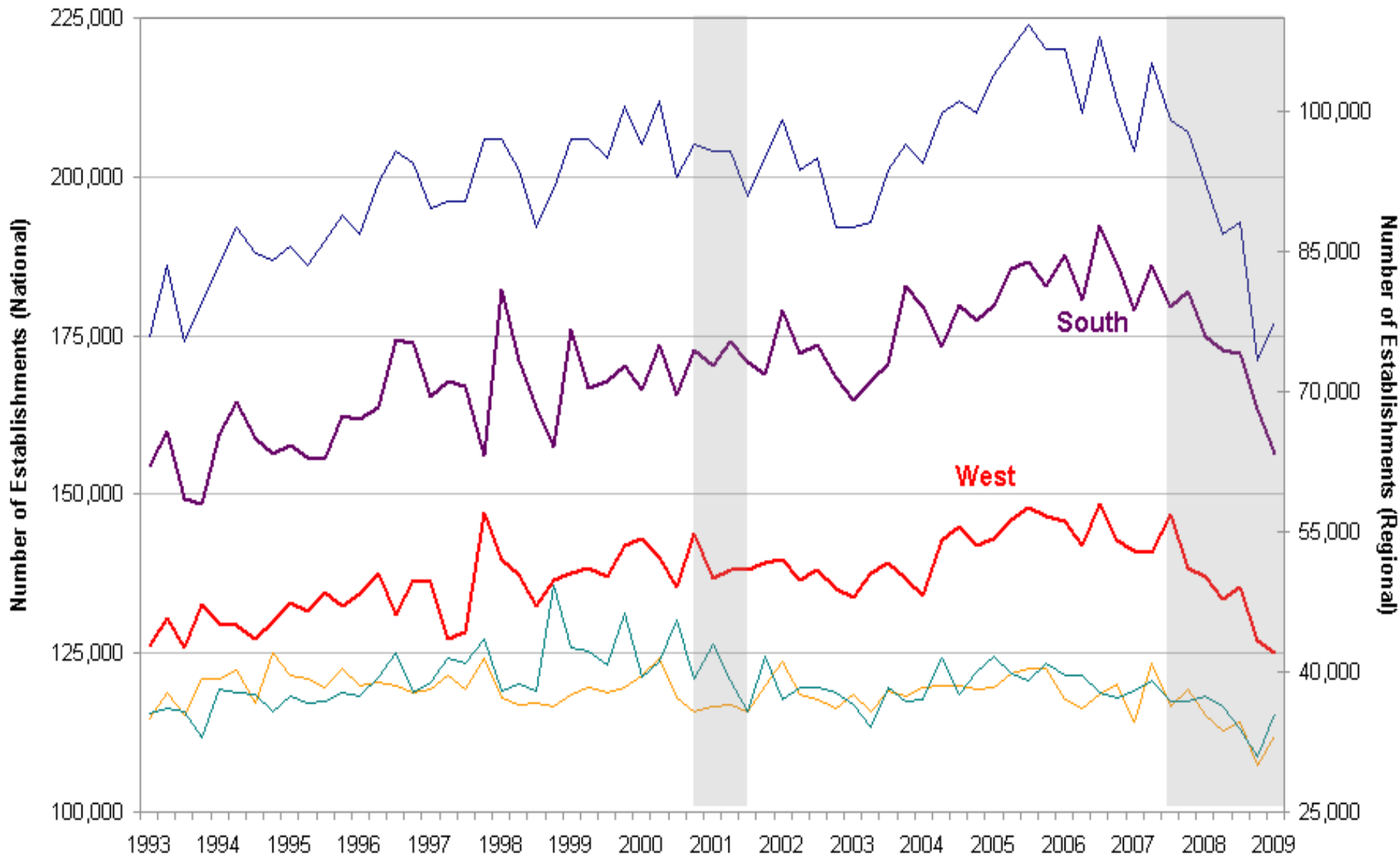


Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

# Private Sector Establishment Births

## Seasonally Adjusted by U.S. Region, 1993Q2-2009Q2

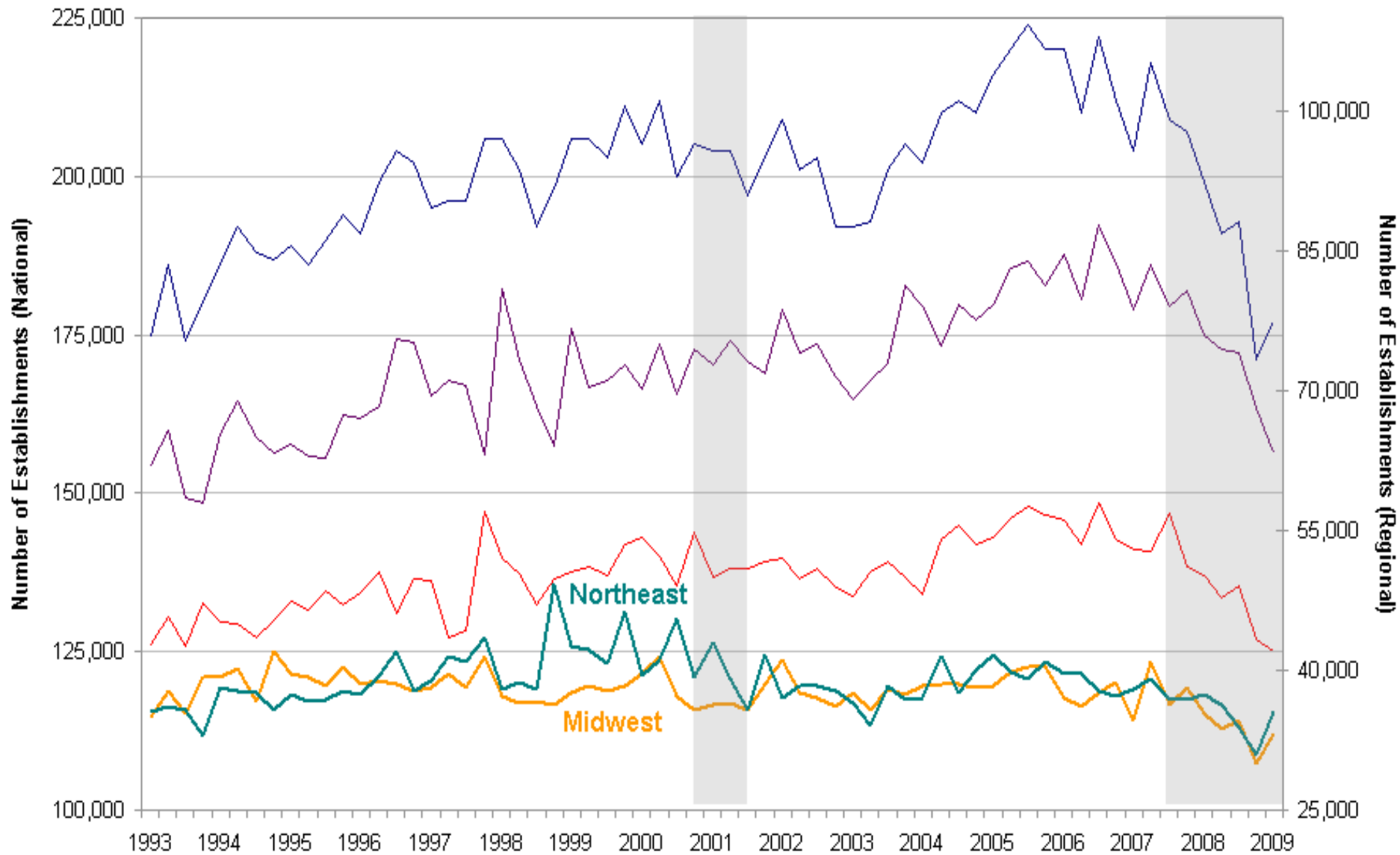


Source: U.S. Bureau of Labor Statistics

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# Private Sector Establishment Births

