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Organizational Economics in the Food, Agribusiness, and Agricultural Sectors

Michael L. Cook and Peter Barry

Introduction

The past three decades have seen significant advances in the field of organizational economics. By endogenizing “institutions” into their analysis, organization economists have enriched and extended the study of economic behavior. This paper explores the dynamic process of adoption of organizational economics or new institutional economics as applied to food economics, agribusiness management, and agricultural economics. The authors view the rapid agroindustrialization of the global food system as fertile ground for adoption of transaction cost, property-rights/incomplete contracting, and agency approaches to understanding the significant changes currently affecting the sector. Numerous research centers and data collection efforts have emerged to expand the organizational economics analytical approach. This paper also serves as an introductory umbrella for the three subsequent papers which document the progress of conceptualization and empirical work in organizational economics applied to food, agribusiness, and agriculture.

Concepts of Organizational Economics

Williamson has consistently argued that organizational economics 1.) holds that institutions matter, 2.) makes institutions susceptible to analysis, 3.) differs from but is not hostile to orthodoxy, and 4.) “is an interdisciplinary combination of law, economics, and organization in which economics is the first among equals” (1996, p. 3). Others (Arrow, 1974; Jensen and Meckling, 1976; Tirole, 1988) distinguish organizational economics as a form of non equilibrium analysis, non perfect rationality, and non profit maximizing behavior relative to traditional economics. Barney (1990) posits that organizational economics is bound together by two commonalities. The first is an abiding interest in the structure, functioning and role of

organizations as opposed to solely an interest in the structure, functioning and role of markets; the second is an emphasis on the dynamic relationships between competition and organizations.

This focus on organizations, their origins and consequences, and rivalry has generated a large and complex interdisciplinary literature. This literature is divided into the original three streams of focus — transaction cost economics, agency theory, and property rights theory — and two more firm-specific subfields, the behavioral theory of the firm and resource-based/dynamic capabilities approach. A brief description of the original three allows us to place them into a context for analyzing the concept of agroindustrialization and the evolution of applied organizational economic research.

Transaction cost economics differs from neoclassical theories of the firm and traditional price analysis in six basic forms. These include 1.) behavioral assumptions, mainly opportunism and bounded rationality; 2.) unit of analysis is the transaction, not the firm, or industry, or individual; 3.) the firm as a governance structure, not a production function; 4.) property rights that are problematic and costly to enforce; 5.) discrete structural (getting basic alignments right) rather than marginal modes of analysis lend to emphasis on first order economizing rather than second order refinements; and 6.) all relevant comparisons are made with feasible alternatives, therefore the relevant criterion is remediableness (Williamson, 1996).

Transaction cost economics argues that economizing on transaction costs is mainly responsible for the choice of one form of organization over another (Williamson, 1988). Consequently, it applies this hypothesis to a wide range of phenomena — vertical market restrictions, vertical integration-disintegration, corporate governance, finance, and more generally to any issue that can be posed as a contracting problem.

Agency theory is directed at the relationship in which one party (principal) delegates work to another (agent) who performs that work. Two common problems are encountered in principal-agent relationships. The first is the “agency problem” that arises when 1.) the desires or goals of the principal and the agent conflict, and 2.) asymmetric information makes it difficult or expensive for the principal to verify the agent’s actions. The second is the problem of risk

sharing that arises when the principal and the agent have different attitudes toward risk and alternative incentive arrangements in contracts change the agent's risk position. The key ideas within agency theory are that principal-agent relationships should reflect efficient information and risk bearing costs, incentive alignments, and the contract as the unit of analysis. Given agency problems, we cannot expect a firm to function as well economically as it would if all information were shared without any cost involved or if the incentives of principal and agent could be costly aligned. This shortfall is called agency costs. Agency theory addresses problems of moral hazard and adverse selection in the principal-agent relationship, as well as the problem of risk sharing.

Traditional property rights theory using three criteria — universality, exclusivity, and transferability — analyzes the relationship between economic efficiency and property rights. Building on this neoclassical framework, Grossman and Hart (1986), Hart and Moore (1990), Hart (1995), and Barzell (1997) develop an organizational economics framework that addresses the issue of “why does ownership matter?”. Their answer postulates ownership is a source of power when contracts are incomplete. They further our understanding of enterprise ownership by introducing the concept that possession of residual control rights is the definition of ownership. Moreover, residual rights are reflected by the incidence of residual risk bearing. In financial contracting, for example, higher leverage by borrowers may induce riskier behavior, so that contracts are written yielding greater control and even eventual shift in ownership of the borrower's assets to the lender, thus protecting the latter's property rights.

