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Social Capital, Trust, and the Agribusiness of Economics

Paul N. Wilson

Economists, including agricultural economists, have a long history of recognizing the importance of the behavioral foundations in decision making while ignoring these observable human dimensions in their economic models. The economics of social capital and trust, two important human characteristics influencing decisions, have captured the attention of economists in recent years. Recent empirical work demonstrates that social capital and trust considerations are prevalent and economically significant, especially in business. Trust alters the terms of trade, generates decision flexibility, reduces transaction costs, and creates additional time resources for management.

Key words: economics of trust, governance mechanisms, social capital

Introduction

Economists ... see the market from beyond the market, not as the marketer sees it, who participates in it, but as an external spectator sees it, who views it from without. Therefore, they see only the bare outward show which alone can disclose itself to an unimplicated observer. They see the bare outward behavior and are blind to the norm which animates it and regulates it and confers upon it, for the persons who enact it, its social meaning.

—J. F. A. Taylor (1966, p. 103)

Criticisms by economists and other social science colleagues of our mainstream economic theory of the business firm reveal both relevant insight and narrow naiveté on the part of the critics (Ansoff; Joskow; Mirowski; Kay). Economics, including agricultural economics, indeed has moved away from in-depth study of “marketers.” The identity, or the humanness, of agents in a transaction is assumed away in most of our analytical models. Market phenomena and behaviorally sterile representative firms have been our teaching and research foci. Yet our conventional analytical assumptions of perfect information and narrow self-interest are suspect when held up to the microscope of observed human behavior. Even our holy grail of Friedmanite predictive power goes largely unvalidated when compared to the culture of replicability in the physical sciences.

In our defense, the economic way of thinking and our standard neoclassical tools have proven to be valuable contributors to policy analysis for decades. Recent advances in

Paul N. Wilson is professor, Department of Agricultural and Resource Economics, the University of Arizona. This article is a revised version of the Presidential Address to the Western Agricultural Economics Association annual meeting, Fargo, North Dakota, July 12, 1999.

This research was supported in part by a grant from the USDA's National Research Initiative Grant Program, “Markets and Trade.” Presentations by and/or conversations with Frank Dooley, Wayne Howard, Mike Mazzocco, Chris Peterson, Lindon Robison, and Gary Thompson helped shape the content of this paper. Constructive comments by two reviewers improved the final product. These colleagues, however, are not responsible for any remaining errors of omission or commission.

economic theory also have generated useful theoretical insights on organizational and managerial behavior. In the last 15 years, game theory, transaction costs economics, and the economics of strategy have moved the economics profession toward economic analysis where the identity of the agents in a transaction matters (Williamson 1985; Milgrom and Roberts; Besanko, Dranove, and Shanley). Slowly we are recognizing that the economics of business organization and management is not faceless. Identity-based economics presents our discipline with the opportunity to establish an even stronger scientific foundation of business, including agribusiness. These increasingly diverse economic tools, based on rigorous economic thought and analysis, are recognized by some as a strength of our discipline rather than a weakness of our scientific enterprise.

Should economists care about the humanness of their science? Should our science concern itself with the complicated behavioral foundations of economic choices under constraints? If we answer these questions in the affirmative, then we are challenged to understand what “marketers” or business managers do with their scarcest resource, their time, and how they make (or how they should make) their decisions. Over his long career of studying business managers, Kotter discovered that human interaction dominated their workday. Managers focused on establishing social connectedness with their employees. Marginal allocative decision making was ubiquitous and largely taken for granted. Time allocation decisions emphasized working with and through people to accomplish business goals.

This human dimension of economics was not lost on Adam Smith or on more contemporary economists (e.g., Sen). In his visionary 1890 work, *Principles of Economics*, British economist Alfred Marshall noted:

Economics is a study of men as they live and move and think in the ordinary business of life. But it concerns itself chiefly with those motives which affect, most powerfully and most steadily, man's conduct in the business part of his life. Everyone who is worth anything carries his higher nature with him into business; and, there, as elsewhere, he is influenced by his personal affections, by his conceptions of duty, and his reverence for high ideals (p. 14).

