

Internal Markets and the Theory of the Firm

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A growing number of companies are explicitly replacing bureaucratic internal resource allocation with internal markets. But if markets work well within firms, why are there firms at all? Why does not all allocation take place on ‘external’ markets? This paper seeks to resolve this apparent anomaly by viewing the firm as a membership club rather than as a command structure. Members join the firm and pay its membership fee when the value of the local public goods they receive exceeds the opportunity cost of joining. Some of the most important public goods provided by firms are variously referred to as organizational capabilities, competencies, or routines. These can often be characterized as public goods because they are ultimately based on knowledge, and hence involve a degree of nonrival consumption. A firm survives when its internal environment generates value-creating capabilities, competencies, and routines. The firm will continue to exist as long as the owners of its human and physical capital find it more profitable to transact inside this environment than outside. Copyright © 2001 John Wiley & Sons, Ltd.

INTRODUCTION

Now that economists have developed a coherent theory of the firm, the business world seems intent on throwing up anomalies that don't quite fit with the theory.

A widely accepted theory of the firm posits that firms and markets are alternative methods of governing transactions. When the sum of production and bureaucratic management costs for an activity inside the firm is less than the sum of production and market transaction costs outside the firm, the activity will take place inside the firm. When the opposite is true, the firm will outsource (see, for example, Coase, 1937; Langlois and Robertson, 1995). In this theory, a wide variety of alternative governance structures can be created by combining various market and bureaucratic elements. Nevertheless, there is a strong tendency among economists to view price-mediated exchange as something that takes place

largely outside the firm; the introduction of prices is a step toward disintegration of the firm.

Recent trends in business organization seem to contradict this view. A growing number of companies are explicitly replacing bureaucratic internal resource allocation with internal markets. In an internal market system, units of the same company charge each other prices for products and services, most purchase decisions are voluntary (i.e. not required by company policy) and, in some cases, internal suppliers even compete with external suppliers. Each unit's financial statements reflect internal as well as external purchases and sales. Internal markets often accompany greater decentralization of decision-making authority, incentive systems that link rewards more closely to performance, and cultural change initiatives that more closely align employee and owner interests.¹

Internal markets raise an obvious question for the economic theory of the firm: is a collection of entities that charge each other prices for most products and services still a firm? Traditional theory suggests that the answer is no, but

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corporate practice cautions a more careful answer. Although some firms have used internal markets to promote intelligent downsizing, many retain a dense network of price-mediated exchanges among business units that have no intention of leaving the mother company. A more careful look at internal market literature and practices suggests new insights that can enrich the economic theory of the firm.

INTERNAL MARKET SYSTEMS

In some ways, internal markets constitute a revolution in business management; in other ways, they represent the continuation of a venerable 20th century trend toward decentralization. A brief glance at a generic 'value chain' (Porter, 1985) helps pinpoint the similarities and differences between internal markets and more traditional business practices.

The value chain breaks down the organization into two types of activities: 'primary' and 'support' (Figure 1). Primary activities are those directly involved in producing the product or service for sale to external customers; support activities provide infrastructure that enhances the productivity of the primary activities.

For years, large multidivisional organizations have used transfer prices to help coordinate at least some of the primary activities. The early 20th century saw the rise of multidivisional companies that gave operating divisions a great deal of autonomy from the central office. In four pioneering companies—Sears, DuPont, General Motors, and Standard Oil of New Jersey—upper management found a need for coordination across different business units, but managers also realized that the central office was simply incapable

of making all of the decisions for business divisions located in diverse regions or involved in different product lines. By 1960, the multidivisional form was widely employed in the automobile, electrical, power machinery and chemical industries. Some retailers reorganized along divisional lines; most prominent were Montgomery Ward, A&P, Kroger and Safeway. Many, though not all, firms in the petroleum, rubber and processed agricultural products industries adopted the new form of organization. They included B.F. Goodrich, United States Rubber, Procter & Gamble, General Mills, General Foods and Borden (Chandler, 1962). 'If decentralization [the M-Form] was a managerial invention in 1920', note Vancil and Buddrus, 'it was an articulated philosophy by 1950, a reorganization trend by 1960, and a universal practice by 1970' (Vancil and Buddrus, 1978, p. 25; Halal, 1986).

