Sources of Innovation

Discussion: Bresnahan, Greenstein, and Henderson

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Overview

- Contribution
  - Organizational diseconomies of scope – a variation on the Henderson theme
  - Business history – two useful accounts of major tech shocks and the dominant firm
- Some missing pieces in the histories
- Market value reflection

Contribution

- Henderson & Clark, ASQ 1990 – architectural innovations, that is, innovations leading to changes in system architecture, call for radical reorganization, which disadvantages established firms relative to entrants - “difficult to recognize and hard to correct”
- Bresnahan et al 2008 – trying to have your cake and eat it too (solving the radical reorg problem by putting two types of organization under one roof) leads to problems when there are shared assets.

A related interpretation

- Sunk R&D/innovation costs create an entry barrier.
- Over time, the size of the barrier erodes due to (endogenous) technical change, leading to....

Entry

Some missing elements

- Possibly not relevant but might be discussed
  - Early in the technology, the dominant firm has an important impact on diffusion by sponsoring a standard – especially true of the PC
  - The role of antitrust in both these stories?
  - IBM's technical, but apparently not financial, success in making robust laptops, long after the PS/2 failure

What happened to value?

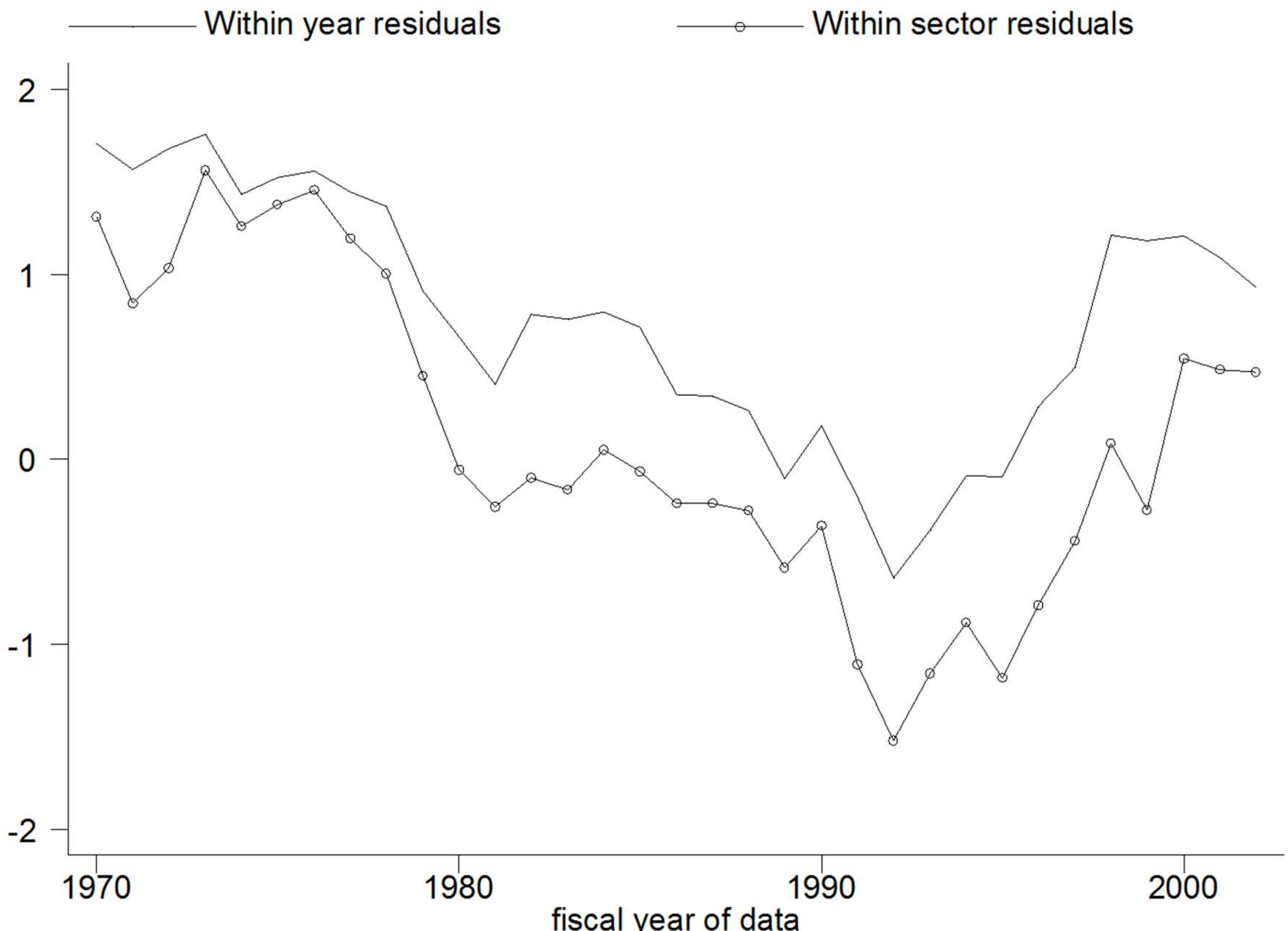
Results from simple Tobin's q regression:

$$Log\ Q = \alpha_t + 0.076\ (K/A) + e_t$$

$$Log\ Q = \alpha_t + 0.030\ (K/A) + e_t\ \ (within\ sector)$$

Plot residuals *e*

IBM – relative value



Microsoft – relative value