Personnel Economics: Firm-Level Hiring Strategies

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What is Personnel Economics?

- Economic analysis of firms' human resource management decisions.
- Field is shared between Labor Economics and Organizational Economics.
- Differs from much of LE because the firm is not a "black-box" production function.

Our Broad Message

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  - More research on how work practices matter for firm performance. (Bloom and Van Reenen, tomorrow).
  - **More research on how firms hire.**

Outline

1. Incentives in Organizations
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   (b) PE has made much progress
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2. Firm-Level Recruitment and Hiring Choices
   (a) We know why hiring is a hard problem
   (b) Review the small literature on firm-level hiring choices
   (c) We call for
      i. Work that documents across-firm variation in hiring strategies
      ii. Field experiments on the efficacy of hiring strategies
      iii. Theory

Incentives in Organizations

- The broad economic question surrounding incentives involves distributed benefits and costs in the presence of asymmetric information.
- Personnel Economics (along with Contract Theory and Organizational Economics) has made great strides in understanding how firms address this problem.
- We focus on three broad points.

1. Incentives do change behavior

- Lazear (2000) shows this for windshield installers at Safelite Glass.
- Shearer (2004) shows this for tree planters in British Columbia.
- Bandiera, Barankay and Rasul (2007) shows this for supervisors of agricultural workers on a UK fruit farm.

2. There is now a very large (and, we think, pretty successful) literature on incentives in organization

   - Performance Measurement: Holmstrom and Milgrom (1991), Baker (1992)

   - Gaming: Oyer (1998), Larkin (2007)

   - Ratcheting: Gibbons (1987)

   - Tournaments: Lazear and Rosen (1981), Knoeber and Thurman (1994), Devaro (2006)

   - Subjective Performance Evaluation: MacLeod and Malcomson (1989), Baker, Gibbons and Murphy (1994), Hayes and Schaefer (2000)

   - Career Concerns: Fama (1980), Holmstrom (1999), Chevalier and Ellison (1999)

3. Some of the remaining questions are likely to be very hard to answer

   - Is there a tradeoff between risk and incentives?
     - Focus of Holmstrom (1979)
     - Empirical relevance questioned by Prendergast (1999, 2002)
     - Lots of work since

- Consider a linear-exponential-normal agency model:
  - Linear contract: Wage $= \alpha + \beta V$
  - Risk-neutral principal and CARA utility agent with parameter ρ
  - Simple production function $V = ve + \tilde{\epsilon}$
  - Quadratic effort costs $\frac{c}{2}e^2$
- Optimal contract maximizes total certainty equivalent subject to agent's incentive constraint.

- The solution is

$$\beta^* = \frac{v^2}{v^2 + c\rho\sigma^2}.$$

- Note $\beta^*(\sigma^2)$ is decreasing.

- Meaurement Problem $\#1$: σ^2 is the conditional variance of output; studies typically use the unconditional variance.

- Measurement Problem $\#2$: Cannot observe ρ, c, or v, and any correlation between these and σ^2 will confound test. Hard to see how you'd control with fixed effects given that v is likely match-specific.

- See Prendergast (2002) on risk and delegation and tests attempted by Adams (2005) and Devaro and Kurtulus (2006)

- Do CEO pay arrangements reflect efficient contracting and competitive markets? Or something else?

  - Bebchuk and Fried (2003, 2006)
  - Tervio (2008) and Gabaix and Landier (2008)

  - Assume, in our agency model above, that
    - Agent's reservation utility is $\overline{u}$
    - Principal's reservation profit is $\overline{\pi}$
    - Match surplus is split according to Nash Bargaining with agent getting share γ.

- The solution is

$$\beta^* = \frac{v^2}{v^2 + c\rho\sigma^2}$$

$$\alpha^* = \gamma\left(\frac{v^2(v^2 + c\rho\sigma^2(2v - 1))}{2c(c\rho\sigma^2 + v)^2} - \overline{u} - \overline{\pi}\right) + \overline{u}$$

- Six unobservables, which means that theorists can reverse engineer theory to fit pretty much any pattern in CEO pay data.