## Seasonally Adjusted by U.S. Region, 1993Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

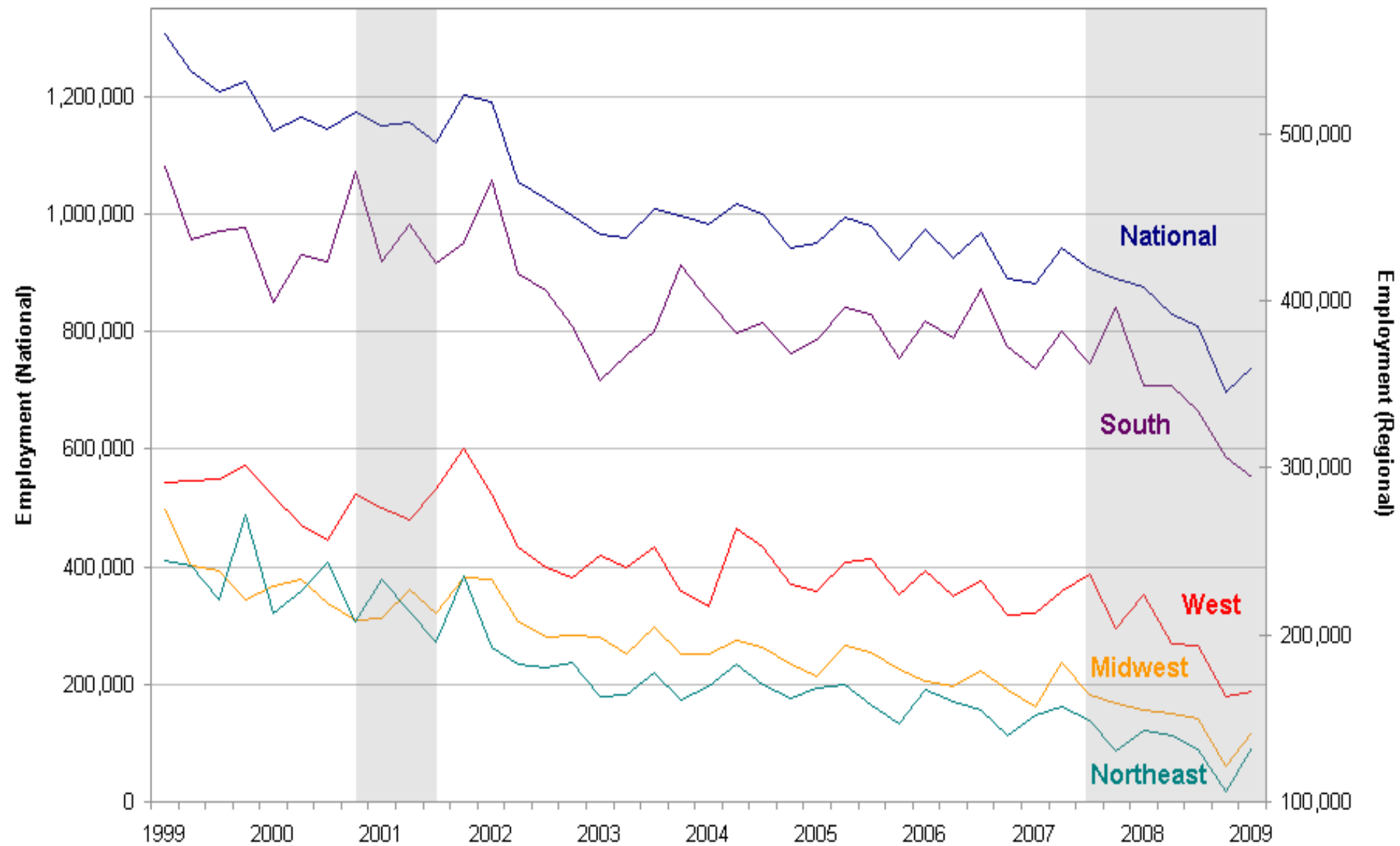
Note: Shaded area represents NBER defined recession period

# Birth Trends

- National and Regional trends
  - ▶ **Number of jobs created by births is falling**
    - Since the late 1990's
    - Consistent across all regions



# Employment from Private Sector Establishment Births Seasonally Adjusted by U.S. Region, 1999Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

# Birth Trends

- National and Regional trends
  - ▶ **Indicates that births today are smaller on average**

# Birth Trends

## ■ Current recession

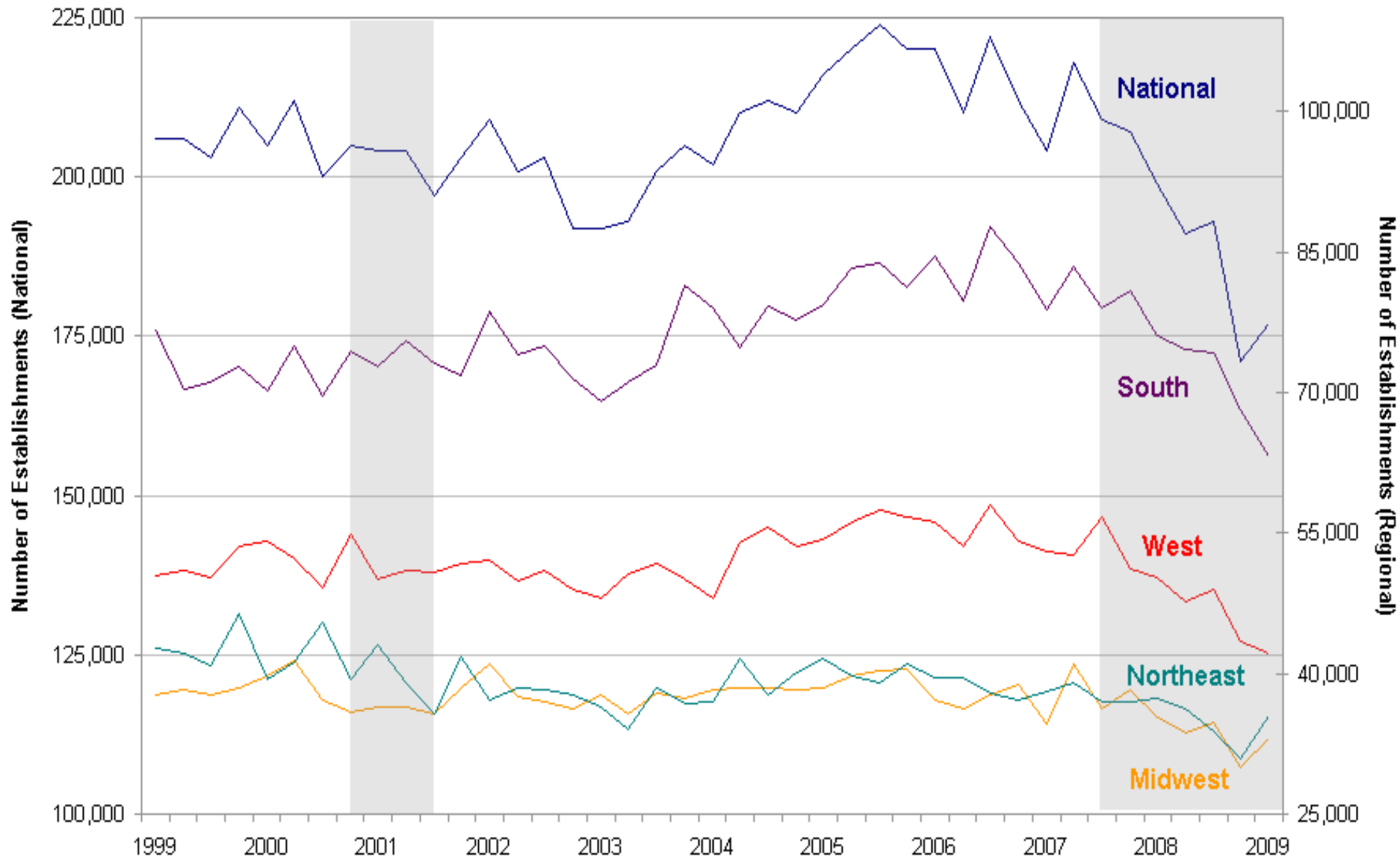
- ▶ Births and jobs created by births have dropped significantly
  - Levels are lower than the 2001 recession
- ▶ In 2009Q2 the number of births rises slightly
  - Driven by Northeast and Midwest regions
  - Births still below pre-recession levels

# Birth Trends

- Current recession
  - ▶ **Births and jobs created by births have dropped significantly**
    - Levels are lower than the 2001 recession