The scope of internal pricing expanded broadly in the 1980s, when innovative companies started thrusting the support activities into the internal market and letting internal customers choose which services they wanted to buy (Halal *et al.*, 1993). Prior to then, most firms treated these business units as tax-supported public utilities and many still do. Customary corporate accounting practice charges business units for centrally provided services through arbitrary allocations of overhead expenses. Under this system, corporate executives at the top decide how much will be spent on various activities, and expert corporate service groups then go forth with this funding to give internal customers what the experts think they need. Internal service providers have weak incentives to listen to their customers, because the budget comes from top management, not the customers. Business units using internal services, meanwhile, have few incentives to compare the

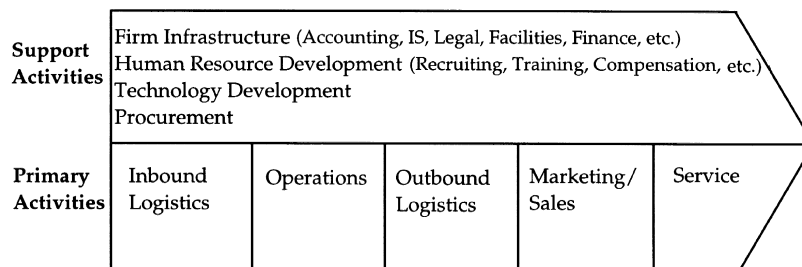


Figure 1. Generic value chain.

value they receive with the costs to the company, because the costs of each purchase decision are spread out across all business units in the company through the overhead allocation. As a result, services like accounting, legal and human resources have more requests for work than they can fill—and have few good ways of comparing customer priorities to select the most profitable projects.

In short, companies that fund and provide support services through a centralized bureaucracy exhibit some of the same maladies as centrally-planned economies. Much of the literature on internal markets explicitly compares this phenomenon to the breakdown of the Soviet and other centrally-planned economies (Ackoff, 1993; Ellig 1993; Pinchot and Pinchot, 1993). Given this starting point, it is no surprise that both researchers and practitioners would turn to the price system as a way to improve the allocation of corporate resources.

INTERNAL MARKETS AND THE COASEAN FIRM

Nevertheless, the concept of internal markets seems to contradict the modern Coasean theory of the firm. Coase argued that business firms exist because spot market exchanges often involve transaction costs—costs of discovering prices, finding suppliers or customers, negotiating deals, recording sales, enforcing agreements and verifying quality. Command decisions, he suggested, can overcome these transaction costs by eliminating some market transactions. An activity takes place inside the firm when the transaction costs of using the market outweigh the costs of coordination through command. Chandler (1977) offers a more vivid image: the ‘visible hand’ of management replaces the ‘invisible hand’ of the impersonal decentralized market. Subsequent scholarship has offered a common sense refinement by including both transaction and production costs in the calculation. Intermediate institutions, such as long-term contracts, franchises or vertical restraints, are seen as a blend of ‘market’ and ‘command’ elements, established and adjusted by entrepreneurs to create the lowest-cost mode of coordinating a particular set of transactions (Coase, 1937, 1937, n. 1; Williamson, 1975, 1985).

In this view, the defining characteristic of the firm is the entrepreneur’s ability to control resource flows through conscious direction rather than competitive bidding. ‘The market’ means a decentralized spot market populated by atomistic, profit-maximizing sellers and utility-maximizing buyers. ‘The firm’ is the opposite of the market—a hierarchical structure in which ‘command and control’ substitute for ‘spot market exchange’ as a coordination mechanism. Thus, the essence of the market is radical atomism, and the essence of the firm is the replacement of price-mediated exchange with the giving of directions. The ‘nature of the firm’ is command and control. To the extent that an organization uses internal prices, it is somehow less a pure firm and more of a ‘mixed mode’.

