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Trustworthiness as an Economic Asset☆

ABSTRACT: The evaluation of trust in economic decision making remains on the periphery of mainstream economic analysis and teaching. Yet business managers use trustworthiness in daily exchanges to create competitive advantages for their firms. An exploratory empirical test of Barney and Hansen's three levels of trust (weak, semistrong, and strong) and Lewicki and Bunker's portfolio of governance mechanisms revealed that strong-form trust exists in day-to-day business relationships along with other governance mechanisms. Identity-based transactions were more prevalent than were weak trust market exchanges in important economic transactions.

Trust is an important lubricant of a social system. It is extremely efficient; it saves a lot of trouble to have a fair degree of reliance on other people's word (Arrow, 1974, p. 23).

Trust is at the root of any economic system based on mutually beneficial exchange. If a significant number of businesspeople violated the trust upon which our interactions are based, our court system and our economy would be swamped into immobility (Greenspan, 1999).

INTRODUCTION

In the last decade, after nearly 30 years of neglect, there has been renewed interest in trust as an important economic determinant of business success (Macaulay, 1963). A trustworthy identity, it is argued, is not only valuable information in an

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exchange but can be transformed over time into an economic asset producing value for the firm. The business' reputation may be more important for sustained profitability than the firm's production technology (Sen, 1993). Yet skeptics in the academic and business communities have questioned the empirical validity of trust or social capital as useful decision variables or management concepts (Williamson, 1993; Gardner, 1995). Our analytical models of transactions between nameless people and firms have served economists well, according to these critics. Trust only has a peripheral and minor role to play in an economy characterized by self-interested calculativeness.

Recent business management literature has taken exception to identity-less exchanges. Michalos (1990) argued that trust is an attitude that allows decision makers to be vulnerable to harm in the interest of a perceived benefit. This risk-taking lubricant sustains the workings of a market economy. In the world of work, managers depend on trust continuously in their day-to-day decision making, according to Shapiro et al. (1992) where trust-based decisions are the rule rather than the exception; a "treachery can pay" attitude exists in business but is not dominant. Fukuyama (1995) claimed that countries with higher levels of trust are more competitive in the global economy characterized by uncertainty. Trust is a risk management tool, reducing the interaction costs of doing business and creating a strategic advantage for firms within a country. The general business sector has discovered that trusting employees (Handy, 1995), suppliers/buyers (Kumar, 1996), and alliance partners (Nooteboom et al., 1997) leads to competitive advantages that outweigh potential risks associated with opportunism (Williamson, 1985).

A more volatile competitive environment for agribusiness has created renewed interest in firm-level risk management (Boehlje and Lins, 1998). When sources of risk are analyzed and management responses proposed, the prevalence of relationship-centered challenges and opportunities is striking. In Boehlje and Lin's (1998) taxonomy of risks facing agribusiness firms, one half of the risk sources contained identity-based relationships where trust could serve as a governance or management tool to reduce the risk associated with that relationship.

We argue in this article that trust is a productive, economic asset for the business firm, not unlike information and knowledge, which appreciates in value through use. Using an exploratory, multiple-case study research design, we discover that selected agribusiness managers use a portfolio of governance mechanisms, including strong-form trust. A well-managed portfolio reduces transaction costs and creates competitive advantages for these firms. These preliminary results also support greater use of game theory, contract design, hierarchy analysis, and social capital in our agribusiness classrooms and research programs.

TRUST AS AN ASSET

Sabel's (1993) notion of trust centers on the mutual confidence that parties to an economic transaction will not exploit one another when one or both of the parties are vulnerable to opportunism. This mutual assurance directed towards economic behavior develops over time through daily observations. A shared understanding develops to the point that short-term economic interests lose their absolute motivational authority in decision making. A sense of duty and mutual dependence grows stronger, thereby promoting a business environment of risk taking and entrepreneurship under uncertainty.

Kreps (1990) extends this notion of trust as a tool for managing the unforeseen to a theory of the business firm centering on reputation as the defining characteristic of the organization. Emerging from noncooperative game theory, this theory of reputation relies on the empirical reality of contingencies in daily business life. Successful firms adapt to unforeseen events efficiently and competitively. Often decisions made under uncertainty and time constraints rely on a principle or focal point to guide the choice. Trustworthiness can serve the role of a guiding decision principle. So a corporate culture develops around a trust-based focal point; it is observable by others, and a reputation develops. In Kreps' (1990) design, the business firm is not a production function nor a governance structure, but rather an intangible object bearing a trustworthy reputation.

