Organizational Economics: Picturing a Field?

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R. Gibbons
MIT and NBER
1. My Cards on Table
2. What Is an Organization?
3. OE as a Field?
4. Roots & Branches of OE
   A. Boundary of the Firm
   B. Internal Organization
   C. Orgs Address Hard Problems
5. Organizational Culture and Performance
1. My Cards on Table

— What questions animate your work?
  o How can an economist help a fixed set of people collaborate better together?
  o How might economics change if economists understood organizations better?
    [help fix hospitals, schools, agencies, … regulation, …]

— Who are you arguing against?
  o Chapter 3 (i.e., firms can be seen as individuals)
  o Efficient markets (i.e., productivity differences are competed away quickly)
  o Efficient equilibria (i.e., culture is either useless or trivial to build)
2. What Is an Organization?

“Organizations are a means of achieving the benefits of collective action in situations where the price system fails.” (Arrow, 1974: 33)

– firms, consortia, unions, legislatures, agencies, schools, churches, social movements, … and some contracts

“All of them … [share] the need for collective action and the allocation of resources through nonmarket methods.” (Arrow, 1974: 26)

– dictator, planner, committee, coalition, …
(Some) Topics in OE

Vertical Integration:
- Vertical integration;
- Supply chains

Horizontal Integration:
- Conglomerates;
- Corporate strategy

Contracts:
- Formal; Relational

Hybrids:
- Alliance; Network;
- Joint Venture

Beyond Firms:
- Communities; States;
- Agencies; PPPs; …

Between Orgzns

Within Orgzns

Decision-Making:
- Power & Politics;
- Culture & Leadership;
- Mgmt. & Productivity

Employment:
- Pay for performance;
- Skill development;
- HR practices

Structures & Processes:
- Hierarchy; Alternative forms;
- Resource allocation;
- Transfer pricing

Beyond Firms:
- Communities; States;
- Agencies; PPPs; …
24 Questions in OE

1. What are the vertical boundaries of the organization: what is bought from outside and what is made inside, for the organization’s own use?
2. How are relations with suppliers, customers, and complementors organized: in arm’s-length dealings or through long-term relationships?
3. Who owns which of the assets used in production?
4. How are the activities of the organization financed?
5. How is governance defined and exercised, both within the organization and by different parties with ownership or other claims?
6. What are the horizontal boundaries of the organization: what products or services does it produce, for what users, using what technologies, and in what locations?

7. How are subunits within the organization defined, linked and coordinated?
8. How are resources of different types allocated?
9. Where does decision-making on different issues occur within the organization?
10. What is the role of hierarchy, how many levels are there, and what are the spans of control (the number of individuals reporting directly to a hierarchic superior)?
11. What are the behavioral and performance effects of delegation?
12. Is the organization fundamentally an expression of authority or is it a “nexus of contracts?”
13. How is power achieved and exercised, and what role does politics play within organizations?
14. What information is collected on different matters, by whom, to whom is it communicated, and how is it used?
15. How is performance measured?
16. How are people recruited, trained and assigned to jobs?
17. How are they evaluated and rewarded?
18. What effects do rewards have on behavior?

19. What are the roles of formal, legally enforceable contracts within and between organizations versus relational contracts (shared understandings that cannot be enforced in courts and so must be self-enforcing, perhaps through reputation concerns)?

20. What norms exist regarding behavior towards others within the organization, as well as outsiders, and how do these affect actual behavior and organizational performance?

21. How are transgressions against organizational rules and norms treated by different parties?

22. How do other aspects of “corporate culture” manifest themselves and affect behavior?

23. What is the nature and role of leadership in organizations?
24. And, finally, how do the answers to these questions depend on the markets in which the organization operates, the strategies it adopts to compete, and the social, legal, regulatory and technological environment in which it is embedded, and how do all of these choices interact and affect performance?
Our Organizational Economy?

Suppose that “a mythical visitor from Mars … approaches the Earth from space, equipped with a telescope that reveals social structures…

Our visitor … might be surprised to hear the structure called a market economy. ‘Wouldn’t ‘organizational economy’ be the more appropriate term?’ it might ask.” (Simon 1991: 27-28)

“organized” = designed ex ante & managed ex post?
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Our Organizational Economy?

Institutional

- Organization

- Organized = designed ex ante, managed ex post?

- School-choice mechanism = designed ex ante?

- Social network = “managed” ex post?

