

Boom, Bust, and Regroup:

**Using the National Establishment Time Series Dataset
to Examine the Multimedia Industry's Impact on the
San Francisco Bay Area**

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Research Questions

- Did the dot-com boom in San Francisco displace the “old” economy—nonhightech manufacturing, warehousing, nonprofit sector?
- Detailed questions
 - How unique was SF’s start-up activity?
 - Did start-up activity and dot-com growth push firms out of SF?
 - Did this activity pressure firms to the extent that they went out of business?

The NETS Data—Basic Elements

- Primarily establishment based—one observation/Duns Number
- Annual information is part of the observation, for years firm in business, for the following variables:
 - Employment, FIPS number, Revenue and SIC for each year in business; headquarters Duns number
- In addition, observation has attached to it:
 - Establishment's most recent name, address, structure
 - First year and last year of establishment's records
 - Move history (years, last move details, how recent, often)

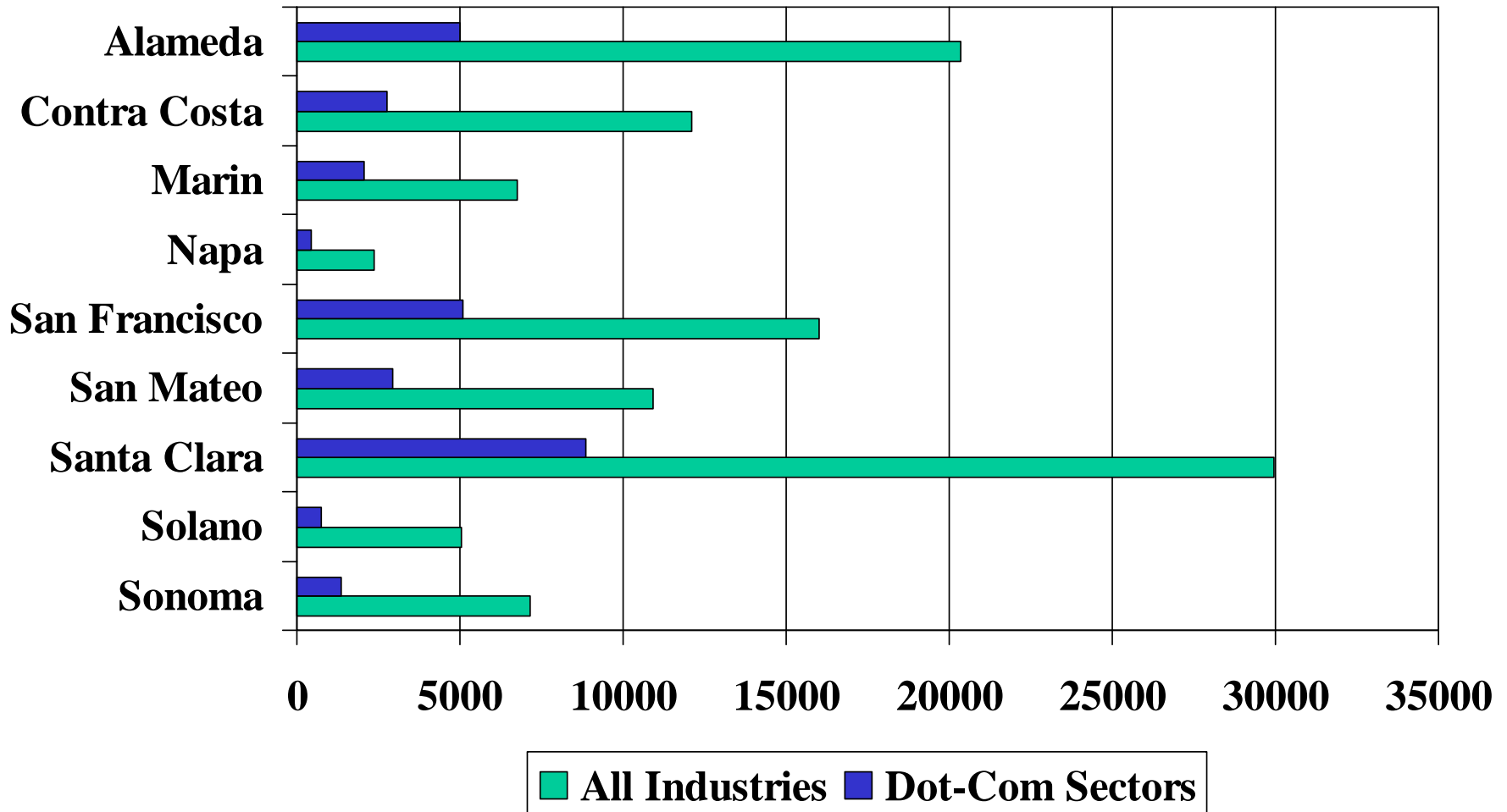
Nets Data—Some Modifications

- “Start-up” of an establishment happens in the first year it appears in the records; a start-up is a new “firm” (definition—Duns number = Headquarters number)
 - Limitations; franchises, mergers
- Establishments with first year less than or equal to 1989 are designated “old”
- County move occurs in year t when $FIPS(t+1)$ does not equal $FIPS(t)$

Methodology

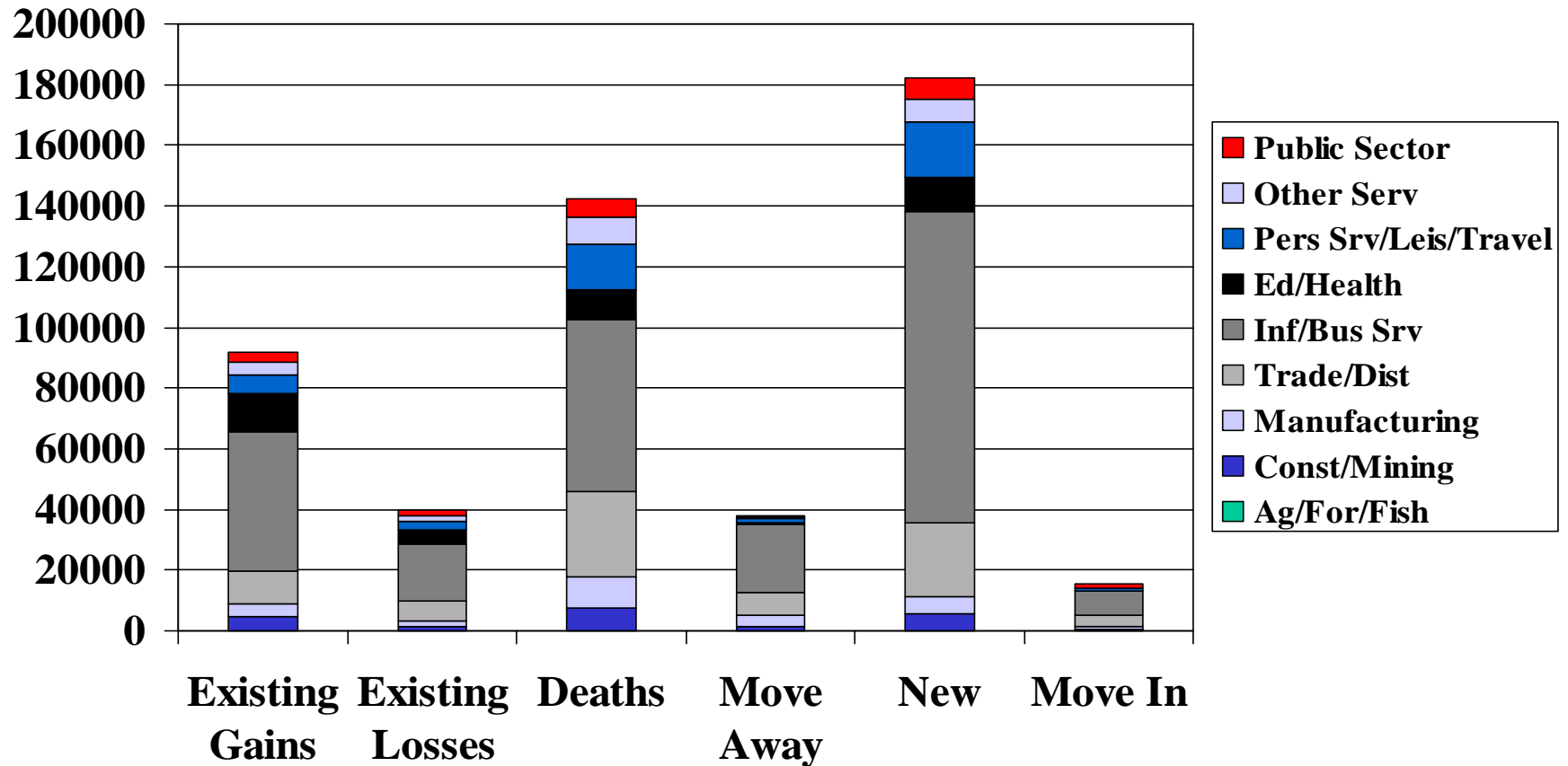
- Statistics aggregated from individual observations to identify start-ups, moves, employment change by area, industry (start-up analysis, components of change)
- Pooled changes per establishment over a 5 year period (start-up analysis)
- Survival characteristics over discrete time periods (establishment moves, establishment deaths)
- For moves, created an observation for each year.