Several popular organizational economics texts reinforce this view. Although recognizing that firms sometimes use internal pricing, Milgrom and Roberts (1992, p. 89) nevertheless hold that

[o]rganizations can be thought of as arising and supplanting the market when they offer more efficient mechanisms for coordinating economic activity and motivating people to carry out the resulting plans. Given this, it would be somewhat surprising to see them rely very heavily on an internal price system. Instead, managers more usually formulate general strategies, make these operational by specifying quantitative goals, develop specific plans to realize these goals, and then direct people to carry out their specified roles using the resources they have been allocated.

In a more recent text, Brickley *et al.* (1997, p. 59) offer a similar summary view:

All economic activity could be conducted through market transactions. However, even in free-market economies, much economic activity occurs within firms, where administrative decisions rather than market prices are used to allocate resources.

Likewise, Rubin (1990, p. 41) suggests in a discussion of transfer pricing that. ‘[I]f two divisions can interact efficiently only through market-like mechanisms, then they should probably be independent and actually use the market’.²

Within this framework, the very idea of an ‘internal market’ may seem paradoxical. Many companies have implemented internal markets, not as a marginal shift that introduces a few more market transactions but as a wholesale *perestroika* that fundamentally alters the way that entire business divisions work with each other.³

Despite significant changes wrought by the introduction of internal pricing, the different business divisions remain part of the same firm. If administrative direction minimizes transaction costs, there seems little justification for wholesale replication of market institutions inside the boundaries of the firm. On the other hand, if the introduction of prices can improve upon administrative resource allocation, then downsizing seems more appropriate than internal markets.

One way of resolving this paradox is for practice to yield to theory; we can simply declare that internal market experiments are either waystations to disintegration or doomed to failure, because they ignore the fundamental nature of the firm. Alternatively, we can revise the theory of the firm to make it consistent with the real-world practice of internal markets. Given that firms implementing internal markets report significant improvements in resource allocation decisions, the latter course may be more prudent.

It is worth distinguishing at this point between two different lines of inquiry that go under the name 'theory of the firm'. One line largely attempts to explain one or more features of the modern corporation—an entity in which shareholders own the capital; ownership is often separated from control; laborers work mostly for wages rather than a share of the profits; and all employees are subject to direction under a hierarchical and bureaucratic system. A burgeoning literature along this line investigates the merits of alternative organizational and ownership forms (e.g. Hansmann, 1988). The other line of inquiry attempts to explain the existence of some type of entity known as 'the organization' that is different from the sea of market exchanges in which it is embedded. Literature in the Coasean tradition often attempts to address both lines of inquiry simultaneously, as it identifies replacement of the price system with hierarchy and the authority relationship as fundamental characteristics that separate firms from markets.

However, it is possible to inquire into the nature of the firm while regarding certain characteristics of the modern corporation as accidental rather than essential. If firms adopting internal markets are still firms, then the replacement of prices with commands must be an accidental feature of the 20th century firm, not a characteristic that defines all firms at all times. Therefore, an organization using internal markets provides the

ultimate challenge to our existing understanding of the nature of the firm, because the use of prices is no longer the key characteristic that distinguishes the external market from the internal market. A theory of the firm that is consistent with the use of internal prices should thus provide the most general understanding of the nature of the firm. In such a theory, firms that use internal prices and firms that refrain from using internal prices would be subsets of the more general class of entities known as firms.

THE IMPLICIT MODEL: THE FIRM AS A CLUB

Most of the literature on internal markets is written by management scholars more concerned with practical application than with the economic theory of the firm. Nevertheless, one can find an implicit theory of the firm underlying the internal market concept. This theory is based not directly on transaction costs but on the theory of clubs.

Clubs arise to provide goods that are neither purely private nor purely public goods (Buchanan, 1965). A pure public good is characterized by non-excludability and non-rival consumption, but few goods fit this rigorous definition perfectly. If it is possible to exclude non-payers, it is possible to form a club whose members share the cost of the goods through membership fees. The term 'club' covers a wide variety of institutional arrangements. In some cases, clubs determine their policies and scale of operations through consensus (e.g. country clubs); in other cases, entrepreneurs take the lead in decision-making and offer various packages of benefits in exchange for the membership fee (e.g. athletic clubs). These examples of clubs correspond roughly to different forms of business organization that make up the universe of firms. The country club operates more like a consumer-owned co-op, while the athletic club operates more like a traditional firm with employees and customers who are not owners. Nevertheless, in all cases the essential nature of the club is that members pay a fee in exchange for a package of goods with some degree of non-rival consumption.

