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Many organizations are experimenting with structures (new organization forms) that are designed to facilitate empowered cross-functional communication. The challenge is to become more efficient or competitive by reducing barriers to communication and to eliminate boundaries which impede the understanding of end-to-end workflows and better performance on strategic goals. Horizontal organization processes such as cross-functional teamwork and empowered decision making at lower organization levels are based on more participative management styles (new management technologies). This paper builds a theoretical model and provides propositions showing how knowledge creation and communication are the foundations of the new organization forms. An organization's capability for creating and communicating knowledge is seen as a resource which can create global strategic competitive advantage. A longitudinal research program is proposed to study the progress of experiments by organizations utilizing the new organization forms and management technologies (NFMT).

Organizational Communication: Development of Internal Strategic Competitive Advantage

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We all sense that the changes surrounding us are not mere trend but the workings of large, unruly forces: the spread of information technology and computer networks; the dismantling of hierarchy, the structure that has essentially organized work since the mid-19th century. Growing up around these is a new information age economy, whose fundamental sources of wealth are *knowledge and communication* rather than natural resources and labor (Stewart, 1993, p. 66).

Whether one labels it revolution or evolution (Mezias & Glynn, 1993), evidence suggests the occurrence of a basic global shift in the organization of work. An editorial essay in *Organization Science* succinctly characterized this shift: "As we contemplate the cataclysmic changes occurring in the environment of organizations, and as we observe the organizational revolution sweeping one industry after another, it is altogether clear that the management of organizations is undergoing a paradigm shift" (Daft & Lewin, 1993, p. i). Fundamental to these seemingly discontinuous changes is the compelling mandate to reduce barriers of understanding for managing the monumental challenges of global competitiveness (Jackson, 1993; Porter, 1990; Thurow, 1992; Tyson, 1992).

51

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There are numerous examples of organizations which have created new approaches to knowledge creation and reduction of barriers to understanding. McKinsey and Company, the major worldwide management consulting firm, works with client companies to design and implement "horizontal organizations" (Ostroff & Smith, 1993). Such "new organizational forms" (NF) create management technologies (MT) (new ways of managing people and processing work) which allegedly are barrier reducing and therefore more efficient. Xerox, for instance, now organizes "around lateral, end-to-end workflows, instead of around vertical functions, departments, or tasks" in new product development (Ostroff & Smith, 1993, p. 153). Motorola utilizes these new horizontal forms in its supply management as does Apple in integrated logistics. Other companies who are utilizing new forms (NF) rather than the functional/vertical are GE and Kodak in manufacturing operations, American Express IDS Division in mutual fund processing, and Knight Ridder newspapers in advertising sales and service.

The primary new management technologies (MT) now evident are participative team-based processes. McKinsey claims that "the basic organization module always remains a team-based work flow, not an individual task. These workflows can then be linked to others, both upstream and downstream, through a variety of methods" (Ostroff & Smith, 1993, p. 154). Thus the organization communication system (the total cross-functional, up-down, and lateral information and knowledge flow - OCS) is more boundaryless. Knowledge (what people know about product and process strategies, work flows, and others' performances within these flows) creates the basis for efficiencies and/or competitive advantages utilizing the new organization forms and management technologies (NFMT). Fortune Magazine cites the comments of the CEO's of General Electric, Allied Signal, Ameritech, and Tenneco, to illustrate how widely applied are NFMT experiments (Stewart, 1993, pp. 82-90). Jack Welch of GE emphasizes these changes in terms of sharing and teamwork: "We want you to share this problem with us. We lay out all of the data . . . When you make a value like teamwork important, you shape behavior" (Stewart, 1993, p. 83). And Lawrence Bossidy of Allied Signal sees their experiment in NFMT such that: "We're breaking down the walls that separate finance and manufacturing and engineering and marketing, and putting all these functional disciplines into process organizations" (Stewart, 1993, p.