Start-Up Activity



Components of Change—Boom Period

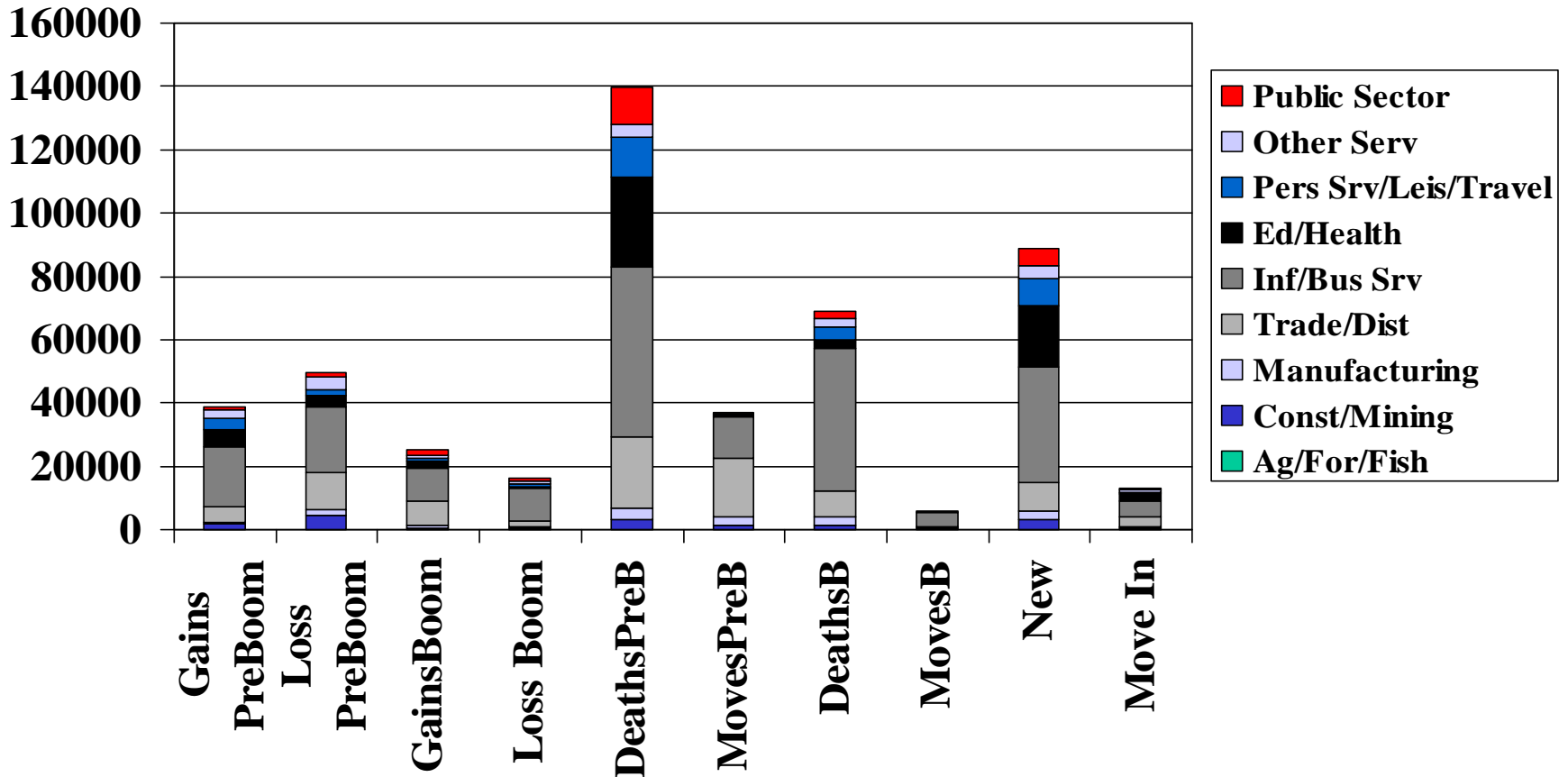
San Francisco Job Change by Establishment History and 1-digit NAICS Category 1995-2000