Ronald Coase's significant and well-known 1937 contribution, “The Nature of the Firm,” provided an analysis of why firms exist at all. Coase concluded:

A firm, therefore, consists of the system of relationships which comes into existence when the direction of resources is dependent on an entrepreneur (pp. 41–42).

Kenneth Arrow, in his 1972 article, “Gifts and Exchanges,” extended this definition by adding that trust in these relationships is critical for efficient transactions:

Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time (p. 357).

Finally, David Kreps, in his 1990 treatise, “Corporate Culture and Economic Theory,” has taken the above insights and redefined the firm as

... an intangible asset carrying a reputation that is beneficial for efficient transactions, conferring that reputation upon whoever currently owns the asset (pp. 94–95).

Under Kreps' definition, the firm becomes a reputation bearer, with the reputation based on a foundation of enduring relationships. In this formulation, the development

and maintenance of enduring business relationships represent a focal point or mode of behavior for the agribusiness firm.

I believe the economic theory of the agribusiness firm resembles a rope with four intertwined conceptual cords or governing mechanisms: markets, contracts, hierarchies, and social capital. These cords complement each other, giving the “rope” explanatory and predictive strength on which we hang our economic analysis. Here I concentrate on the fourth strand, social capital—and more specifically trust—that supplies cohesion to the other governing mechanisms to create internal and external organizational efficiency for the agribusiness firm.

Why is this fourth strand important? Trust complements the other mechanisms by reducing uncertainty in markets, facilitating the management of unforeseen contingencies in commercial contracts, establishing credence in organizational hierarchies, and creating valuable time resources that can be productively allocated to the logistics of reaching business goals.

This paper is organized as follows. First, the concepts of social capital and trust are defined. A strong critique of these concepts is then offered from the point of view of mainstream neoclassical economics. This is followed by an evaluation of empirical evidence for the existence and importance of social capital and trust in commercial transactions. Finally, an attempt is made to answer the question “So what?”

Social Capital

Social capital is “the potential benefits, advantages, and preferential treatment resulting from one person or group’s sympathy and sense of obligation toward another person or group” (Social Capital Interest Group). Referred to as organizational capital in the resource-based theory of the firm, social capital is the consequence of complex human interactions (Barney and McEwing). In the commercial business sphere, social capital changes the level and terms of transactions, internalizes externalities, and reduces the cost of contractual obligations.

Our conventional neoclassical theory of the firm generally assumes no interdependencies affecting transactions or exchanges. Critics of this conventional formulation argue that the norm of mutual interest and reciprocity should be embedded into our economic models (Coleman 1984, 1988; Putnam 1993, 1995). Economic transactions, according to Granovetter, are embedded in a system of interpersonal relationships and, despite the calculus of self-interest, these economic exchanges are conditioned by the social system in which they occur.

Like other economic assets, social capital requires investment, it is not “*mana* from heaven.” Social capital has economic value. This value can depreciate, particularly if it is not continuously maintained. Also, social capital can be transferred from one organization to another through merger and transfer of employees carrying with them their business relationships.

Social capital can be formulated as obligations, expectations, and trustworthiness. Efficient and effective information channels among suppliers, manufacturers, and retailers represent a form of social capital (Kumar). Norms and effective sanctions within the commercial sector also represent social capital. For example, the operations of the fresh produce industry in North America represent a significant investment in social capital

by individual companies and the sector as a whole (Wilson, Thompson, and Cook). Close social networks and an effective compliance agency [i.e., the Perishable Agricultural Commodities Act (PACA)] combine to create an efficient distribution system for highly perishable products.

Social capital is not human capital in the strictly Stigler-Becker sense. Human capital emphasizes human skills and knowledge embedded within the individual. Social capital exists in a matrix or network of social relationships. Both human capital and social capital can be measured as stock variables and augmented with flows—relational investments.