The extent of rivalry in consumption helps determine the optimal size of the club. Adding more members to the club reduces the cost per member,

but it also eventually leads to congestion, which reduces the utility each individual gains from membership in the club. (Adding members to a country club reduces greens fees but also makes it more difficult to get a tee time.) The club reaches optimal size when the admission of a new member reduces other members' costs by an amount exactly equal to the amount by which additional congestion created by the new member reduces the other members' utility.

The theory of clubs describes how many internal markets systems work in practice. In most discussions of internal markets, the role of the company's central office is essentially to provide public goods to the rest of the organization. The CEO's office conducts shareholder relations; acquires capital and allocates it among the company's divisions; provides 'collective defense' via government relations, legal activity and similar services; offers a forum for resolution when contractual disputes and externalities arise; and invests in strategic R&D, corporate culture, building corporate capabilities and other goods and services that benefit the entire organization (Halal *et al.*, 1993). This view of the CEO's office also comports well with the description by Chandler (1991) of 'value-creation' and 'loss-prevention' functions of the corporate headquarters.⁴

Within the organization, all of these activities are arguably subject to free-riding, for fairly straightforward economic reasons. Capital acquisition can involve free-rider problems if the organization's reputation allows it to raise capital at a lower cost than the individual business divisions would have to pay independently. The real public good here is not simply the acquisition of capital, but the organization's reputation, which influences the financial markets' perception of risk. Likewise, allocation of capital need not always be a public good; financial markets allocate capital every day. The public good involved in capital allocation is the management's inside knowledge that allows it to allocate capital more effectively than could outsiders without this knowledge. If management does not have any superior inside knowledge, then capital might as well be allocated through the capital market.

Collective defense, the mitigation of externalities and research are more straightforward examples of public goods. But perhaps most interesting for the theory of the firm is the last type of goods on the list—the development of routines,

competencies and capabilities that give the organization a strategic advantage over its competitors. The term 'capabilities' is probably most useful here, as several authors (Richardson, 1972; Stalke *et al.*, 1992; Langlois and Robertson, 1995) suggest that it is the broadest term of the three.

A firm's capabilities are the experience, abilities and knowledge that enable it to undertake its activities. Some capabilities are easy for firms to acquire, but the ones of most interest here are those that require a great deal of investment and time and are difficult to duplicate in the short run. Hard-to duplicate capabilities are difficult to square with the theory of perfect competition, as the theory assumes that all firms have access to the same technology, including management technology. But the idea of distinctive capabilities emerges naturally from a dynamic theory of competition, in which differentiated firms struggle to meet consumer demands with heterogeneous resources. In short, the notion of capabilities helps explain why some firms in an industry earn rents, while others break even or suffer losses (Jacobson, 1992; Hunt, 1995; Hunt and Morgan, 1995).

It is probably inaccurate to say that the firm's central office directly creates all of the corporate capabilities. This may sometimes be the case, as when the CEO subsidizes R&D that leads to the discovery of proprietary products. But in many cases, corporate capabilities arise as a result of the interactions between employees or business divisions. New ways of doing things are discovered and gradually propagated throughout the organization through a semi-spontaneous process.

Even if the central office does not directly create new capabilities, it can play a significant role in fostering the creation and spread of capabilities. The central office makes acquisition decisions, thus determining who will be considered eligible to share and contribute to the development of inside knowledge. In addition, the central office influences corporate culture and financial incentives, both of which can either retard or enhance the development of new ideas and their spread throughout the organization.

Whether the central office directly creates or indirectly influences organizational capabilities, the key point is that capabilities are fundamentally based on knowledge. Knowledge cannot be used up, but access to it can be limited. Thus, capabilities based on knowledge are semi-public goods. The knowledge on which they are based

involves non-rival consumption, but it is possible to exclude non-payers. A club is therefore a viable organizational form to produce and use knowledge-based organizational capabilities.