# Private Sector Establishment Births

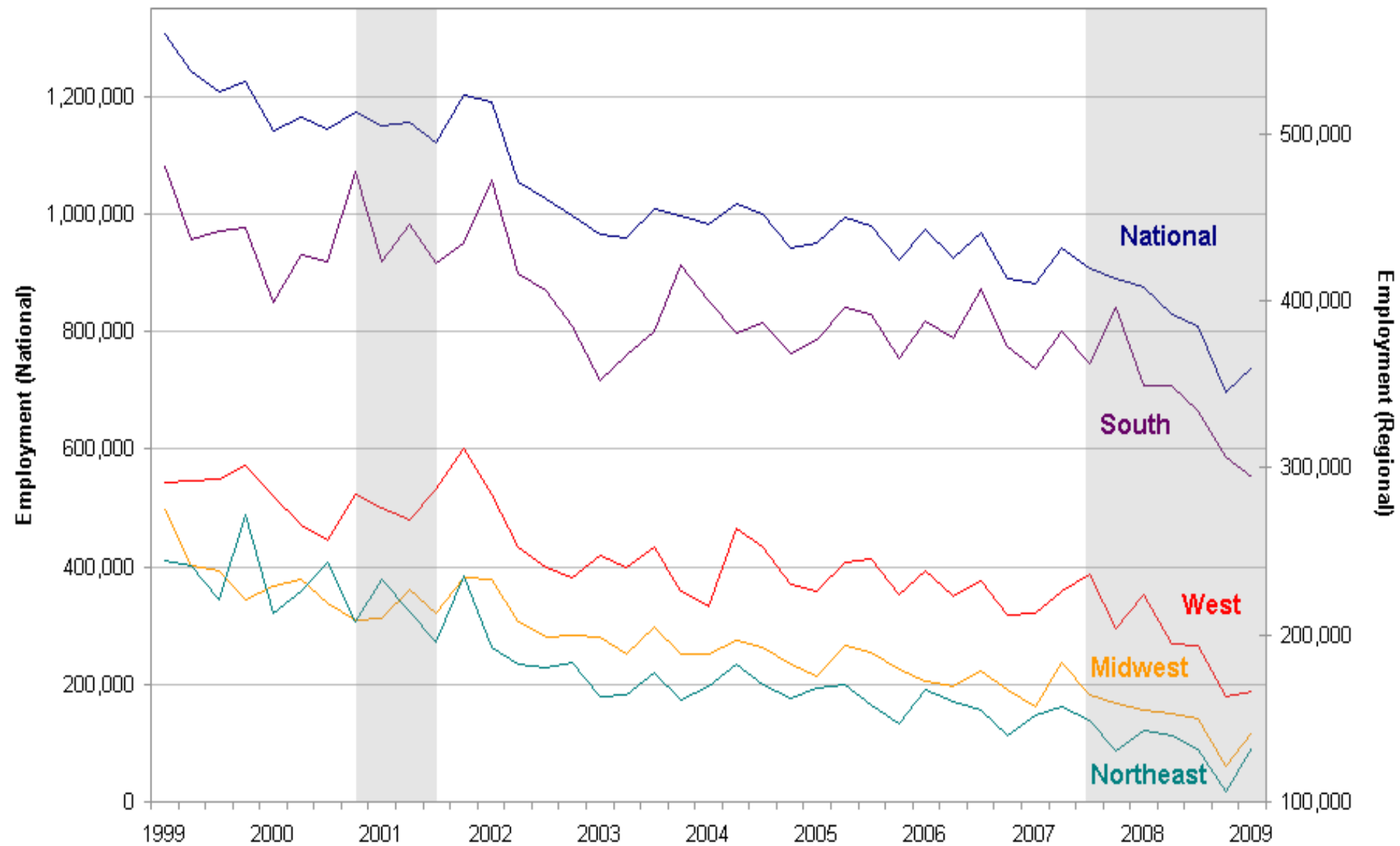
## Seasonally Adjusted by U.S. Region, 1999Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

# Employment from Private Sector Establishment Births Seasonally Adjusted by U.S. Region, 1999Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

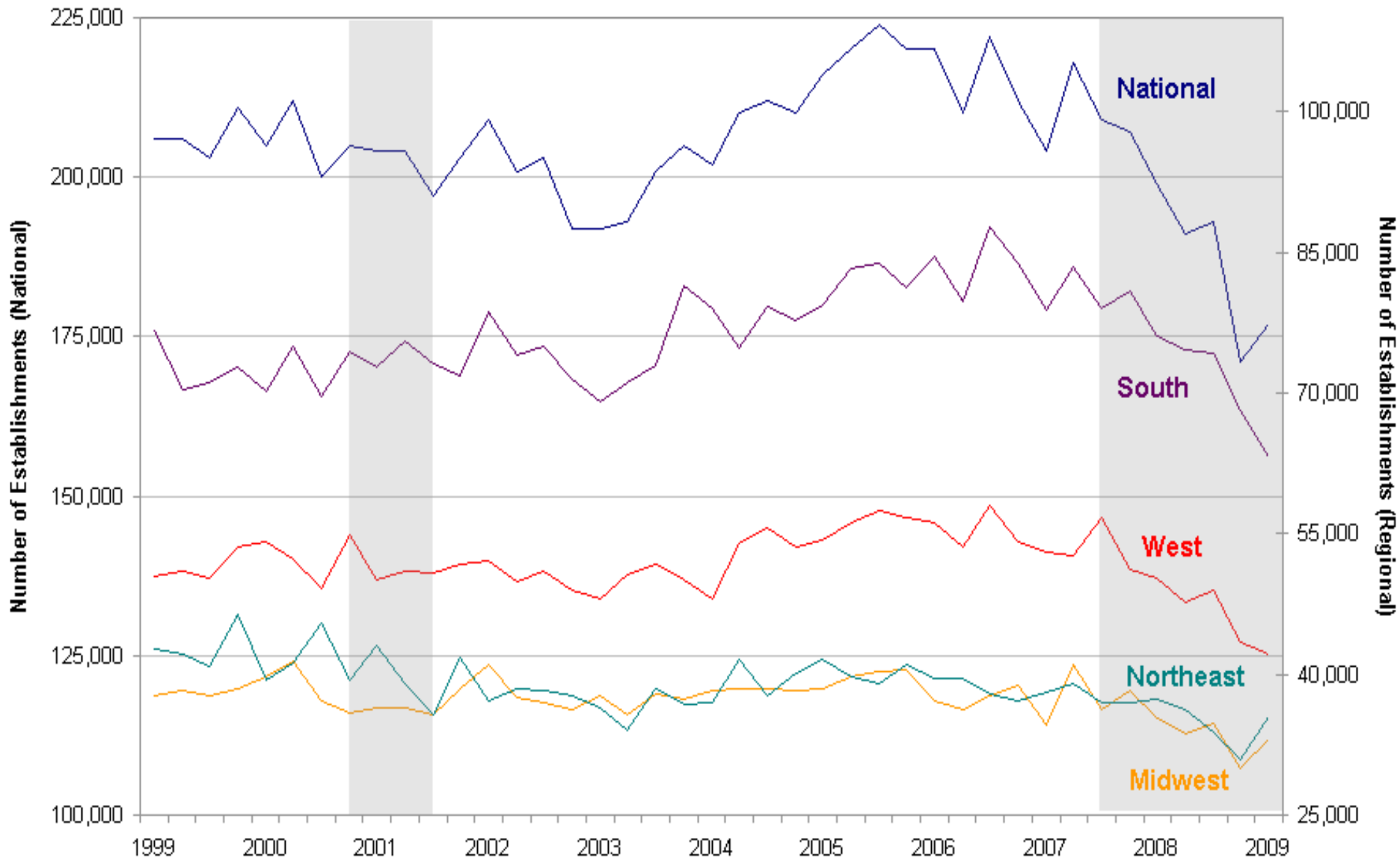
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# Birth Trends

- Current recession
  - ▶ **In 2009Q2 the number of births rises slightly**
    - Driven by Northeast and Midwest regions
    - Births still below pre-recession levels