- To us, it is not clear what possible pattern in the data would be **inconsistent** with efficient contracting and competitive markets.

Hiring

- The broad economic question surrounding hiring is matching with costly search and bilateral asymmetric information.

- We have classic models that illustrate these issues:
  - Matching: Jovanovic (1979)
  - Search: Mortenson (1986)
  - Asymmetric Information: Greenwald (1986)

- "Firms" in these models are black-box production functions.

- Little attempt to understand the specfic approaches that firms use to address these issues.

- Why should we care?

  - Central question in the Economics of Strategy: What explains persistent firm-level differences in profitability?

  - Common refrain in b-schools: "Competitive advantage through HR"

  - To what extent is there firm-level heterogeneity in hiring practices? What explains this heterogeneity? What works and what doesn't?

- What are the sources of match-specific productivity?
  - Firm-specific weights on general skills: Lazear (2004), Backes-Gellner and Mure (2005)
  - Complementarity between product-market strategies and employee skill set: Andersson, et al (2009)
  - Co-worker complementarity: Hayes, Oyer and Schaefer (2006)
  - Hiring risky workers: Lazear (1995), Burgess et al (1998), Bollinger and Hotchkiss (2003), Hendricks et al (2003)
  - Employees' preferences or beliefs: Prendergast (2007), van den Steen (2005)

- How do firms screen?

  - Output-based pay: Lazear (2003), Oyer and Schaefer (2006), Bergman and Jenter (2007)

  - Labor-market intermediaries: Autor (2001)

  - Employees' social networks: Montgomery (1991)

- What is the role of labor-market intermediaries?

  - Autor (2009), and collected papers therein

  - Temp help firms: Autor (2001), Neugart and Storrie (2005),

  - Executive search firms: Bull, Ornati, and Tedeschi (1987), Khuranna (2001), Cappelli and Hamori (2006)

- How do firms access employees' social networks to search?

  - Exploding literature on networks in labor markets. Focus is largely on employee search, not firm search.

  - Within-firm comparison of wages and referrals: Antoninis (2006)

  - Connections between referrals and subsequent wages: Simon and Warner (1992), Kugler (2003)

- How and why do firms raid other firms for employees?

  - Raids, Matching and Adverse Selection: Lazear (1985), Tranaes (2001)

  - Raids in the Market for CEOs: Fee and Hadlock (2003), Murphy and Zabojnik (2007), Frydman (2007)

  - Internal vs. External Candidates: Chan (1996), Hassink and Russo (2008)

- Exactly how do employers search, and does the choice of recruitment method matter?

  - Wage and productivity effects of choice of recruitment method: Holzer (1987), Devaro (2005), Devaro (2007), Mosca and Pastore (2008)

  - Duration of search by employers: Barron, Berger, and Black (1997), Brencic (2009)