Trustworthy behavior is observable in economic transactions: repeated transactions reveal the firm's focal point, and a reputation is formed. Burchell and Wilkinson, (1997) noted that firms with a reputation that they "do what they say they will do" reduce transaction and monitoring costs for their trading partners. These lower costs are not inconsequential, as revealed in the willingness of these trading partners to pay slight price premiums and work out disagreements on a mutually satisfactory basis to maintain the beneficial relationship.

Incomplete contracts predominate in business. A mutual understanding of a trustworthy reputation creates a trading environment that handles ex post facto contingencies efficiently and effectively. Contracting parties place value on the knowledge that ex post facto negotiations will be handled fairly, quickly, and without the threat of holdup.

The presence of trust creates value for the firm because the firm, with a high level of assurance, can make decisions today that will not be transacted until a later time (Zajac and Olsen, 1993). Increased flexibility in volatile market conditions increases the competitiveness of the business in economic upturns and downturns. First-mover business commitments and financial investments can be made in search of economic rents with a high level of assurance that future commitments will be honored.

But is trustworthiness an economic asset? Generally we refer to assets as resources that create benefits for the firm. Asset value is measurable, in most

cases, and this value depreciates over time. Assets have an opportunity cost and complement or substitute for one another. Even unidentifiable intangible assets, such as goodwill, can be purchased, amortized, and sold (Welsch et al., 1996). One determinate of goodwill is reputation, and it is valued, along with the other goodwill contributors, as the present value of the expected future excess earnings of the firm. Yet, an unidentifiable, intangible asset is generally not recognized in accounting records unless it has been paid for in an arm's length transaction.

Contrary to claims by skeptics, the value of trust, or its "worthwhileness," can be measured in business transactions. Dasgupta (1988) uses simple game models to illustrate this economic value. He argued that trustworthiness is similar to other assets, such as knowledge and information. However, economists have invested so little time in measuring and understanding trust that this asset remains on the periphery of mainstream economics.

TRUSTWORTHINESS AND COMPETITIVE ADVANTAGE

The culture of a firm is largely determined by the values and beliefs of its past and present owners and employees, particularly its board of directors and management. The importance of trust relationships will vary within and across firms because of this historical human diversity. In fact, a competitive advantage associated with trust can only be sustained when the reputation of the firm is not easily reproduced by other firms, that is, it is not easily imitable (Barney, 1986). The inability to imitate corporate cultures produces, in part, the heterogeneity in organizational structure and performance and the opportunity for a trust-based competitive advantage.

Recognizing that some form of trust exists in all economic transactions, Barney and Hansen (1994) attempted to categorize three trust relationships that are observable in business transactions. They argued that weak-form trust is evident in exchanges with limited opportunity for the exchange partners to take advantage of one another. Price discovery is nearly costless; quality can be easily evaluated; little time must be spent in the transaction; and "customer satisfaction is guaranteed." Most day-to-day market exchanges fall into this category. Challenges associated with opportunism, holdups, moral hazard, and adverse selection are minor.

Semistrong-form trust, according to Barney and Hansen (1994), is evident when a formal or informal governance mechanism exists to facilitate exchanges when the potential for opportunism is present. Formal forms of governance, such as contingent claims contracts, sequential contracting, and various forms of alliances, discourage opportunism. Informal forms of governance would include a market for reputations and social networks that create incentives for compliance over time.

Strong-form trust exists between two parties when they know that opportunistic behavior would violate a commonly shared standard of behavior. In this case the

firm has a focal point that does not require supporting governance mechanisms to reduce uncertainty in the exchange. Exchange partners are trustworthy because of who they are and the business values they share. Parties to a transaction look after the best interests of each other.

Barney and Hansen (1994) speculated that strong-form trust may be rare in the economy and, therefore, represents a source of strategic advantage for businesses successful in locating other strong-form trust partners:

While the number of strong form trustworthy exchange partners in a particular segment of the economy is ultimately an empirical question, it seems like a reasonable guess that strong form trustworthiness in at least some segments of the economy is probably rare, and thus (assuming exchanges with other strong form trustworthy exchange partners are developed) at least a source of temporary competitive advantage for strong form trustworthy individuals and firms. p. 186)

Other authors have not chosen to “guess” about the empirical importance of trust relationships in business. Ottati (1994) found that trustworthiness was an important part of personal capital in industrial districts where trust substituted for financial collateral in loan applications. Burchell and Wilkinson, (1997) quantitatively and qualitatively evaluated the role of trust in 60 firms in Britain, Germany, and Italy. They found evidence to support Arrow’s (1974) claim that trust is an important social lubricant across businesses in these three countries. We now explore the empirical reality behind Barney and Hansen’s (1994) “reasonable guess.”

