Introduction

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Organizational economics involves the use of economic logic and methods to understand the existence, nature, design, and performance of organizations, especially managed ones. As this handbook documents, economists working on organizational issues have now generated a large volume of exciting research, both theoretical and empirical. However, organizational economics is not yet a fully recognized field in economics—for example, it has no *Journal of Economic Literature* classification number, and few doctoral programs offer courses in it. The intent of this handbook is to make the existing research in organizational economics more accessible to economists and thereby to promote further research and teaching in the field.

The Origins of Organizational Economics

As Kenneth Arrow (1974: 33) put it, "organizations are a means of achieving the benefits of collective action in situations where the price system fails," thus including not only business firms but also consortia, unions, legislatures, agencies, schools, churches, social movements, and beyond. All organizations, Arrow (1974: 26) argued, share "the need for collective action and the allocation of resources through nonmarket methods," suggesting a range of possible structures and processes for decisionmaking in organizations, including dictatorship, coalitions, committees, and much more.

Within Arrow's broad view of the possible purposes and designs of organizations, many distinguished economists can be seen as having addressed organizational issues during the first two centuries of the discipline. For example, Adam Smith (1977) famously was concerned about moral hazard and free riding by directors of joint-stock companies, and his pin factory is a discussion of job design. A century after the initial publication of Smith's volume, in the first volume of the *Quarterly Journal of Economics*, the founding president of the American Economic Association, Francis Walker (1887), argued that differences in the quality of management account for persistent intra-industry differences in productivity and profitability. Frank Knight (1921) discussed entrepreneurship and the nature of the firm, which he saw as an institution in which the more uncertainty-averse worked for fixed wages, whereas the entrepreneur bore the risk but had authority over the employees. Berle and Means (1932) described conflicts of interest arising from the separation of corporate ownership by shareholders from corporate control by top managers. Ronald Coase (1937) raised the question of the boundaries of the firm, arguing that economizing on the costs of transacting would determine what was done in the market versus under hierarchic control.

Herbert Simon (1951) offered perhaps the first formal model in organizational economics, treating the employment relationship as the use of authority rather than as contracting in response to uncertainty and the need for adaptation. Edith Penrose (1959) studied managerial activities and decisionmaking, organizational routines, and knowledge creation in firms and argued that these are critical determinants of the success and growth of the firm. Alfred Chandler (1962, 1977) documented the historical emergence of the modern corporation and professional management.

At the edges of economics, there was related work in organizational theory. Chester Barnard (1938) was one of the earliest contributors, seeing organizations as systems of collaborative activity and discussing the roles of incentives and authority in the formal and informal aspects of organization. Building on Barnard, the Carnegie School then focused on two major issues: bounded rationality and conflict of interests. Simon (1947) and March and Simon (1958) asked how the organization can orchestrate the acquisition and communication of information and the allocation of decisionmaking so as to produce a tolerable outcome for the organization when its members are boundedly rational. Cyert and March (1963: 30) argued that "people (i.e., individuals) have goals; collectivities of people do not" and that "since the existence of unresolved conflict is a conspicuous feature of organizations, it is exceedingly difficult to construct a useful positive theory of organizational decision making if we insist on internal goal consistency." Instead, March (1962) described "The Business Firm as a Political Coalition."

Reflecting on these early developments, Arrow (1964: 397–398) noted that "the large organization, so prominent on our contemporary social landscape, is of great antiquity. . . . But it is perhaps only in our era, and even then haltingly, that the rational design of organization has become a subject of inquiry." Around 1970, however, the field began to take off.

Many important contributions in the 1970s concerned the nature and boundaries of the firm. Oliver Williamson (1971, 1975) proposed a theory of the replacement of market dealings by authority in the firm, based on the potential for inefficient haggling when unplanned adaptations are required. In contrast, Armen Alchian and Harold Demsetz (1972) argued against the idea that the firm is a manifestation of authority, proposing instead that the firm was best viewed as a collection of contracts. George Richardson (1972) undercut the simple firm-versus-market dichotomy by accentuating the great variety of organizational forms and relationships between firms that actually populate the economy, and he wrote convincingly of the role of capabilities—information, knowledge, and skills—in determining the effectiveness of activities in and between firms. And Benjamin Klein et al. (1978) and Williamson (1979) explored the consequences of specific assets and hold-up for firms' make-or-buy decisions and contracting between firms.