The type of club called the firm can exclude non-members from using its organizational capabilities and other public goods. In one way or another, business units inside the organization pay a membership fee or 'tax' for the privilege of having access to the larger organization's reputation, collective defense, dispute resolution, corporate culture and capabilities. Just as members of a country club can conduct business in its smoking-room, so too can the member-units of a firm conduct business with each other—and even charge prices—surrounded by profit-enhancing amenities paid for by their membership dues.

INTERNAL MARKETS AND THE BOUNDARIES OF THE FIRM

The optimal size of a club depends on a trade-off between the benefits of having more members to share production costs and the costs of congestion. If we view the firm as a club, what type of trade-off determines its optimal size?

Benefits of Additional Members

Cost Sharing For a firm, the analogy on the benefit side is fairly straightforward. If the firm has more and larger business units, then there are more participants available to share the costs of building and maintaining a reputation, engaging in 'corporate defense' and developing value-adding capabilities. If there were no congestion costs, the optimal size of the firm would be large enough to include any business unit willing to pay something to be a member.

Note that this does not imply that the optimal size of the firm would be infinite in the absence of congestion costs. In contrast to the public goods usually discussed in economic theory, the public goods the firm provides are not necessarily valuable to all business units in society. The firm's reputation, for example, permits the acquisition of lower-cost capital only so long as the firm remains in businesses in which the financial markets believe the potential financial rewards outweigh the risk. Similarly, most corporate capabilities are at least somewhat focused on particular activities or

markets. An airline that develops a computer system with the capability to track thousands of constantly changing air fares will probably have few oil exploration companies requesting mergers, because the fare-tracking capability is of little value in oil exploration. A corporate capability is the capability to do something in particular (Foss, 1997).

For these reasons, public goods provided by the firm are local, in the sense that they benefit only a subset of businesses, rather than all businesses in the economy. The nature of the public goods helps circumscribe the potential boundaries of the firm—note that swimming clubs are unlikely to include many families who are afraid of water! The optimal size of the firm is thus inextricably linked with the optimal scope of the firm.

Productivity Adding members to the firm may also bring benefits in addition to cost sharing; new members may enhance the value of membership for the other members. They can do this in two ways.

First, new members of the firm can produce discreet goods and services that the other members value. However, this contribution is of little intrinsic interest for the theory of the firm, because existing members of the firm could just as well buy these goods and services from external vendors without bringing them into the firm. If this were the only contribution offered by potential new members, the firm would have little reason to offer them membership.

Second, new members can increase the value of others' membership in the firm by generating positive externalities that increase the other members' productivity. This is the classic example of team production, in which co-operating inputs produce more jointly than they can produce separately (Alchian and Demsetz, 1972).

Congestion Costs

The effects of congestion inside the firm are somewhat more complicated. Some public goods, such as corporate defense, do encounter straightforward congestion problems, similar to those encountered by a government that expands its territory. As the firm grows, it will have to devote more resources to government-related matters, or else the real quality of corporate defense will decline in the face of a fixed budget.⁵ This is true if only because larger firms tend to receive more

attention from policymakers. Therefore, additional members create congestion that diminishes the quality of service for everyone in the firm.

Knowledge-based public goods, like reputation and corporate capabilities, require more subtle analysis. Pure knowledge involves no congestion; expanding the firm does not 'use up' its reputation or technology. Nevertheless, a given quantity of these goods cannot serve an infinite number of members in the corporate club.

Reputation As a firm adds more members and expands into additional businesses, the value of its reputation in either financial or product markets could become diluted. External observers who think they know what the company's name signifies become less certain as they see the name applied to seemingly dissimilar businesses. The point here is not just the one made above—that reputation is specific to particular markets, and so many unrelated businesses might not be willing to pay to use an existing firm's reputation. The point is that excessive expansion might dilute the value of a firm's reputation, even for the set of businesses that do value it enough to join the corporate club. When Sears diversified into insurance, stock brokerage and real estate during the 1980s, for instance, it may have reduced the value of its brand name in hardware and household goods, since some consumers (and financial analysts) inferred that Sears was de-emphasizing its traditional businesses in search of greener pastures. This is in effect different and separate from the fact that the Sears name apparently added little value in financial services.