Thus, it is apparent that the "ubiquity of change" (Stewart, 1993, p. 72) includes experiments with a set of new organizational forms and management technologies (NFMT). The rationale for barrier reduction within these NFMTs is that for companies to create and sustain competitive advantage into the 21st century, they must become "fast

and agile" and "boundaryless" (Welch, 1993, p. 82). Again, the editors of *Organization Science* argue that "the new paradigms have as their premise the need for flexible, learning organizations that continuously change and solve problems through interconnected coordinated self-organizing processes" (Daft & Lewin, 1993, p. i). These "fast adaptation" strategic designs attempt to develop internal organizational capabilities which will create and sustain competitive advantage in global markets. In the resource-based view of the firm (Barney, 1991; Dierckx & Cool, 1989; Peteraf, 1993; Rumelt, Schendel & Teece, 1991) such capabilities are rare, valuable, non substitutable, and inimitable. They represent the "Process School" of competitive advantage in resource-based theory (Amit & Shoemaker, 1993; Grant, 1991; Schulze, 1992). The present paper posits that these new capabilities are rooted in the knowledge-bases and organizational communication systems (OCS) which are the foundations of the NFMT.

The argument herein is that within the NFMT, organization communication systems (OCS) are fundamental internal resources which are directly related to competitive advantage and financial performance. Effective and efficient OCS provide access both to objective and tacit knowledge which is the basis for higher performing internal and external organizational collaborations. Throughout the paper the term effective will be used as "setting the correct goals" or "doing the right things." Efficient is used as "productive with minimum waste" or "doing things right." Thus, OCS have the potential to bring to fruition Daft and Lewin's (1993) assertion that "new organizational forms open up new sources of competitive advantage" (p. ii).

This paper will attempt to integrate thinking processes of those who investigate strategic competitive advantage (the ability to secure above-average performance and/or profits over the long run) and those who do research in organization communication. Competitive-advantage scholars tend to overlook communication as an advantage, whereas communication scholars tend not to explore fundamental strategic issues, including explanations and predictors of financial performance. Bringing together theory and subject matters may serve to bridge the limited paradigms which exist among both sets of scholars.

The paper proceeds as follows. First, a review of the array of new organizational forms and management technologies (NFMT) is presented, and these evolutional designs are framed in the context of resource-based theories of competitive advantage. A model is then developed, detailing the relationship of internal knowledge bases and organizational communication foundations to resource-based theory, with the dependent variable being the overall financial performance of the firm. This model is then expanded through examination

of knowledge-based resources to provide a theoretical foundation for the primary role of communication processes in the development of internal strategic capabilities. A review of empirical research on the organizational communication-financial performance link is reported. Finally, propositions are presented which identify specific and measurable aspects of communication as fundamentally related to the development of strategic internal capabilities which yield better firm financial performance.

The Evolution of New Organization Forms and Management Technologies (NFMT)

As indicated earlier, a barrier reducing set of NFMT is revolutionizing organization strategies and designs. An attempt is underway to release the stranglehold of bureaucratic inertia which has gripped modern corporations (Daft & Lewin, 1993; Mezias & Glynn, 1993). Strategies emphasizing relaxation of traditional notions of managerial control (Angle & Van de Ven, 1989) have emphasized such forms as "spin-offs, skunkworks, special ad-hoc work teams, or autonomous work groups that operate outside the existing organizational structure" (Mezias & Glynn, 1993, p. 81). Burgelman (1985) and Kanter (1985) had earlier predicted that such strategies and designs would prevail in the 1990s. These new organizational forms have been referred to by various names: modular, cluster, learning, network, or perpetual matrix organizations, spinout or virtual corporations (Bartlett & Ghoshal, 1989; Miles & Snow, 1986; Quinn, 1992; Senge, 1990). Daft and Lewin (1993) catalog the characteristics of these forms as emphasizing flatter hierarchies, decentralized decision making, greater capacity for ambiguity tolerance, permeable internal and external boundaries, empowerment of employees, capacity for renewal, self-organizing units, and self-integrating coordination mechanisms. Certainly to this list might be added reengineering, cross-functional teams, continuous improvement, downsizing, restructuring, and horizontal organizations.

Mezias and Glynn refer to such innovative designs as "evolutional" in the sense that structures "are designed to allow the organization to move beyond its current capabilities by making boundaries unclear. They embody the important idea that innovation is a chaotic, probabilistic process" (1993, p. 81). The goals of these evolutional designs are to enhance lissomeness and agility, to nurture the ability to adapt and learn, to recognize effective communication as a strategic internal capability and rare, valuable resource.