# Private Sector Establishment Births

## Seasonally Adjusted by U.S. Region, 1999Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period



# Death Trends

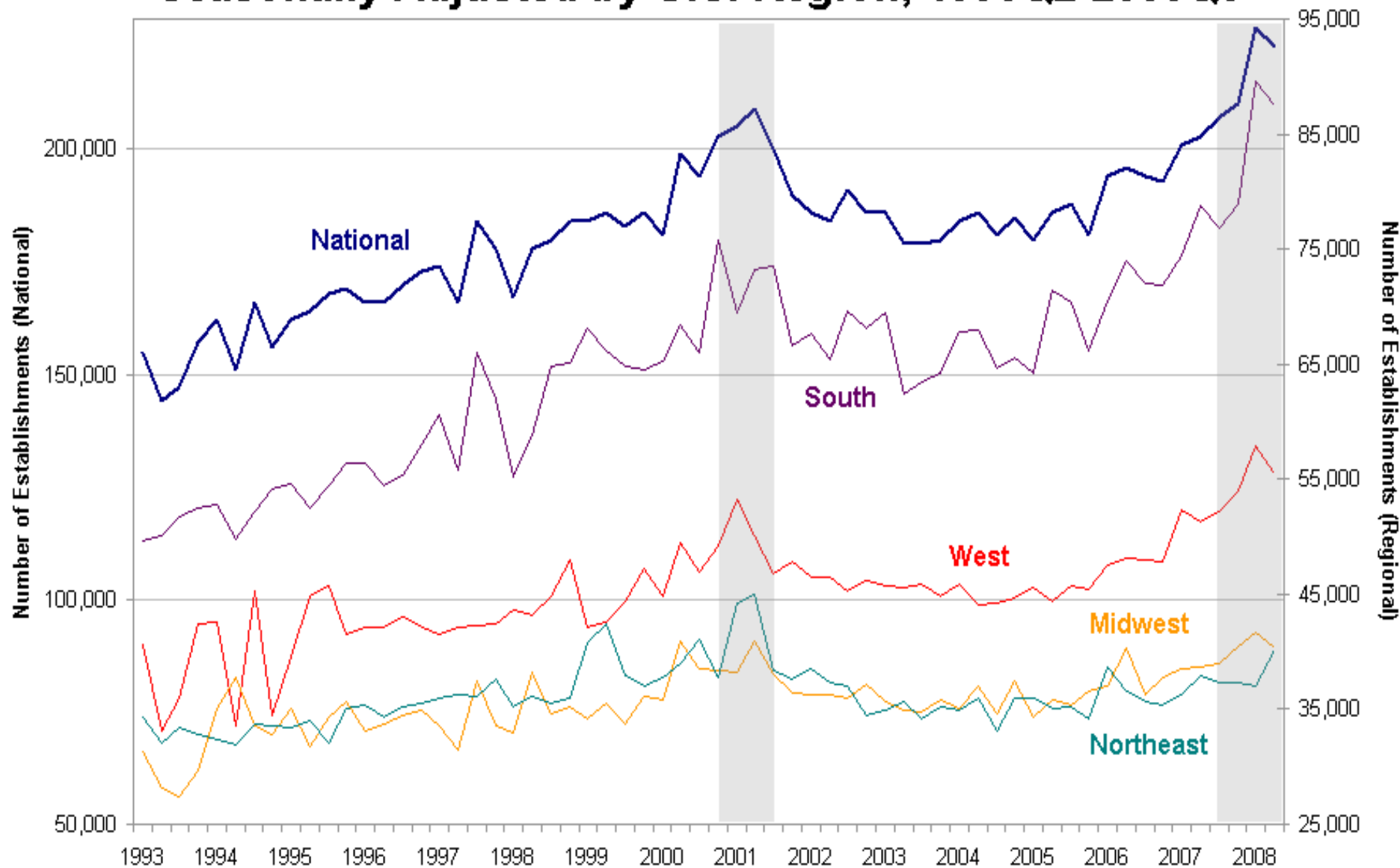
- **National and Regional trends**
  - ▶ Deaths have risen over time
  - ▶ The number of jobs lost to deaths has been falling since the last recession
  - ▶ Deaths peak during recession periods

# Death Trends

- National and Regional trends
  - ▶ **Deaths have risen over time**
    - Consistent across all regions

# Private Sector Establishment Deaths

## Seasonally Adjusted by U.S. Region, 1993Q2-2008Q3



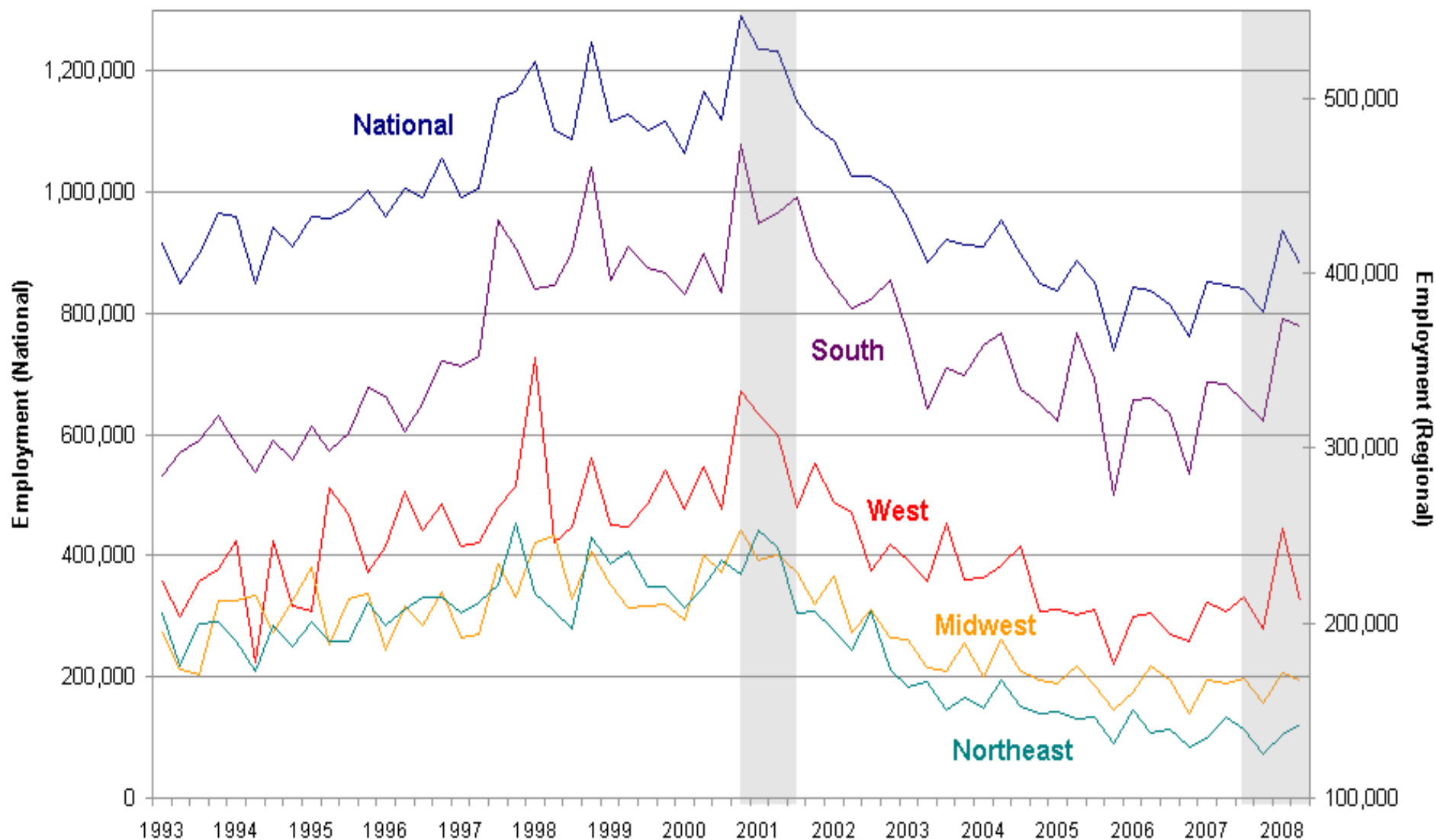
Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

# Death Trends

- National and Regional trends
  - ▶ **The number of jobs lost to deaths has been falling since the last recession**
    - Indicates that the size of establishments going out of business is smaller

# Employment from Private Sector Establishment Deaths Seasonally Adjusted by U.S. Region, 1993Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