Capabilities The congestion problems of corporate capabilities arise because many capabilities are costly to transfer quickly and accurately. Capabilities often involve much tacit knowledge—knowledge gained through experience that is difficult to transfer quickly from one mind to another. Tacit knowledge is most effectively transferred through experience. Theoretically, the knowledge itself is not subject to congestion, but there are very real limits to the people whose minds contain the knowledge. As more members join the firm, they strain the capacity of those who have the ability to transfer the knowledge on which the firm's capabilities are based.

This type of congestion is not mere speculation. The rise and demise of People Express airlines illustrates how hard-to-replicate capabilities re-

strain the optimal size of the firm. Founded in 1980, People Express initially earned a reputation for both low fares and superior service. Employee stock ownership, job rotation and team-based management played a key role in motivating and enabling employees to provide friendly, on-time service. But by 1985, service quality had eroded so badly that not even low fares could keep the customers coming back. Quality eroded because the transfer of corporate capabilities to new employees could not keep pace with the airline's growth during the early 1980s. By the end of 1982, temporary employees made up one-third of the labor force, and the purchase of Frontier Airlines in 1985 brought in 4000 more employees with a very different corporate culture. '[T]o sustain [People's] 100 percent per year growth', Senge (1990, p. 135) noted, 'you need "cookie cutter" jobs for which people can be trained in weeks, rather than the sophisticated human resource system requiring many months for people to master many different types of skills'. Senge concluded that People Express could have survived if it had raised prices somewhat to simultaneously slow growth and provide increased cash flow for investment in training of new employees.

The Trade-off

As with a club, the optimal size and scope of the firm depends on a marginal trade-off. Potential new members are willing to pay something to join, but a potential member's willingness to pay falls as the perceived value of the firm's bundle of public goods falls. Congestion costs rise as the number of members rises. As a result, the firm reaches optimal size and scope when the fee a prospective member is willing to pay just balances the additional congestion costs it imposes on the rest of the organization.

THE FIRM AS A 'CULTURE CLUB'⁶

The logic of cost sharing, team production and congestion places an outer limit on the optimal size of the firm. It explains why the entire economy is not organized as one large firm.

However, it does not place an inner limit on the firm's optimal size. Some firms could be much smaller than this logic suggests. Theoretically, some business units could share in a firm's

reputation, capabilities or other public goods without necessarily becoming part of a single organization. Joint ventures, strategic alliances, long-term contracts and the like could perhaps allow one firm to contract for public goods with another. For example, a firm could license its brand name, and hence the use of its reputation, to another firm. To sell capabilities, a firm could sign contracts for on-site apprenticeships that would allow employees of other firms to learn its capabilities through experience. If this type of contract is possible, one firm could even hire another firm to develop new capabilities.

Transaction Cost Redux

Two types of problems complicate this type of contracting: static transaction costs and dynamic transaction costs.

Static transaction costs are the transaction costs commonly discussed in neoclassical microeconomics literature. They arise because of asset specificity, asymmetrical information, uncertainty and various other well-documented problems. Such transaction costs could prevent contracting for a firm's public goods, because goods like corporate defense, reputation and corporate capabilities involve highly specific assets. Contracting difficulties may also crop up due to the nature of knowledge: the buyer does not know what knowledge is worth until he knows it, but once he knows it, he no longer needs to pay for it. For both types of reasons, knowledge-based corporate capabilities may be subject to the hazards of opportunism, and integration can mitigate this risk (Tece, 1980).

In addition to these types of transaction costs, corporate capabilities in particular often involve dynamic transaction costs. Such costs stem from the fact that different people (and firms) possess different 'mental models' (Senge, 1990) that reflect their different interpretations of the same world. When this occurs, contracting may fail not just because of incentive problems, but because of knowledge problems:

Problems of economic organization may crucially reflect the possibility that a firm may control production knowledge that is, in important dimensions, strongly different from what others control. Thus members of one firm may quite literally not understand what another firm wants from them (for example, in supplier contracts) or is offering them (for example, in license contracts) (Langlois and Foss, 1999, p. 24).