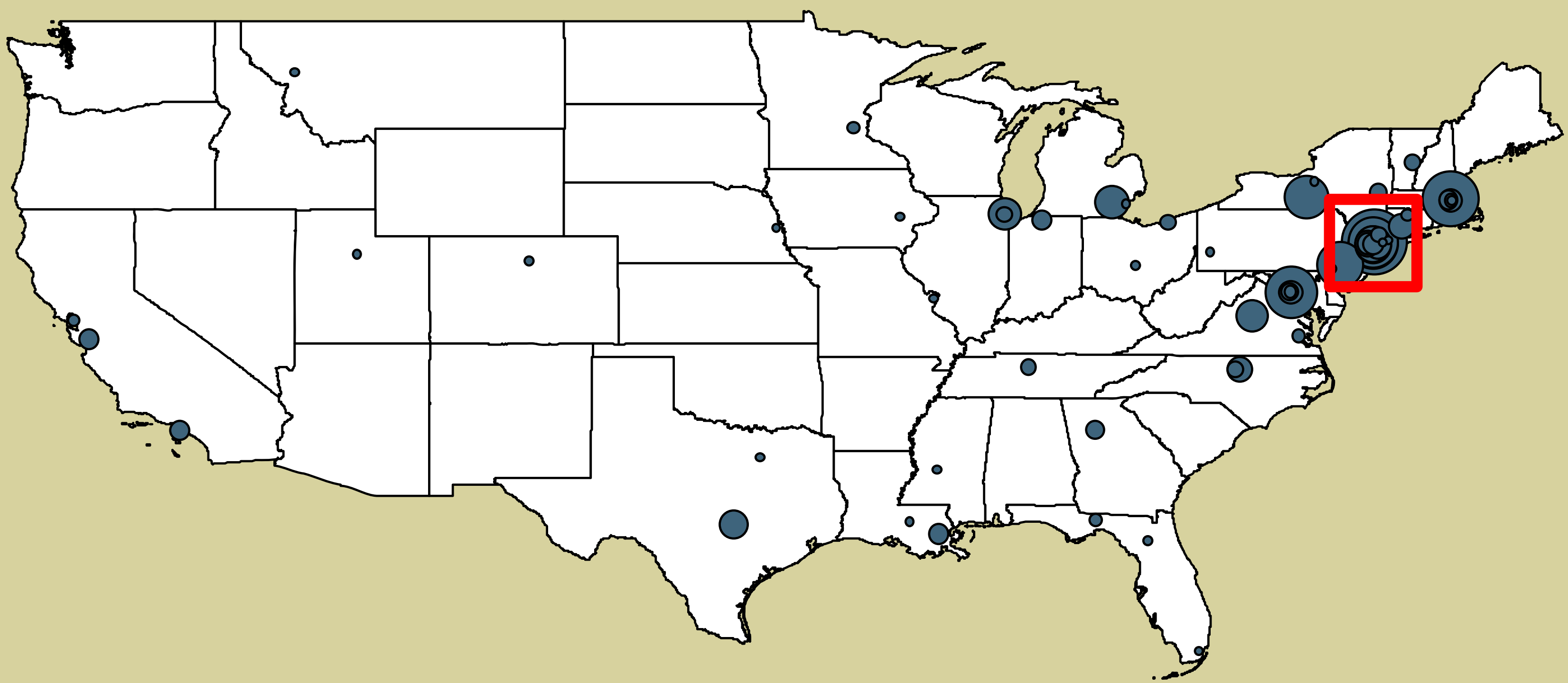
  - Hiring practices and firing costs: Brencic (2007)

- How does online recruiting differ from more traditional forms?
  - Wiring the Labor Market: Autor (2001), Kuhn and Skuterud (2004)
  - Internet and match quality: Hadass (2004), Stevenson (2009)
  - Focus is again largely on employee search, not firm search.
  - Firm-level online search choices: Brencic and Norris (2008), Nakamura et al (2009)

- Organizational Demography
  - Effects of the hiring manager: Giuliano, Levine and Leonard (2009)
  - Within industry, across-firm comparison of employee sourcing strategies: Oyer and Schaefer (2009)

Associates in Skadden Arps NYC Office (473 lawyers)

Offices are red squares, law schools are blue circles.

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Some Observations on Hiring

- The black-box models of matching, search, and asymmetric information give us great conceptual frameworks.
- But we need to know more about how firms actually grapple with these problems.
  - We need a better understanding of across-firm variation in hiring strategies.
  - We need inside-the-firm field experiments about hiring.
  - We need more models that predict which firms will benefit from which hiring strategies.

Conclusion

- We think Personnel Economics can benefit from a change in direction.
- We think the field has been remarkably successful in helping us understand how firms address incentive problems. We think progress in this area will continue, but some of the remaining questions will be difficult to answer well.
- We need a better understanding of firms' hiring and recruitment practices.