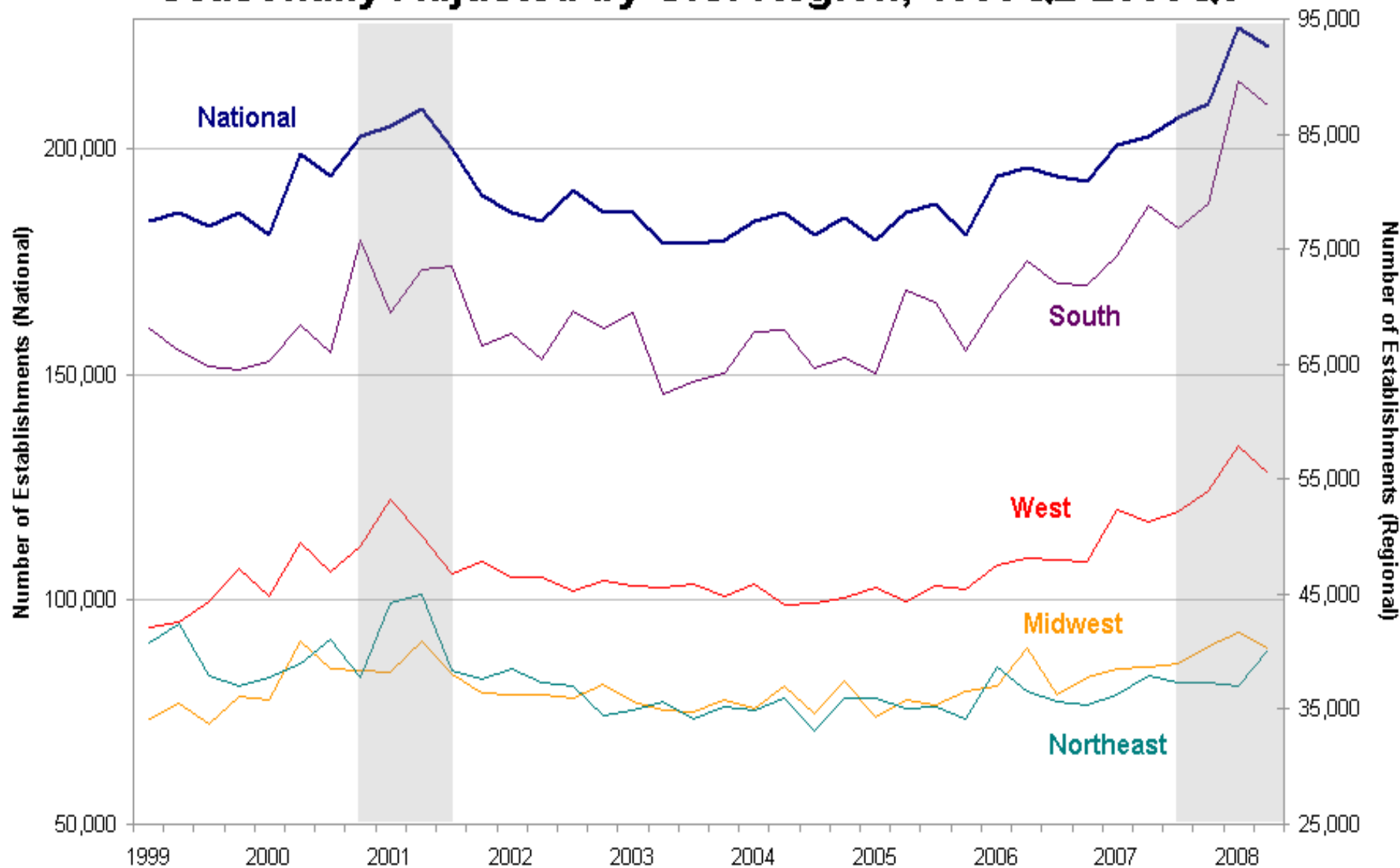
Note: Shaded area represents NBER defined recession period

# Death Trends

- National and Regional trends
  - ▶ **Deaths peak during recession periods**

# Private Sector Establishment Deaths

## Seasonally Adjusted by U.S. Region, 1999Q2-2008Q3



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

# Death Trends

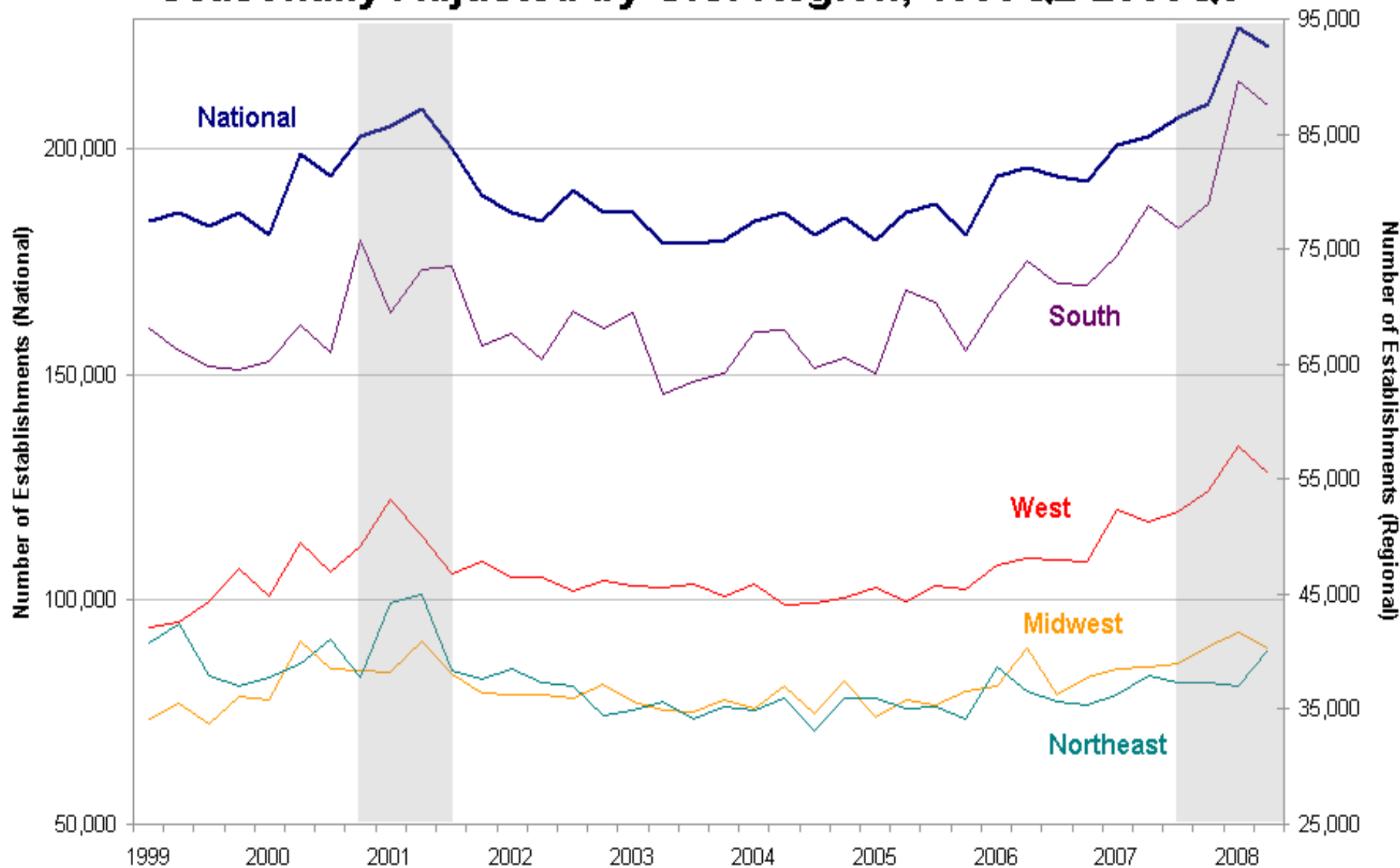
## ■ Current recession

- ▶ In 2008Q2 deaths reached their highest levels for the nation and the South, West, and Midwest regions
- ▶ In 2008Q3 deaths decrease for all regions and the nation except for the Northeast
- ▶ More data is needed to officially determine when deaths reach their highest peak during the current recession



# Private Sector Establishment Deaths

## Seasonally Adjusted by U.S. Region, 1999Q2-2008Q3



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

# Birth Rates

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- The rate at which entrepreneurs create new businesses and jobs
- $\text{Number of Births} / \text{Total Number of Establishments}$
- $\text{Employment from Births} / \text{Total Employment}$
- Preliminary research data only – not a published data series