In this type of situation, integration into a firm may be superior to purchase in the external market even if there are no incentive or opportunism problems. The most well-meaning and trusting people may still have trouble understanding each other, because they do not share the same 'mental models'. As a result, contracting for capabilities outside the firm may be more expensive than producing them inside the firm.

Dealing with Transaction Costs

Common ownership provides one possible way of mitigating both types of transaction costs. The neoclassical literature thoroughly documents how common ownership can reduce static transaction costs (Williamson, 1985; Grossman and Hart, 1986). Langlois and Robertson (1995) suggest that common ownership can, under certain circumstances, provide an efficient solution to problems created by dynamic transaction costs as well. In their theory, an entrepreneur spots a profit opportunity that requires simultaneous changes in many interrelated parts of a production system, across several different firms. The entrepreneur may find it very costly to explain his vision to the other firms and persuade them to alter their established routines. Consequently, the entrepreneur can reduce dynamic transaction costs by simply buying the means of production and reorganizing the system himself.

Like the neoclassical theories based on static transaction costs, the theory of dynamic transaction costs relies on administrative fiat to take the place of market price signals, at least temporarily. We are thus back to a theory that essentially posits a trade-off between the costs of using 'the price system' and the costs of administrative direction. To develop a theory of the firm that allows internal markets, we need some additional means of reducing the cost of internal transactions.

A small but growing literature on culturally-based forms of organization, dubbed 'clans' by Ouchi (1979), can help fill the gap. A clan is an organization held together by its members' shared values and commitment to common objectives. In its pure form, a clan

requires not only a norm of reciprocity and the idea of legitimate authority... but also social agreement on a broad range of values and beliefs. Because the clan lacks the explicit price

mechanism of the market and the explicit rules of the bureaucracy, it relies for its control upon a deep level of common agreement between members on what constitutes proper behavior, and it requires a high level of commitment on the part of each individual to those socially prescribed behaviors (Ouchi 1979, p. 838).

Superficially, such discussions of social solidarity seem far afield from an economic theory of the firm. In reality, such behavior by individuals is consistent with methodological individualism in a world of either complete rationality or bounded rationality.

In a world of complete rationality, individuals who share certain similarities in their utility functions may well possess an innate urge to cooperate with each other in pursuit of common goals. Ben & Jerry's Ice Cream stores, for example, seek to hire environmentally conscious employees who share the company's commitment to certain social goals. To the extent that the company succeeds in attracting this type of employee, it does more than just provide a pleasant work environment or feelings of solidarity. The company will also have a group of employees who naturally choose to do the 'right' things, in terms of the company's strategy and the position it seeks to occupy in the marketplace (Heffernan, 1992). These employees will have an innate desire to do things in ways that the company wants them done, generating either a cost advantage, a quality advantage, or both. Such sorting results simply from the shape of different utility functions.

Bounded rationality also explains why different firms might possess distinctive cultures, in the sense of distinctive sets of behavioral rules. In a world of bounded rationality, individuals may choose to adopt general behavioral rules if they believe following those rules will yield greater utility than imperfect attempts at optimization. Organizational economics has traditionally dealt with bounded rationality by exploring the relative costs and benefits of long-term contracts and various bureaucratic structures (Williamson, 1985). An organization's culture—tacitly understood rules that govern behavior—offers an alternative means of governing transactions in the face of bounded rationality. An organization's culture economically conveys instructions for dealing with a wide variety of unpredictable situations. Culture thus mitigates the transaction costs associated with continual renegotiation of contracts

and the bureaucratic costs of detailed rulebooks (Camerer and Vepsäläinen, 1988). Understood in this way, corporate culture helps mitigate both static and dynamic transaction costs.