RESEARCH DESIGN: A MULTIPLE CASE EXPERIMENT

As agricultural businesses consolidate and industrialize, case study research becomes an increasingly useful tool for exploring the “black box” of organizational structure and managerial decision making within the firm (Sterns et al., 1998). Analysis of human interaction where and when identity matters is facilitated by the case study method.

Yin (1994) noted that case studies are analogous to experiments in the physical sciences. Experiments are helpful in testing existing theory and developing new theory. Case studies, according to Yin (1994), are not capable of producing generalizable results to populations of business firms. Rather, case studies improve our understanding of theory. In this experimental vein, we proceed to test Barney and Hansen’s (1994) conceptual model of trust relationships in business.

We selected six relatively small agribusiness firms in Pima and Pinal Counties in southern Arizona as experiments. The first firm is a retail supplier of high quality plant material to homeowners and apartment residents in urban Tucson. The second firm, a wholesale plant nursery, grows and distributes plant material to retail nurseries and landscape contractors throughout Pima County. The third

Table 1. Trust Categories for the Agribusiness Firm (Adapted from Barney and Hansen, 1994)

Trust	The confidence that any vulnerabilities you might have in a market exchange will not be exploited by the other party. The certainty that you will not be taken advantage of by the other business or individual.
Weak trust	Exchanges where there is limited opportunity for one party to exploit the other. Neither party is vulnerable; the quality of the goods and services can be evaluated at low cost, and no money or time needs to be invested in contracts. For example, highly competitive product markets will be a form of weak trust where both parties win in an exchange. Examples would be buying gasoline for your car; buying office supplies; and hiring minimum-wage, temporary workers.
Semistrong trust	Exchanges where vulnerabilities exist but you are protected by a formal or informal contract, by your power to leverage the other party's reputation if he or she fails to comply, or by membership in a governing organization that will enforce compliance. For example, you may sign a contract or verbalize a contract to deliver a certain amount of product to a customer or accept delivery of a product from a supplier. Or your dominant economic position in the industry may be a threat to a supplier or buyer if they fail to comply with an agreement—you could destroy their reputation in the industry. Or an organization guarantees compliance with agreements by alerting members to businesses in default or arrears, and in some cases, fining these "cheater" firms.
Strong trust	Exchanges where vulnerabilities exist but you are protected by a set of values, principles, and standards of the other party that have been internalized by that individual or firm. Any exploitation of your vulnerabilities would be against the values, principles, and standards of behavior of the other party. Although there is opportunity for cheating, business is conducted irrespective of the existence or nonexistence of any contract, enforcement mechanism, or policing organization. For example, loyal employees in responsible management positions look after the best economic interests of the business even when there may be some personal incentive to behave otherwise. Or a supplier tells you about price discounts even if it may not be in his best economic interests to do so. Or a buyer helps you by taking excess inventory off your hands.

firm, a rural dairy farm, milks 1,550 cows two times a day, supplying milk to the Phoenix metropolitan area. A 2,000-acre cotton farm was the fourth business selected. Fertilizer, insecticide, and herbicide are the principle products sold to local farmers by the fifth firm, a chemical supply business. Finally, our sixth firm, a beef cattle feedlot, purchases dairy calves and raises them to be sold as replacement heifers or veal calves. The feedlot averages 1,800 animals in inventory during the year.

The research design focused on the one-way trust relationship between the owner/operator of the business and the firm's employees, customers, and suppliers.

Interviews were scheduled, and Table 1 was mailed to the owner/operator 1 week in advance of the interview. The owner/operator of each business was interviewed for a minimum of 1 hr, with some interviews running over 2 hr. We

served as the interview team. After discussing the role of trustworthiness in their operations and the definitions in Table 1, the owner/operators were asked to select the type of trust that characterized their economic relationship with employees, customers, and suppliers. Trust was distributed over a five-point scale, with weak-form trust = 1 and strong-form trust = 5. A trust level was selected for the seven most important employees, customers, and suppliers. Importance was defined as the economic revenue or cost associated with that individual or firm. After the ranking exercise, the owner/operators discussed the reasons for their rankings.