However, several of the assumptions underlying organizations' experimentation into NFMT have been largely unexamined and untested. Just as it has been difficult to relate participative decision

making to the "bottom line" (see Meyer, 1971, for an early treatment of this issue), the NFMT-Financial Performance relationship will require empirical verification. The present treatise attempts to illuminate several of these assumptions. In particular, we examine how NFMT are built upon the foundation of more effective and efficient organizational communication systems (communicated knowledge), how these NFMT yield more effective and efficient communication among teams and individuals, and how more effective and efficient communication explains variance in overall firm financial performance. The relationship of knowledge and communication to strategic internal capability as a source of competitive advantage is fundamental to the philosophy and performance of NFMT. Resource-based theory of competitive advantage provides a basis to build such relationships into a model and provides avenues for future empirical research.

The Resource-Based View of Competitive Advantage

In the neoclassical economics of the firm, a general equilibrium "solution" evolves wherein individual firms cannot receive above-average returns (economic profits or "rents") for use of invested resources or sale of products or services. A brief explanation is in order to relate this "general equilibrium" solution to a contrasting viewpoint labeled "resource-based theory".

Due to free market forces in neoclassical economics, there is always a tendency toward the equilibrium solution in economic activity. The theory begins with a set of assumptions: no firm is large or powerful enough to set prices, resources are perfectly divisible and mobile in uses to which they are put, information is perfectly available, and eventually all resource factors and products are homogeneous. Since resources are divisible and mobile, they will move to the uses where they can receive the highest returns. As more supplies of these resources move to produce in given markets, the prices of such needed resource inputs will be driven down to a standard price (normal return). As consumers show that they will purchase these products, such markets will attract more firms to the point where all production settles at the most efficient standard scale of operation and resource usage. Both resource inputs and product outputs will then be homogeneous and bought and sold at standard prices. Returns to invested resources are at a normalized average so that above-average profits (called economic profits or "rents") are impossible (zero). Individual firms have no competitive advantage over any other firms.

The field of strategic management attempts to view the world as it functions. It is clear that some firms, in fact, do secure economic advantage over competitive firms. Often these competitive advantages last for long periods of time. Obviously, market monopolies or oli-

gopolies can secure such advantage and above-normal profits. Over time, substitute products or services can compete away market power advantages through new technologies or changes in consumer tastes and preferences. Firm strategy, therefore, may be directed toward creating and sustaining competitive advantage and economic profits (rents). One way to create such advantage is through creation and utilization of resources.

Within the discipline of strategic management, the relatively new "resource-based" theory focuses on inputs or resources (as contrasted with product markets) as sources of competitive advantage. The resourcebased view focuses on sets of resources and capabilities which are mobilized and applied to create and sustain a competitive advantage (Barney, 1991; Dierckx & Cool, 1989; Rumelt, Schendel, & Teece, 1991). Resources may be inputs that are converted into outputs that consumers need and want to buy, or resources may facilitate the creation of those outputs. Tangible examples of resources are capital equipment, physical plant, intellectual property (such as patents, copyrights, trade secrets, and brand names), raw materials, and human capital (Amit & Shoemaker, 1993; Grant, 1991). More recently, theory has examined less tangible resources as a source of competitive advantage (Amit & Shoemaker, 1993; Schulze, 1992) in the form of internal capabilities. Grant has defined such capabilities as "complex patterns of coordination and cooperation between people, and between people and (tangible) resources" (1991, p. 122). Amit and Shoemaker refer to such capabilities as "intermediate goods" (1990, p. 4). It is interesting to note for the purposes of the present paper that these "complex patterns" rest on the foundations of communicated knowledge.