As a set of constraints both internal and external to agents, corporate culture reduces static transaction costs by reducing opportunism. Opportunities for opportunism may arise but agents refrain from taking advantage of them because engaging in opportunistic behavior imposes psychic disutility, is punished by social sanction or is perceived to be inconsistent with their long-term best interests. Corporate culture provides general principles that help people at all levels of the organization act according to the spirit of incompletely specified contracts. Organizations that want to survive as ongoing enterprises have incentives to develop reputations that will encourage people to deal with them in the future, and so they find it rational to develop and preserve cultures that mitigate opportunism (Kreps, 1990).

Dynamic transaction costs arise because firms and individuals fail to share the same mental models of the existing world and visions of what could be. Corporate culture reduces these costs by giving people in the same organization a similar set of mental models and visions. With shared models and visions, people inside the firm can write contracts and engage in transactions that would be prohibitively expensive in the external market. In this way, corporate culture helps solve knowledge problems in addition to incentive problems.

Organizational culture both reflects and creates a different set of utility functions and behavioral constraints than exists in the external marketplace. Thus, organizational culture becomes a key feature distinguishing internal from external markets. Price-mediated transactions take place inside the firm, but they occur within a different framework of constraints than transactions in external markets.⁷

CONCLUSIONS

If a rich network of price-mediated exchange is possible inside the firm, then we lose the idea that command or bureaucracy is the essential feature that separates the external from the internal market. In the internal market, some rules imposed from the top may well constrain transactions, but

this is also true in external markets. External and internal markets alike have both prices and commands, and so they cannot be distinguished on these grounds alone.

To understand the boundaries and nature of the firm, the relevant distinction is not between 'the firm' and 'the market'. Rather, the relevant distinction is between internal and external markets, which operate under different background rules and cultural constraints.

Given the reality of internal markets, it is more informative to view the firm as a membership club than a command structure. Members join the firm and pay its membership fee when the value of the local public goods they receive exceeds the opportunity cost of joining. Some of the most important public goods provided by firms are variously referred to as organizational capabilities, competencies or routines. These can often be characterized as public goods because they are ultimately based on knowledge, and hence involve a degree of non-rival consumption. A firm survives when its internal environment generates value-creating capabilities, competencies and routines. The firm will continue to exist as long as the owners of its human and physical capital find it more profitable to transact inside this environment than outside.

The club theory of the firm can be seen as a complement to, rather than a substitute for, the more familiar transaction cost reasoning. Internal and external markets both have transaction costs, and they both have production costs. The capabilities and culture created by an organization influence both the internal transaction costs and the internal production costs. For an activity producing results of a given quality, when the sum of internal costs is lower, the activity will tend to take place inside the firm. When the sum of external costs is lower, the activity will take place outside the firm. Thus can internal markets at once be genuinely internal and genuinely markets.

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NOTES

1. Three management change initiatives seeking to address many of these elements go by the names of the Market Based Management™ framework (Gable and Ellig, 1993), 'intrapreneurship' (Pinchot and Pinchot, 1993) and 'internal markets' (Halal *et al.*, 1993).
2. In addition to published commentary in textbooks, a number of economists have raised similar objections to internal markets in discussions with both the author and scholars working on internal markets at George Washington University and the Institute for Interactive Management.
3. For examples see Halal *et al.* (1993). I am indebted to Russell Ackoff (1993) for the 'Corporate Perestroika' metaphor.
4. Chandler largely describes the actual role of the corporate headquarters in the modern corporation. Thus, certain types of control activities he describes may be unnecessary in a firm using internal markets, and certain other activities can probably be provided for a price instead of treated as a public good. But he considers that both categories of activities include at least some activities that appear to be public goods.
5. The collective defense function has grown significantly during the past several decades for US firms. Several studies and surveys show that CEOs at many large companies spend 25–50% of their time on government-related activities (Donaldson and Lorsch, 1983, p. 13).
6. Kudos to Noel Campbell for the brilliant metaphor.
7. The spirit of this analysis is thus similar to that of Vanberg (1992), who suggests that the firm involves a 'constitution' that creates background rules and constraints different from those in the external market. The notion of culture discussed here is a subset of what Vanberg means by the firm's constitution.

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