With this experimental design we performed a preliminary empirical test of Barney and Hansen's (1994) three forms of trust. Are these forms of trust understood by business executives? Do they have meaning in their day-to-day operations? Do all three forms exist simultaneously? If so, what is the distribution or mapping of trust across business relationships? And finally, do these maps vary by business, and if so, how do they vary and why?

RESULTS: THE NATURE AND INCIDENCE OF TRUSTWORTHINESS

Owner/operators experienced little difficulty understanding the types of trust outlined in Table 1 and during the interviews quickly applied them to their business operations. These small business executives spoke freely, and in some cases passionately, about the role of trustworthiness in their business relationships. Trustworthiness is a business asset, according to these executives, providing competitive advantages to the firm. Fig. 1 captures the nature of these advantages with respect to their source and process characteristics as described by these managers.

Employees, customers, and suppliers approach a transaction with a basic set of beliefs and values associated with how they do business. These behavioral fundamentals produce observable characteristics in the trading parties handling of the transaction. Repeated observations of these characteristics create a trustworthy reputation for the other party. Trustworthiness increases business flexibility, reduces risk, saves managerial time, and reduces monitoring costs. All six managers indicated that semistrong- and strong-form trust relationships create competitive value for their firms.

According to these owner/operators, trustworthiness takes time and money to develop and to maintain as a productive asset. However, unlike depreciable assets, trust appreciates in value through experience. Strong-form trust, and even forms of semistrong trust, substitute for investments in other formal governance activities (e.g., monitoring mechanisms) and reduce the probability of noncompliance.

The owner/operators noted that price and quantity were critical considerations in all business relationships because of their direct impact on profitability. Yet

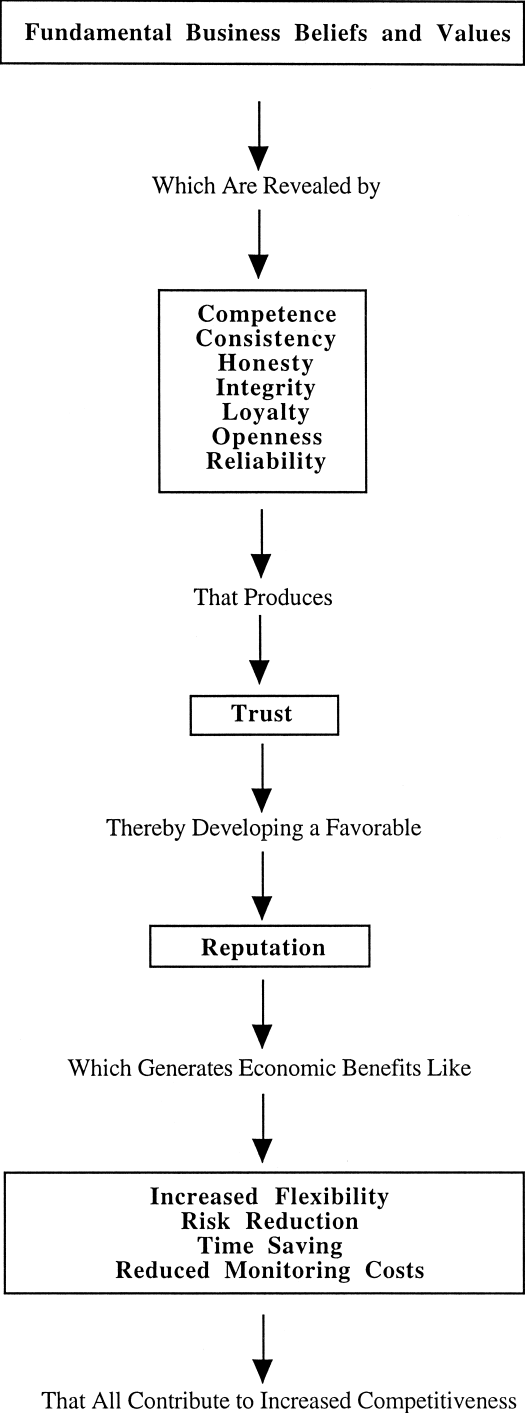


Figure 1. Behavior foundations of trustworthiness.