In sum, the resource-based view argues that a firm can procure and/or develop a resource set which will cause it to perform better and secure a competitive advantage over other firms. Superior performance is feasible if a firm owns, controls, and configures its resources so as to "produce more economically and/or better satisfy customer wants" (Peteraf, 1993, p. 180). This view contrasts with the market power (monopoly, oligopoly) view of competitive advantage (Porter, 1985; Yao, 1988) which is more traditional in strategy research. Resource-based theory emphasizes resources as a primary determinant of firm performance (Rumelt et. al., 1991). Thus, differences in the resource stocks and configurations of competing firms yield potential competitive advantage (Conner, 1991, p. 132).

Resource-Based Structure and Process Models Related to Communicated Knowledge

From the foregoing recapitulation, it is apparent that there are two approaches to understanding the contributions of resources to com-

petitive advantage: the Structural and the Process Schools (Schulze, 1992). The *Structural School* tracks competitive advantage to the economics of marketable assets controlled by the firm. These assets are converted into outputs through production and operations within the firm. If such assets are rare, valuable to the production function, difficult to substitute, and inimitable, they create a competitive advantage for the period of time that the foregoing properties prevail (Barney, 1991).

Recently, however, the *Process School* has emphasized internal strategic capabilities which usually are less tangible and are more firm specific (in the sense that minimal or nonexistent external markets exist for these resources). Knowledge and communication processes clearly fit the internal strategic capabilities category. Amit and Shoemaker make the distinction definitively:

The firm's resources will be defined as transferable input factors controlled by the firm, that are converted into outputs using a range of firm assets and bonding mechanisms such as management information systems, incentive systems, or trust between management and labor. These resources consist of proprietary know-how (e.g. patents and trade secrets), financial or physical assets (e.g. property, plant and equipment), human capital, government licenses, etc. Capabilities, in contrast, are tangible or intangible (invisible) assets that are firm specific and are created over time through complex interactions [italics added] among the firm's resources. They can be thought of as intermediate goods generated by the firm to provide enhanced productivity of its resources as well as flexibility and protection for its final product or service. Capabilities are based on developing, carrying, and exchanging information [italics added] through the firm's human capital (Amit & Shoemaker, 1990, pp. 4-5).

Thus, the Process School of resource-based theory asserts that internal strategic capabilities have the potential to create competitive advantage. Inherent in Amit and Shoemaker's (1993) and Grant's (1991) definitions of internal capabilities is the emphasis on complex interactions, exchange of information, and coordination between people as crucial to the development of internal strategic capabilities. It is clear that the knowledge-base and the organization communication systems (OCS) are at the core foundation of these "interactive exchanges." As viewed through the lens of resource-based theory, effective and efficient knowledge flow within the OCS is rare, valuable, non substitutable, and difficult to imitate by less capable competitors.

Indeed, NFMT experiments take direct aim at developing such knowledge-based communication capabilities in order to create and sustain competitive advantage in domestic and global markets. Figure 1 provides a glimpse of the relationships among strategies (S), resources (R), and performance (P), emphasizing the roles of knowledge and communication in the development of competitive advantage. Given the foregoing analysis, several researchable propositions can be proposed utilizing the communicated-knowledge foundation.

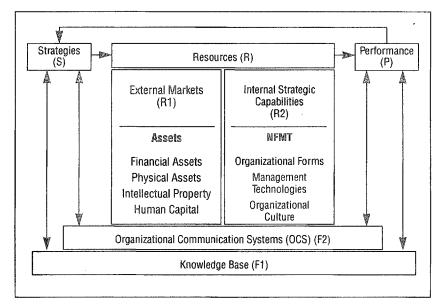


Figure 1. Internal Strategic Capabilities Based on Communicated Knowledge

Whether strategies are rationally planned or simply "emergent" (Mintzberg, 1979), they work through resources to produce performance and financial indicators of such performance. Within resource-based theory, both external (Structural School) market resources (R1) and internal (Process School) strategic capability resources (R2) affect performance and competitive advantage. In other words, both assets (R1) and NFMT (R2) have direct potential impact on performance (P). The bedrock foundation (F1) upon which strategy, resources and performance are built is the knowledge base. Strategy formation, resource acquisition and development, and day-to-day performance itself are increasingly dependent on brain power and knowledge, including technology (Jackson, 1993; Porter, 1990; Thurow, 1992; Tyson, 1992). But a second foundation (F2) is the "coordinated sense making" process built into the organization communication system (OCS). Knowledge and information exchanges take place among F1 and S, R1, R2, to impact P. In this sense, the OCS permeates all relationships in the organization. It underlies the NFMT as the basis for improved performance and sustainable competitive advantage.