Other important contributions were focused within organizations. Arrow's (1974) beautiful little book addressed topics ranging from authority and codes to responsibility, trust, and values. Richard Nelson and Sydney Winter (1982) wrote in evolutionary terms about organizational routines that enable the organization to do what it does (and hence may convey competitive advantage or its opposite). And Michael Jensen and William Meckling (1976) provided the first treatment of agency costs as a necessary consequence of the separation of ownership from control.

In formal modeling, Jacob Marschak and Roy Radner (1972) modeled optimal communication and decisionmaking processes in uncertain environments with dispersed information but shared objectives. Leonid Hurwicz (1973) introduced the concept of incentive compatibility and initiated mechanism-design theory, where the institutions used to allocate resources become a choice variable, thereby setting the stage for economic analysis of organizational design. And James Mirrlees (1975/1999) and Bengt Holmström (1979) introduced formal models of moral hazard, launching a literature that would have tremendous influence on organizational economics.

What Are the Questions Addressed by Organizational Economics?

These early contributions laid the foundations for the work that has emerged in the past 30 years, which is the focus of this handbook. Extrapolating from this early work suggests a wide range of issues for organizational economics, including the following.[1] What are the vertical boundaries of the organization? How are relations with suppliers and customers organized? Who owns which assets, and how are the activities of the organization financed? How is governance defined and exercised, both internally, within the organization, and by external parties with ownership claims? What are the horizontal boundaries of the firm (i.e., what businesses is it in)? How are departments and divisions defined? How are resources of different types allocated? What is the role of hierarchy, how many levels are there, and what are the spans of control? Is the organization an expression of authority or a nexus of contracts? What are the roles of formal versus relational contracts in the organization? Where does decisionmaking occur in the organization? How is power achieved and exercised, and what role does politics play in organizations? What information is collected, by whom, to whom is it communicated, and how is it used? How are people recruited, trained, and assigned to jobs? How is performance measured? How are people rewarded? What effects do rewards have on behavior? What norms exist regarding behavior toward others in the organization, as well as outsiders, and how do these norms affect behavior and organizational performance? How do other aspects of corporate culture manifest themselves and affect behavior? What is the nature and role of leadership in organizations? 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 these choices interact and affect performance?

Related Fields

Given this agenda, it is clear that organizational economics overlaps with many other fields in economics, as well as with a variety of other disciplines in the social sciences and management.

In economics, there is a large intersection with personnel economics, which studies the relationship between employer and employee and the economics of managing human resources

1. We phrase these questions in positive terms, but their normative versions are equally important.

in firms. Industrial organization also has significant overlaps, sharing interest in the vertical and horizontal scope of the firm, supplier relations, and other contracts between firms, and the impact of compensation on firm behavior. More recently, international economics has begun investigating outsourcing and offshoring, as well as the multinational corporation, all of which raise organizational issues. In addition, development economics is studying the role of firms in economic growth, including the effects on their productivity of improving their organization and management and relaxing financial constraints. And researchers studying different economic systems and the transition from one to another—both historically and today—also share interests with organizational economics.

There are also important connections with disciplines beyond economics. The law literature has central interests in contracts and in governance. Social psychology is concerned with motivation, decisionmaking, and culture. Organizational sociology (and, more recently, economic sociology) studies the sociology of economic institutions, including firms, markets, and networks. And political science studies decision processes in government agencies, legislatures, communities, and more. However, this handbook focuses more on making organizational economics accessible to economists and hence less on forging the connections to other disciplines that ultimately could and should be made; see the Smelser and Swedberg (2005) *Handbook of Economic Sociology* for surveys of work in one social science and Ostrom (1990) for a leading example of work from another.

In business schools, scholars in organizational behavior have not only harnessed the insights of psychology and sociology to understand firms, they have also developed large bodies of research on issues ranging from compensation and job design to leadership and organizational change. And the overlaps between organizational economics and other areas of management are also significant. Corporate finance is concerned with the allocation of resources within the firm, the effects of the financing of the firm on managerial behavior, and issues of corporate governance. Managerial accounting is also concerned with resource allocation inside firms and with internal governance, as well as with acquiring and communicating information and with performance measurement and pay. Marketing addresses relations with suppliers and customers and also the management of sales forces. And strategy studies organizational capabilities (as a source of competitive advantage) and the vertical and horizontal boundaries of the firm (as a problem of corporate strategy). As with social sciences beyond economics, this handbook barely begins to explore the current and potential connections with management fields; see Baum's (2002) *Companion to Organizations* for surveys of work in organizational behavior and related fields.