Table 2. Level of Trust for Three Business Relationships (Number and Percent of Total Rankings by Relationship)

<i>Business Relationship</i>	<i>Level of Trust</i>				
	<i>Weak</i> 1	2	<i>Semi-Strong</i> 3	4	<i>Strong</i> 5
Suppliers	9 (24)	9 (24)	10 (26)	4 (10)	6 (16)
Employees	7 (18)	0	2 (5)	9 (23)	21 (54)
Customers	14 (44)	2 (6)	10 (31)	2 (6)	4 (13)

these executives emphasized that these traditional economic variables were not necessary and sufficient conditions for business success. Identity signals embedded in economic exchanges were critical too. The “who” of trading relationships is not dominated by the “how much.” Both economic signals are vital.

Table 2 summarizes the rankings across the three types of business relationships. For both suppliers and customers, weak trust associated with identity-less markets represented 18–34% of these relationships. The majority of these exchanges contained some degree of economically relevant identity through formal or informal contracts and/or high levels of assurance that all parties’ interests will be protected. In the case of employer-employee relationships, strong trust (a ranking of 5) dominated the other two forms. Important labor inputs in these firms represent much more than a commodity where price and quality are easily discovered in a nonopportunistic market.

These executives use three forms of governance in their business transactions: the market, contracts, and social capital or strong-form trust. This empirical result supports Lewicki and Bunker’s (1996) claim that firms maintain a portfolio of governance mechanisms in their business transactions in their efforts to minimize transaction costs that are subject to the operational needs and constraints of the business. We found all three governance forms in all firms. Informal and formal contracts (semistrong) and social capital (strong form) were more prevalent than markets (weak form) in the portfolio for the most important transactions.

The multiple-case design also produced support for Lewicki and Bunker’s (1996) hypothesis that some trust relationships evolve over time. Weak trust relationships can evolve into semistrong- or strong-form trust transactions as the number of transactions increases and the trading parties become more acquainted. For example, all six owner/operators indicated that most employees are hired either “as commodities” or “under contract,” but a selected few become strong-form trust employees in the firm. Some suppliers and customers also followed this evolutionary pattern toward a noncalculative relationship.

Trustworthiness mappings (Fig. 2) for the six firms provide a graphical account of the three fundamental empirical relationships associated with trust summarized in Table 2. Noteworthy is the moderately positive correlation between economic importance and the form of trust for five of the six firms. The more economically