Communicated knowledge is viewed as probably the single most important source of competitive advantage into the 21st Century (Daft & Lewin, 1993; Grant, 1993; Nelson & Winter, 1982; Schulze, 1992). Since competitive advantage yields supranormal financial performance (Porter, 1985, 1990), it follows that one would predict a strong

positive relationship between effective and efficient communication (OCS) and financial performance. However, little if any empirical work has tested this relationship. From Figure 1, four propositions are derived.

P1: As predicted in structural resource-based theory, firms which own and/or control rare, valuable, inimitable, and non-substitutable external marketable resources (R1) will perform better than firms which own and/or control fewer such resources.

P2: As predicted in process resource-based theory, firms which have developed more effective and efficient internal strategic capabilities (R2) will perform better than firms which have developed fewer such capabilities.

P3: As predicted in resource-based theory, firms which own and have developed both structural (R1) and process (R2) resources will perform better than firms with lesser total aggregated stocks of structural and process resources.

P4a: Firms with effective and efficient organizational communication systems will perform better financially than firms with less effective and efficient organizational communication systems.

P4b: Firms with effective and efficient organizational communication systems will have greater internal strategic capabilities (R2) than firms with less effective and efficient organizational communication systems (OCS).

P4c: Firms with effective and efficient organizational communication systems will have greater ability to serve their external markets (R1) than firms with less effective and efficient organizational communication systems (OCS).

P4d: Firms with effective and efficient organizational communication systems will pursue more effective strategies (S) than firms with less effective and efficient organizational communication systems (OCS).

Organizational Communication and the Development of Internal Strategic Capabilities

As described previously, the importance of communication to the development and sustenance of competitive advantage has been implicitly noted in the various definitions of internal strategic capabilities (Amit & Shoemaker, 1993; Grant, 1991). However, recent discussion attempting to establish a "knowledge-based" view of the firm in resource-based theory asserts the existence of a more concrete theoretical relationship between organizational communication processes and the development of internal strategic capabilities (Grant, 1993; Spender, 1993). This "knowledge-based" perspective identifies knowledge as the most strategically important resource possessed by the

firm. Organizational capabilities are viewed as the product of distinctive competencies in the integration and application of this knowledge. The knowledge perspective links communication as the pervasive, underlying force responsible for maintenance and dissemination of strategic capabilities based in knowledge. Figure 2 encapsulates the basic concepts of the knowledge perspective.

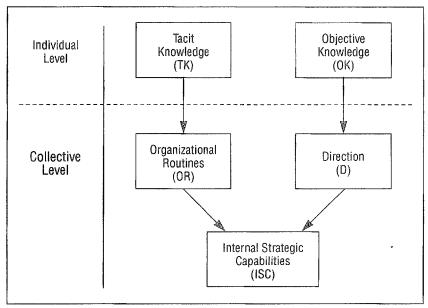


Figure 2. The Development of Strategic Capabilities: A Knowledge-Based Approach

The knowledge-based perspective explanation of the development of internal strategic capabilities is structured within two continua: Individual-Collective Levels and Tacit-Objective Knowledge. The summary represented in Figure 2 is based on the works of Grant (1993), Polanyi (1967), Selznick (1957), and Spender (1993). Objective knowledge is possessed by individuals and is observable, explicit, and transferable into public language (Polanyi, 1967). Tacit knowledge, in contrast, consists of "unexpressed knowing.... subsidiary awareness.... distanced from the domain of explicit language" (Spender, 1993, p. 7). The point to be made for the purposes of the present analysis is that strategic capabilities result from new knowledge creation accomplished through a combination of individuals' tacit and objective knowledge. Yet this collection of knowledge must somehow be aggregated and communicated at a collective level.