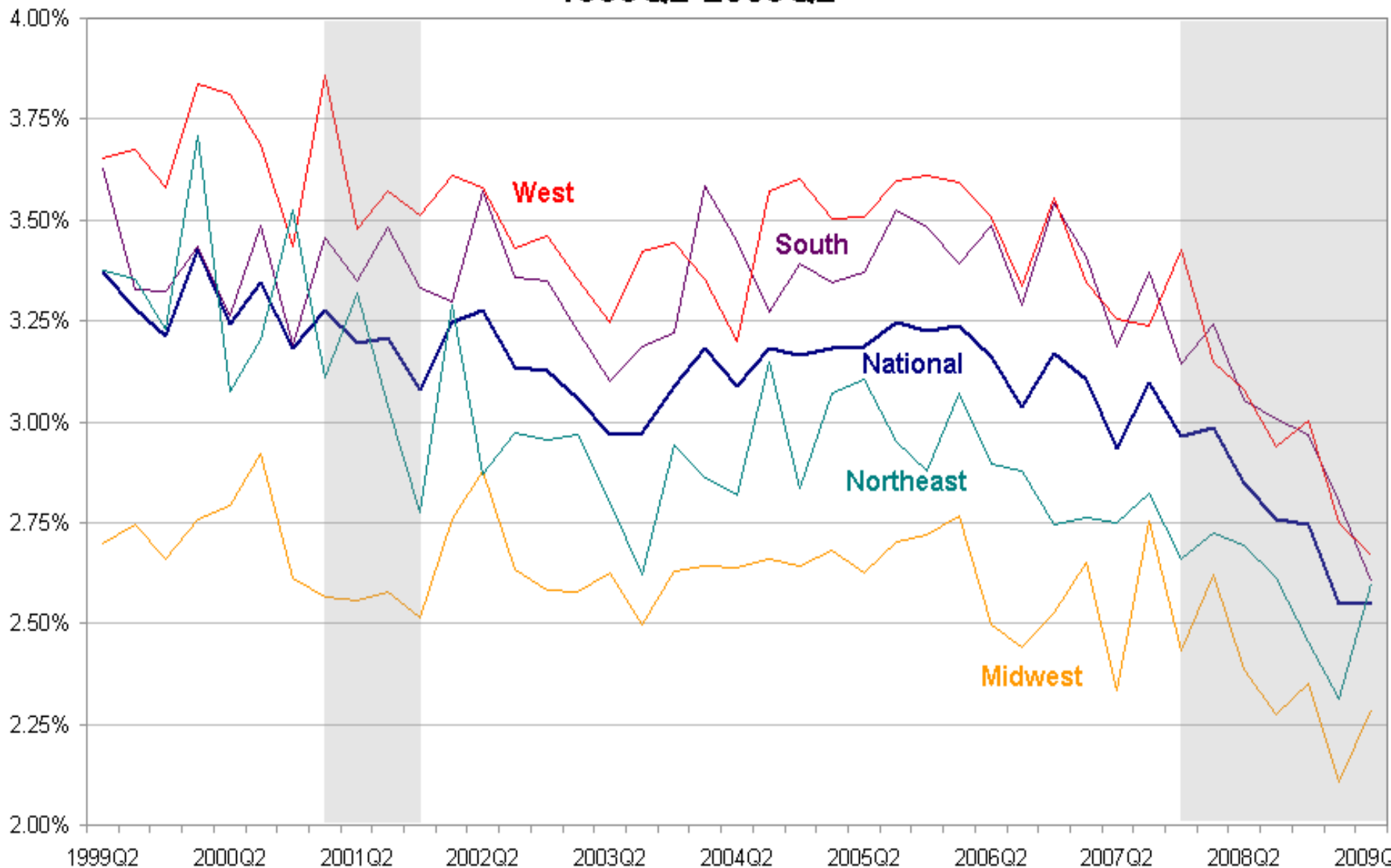
# Birth Rates

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## ■ National and Regional Trends

- ▶ In 2009Q2 the national birth rate was 2.6 percent and births accounted for .7 percent of total employment
- ▶ West and South consistently above the national birth rate
- ▶ Between 2007Q3 and 2009Q2, the national birth rate dropped .5 percent and the South had largest drop of any region at .8 percent

# Birth Rate of Establishments by U.S. Region 1999Q2-2009Q2



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

Preliminary research based on author's calculations

# Death Rates

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- The rate at which businesses fail
- $\text{Number of Deaths} / \text{Total Number of Establishments}$
- $\text{Employment from Deaths} / \text{Total Employment}$

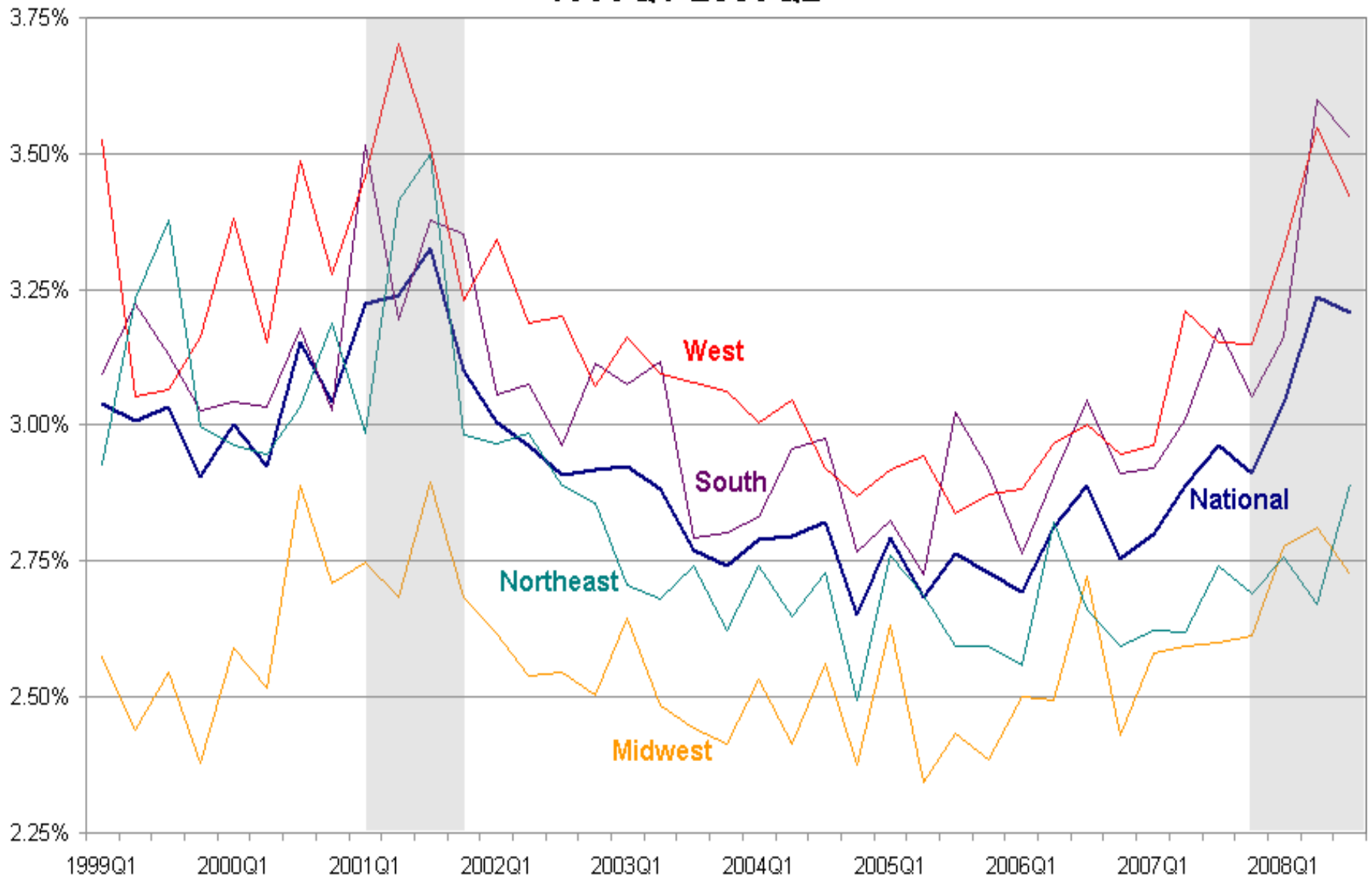
# Death Rates

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## ■ National and Regional Trends

- ▶ In 2008Q3 the national death rate was 3.2 percent, and accounted for .8 percent of total employment
- ▶ West and South consistently above the national death rate
- ▶ Between 2007Q3 and 2008Q3, the national death rate increased by .24 percent and the South had the largest increase of any region, .35 percent