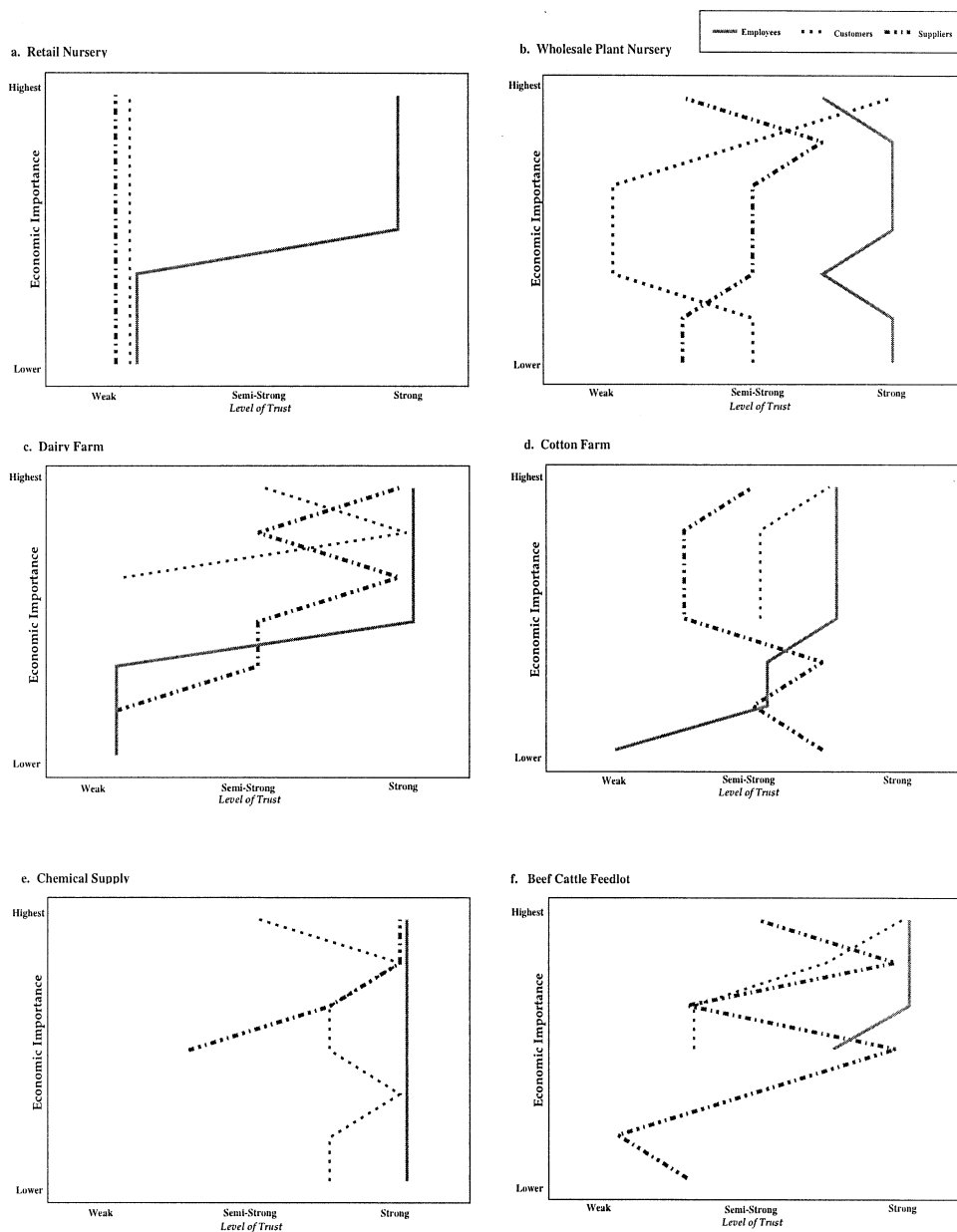


Figure 2. Trustworthiness mappings for selected agribusiness firms.

important, and the more vulnerability possible with the supplier, employee, and customer, the more likely the relationship is characterized by semistrong or strong trust. Secondly, the variability in trustworthiness internal and external to the firm is revealed. Varying degrees of strong trust dominate the internal employer-employee relationship, whereas exchanges with suppliers and customers can range widely depending on the identity of the party. Finally, Fig. 2 reveals the variance or diversity in trustworthiness in business relationships across these six small agribusiness firms.

Retail Nursery (Thirty-five Employees)

Office and management employees received strong-form trust rankings by this owner/operator. But the potential for opportunistic behavior by sales clerks and laborers is limited, so their transactions were ranked as weak-form trust. This retail executive found no source of vulnerability with either his customers or his suppliers. Customers numbered in the thousands and purchased relatively small quantities of plant material and supplies throughout the year. All parties in the transaction easily evaluated price and quality information. Similarly, the major suppliers of plant material operated in a highly competitive commodity market where the success of profitable opportunistic behavior was limited.

Wholesale Plant Nursery (Twenty-eight Employees)

The employees in this family-operated business shared similar business values and goals with the owner-operator. Most of these workers were cross-trained to work the sales counter, water plants, load trucks, make deliveries, or work in the greenhouses. Vulnerability to opportunistic behavior was possible in the mind of the executive, but strong employer-employee relationships reduced the probability of occurrence. Customer trust rankings varied from strong-form for the most important customer, a landscape contractor, to weak-form and semistrong-form for retail nurseries and other landscapers. The opportunism of suppliers was managed through informal and formal contracts where the interaction between buyer and supplier was on a weekly basis with well established ex post facto means for resolving conflict.

Dairy Farm (Seventeen Employees)

Again, important management employees, such as the dairy foreman, calf barn attendants, and milking parlor shift supervisors, shared high levels of social capital with the owner/operator to counteract opportunistic temptations. Other employees, such as milkers, cow pushers, and feed truck drivers, were governed by the market where expectations on both sides were understood and failure to comply terminates the employment relationship. The dairy's three customers, one for milk and two for calves, ranged from contractual for fluid milk, strong-form

trust for the bull calf buyer, and weak-form trust for the heifer calf buyer. Strong-form trust characterized the two most important feed suppliers. The operator commented that a high level of assurance that quality feed would be delivered in a timely manner created economic advantage to his firm in the form of lower cost per hundredweight of milk produced.