Spender (1993) argues that there exist two levels of knowledge within an organization: 1) knowledge which resides within the individuals

in the organization and 2) knowledge which exists at the collective level, independent of individuals. Spender supports the position that collective institutionalized knowledge exists and influences the organization (Chandler, 1990; Selznick, 1957). Spender directly relates such collective knowledge to strategic capabilities by suggesting that "an organization's distinctive competencies emerge at a collective (organizational) level" (1993, p. 16).

Grant further elaborates on the forms of collective knowledge by citing organizational routines (OR) and direction (D) as the communication mechanisms that facilitate the functioning of said collective knowledge (1993). Organizational routines have become a standard basis of analysis in the field of evolutionary economics:

to include characteristics of firms that range from well-specified technical routines for producing things, through procedures for hiring and firing, ordering new inventory . . . to policies regarding investment, R&D, advertising, and business strategies about product diversification (Nelson & Winter, 1982, p. 14).

Not all business behavior is routine, yet decisions are basically "rule guided" (Nelson & Winter, 1982, p. 17). Even periodic analysis processes regarding such routines are thought to be rule-oriented whereby these written rules or unwritten norms evolve through human interaction. There are even rules for proper interaction. What is communicated are the routines themselves, thus becoming a part of the organizational culture ("the way we do things around here").

Tacit knowledge is given its form through organization routines defined as, "coordination . . . achieved through commonly understood roles and interaction patterns established through training and constant repetition, supported by a series of explicit and implicit signals" (Grant, 1993, p. 4). Thus the organizational culture is the carrier of tacit knowledge in the organization. As such, a strong culture is an internal strategic capability (Deal & Kennedy, 1982) and the carrier of widely communicated tacit knowledge. Such a capability is rare, valuable, non-substitutable, and inimitable, and thus qualifies in resource-based theory as a source of competitive advantage. This tacit knowledge-organizational routines relationship is quite different from the objective knowledge-direction process.

Direction (D) consists of the "directives, policies and procedures which embody the knowledge of a large number of specialists" (Grant, 1993, p. 3). As such, direction gives expression to objective knowledge. As with tacit knowledge, communication is the distributor of objective knowledge through direction. Figure 2 summarizes the relationship between the types of knowledge and different levels of communication systems.

A close analysis of the factors specified by the knowledge-based view of the firm as being responsible for the development of internal strategic capabilities indicates that at both the individual and collective levels of analysis, communication underlies the aforementioned aspects of knowledge formation and integration. Specifically relevant is communication theory which concerns the development of shared experiences and efficient information exchange at the individual level, and effective institutional processes and appropriate leadership forms on the collective level.

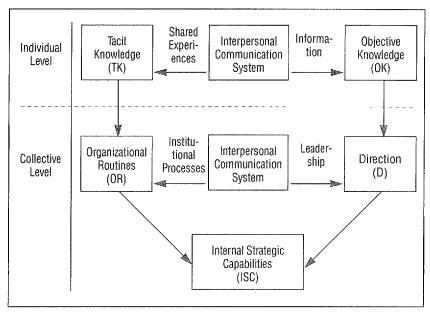
At the individual level, the interpersonal communication system which provides for shared experience and information exchange is the basis for the development and integration of objective and tacit knowledge. Tacit knowledge, the "unexpected knowing that precedes and underpins any communication" (Spender, 1993, p. 7), is based on the shared experience of individuals. As Polanyi (1967) noted, "there must be a shared set of experiences of the relevant domain, for it is intimacy with these experiences rather than with abstract concepts that lies at the root of human communication." As tacit knowledge is incommunicable in an explicit form and relies on subsidiary awareness or understanding, the generation of tacit knowledge among individuals requires "merely experiences, intimacy, and reflection" (Spender, 1993, p. 7). The development of this conscious, unspoken understanding as a means of effective communication between individuals improves the "efficiency of signaling/responsiveness" (Grant, 1993, p. 9) which is needed for tacit knowledge integration.

Thus, effective and efficient tacit knowledge integration results from a communication system which facilitates shared experience between individuals through allowing for increased intensity, time of acquaintance (Grant, 1993), and frequency of interaction, and for communication as dialogue (Eisenberg & Goodall, 1993). This leads to proposition five.

P5: Communication processes which enhance shared experiences among organizational members will yield internal strategic capabilities and better financial performance.