Social capital reduces transaction costs (North). Search costs, the costs of finding information and business partners, are reduced. Communication between business associates over time and space is facilitated. The time invested in ex ante and ex post contract negotiations is reduced. Finally, the efforts devoted to policing and enforcing agreements are minimized. In summary, social capital is a legitimate factor of production, either substituting for another factor of production (e.g., lawyer hours) or complementing the productivity of other assets, such as labor.

Trust

Like the broader concept of social capital, the difficulty of defining and operationalizing trust in commercial transactions has led to more paralysis than analysis in economics (Gambetta). In recent years, however, economists and organizational theorists have begun to analyze the role of trust in business more rigorously. Repeated observations of the prisoner's dilemma, communities of interest, and verbal contracts in the business world motivate this effort. Also, the recognition that economic agents are not blessed with unlimited ability and time to map all possible contingencies in a transaction or contract has led to this renewed interest. An entire recent (1998) issue of the *Academy of Management Review* is devoted to the role of trust in society, principally in economic relationships.

Sabel defines trust as "... the mutual confidence that no party to an exchange will exploit the other's vulnerability" (p. 1133). Lyons and Mehta state that trust, a social relation between two parties, exists when

... each party orients her behavior in whole or in significant part to her expectations of the behavior of the other. Trust is a meaningful concept for the parties to a social relation if and only if at least one party is exposed to an element of behavioral risk (p. 240).

Common themes in these definitions are the existence of two parties, a relationship between the two parties, and potential vulnerability for one or both parties in the exchange. This assessment of information and uncertainty is common in all commercial transactions.

Generally, economists have assumed that trust either exists in a transaction or it does not. Numerous authors recently have pointed out that trust is not only present in various forms, but that a continuum of trust relationships exists in commercial transactions (table 1). Trust can be developed through a process of exchanges, through personal identification with the other agent, or through an organization established to minimize

Table 1. Selected Classifications of Trust Relationships

Author(s)	Trust Classification/ Hierarchy	Description
Zucker (1986)	Process-based	Developed through repeated transactions where a credible reputation evolves.
	Characteristic-based	Tied to the identity of a person or organization with shared values, beliefs, race, gender, family, etc.
	Institutional-based	Based on the existence of formal organizations with responsibility for professional, business, and/or government regulation.
Sako (1992)	Contractual	Built on shared moral norms of honesty and promise-keeping.
	Competence	Shared understanding between parties of appropriate professional conduct and acceptable technical and managerial standards.
	Goodwill	Based on a consensus among exchange parties on what is fair in their transactions.
Shapiro, Sheppard, and Cheraskin (1992)	Deterrence-based	Developed through repeated transactions where the reputation of the firm is held hostage.
	Knowledge-based	Established on regular communication and the development of personal relationships that produce dependability.
	Identification-based	One party in a transaction fully internalizes the preferences of the other party, foregoing opportunism.
Barney and Hansen (1994)	Weak	Relationship between exchange partners when the quality of goods and services can be evaluated at low cost, transaction-specific investments are low, and vulnerabilities are limited.
	Semi-strong	Established through the use of formal and informal contractual devices and reputation-based governance mechanisms.
	Strong	Shared values, standards, and principles of behavior are internalized by both trading partners, imposing high costs on opportunistic behavior.
Lyons and Mehta (1997)	Self-interest	Based on calculative behavior where incentives are created intentionally to manage behavioral risk.
	Socially-oriented	A shared commitment to certain moral or ethical principles, emphasizing how decision makers are bound together rather than calculative behavior.
Rousseau, Sitkin, Burt, and Camerer (1998)	Calculus-based	Trust is developed when one of the parties in an exchange perceives that the other party intends to perform in a beneficial manner.
	Relational	Repeated interactions between agents over time produce positive expectations concerning the reliability and dependability of the parties.
	Institutional	Organizational and cultural supports (e.g., legal system) which produce confidence that vulnerability in exchanges will not be exploited. Similar to social capital.

vulnerability in exchanges. Depending on the degree of opportunism, a form of trust exists in all commercial transactions.