Outline of the Handbook

Beyond this introduction, the handbook consists of six parts. Part I contains foundational material. Erik Brynjolfsson and Paul Milgrom survey the theory and econometrics of complementarity, seen as an alternative to the usual assumptions of microeconomics (concavity, divisibility, etc.) that allows modeling organizational questions with great richness and still permits drawing strong conclusions. Ilya Segal and Michael Whinston organize a broad literature on property rights and break new ground on this central issue in organizational economics. Steven Tadelis and Oliver Williamson discuss the theoretical and empirical literatures on transaction cost economics and develop a formal model that yields new insights. In addition, we offer an exposition of the means of motivating people in organizations, focusing on agency and performance contracting, but also mentioning nonfinancial means of motivating behavior.

Part II describes three empirical methods that loom large in organizational economics but may not be completely familiar to those not involved in the field. George Baker and Ricard Gil examine the role of clinical or case studies in organizational economics, arguing that (ever since the discussion of Fisher Body in Klein et al. [1978]) case studies can and do play a vital role in the process of scientific investigation and suggesting what characteristics of such studies make them particularly valuable. Colin Camerer and Roberto Weber discuss the role of experiments in studying organizational issues, describing a number of such studies and again explicating what makes for a good experimental study. Finally, Casey Ichniowski and Kathryn Shaw discuss insider econometrics, which involves careful econometric analysis of data whose collection inside organizations is guided by detailed knowledge of the phenomena gained both from insiders (managers and other employees) and from personal observation.

Each part in the remainder of the handbook then focuses on a specific set of organizational issues. Part III studies individuals and groups in organizations. It involves three contributions on employment by James Baron and David Kreps, by Edward Lazear and Paul Oyer, and by Michael Waldman; two chapters on authority, power, politics, and influence by Patrick Bolton and Mathias Dewatripont and by Niko Matouschek and ourselves; and an essay on culture and leadership by Benjamin Hermalin. The three chapters on employment illustrate the significant intersection between organizational economics and personnel economics, as well as connections to economic sociology and human resource management. The other three chapters in Part III can be seen as discussing different aspects of decisionmaking in organizations, often echoing Barnard (1938) and the Carnegie School's view of "the organization as a decision-making process" (Cyert and March 1963: 202), in which individuals compete for resources, power, and influence, and information is a strategic tool.

Part IV studies structures and processes in organizations, with two chapters on hierarchy by Luis Garicano and Timothy Van Zandt and by Dilip Mookherjee, and individual chapters on innovation and organization by Pierre Azoulay and Josh Lerner, on corporate governance by Benjamin Hermalin, on strategy and organization by John Roberts and Garth Saloner, on resource allocation by Robert Gertner and David Scharfstein, and on organizational capability by Robert Gibbons and Rebecca Henderson. The two chapters on hierarchy are complements, in that Garicano–Van Zandt follows the emphasis in Simon (1947), March and Simon (1958), and Marschak and Radner (1972) on the acquisition and communication of information, to the exclusion of incentive issues, whereas Mookherjee focuses entirely on the ways in which hierarchy may either ameliorate or exacerbate incentive issues (especially when Hurwicz's [1973] mechanism-design approach seems to offer a centralized method for all organizational communication and decisionmaking). The Azoulay-Lerner and Hermalin chapters—on innovation and corporate governance—connect to other fields in economics, such as growth on the one hand and law and economics on the other, with Azoulay-Lerner building on themes from Knight (1921) and Penrose (1959), and Hermalin on themes from Smith (1977) and Jensen and Meckling (1976). And the Roberts-Saloner, Gertner-Scharfstein, and Gibbons-Henderson chapters—on strategy, resource allocation, and capabilities—connect to management research on strategy, corporate finance, and managerial practices, echoing Walker (1887), Penrose (1959), Chandler (1962, 1977), and Nelson and Winter (1982).