# Death Rate of Establishments by U.S. Region 1999Q1-2009Q2



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

Preliminary research based on author's calculations

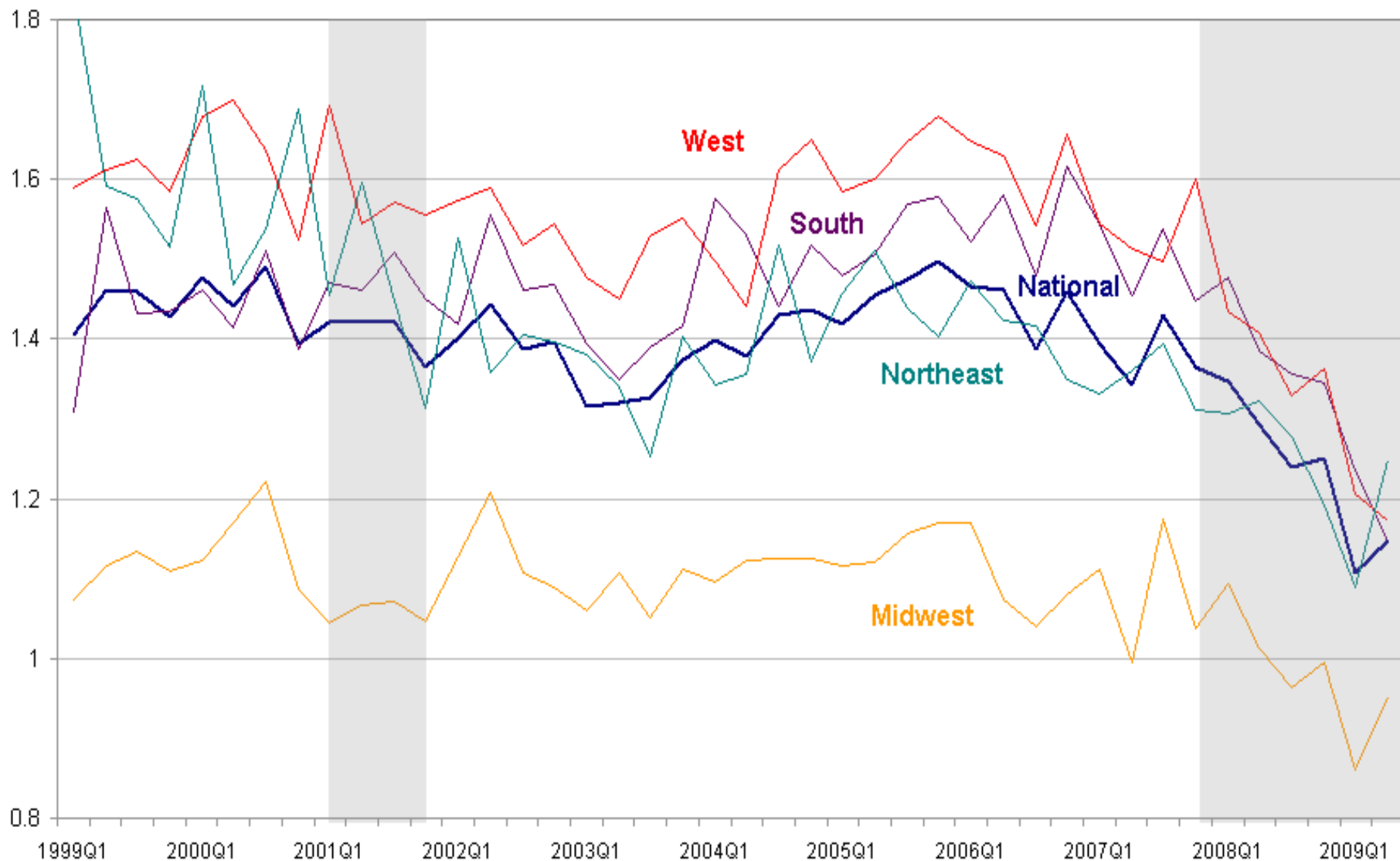
# Births Per 1,000 in the Labor Force

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- Measure of the workforce engaged in entrepreneurial activity
- Births per 1,000 workers in the labor force
- South and West are above the national levels, but continue to decline in 2009Q2
- Midwest is consistently below the national level



# Establishment births per 1,000 people in the labor force by U.S. region, 1999Q1-2009Q2



Source: U.S. Bureau of Labor Statistics

Note: Shaded area represents NBER defined recession period

Preliminary research based on author's calculations

# Conclusion

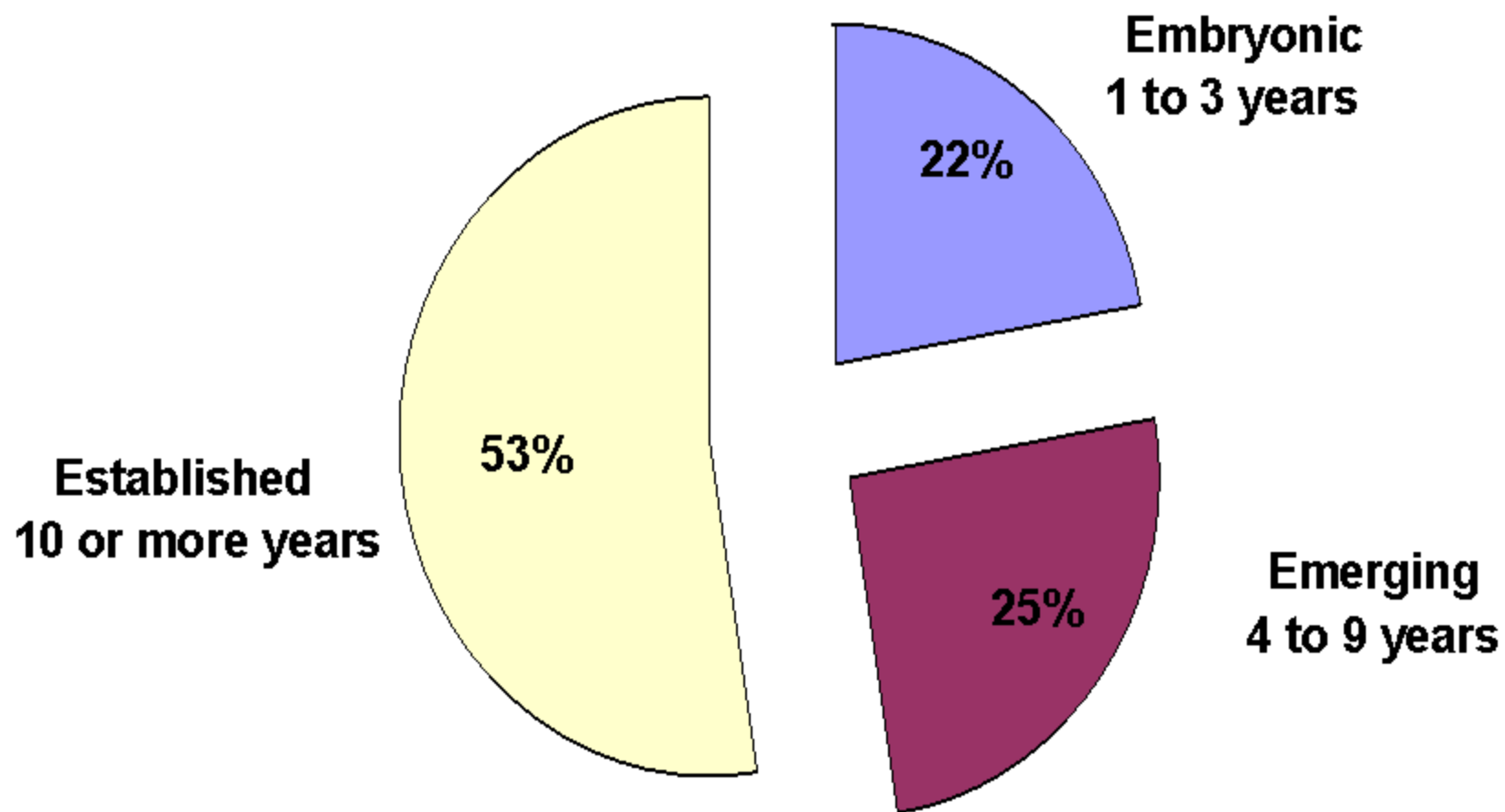
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- BED data on births and deaths are a useful tool in analyzing the U.S. labor market
- National and regional data on births and deaths indicate changes in trends over time as well as in the size of births and deaths
- Birth rates can be used to compare rates of entrepreneurial activity across regions
- Future quarters of data are needed to analyze how states and regions have fared during the current recession