Like other productive assets, trust can be invested in, trust has value, trust can be lost or lose value, and trust is transferable to other relationships through reputation. In addition, trust is a time-dependent asset. Trust relationships evolve over time. Figure 1(a), based on the work of Barney and Hansen, and Lewicki and Bunker illustrates this process. Weak trust, or that level of trust often found in most commodity exchanges where information is near perfect and vulnerability is limited, may be the predominant form for a business at any point of time. Over a period of time, some of these weak trust relationships may evolve into semi-strong trust, the use of formal or informal contracts, because asset specificity has created vulnerability on the part of at least one party in the exchange. Some of these semi-strong relationships in turn may evolve into strong form trust, as defined by Barney and Hansen, where shared values and beliefs discourage opportunism even when one or both of the exchange partners is in a position of vulnerability. At any point in time, a business firm represents a portfolio of trust relationships. This portfolio of exchange relationships evolves continually.

Rousseau et al. characterize institutional trust, created by ex ante deterrents or supports, as a constant factor or "bandwidth" over time [figure 1(b)]. Organizational and societal factors embedded in transactions support the development and maintenance of calculus-based and relational trust. The authors conclude that a "rich diversity" of trust will exist between two parties at any given point in time. In addition, the trust mix varies over the life of the relationship.

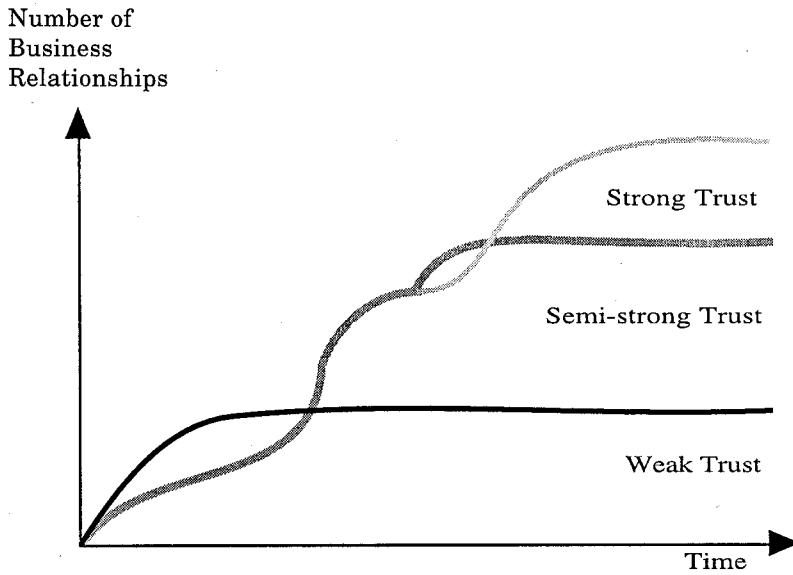
A Critique of Social Capital and Trust

In 1980, long before Coleman's and Putnam's often cited works on social capital, Yoram Ben-Porath published "The F-Connection" (i.e. families, friends, and firms) paper in a rather obscure demography journal. This potentially seminal contribution to economics analyzes the importance of relationships and human identity in commercial transactions. As reported by Griliches, this earliest of social capital work received a "cool reception" by an editor of a mainstream economics journal, even after a favorable referee report, because Ben-Porath's research provided useful insights but no clear, replicable model. According to Griliches, the rejection of this contribution within the economics profession was unfortunate because the issue of how social capital endures or collapses is of "great importance" in our economic lives.

The Ben-Porath story illustrates the general skepticism within the economics profession toward proposals directed at the inclusion of social capital and trust in mainstream economics (Gardner; Solow; Williamson 1993). Much of this skepticism is well placed and well deserved. As a colleague of mine often quotes, "Anecdotal evidence is an oxymoron." The social capital and trust literatures until the last five years surely have provided the profession with more rhetoric than fact. Economists should be able to tell the policy maker "what will happen if . . .," and economists working in the social capital arena have failed to provide a contribution associated with this professional responsibility.