Part V considers the boundary of the firm, contracts between firms, and multifirm governance structures, with chapters by Timothy Bresnahan and Jonathan Levin on vertical integration, Francine Lafontaine and Margaret Slade on the empirics of contracting between firms, Claude Ménard on hybrid organizations, James Malcomson on relational incentive contracts, Lewis Kornhauser and Bentley MacLeod on contract law and contract economics, and Henry Hansmann on legal forms of organization. The Bresnahan-Levin and Lafontaine-Slade chapters—on vertical integration and contracting—illustrate connections between organizational economics and industrial organization (building on Coase [1937], Williamson [1971, 1975, 1979], and Klein et al. [1978]). And Ménard's chapter on hybrids—such as alliances, joint ventures, and consortia—illustrates the rich middle ground between integration and simple contracting (building on Richardson [1972]). Malcomson's chapter on relational incentive contracts is cast in terms of buyer-supplier relations but applies as well within firms and so complements our chapter on motivation (building on Mirrlees [1975/1999] and Holmström [1979]). And the Kornhauser-MacLeod and Hansmann chapters illustrate connections with the legal literatures on contracts and organizations (connecting to Alchian and Demsetz [1972]).

Finally, although much of the foregoing could be applied to organizations other than firms, Part VI explicitly adopts this focus, with chapters by Abhijit Banerjee, Rema Hanna, and Sendhil Mullainathan on corruption and by Terry Moe on government agencies. The Banerjee et al. chapter applies a mechanism-design approach to understanding both the endogeneity and the net costs and benefits of corruption, illustrating connections to economic development. In contrast, Moe's chapter informally applies ideas about organizational design and performance to understand the complexity (and, at times, seeming perversity) of government agencies, illustrating connections to political science.

What Have We Left Out?

Despite the rich set of studies contained in this volume, there are other issues and areas of research that we see as potentially (and sometimes currently) important to organizational economics but that we could not include here for various reasons.

One of the most exciting of these is econometric investigation of management practices and managers and their impact on productivity and growth in organizations (e.g., Bertrand and Schoar 2003; Bloom and Van Reenen 2007). Closely related to this are field experiments in organizational economics (e.g., Paarsch and Shearer 1999; Bandiera et al. 2011). A very large fraction of the experimental work going on in firms concerns randomized controlled experiments in enterprises in emerging markets. The vast bulk of these studies is in micro and small enterprises (e.g., Bruhn et al. [2012] or the extensive references in Banerjee and Duflo [2011]), although there is also recent work in large companies in these markets (Bloom et al. 2012). More generally, it would be interesting to have more work on the connections between economic organizations and economic development. In addition, more work relating organizations and international economics (including trade, investment, and location choices and the choice of organizational form for multinationals) would be welcome.

Another class of subjects in which we would like to promote more research involves different organizational forms. Legislatures, government bureaus and departments, the courts, political parties, clubs, cooperatives, mutuals, family firms, state-owned enterprises, charities and not-for-profits, hospitals, universities, and schools—all raise interesting organizational issues and deserve more attention than they have received. Particularly prominent in current business school research (largely in operations) is the organization and management of supply chains (e.g., Lee et al. 1997). Finally, we are only too aware that the vast bulk of the work discussed here is rooted implicitly in the institutional context of the English-speaking economies. We would very much like to see this imbalance righted.

Hopes for the Future

To reiterate, our goal in assembling this handbook is to make existing research in organizational economics more accessible to economists. We hope that several things might then follow. First, we see the prospect of a coherent field here—with topics that relate to one another and methods that cut across topics. We hope this handbook's sketch of the field will inspire discussion and elaboration of what organizational economics is and could be. Second, we see exceptional potential for several dialogues—between theoretical and empirical researchers; between research and practice; and between organizational economics, other fields of economics, and other social sciences and management disciplines. We hope this handbook will facilitate those dialogues. Finally, turning from research to teaching, we think it is possible and desirable to teach doctoral courses in organizational economics, thereby preparing new generations of organizational economists who can build on and surpass the exciting developments of the past three decades. We hope the chapters in this handbook will appear in many syllabi—as central elements of courses on organizational economics and as complements to courses on industrial organization, labor, trade, development, and economic history.

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