Dixit AER 2009
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   C. Orgs Address Hard Problems

5. Organizational Culture and Performance
OE and (Some) Economics Fields

- Trade, Development
- Corp Fin
- Between Orgzns
- Within Orgzns
- Law & Econ
- Political Economy
- IO
- Labor

NBER 2002-06
OE and (Some) Management Fields

- Finance: corporate (vs. asset pricing)
- Accounting: cost (vs. financial)
- Strategy: corporate (vs. BU)
- HRM: internal “markets” (vs. external)
- Marketing: channels (vs. pricing)
- Operations: supply chain (vs. “inventory”)
- Int’l Mgmt: FDI, MNE (vs. exch. rates)
OE and (Some) Social Sciences

- Economic Sociology
- Between Orgzns
- Within Orgzns
- Political Economy
- Social Psychology
Recent (AER) Models of Orgs

Chassang *AER* 10
Board *AER* 11
Bonatti & Horner *AER* 11
Halac *AER* 12
Li & Matouschek *AER* 12
Kaya & Vereshchagina *AER* 14
Bonatti & Rantakari *AER* 16
Dessein, Galeotti, Santos *AER* 16
Grenadier & 2 Malenkos *AER* 16
Andrews & Barron *AER* 16
Halac & Prat *AER* 16

“Building Routines”
“Value of Loyalty”
“Collaborating”
“Rel Cons & Value of Relationships”
“Managing Conflicts in Rel Cons”
“Partnerships vs. Corporations”
“Politics of Compromise”
“Rational Inattention & Org Focus”
“Timing Decisions in Orgs”
“Allocation of Future Business”
“Mgr’l Attn & Wkr Performance”

vs. contract theory, network theory (e.g., *Econometrica*)
Recent Empirical OE

- **HRM**
  - Lazear, Shaw, Stanton *JOLE* 15 (value of bosses)
  - Bloom, Liang, *et al.* *QJE* 15 (working from home)

- **Authority**
  - Fehr, Herz, Wilkening *AER* 13 (lure of authority)
  - Giroud *QJE* 15 (access of HQ to plants)

- **Vert. Intgn.**
  - Atalay, Hortacsu, Syverson *AER* 14 (vertical flow?)
  - Alfaro, Conconi, *et al.* *RES* 15 (prices affect VI)

- **Contracts**
  - Lerner & Malmendier *AER* 10 (termination in R&D)
  - Fehr, Hart, Zehnder *AER* 11 (flexible → shading)

- **Mgmt. & Prod.**
  - Bloom, Sadun, Van Reenen *AER* 12 (IT in US MNEs)
  - Bloom, Eifert, *et al.* *QJE* 13 (Indian textiles)
  - Braguinsky, Ohyama *et al.* *AER* 15 (cotton spinning)
OE and (Some) Economics Fields

Trade, Development

IO

Corp Fin

Between Orgzns

Within Orgzns

Law & Econ

Political Economy

Labor
EMPIRICAL ORGS OUTSIDE OE

- **Trade**  Antras *QJE* 03  (1/3 of trade is within-firm)
  Antras-Foley *JPE* 15  (managed contracts)

- **Health**  Chan *JPE* 16  (mutual monitoring in ED)
  Chandra, Finkelstein, *et al.* *AER* 16  (perf diffs in HC ~ in mnfctr)

- **Education**  Rockoff, Staiger *et al.* *AER* 12  (learning → teacher assgnmt)
  Fryer *QJE* 14  (injecting charter practices into public schools)

- **Public**  Bajari, Houghton, Tadelis *AER* 14 (adaptation in procurement)
  Rasul-Rogger *EJ* 16  (management in civil service)

- **Devp.**  Macchiavello-Morjari *AER* 15  (Kenyan roses)
  Atkin, Chaudry, *et al.* *QJE* 17  (soccer balls)

- **Growth**  Caliendo, Monte, Rossi-Hansberg *JPE* 15  (layers)
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4. Roots of OE

- Smith (1776)
- Walker (1887)
- Knight (1921)
- Berle & Means (1932)
- Coase (1937)
- Barnard (1938)
- Simon (1947)
- Penrose (1959)
- Chandler (1962)
- Cyert & March (1963)
- Williamson (1971)
- Alchian & Demsetz (1972)
- Hurwicz (1972)
- Marschak & Radner (1972)
- Richardson (1972)
- Arrow (1974)
- Mirrlees (1975)
- Jensen & Meckling (1976)

4A. Boundary of the *Firm*

Vertical Integration:
Vertical integration; Supply chains

Horizontal Integration:
Conglomerates; Corporate strategy

Contracts:
Formal; Relational

Hybrids:
Alliance; Network; Joint Venture

Animating question?
Between Orgzns
Who posed it?
Within Orgzns
What came next?
4A. Boundary of the *Firm*

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*If markets are so good, why are there firms?*
- Between Orgzns
- Within Orgzns

Coase ‘37

Williamson
- 71, 73, 75, 79
- KCA 78
- GHM 86, 90
- ...
4A. Boundary of the *Firm*

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- If *markets* are so good, why are there *firms*?
  - Within Orgzns
  - Between Orgzns
  - Coase ‘37

- Williamson 71, 73, 75, 79
- KCA 78
- GHM 86, 90
- ...