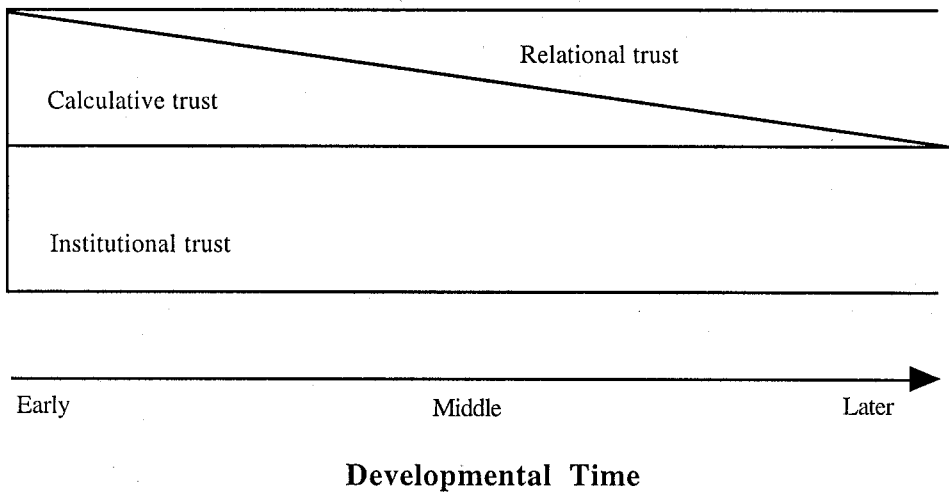
A first warning by the skeptics directed toward those economists interested in social capital theory is a reminder that calculativeness is the dominant motivation in economic

(a) Evolution of a trust portfolio



Sources: Adapted from Lewicki and Bunker (1996), and Barney and Hansen (1994).

(b) A business relationship over time



Source: Rousseau, Sitkin, Burt, and Camerer (1998).

Figure 1. Trust and time

transactions. Noncalculative behavior may be appropriate study material for sociologists, but not for serious economists. There is no need for a new paradigm in economics. Our neoclassical theory and its related econometric tools serve society well. Coercion and self-interest perform well in describing business management behavior. Incentives and rules can be used to generate cooperation and collaboration without an appeal to social capital and trust.

Critics also warn that other social sciences dilute the analytical power of economics. Sociology does not have a theory with a driver or central motivating force such as self-interest. Therefore, sociology is an immature, multi-paradigm social science with little predictive power. This second warning raises the Occam's razor issue of losing scientific standing by incorporating complexity into economic models. Behavioral simplicity is preferable to human complexity that leads to scientific obscurity.

Finally, critics categorize work in social capital and trust as scientifically sterile since these concepts are incapable of generating falsifiable hypotheses about economic behavior. Without an operational measurement of trust, how can its incorporation into economic models be tested as an improvement in a positive or normative sense? Economics needs proof, not insights that are not testable. To quote Solow in his review of Fukuyama's book:

I believe that the sorts of things that Fukuyama wants to talk about are more important than my colleagues in economics are willing to admit. I would rather they were discussed imprecisely than not discussed at all. But imprecision is not a virtue, and 'for example' is not an argument. Academic social science is often narrow and boring, but it tends to root out vagueness and inconclusive argumentation (p. 39).

Empirical Evidence from Business

Economists have begun to answer, at least partially, the theoretical and empirical doubts associated with the concepts of social capital and trust. The Social Capital Interest Group (SCIG) at Michigan State University is leading the efforts to reduce the imprecision surrounding social capital in the agricultural economics profession (Schmid and Robison). They demonstrate that commercial interdependencies can be incorporated successfully into our standard optimization models. Empirically, Siles, Robison, and Hanson (1994a, b) interviewed bankers and bank customers to evaluate the strength of the social relationships between these agents. They found that social capital makes a positive difference in receiving a loan if your financial records show that you are a marginal borrower. Social capital also substituted for information in how the bankers evaluated their customers. On the customer side, the authors discovered that customers were less likely to switch banks for higher interest rates on their deposits if they had friendly relationships with their bank's employees. Terms of trade were influenced by the identity of the parties in these exchanges.