Cotton Farm (Eight Employees)

The governance mechanism of choice for employees, customers, and suppliers was contractual in nature for this cotton farmer. Vulnerability was managed through formal and informal agreements that spelled out expectations and conditions associated with a transaction. Not a single business relationship was ranked as strong-form trust. Only one employee relationship exhibited weak trust where the owner/operator was not exposed to opportunism. Opportunism, according to this cotton farmer, was present to some degree in all his transactions, and he used agreements between the transacting parties to manage his risk.

Chemical Supply (Thirteen Employees)

The owner/operator emphasized that he could not operate his business successfully without strong-form trust with all his employees. Potential opportunism by salesmen, yard staff, and delivery people created high levels of vulnerability for the firm. The executive noted that he only retained honest, "low maintenance" employees he could trust with money, chemicals, and customers. Likewise, this chemical supply firm had semistrong- to strong-form trust relationships with its major customers. Opportunism was managed through handshakes and verbal agreements. Relatively less important suppliers were ranked in the direction of weaker-trust relationships.

Beef Cattle Feedlot (Four Employees)

This family-operated feedlot raised replacement heifers and veal calves. According to the owner/operator, strong-form trust employees were critical for his business. He noted that his employees started out in semistrong-trust relationships but evolved into "high quality" employees he could trust while he was away on business trips. The top two customers or buyers were ranked in the strong category. The manager attributed the diversity of ranking for to the working relationship the owner/operator had developed with the individual salesperson, with feed grain, veterinarian services, and hay receiving higher trust rankings than suppliers of equipment, power, and fuel.

Four central tendencies that can serve as testable hypotheses in further research efforts emerged from these results. First, it appears that weak trust or commodity-like exchanges do not dominate the most important economic transactions in these firms. Owner/operators interact with employees, suppliers, and customers based,

in part, on their identity. Formal and informal contracts are agreed on; business values and beliefs are shared and understood.

Second, the predominant business relationships have a degree of semistrong trust as their central feature. Contrary to the standard production theory of the firm, the agribusiness world is characterized by exchanges where vulnerabilities exist, and the executive is protected via formal or informal contracts, reputation, or by a third party enforcing compliance. This finding challenges the widely taught view of the firm as primarily a technological relationship (i.e., production function) stripped of all human identity. Interaction with input suppliers and customers is the major activity of the business firm, according to these six owner/operators.

In response to Barney and Hansen's (1994) "guess" about strong trust, we found that strong trust is found in the three types of business relationships to varying degrees. A set of shared values, principles, and standards do not protect the executive in all, or even most, exchanges, but the existence of internalized trustworthiness exists and is not "rare." As previously noted, strong trust is most evident with economically important employees who share responsibility for managing the firm.

Of the six businesses, only the retail nursery was directly interacting with the consumer of the final product in the agribusiness distribution chain. We hypothesize that the closer the business is to large numbers of the final consumers, the more prevalent weak trust will become in these business relationships. The owner/operator of the retail nursery in this study viewed all his customer relationships as commodity-like where there is limited support for opportunism. Price dominates all sales in this firm.

SELECTED IMPLICATIONS FOR AGRIBUSINESS MANAGERS AND RESEARCHERS

These six business experiments revealed that

- Investments in trust-based relationships can produce competitive advantages based on noncalculative behavior.
- Strong-form trust relationships with employees, although not always possible or appropriate, are a legitimate means for achieving superior economic performance.
- The portfolio of governance mechanisms ranging from the market to strong-form trust should be evaluated continuously in an effort to reduce transaction costs.
- Ex ante and ex post facto contracting talents serve the agribusiness executive well because most key business transactions are characterized by some degree of semistrong-form trust.

In addition, these six managers, as well as most business managers (Mitntzberg, 1971; Kotter, 1999), indicated they devoted a majority of their business day to working with people, primarily on logistical issues. These owner/operators invested significant time “designing and maintaining” the internal and external economic relationships of their businesses. Trustworthiness in these relationships creates operational efficiency benefits by freeing up valuable managerial time resources that can be reallocated to economically productive activities.

Likewise, these experiments revealed that agribusiness managers operate under extreme time pressures, and economic decisions are made within this binding temporal constraint. Bounded rationality accurately characterizes their day-to-day decision making. Marginal decisions on the allocation of physical assets appear to be made quickly and accurately given the time available for the decision.

Finally, these empirical results lend support to the claim that identity-relevant economics should occupy a greater amount of space in agribusiness journals and discussion time in classrooms. Institutional design, contracts, agency, interaction costs, collective action, social capital, and game theory capture a greater part of the intellectual core for understanding many important economic transactions.

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