- If *contracts* are so good, why are there *bosses*?
4B. Internal Organization

**Between Orgzns**

- Who posed it?

**Within Orgzns**

- What came next?

**Animating question?**

- Decision-Making: Power & Politics; Culture & Leadership
- Employment: Pay for performance; Skill development; HR practices
- Structures & Processes: Hierarchy; Alternative forms; Resource allocation; Transfer pricing
4B. Internal Organization

Decision-Making:
Power & Politics; Culture & Leadership

Employment:
Pay for performance; Skill development; HR practices

Structures & Processes:
Hierarchy; Alternative forms; Resource allocation; Transfer pricing

Holmstrom (84), Milgrom-Roberts (88), Tirole (86), ...

Between Orgzns
Within Orgzns
4B. Internal Organization

Why do organizations seem less rational than members?

Between Orgzns

Within Orgzns

March 62, 66 CM 1963

Decision-Making:
Power & Politics; Culture & Leadership

Employment:
Pay for performance; Skill development; HR practices

Structures & Processes:
Hierarchy; Alternative forms; Resource allocation; Transfer pricing

“The Business Firm as a Political Coalition”
(March, 1962)

“We have argued that the business firm is basically a coalition without a generally shared, consistent set of goals. Consequently, we cannot assume that a rational manager can treat the organization as a simple instrument in his dealings with the external world. Just as he needs to predict and attempt to manipulate the ‘external’ environment, he must predict and attempt to manipulate his own firm.”

Cyert and March, 1963

“An economic transaction is a solved political problem. Economics has gained the title of queen of the social sciences by choosing solved political problems as its domain.” (Lerner 1972: 259)
• **Summary (1981)**

“It is possible, on considering these phenomena, to conclude that organizations are systematically stupid. … [Alternatively,] *it is possible to try to discover why reasonably successful and reasonably adaptive organizations might exhibit the kinds of … behaviors that have been reported.* Perhaps the stories of … perversity tell us less about the weaknesses of organizations and more about the limitations of our ideas about [them].”
Orgs Address Hard Problems

If contracts were perfect, why would we need bosses?

Bosses not immune to problems that wreck contracts.
Orgs Address Hard Problems

If contracts were perfect, why would we need bosses?

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Gibbons JEBO 2005

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Gibbons JEBO 2005
Orgs Address Hard Problems

Effectiveness

100%

Transactions via contracts

Transactions via bosses

Shapley Value

Arrow’s Theorem

Transaction difficulty

Integrated (Illustration)

Non-Integrated

Gibbons JEBO 2005
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5. Culture?

- “Culture is one of the two or three most complicated words in the English language”
  Williams (1983)

- “[A] historical overview … estimated that there were more than 160 definitions in use”
  Steinmetz (1999)
National (etc.) Culture

• “…customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation”

Guiso, Sapienza, and Zingales (2006)
We argue that social capital as proxied by trust increases aggregate productivity by affecting the organization of firms. To do this we collect new data on the decentralization of investment, hiring, production, and sales decisions from corporate headquarters to local plant managers in almost 4,000 firms in the United States, Europe, and Asia. We find that firms headquartered in high-trust regions are significantly more likely to decentralize. To help identify causal effects, we look within multinational firms and show that higher levels of bilateral trust between the multinational’s country of origin and subsidiary’s country of location increases decentralization, even after instrumenting trust using religious similarities between the countries. Finally, we show evidence suggesting that trust raises aggregate productivity by facilitating reallocation between firms and allowing more efficient firms to grow, as CEOs can decentralize more decisions. JEL Codes: L2, M2, O32, O33.
The purpose of this book is, first of all, to clarify the concept of “organizational culture” and, second, to show how the problems of organizational leadership and organizational culture are basically intertwined. I hope to demonstrate that organizational culture helps to explain many organizational phenomena, that culture can aid or hinder organizational effectiveness, and that leadership is the fundamental process by which organizational cultures are formed and changed.