In his review of Fukuyama's book, Solow laments that accurate measures of social capital appear distant in our scientific future. Knack and Keefer tackle this frustration by econometrically evaluating data from the World Values Survey of thousands of respondents from 29 countries. By developing an indicator for TRUST and an index for CIVIC, the authors produce "the strongest evidence to date that trust and civic cooperation have significant impacts on aggregate economic activity" (p. 1283). Trading agents

in higher-trust countries have less need to invest in protection from opportunism. Formal organizations that effectively protect property rights, thereby creating trust, create an institutional environment for stronger economic performance. However, association membership is not positively correlated with economic performance, but the homogeneity of population is. Interestingly, Knack and Keefer found a negative relationship between the number of law students and the level of TRUST in a society.

Using the same World Values Survey data set, another group of researchers tested the hypothesis that trust is needed to support cooperation in large organizations, including business corporations (La Porta et al.). Testing several of Fukuyama's hypotheses, the authors found that an increase in trust raises participation in professional associations, in civic activities, in the efficiency of government, and in the economic performance of large corporations. In addition, the authors found that trust in large firms substitutes for another governance mechanism, the family. In spite of economic skepticism associated with the concept of trust, this statistical analysis of cross-sectional data holds up well to the skeptic's yardstick of empirical relevance.

Turning to the business manager more directly, Sako reported on the economic importance of trust relationships by analyzing 1,415 survey responses from component suppliers in the Japanese, American, British, German, and Latin Catholic Europe auto industries. Sako found that higher levels of trust were positively correlated with economic performance among the suppliers. Goodwill trust was critical in this manufacturing culture because contracts were incomplete and all contingencies could not be foreseen. Trust was enhanced through information sharing and continuous interaction.

Burchell and Wilkinson interviewed 14 customer firms and 48 suppliers spread evenly over manufacturers of kitchen furniture and mining machinery in Germany, Britain, and Italy. Managers reported in the survey that trust has become an important business tool due to the decline of trust in the economic environment. Business relationships built on trust reduced risk and improved economic performance. Trust is simply defined by many of the respondents as "doing what you say you will do." The authors present an impressive statistical overview of the meaning of trust, strategies for establishing trustworthiness, how firms decide to trust other firms, and ways to deal with untrustworthiness. This empirically rich data set reveals a diverse system of trust relationships internal and external to the firm.

Wilson and Kennedy, in an empirical test of Barney and Hansen's conceptual framework, found a varied system of trust relationships in six agribusiness firms. Semi-strong form trust dominated the economically most important relationships with suppliers, employees, and customers. Strong form trust did exist in these firms' internal and external business transactions, but was not as important as formal and informal contracting. Weak form trust, generally associated with market transactions where little opportunism exists, was dominant in only one of the six firms. These six agribusiness firms exhibited a diverse set of governance mechanisms, an empirical finding supportive of the conceptual literature concerning trust portfolios.

The preceding literature creates a strong case for the existence and importance of trust and social capital in business relationships. However, the literature fails to present an empirically replicable model of how trust is produced and how trust reduces transaction costs. Although Bhattacharya, Devinney, and Pillutla have derived a mathematically precise definition of trust, empirical applications to business decisions are distant. Operationalizing trust in our standard analytical tools remains in its infancy and a welcome challenge for selected economists.

So What? Implications for Agribusiness Economics

Social capital theory, rather than a new economic paradigm as some claim, represents a challenging and relevant conceptual tool for economic analysis. Social capital considerations complement other economic frameworks. As noted in the introduction, the theory of the agribusiness firm is a composite of these models rather than a single model (e.g., production theory). Failure to recognize this portfolio of governance mechanisms blurs our understanding of decision making at the firm level.