# BED Future Developments

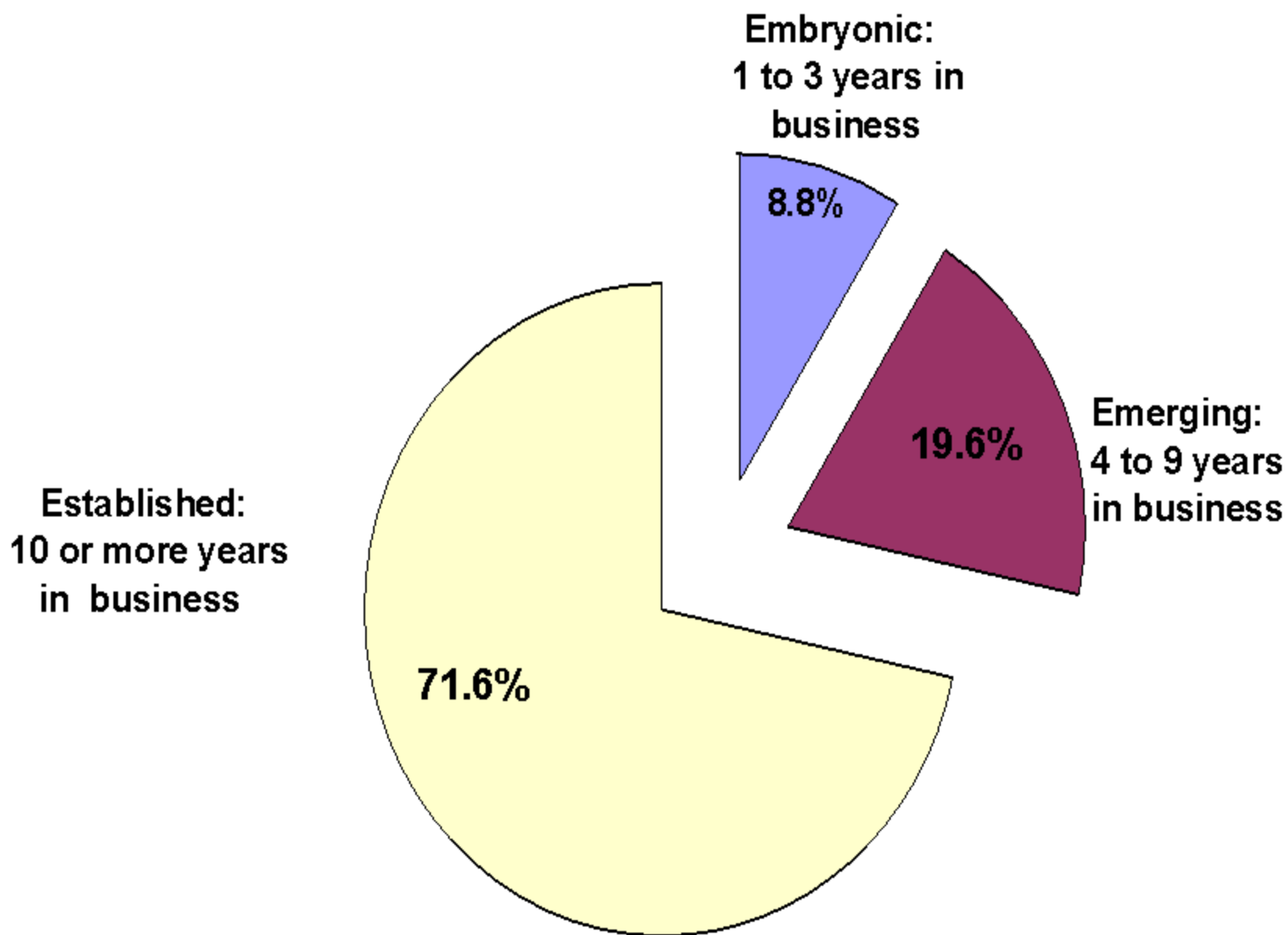
- Greater industry detail
  - ▶ NAICS 3-digit now available
- Lower geographic levels
  - ▶ Births by county
- Age and survival
  - ▶ Research phase
    - Contact Akbar Sadeghi at:  
[sadeghi.akbar@bls.gov](mailto:sadeghi.akbar@bls.gov)

## Number of firms by age group, in percent, December 2006



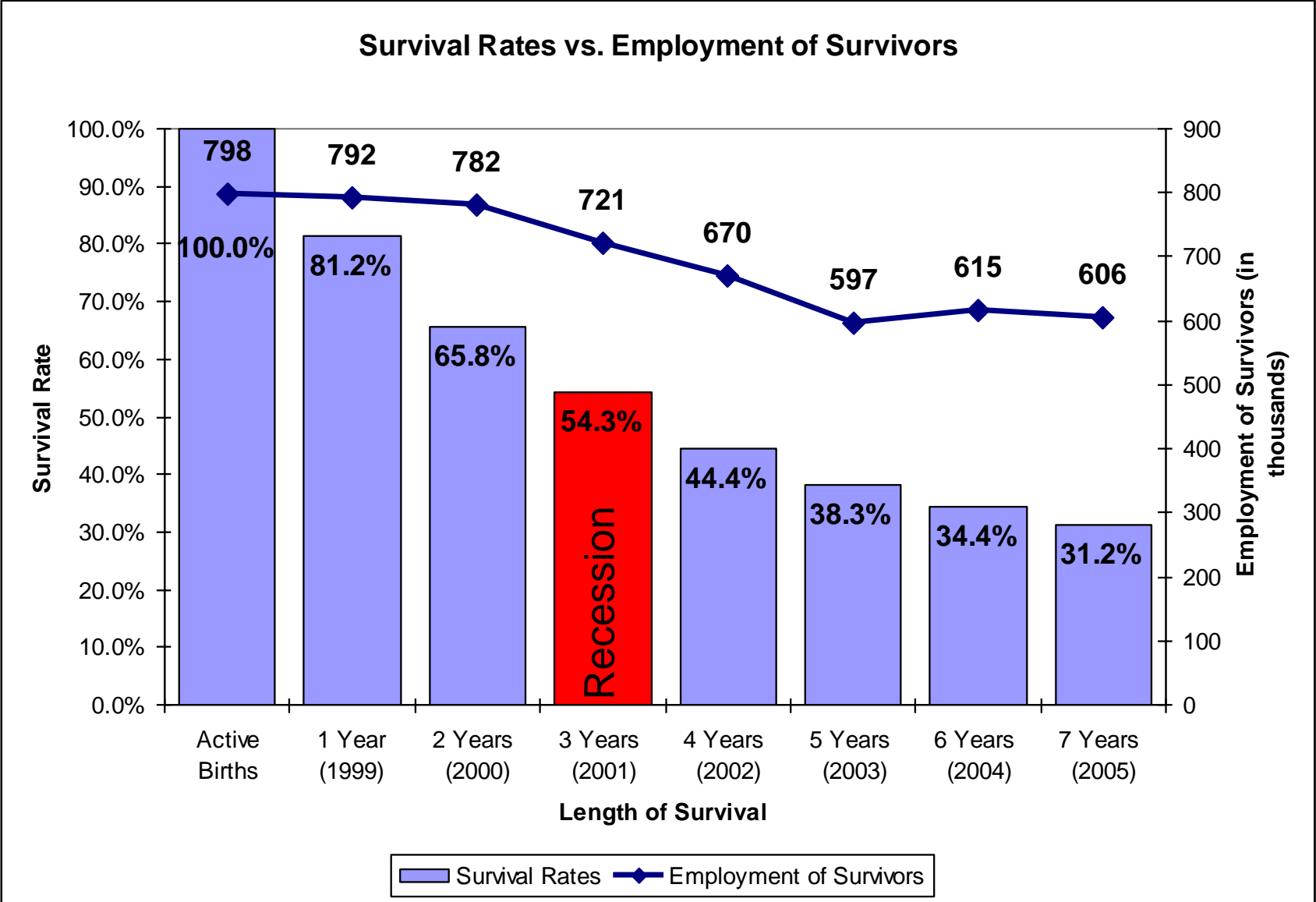
NOTE: Based on preliminary research data

Age of firms: share of total employment , December 2006



**NOTE: Based on preliminary research data.**

# Survival Rates vs. Employment of Survivors



# BED Publication Schedule

- Data available approximately 8 months after close of the quarter
  - ▶ Publication dates
    - 4<sup>th</sup> quarter 2009 – August 18, 2010
    - 1<sup>st</sup> quarter 2010 – November 18, 2010

# Contact Information

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