Source: Author from NETS 2005 data.

Components of Change—Bust Period

San Francisco Job Change by Establishment History and 1-digit NAICS Category 2000-2004



Source: Author from NETS 2005 data.

Probit Analyses—Moves out of San Francisco; Establishment Deaths

- H1: Nonhightech manufacturing establishments were pushed out as dot-com growth increased
- H2: Nonprofit establishments were pushed out as dot-com growth increased

Data Transformation

From Nets:

Obs1: duns#, Fips96 . . . Fips05, Emp96...Emp05, 8-dig SIC ...)

To:

Obs1-96: duns#, year=1996, Fips1=Fips96, Fips2=Fips97,
Emp1= Emp96, Emp2=Emp97, SF Emp Ch 93-96, Dot Com
Emp Ch 95-96, NAICS dummies, FirstYr, LastYr, Move=1 if
Fips1≠Fips2, Deathdum=1 if LastYr=year

Obs1-97: duns#, year=1996, Fips1=Fips97, Fips2=Fips98,
Emp1= Emp97, Emp2=Emp98, SF Emp Ch 94-97, Dot Com
Emp Ch 96-97, NAICS dummies, FirstYr, LastYr, Move=1 if
Fips1≠Fips2, Deathdum=1 if LastYr=year

...

Results, Depended Variable MOVE

| Variable | Model 1 | Model 2 |
|-------------------------|---------|---------|
| Year | + | + |
| Employment Size | + | + |
| NAICS Dummy 51 | + | + |
| NAICS Dummy 54 | + | + |
| NAICS Dummy 33 | + | + |
| NAICS Dummy 31-32 | + | + |
| NAICS Dummy 44-45 | - | - |
| NAICS Dummy 48-49 | + | + |
| NAICS Dummy 624 | - | |
| SF Emp Change 3 year | - | |
| Dot-Com Emp Ch 1 year | + | |
| Interactive N54/SF3yr | | - |
| Interactive N4445/SF3yr | | - |
| Interactive N54/DC1yr | | + |
| Interactive N4445/DC1yr | | + |
| Interactive N624/DC1yr | | + |
| Constant | - | - |

Findings and Future Plans

- Moves were positively correlated to dot-com growth
- Business service sectors were as likely to move as were nonhightech manufacturing and distribution firms; nonprofits were less likely to move (counties)
- Similar model for establishment deaths explained very little.
- Breaking analysis into more sectoral and locational detail could yield different results.