Agribusiness firms are a system of relationships between people. Trust provides the cement or cohesion that holds these relationships together in support of business goals. Trust-based information sharing, within and outside the firm, produces first-mover competitive advantages for the business. Trust also reduces uncertainty in business transactions. Assurance that the other party to a contract will act honorably (i.e., without opportunism) under unforeseen circumstances not covered by the contract creates economic value for the firm. As noted by Milgrom and Roberts, "In a world of costly and incomplete contracting, trust is crucial to realizing many transactions" (p. 139).

Time is the agribusiness manager's scarcest resource. Trust produces time by freeing time resources from *ex ante* and *ex post* contracting activities. This freed time is reallocated to economically productive activities. Unfortunately, time as a productive resource has received little attention in our agribusiness economics literature.

Several challenges emerge from this analysis for agribusiness economists. First, if we intend to understand the decision maker, agribusiness economists should redouble our efforts in primary data gathering at the firm level. We cannot be "unimplicated observers." Business surveys are a dying art in our profession. Markets, especially national and international markets, are easier and cheaper to study. But aggregate econometric analysis produces limited decision value for the individual agribusiness manager. Managers need detailed insights concerning their competitors' strategic behavior. They also demand a keen understanding of specific markets, often down to the neighborhood or household levels.

Primary data at the managerial level implies personal interviews. Personal interviews imply personal contacts. Personal contacts imply personal relationships with agribusiness managers. This form of social capital differentiates agribusiness researchers from many of their departmental colleagues and business school faculty (Westgren and Zering). Firm-level data and information lead to a more intimate understanding of behavior underlying aggregate market analysis. Both types of economic analyses produce value for society.

The existence of trust will influence the firm-level data used in our models. We need to be vigilant when social capital changes the terms of trade. For example, our traditional enterprise budgeting activities report and use input prices gathered from suppliers and extension specialists. A troubling outcome of some budgeting activities is the historically poor return on agricultural crops reported in these budgets. In the case of my state, these returns to all assets have been so poor over the last 20 years that only a fraction of the 300,000 acres of cotton in Arizona should be planted each year. One explanation for this budgeting pessimism are the biased terms of trade reported in the published budgets. If the price paid to a supplier is relationship based, input costs may decline over time as the number of transactions increases. So returns above variable

costs may be much higher than our estimates. Likewise, net price per unit sold may increase as well due to fewer returns and favorable timing of payments.

Secondly, agribusiness economists should revisit Simon's bounded rationality models of the firm (Simon; Simon et al.). Decision making under time constraints captures the reality of day-to-day business operations more accurately than our traditional time-less optimization models. Models of time-bounded economic efficiency with trust as a productive input could create a more realistic framework for optimization behavior.

Allocative efficiency has driven most of our teaching and research in agribusiness economics. Successful agribusiness managers are outstanding marginal analysts. However, they struggle with organizational efficiency issues of how to design the firm internally and structure external relationships to reach their business goals. Most of their business day is devoted to facilitating the work of their employees, searching for ways to organize and operate that reduce costs and/or create markets. As economists tackle the changing structure of global agribusiness, we will recognize that social capital and trust, as cohesive forces, form an important part of the core of modern organizational architecture.

Finally, the emphasis social capital and trust place on identity-based transactions creates an important bridge to our business school colleagues, an intellectual path more traveled by some agribusiness economists than others at this time. Economics is the integrative discipline for the science of business. Not only finance, but also management, marketing, advertising, processing, human resources, strategy, and operations have an economic core. Economics permeates everything business executives do. But academic collaboration across colleges by agribusiness economists requires the recognition that economic relationships matter in firm-level decision making. Research and collaborative teaching in these traditional business fields should be encouraged, not dismissed as "not economics."

We are challenged to rebuild the identity of our economic agents in our classroom models and research methods in a rigorous fashion. The risk of scientific obscurity may yield the surprising return of greater scientific relevance and predictive power.

[Received August 1999; final revision received February 2000.]

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