As organizational economics has matured, elements of these three focus areas have increasingly been synthesized and concurrently employed to elucidate, explain and improve organizational decision making. An example is provided by the case of a large, multi-operator agricultural production firm that 1.) has an agency relationship with one or more lenders in which monitoring by lenders and signaling by borrowers are key elements of the financial contract; 2.) engages in specialty crop contract production on leased land with a fixed cash rent rather than crop shares in order to protect the firm's property rights to the premium income;

3.) has brought in-house accounting, legal, marketing, and harvesting services in order to reduce transaction costs. Interrelationships among these agency, property rights, and transaction cost elements are important to consider and measure in empirical analyses. The cost, availability, and other terms of external capital, for example, may respond favorably to the specialty crop contract, although the financial risk and tenure concerns of cash leasing and the risks provided by variable incentive arrangements could be mutually offsetting. Similarly, the in-house, transaction cost reducing services could signify a credible commitment to the process offering the production contract and provide for further reductions in credit risk by lenders. Under extreme adversity, the respective contractors could each vie for recovery of their loans, specialty crop, and wages based on the terms and legal status of the contracts.

These three increasingly mainstream theoretical schools dominate the organizational economic literature. Applying these theories to food system analysis is addressed in the next section of this paper.

Organizational Economics Applied to Food System Analysis

Barry (1999, 1993), utilizing two cases and an extended example encourages the agricultural economics profession to incorporate organizational economics concepts into its education and research programs. His arguments are consistent with Cook and Chaddad's (2000) comparative study of development and agribusiness economic approaches to analysis of coordination and motivation costs resulting from the increased economic specialization accompanying the agro-industrialization process. They also posit that organization theories would be powerful concepts to inform the debate. Examples are market power induced intra-firm strategic and structural design decisions *versus* the argument that agroindustrialization is exogenously determined and exchanges are organized by means of transaction cost minimizing governance structures.

One of the constraints of advancing these concepts into more useful analytical tools has been the challenge of empirical validation. Agency and transaction costs are more difficult to

measure than traditional production costs and encompass activities such as compiling and transmitting information, time delays caused by more inter- and intra-firm centralized decision making, maladaptation costs created by inaccurate information, and imperfect commitment costs. The remainder of this paper introduces three “critical mass” efforts in their challenging attempts to operationalize organizational economics concepts into policy and strategy applications.

The Menard-Klein paper introduces the work of the Center for Analytical Theory of Organization and Markets (ATOM) at the University of Paris, France, which has been coordinating cross-border food system analysis utilizing an organizational economic framework. Stressing discrete structural analysis to understand vertical integration and network studies the authors highlight the understanding of institutional environments as generators of the evolution of path dependent governance structures. Given the food trade policy frictions in the agricultural sector of the WTO sponsored liberalization talks, this paper lays the groundwork for why and how organizational economics might inform the forthcoming trade policy outputs.

The MacDonald, Ahearn, and Banker article contributes to this session very effectively. The authors expand on previous work regarding the economic and policy implications of agro-industrialization. They provide numerous examples of the increasing role organizational economics can play in analyzing agricultural policy issues; they highlight distinctive characteristics of the farm-household farm-business organizational relationship, they utilize components of organizational economics to inform domestic agricultural policy, and finally they cite the use of the Agricultural Resource Management Survey (ARMS) in applying organizational economics to agriculture and discuss the challenges of updating and improving the database to make it more “organizational economics friendly”. Their discussion clearly shows why agency relationships, governance structures, and transaction cost economics do not support a “one size fits all” agricultural policy. This paper will be cited often and deservedly so as the agricultural economics profession seeks conceptual frameworks and databases relevant for informing domestic agricultural and environmental policy.

The Sykuta-James article highlights the intra-firm and inter-firm decision making and coordination value of organizational economics in agrifood studies. Initially, the authors provide a brief description as to the increased utilization of organizational economic concepts as measured by AJAE and RAE keyword references over the past ten years. Additionally, the authors provide an informative literature review of organizational economics research in agribusiness comparing intra-firm and inter-firm agribusiness research. Building on their review of the literature, the authors outline a challenging research agenda for the agribusiness researcher who is addressing structural, behavioral, and economic performance changes in the food system. They complement the MacDonald *et al.* piece by calling for problem-theory-data collection systems that are more “organizational economics friendly”. They conclude with a description of the objectives and workings of a major interdisciplinary research effort which emphasizes the importance of data collection and preparation – the Contracting and Organization Research Institute (CORI) based at the University of Missouri-Columbia.

Summary

The purpose of this paper and session is to highlight the growing importance of organizational economics in the realm of applied economics and to document examples of its value in traditional agricultural economic settings. The session introduces the broad applicability and versatility of organizational economics by use of cross border institutional environment analysis, application to domestic agricultural and environmental policy making, and its effectiveness when utilized in analyzing the dynamics of intra-firm and inter-firm agribusiness decision making. Each of the papers argues that the challenges for more powerful applications and relevance is heavily dependent upon more sophisticated data development and data collection systems. The papers go beyond the “problem identification” stage to share examples of organizational models and initiatives (ATOM, CORI and USDA) that provide “solutions” to the application of organizational economics in food, agribusiness, and agricultural economics research.

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