(Part of) culture = equilibrium?

Leaders build equilibria?
Are Changes in ICU Safety Culture Associated with Changes in Bloodstream Infections?

R. Gibbons, T. Wang, N. Beaulieu, Y.-J. Hsu, J. Marsteller, E. Martinez, S. Watson, and P. Pronovost
An Intervention that Worked

**Problem:** Central-line associated bloodstream infections

- 80,000 catheter-related BSIs per year (US ~ 2005)
- 28,000 deaths in ICUs
- $45,000 average medical care cost
- $2.3 billion annually

**Solution:** Hopkins → Michigan → National collaborative

- Two primary components
  - 5 evidenced-based practices (checklist)
  - Comprehensive Unit-based Safety Program (CUSP) culture-change program

- Results from national program (through 2012)
  - 1,000 hospital (1,800 hospital units) participating
  - BSIs reduced by 41%
  - Estimated saved lives: 290-605
  - Estimated cost savings: $36M ($97M? $244M??)
# Two Components

## Checklist

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Wash hands</td>
</tr>
<tr>
<td>2</td>
<td>Sterile mask, hat, gown, gloves, and drapes.</td>
</tr>
<tr>
<td>3</td>
<td>Avoid groin</td>
</tr>
<tr>
<td>4</td>
<td>Clean with chlorhexidine</td>
</tr>
<tr>
<td>5</td>
<td>Remove unnecessary catheters</td>
</tr>
</tbody>
</table>

## CUSP

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>Assess culture (SAQ)</td>
</tr>
<tr>
<td>2</td>
<td>Educate staff on science of safety</td>
</tr>
<tr>
<td>3</td>
<td>Identify safety concerns</td>
</tr>
<tr>
<td>4</td>
<td>Senior executive partnership</td>
</tr>
<tr>
<td>5</td>
<td>Learn from one defect per month</td>
</tr>
<tr>
<td>6</td>
<td>Implement teamwork tools</td>
</tr>
<tr>
<td>7</td>
<td>Reassess culture (SAQ)</td>
</tr>
</tbody>
</table>

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**Hopkins:** checklist → cart → CUSP
Q: Within an ICU, CLABSI ↓ when SAQ ↑?
ΔCLABSI Associated w/ ΔSAQ?

\[ BSI_{it} = \theta_i + \kappa_t + \alpha * n_{it} + \mu_i * n_{it} + \beta * n_{it} * SAQ_{it} + \delta * n_{it} * X_{it} \]

**Marginal Effect of SAQ on BSI Count in a FE Model**

<table>
<thead>
<tr>
<th>Marginal Effect of Culture</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 41</td>
<td>-0.64**</td>
<td>-0.95**</td>
<td>-1.11**</td>
<td>-0.50</td>
</tr>
<tr>
<td>I am frequently unable to express disagreement with staff physicians/intensivists in this ICU</td>
<td>(0.009)</td>
<td>(0.008)</td>
<td>(0.003)</td>
<td>(0.076)</td>
</tr>
</tbody>
</table>

\[ ME = \beta * \bar{n} * \sigma_{SAQ} \]

* 0.05 ** 0.01 *** 0.001

Avg. BSI: 2.86 → 1.58

Multiple measures significant simultaneously
Bottom Lines

• **Our Organizational Economy?**

• **OE Becoming a Field?**

• **Orgs Address Hard Problems**
  – “Business Firm as Political Coalition” (March 62)

• **Org Culture and Performance**
  – Possible to improve org performance
  – Possible to do so by changing culture?
  – Possible to measure
  – Possible to model?
Thank you!
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Three Lenses on Real Organizations

**Design**

Organizations are **machines**

An organization is a mechanical system crafted to achieve a defined goal. Parts must fit well together and match the demands of the environment.

**Action comes through planning.**

---

**Political**

Organizations are **contests**

An organization is a social system encompassing diverse, and sometimes contradictory, interests and goals. Competition for resources is expected.

**Action comes through power.**

---

**Cultural**

Organizations are **institutions**

An organization is a symbolic system of meanings, artifacts, values, and routines. Informal norms and traditions exert a strong influence on behavior.

**Action comes through habit.**

---

*Ancona et. al. 99*  

Need all 3!
Past, Present, & Future of OE?

**Design**
- machines
- planning

**FORMULA**

**Political**
- contests
- power

**PROMISE**

**Cultural**
- institutions
- habit

**STORY**

Leaders build, manage, and change equilibria?