Figure 3 specifies the role of the communication processes of information exchange in the creation and integration of objective knowledge. The process of generating explicitly coded objective knowledge refers to the use of "public" language which allows interaction of knowledge between individuals in an organization. Formal as well as informal communication systems exist to facilitate information exchange and accomplish the development and integration of objective knowledge. Examples of information exchange-based communication systems which function for the development of objective knowledge include formal management information systems (MIS) and

e-mail systems, as well as effective and efficient cross-functional, vertical, horizontal, grapevine, and dyadic interpersonal information exchange. Proposition six illustrates the importance of effective information exchange to the development of objective knowledge by individuals.



 ${\bf Figure~3.~The~Development~of~Strategic~Capabilities:~A~Knowledge-Based~Approach~Through~Communication.}$

P6: Communication processes which enhance the exchange of objective information among organization members will yield internal strategic capabilities and better financial performance.

At the collective level, the more that a firm can access and harness the specialized knowledge of its employees, the more capable it is likely to be (Grant, 1993). Figure 3 shows that the organizational communication system at the collective level consists of institutional processes and leadership which provide for the integration and development of new knowledge from individual specialists in the form of organizational routines and direction.

In the context of this paper, "institutional processes" refers to organizational elements of tacit communication through such media as culture, rituals, and social integration patterns. The relationship between institutional processes, organizational routines, and strategic organizational capabilities (as shown in Figure 3) was noted by Selznick (1957), who saw distinctive competence as a character-like emergent quality which results from the patterns of the organization's

activities. Grant (1993) further expanded on the influence and nature of institutional processes on organizational routines in describing organizational routines as coordination which is achieved through commonly understood roles and interaction patterns which stem from an organization's culture, rituals, and social integration patterns to provide the collective basis for the integration and development of tacit knowledge through organizational routines, and provide for the creation of internal strategic capabilities.

P7: Communication processes which include effective and efficient institutional processes will yield internal strategic capabilities and better financial performance.

Whereas institutional processes are the organization-level means of integrating tacit knowledge through the development of organizational routines, effective communication of leadership is the organization-level means of directing and integrating the objective knowledge of individuals, which becomes manifest in direction (Figure 3). Direction is identified by Demsetz (1991) as the principal means by which objective knowledge can be communicated at low cost between specialists and the large number of other employees of the organization. Thus, direction consists of both a manifestation of organizational knowledge as well as a means of communication based on rules, policies, and procedures which are developed and implemented by the organization's leadership. However, leadership establishes the direction framework whereby individuals are oriented toward engaging in the work behaviors necessary for the organizational integration of objective knowledge that is oriented towards goal achievement. Thus, the ability of leadership to communicate direction which allows for the integration of objective knowledge is a basis for the development of internal strategic capabilities.

P8: Communication processes which include consistent, redundant articulation of organizational goals by top leaders will yield internal strategic capabilities and better financial performance.

In summary, the knowledge-based view of the firm relies on the effectiveness of the communication system at both the organizational and individual level in the development of internal strategic capabilities. In particular, at the level of the individual, shared experience and information exchange underlie tacit and objective knowledge formation and integration; at the organizational level, institutional processes and leadership are responsible for the development of organization routines and direction.

Communicated Knowledge as a Source of Competitive Advantage: An Agenda for Future Research

Given the theoretical review provided by resource-based theory throughout this paper, a worthwhile direction for future research is the empirical investigation of relationships between OCS and firm financial performance. An attempt to locate past empirical work concerning this relationship revealed a paucity of research in this area. The reviewed research tends to examine communication links with either organizational effectiveness or productivity (Clampitt, 1983; Clampitt & Downs, 1993; Jacobs & Jillson, 1974; Tubbs & Hain, 1979; Tubbs & Widgery, 1978), not financial performance. Most of the productivity and effectiveness variables which have been studied include such intermediate variables as absenteeism (Tubbs & Widgery, 1978), grievances (Tubbs & Hain, 1979), and politics (Jacobs & Jillson, 1974). Snyder and Morris (1984) studied 12 social service organizations utilizing objective measures such as number of clients served and costs of operations to find relationships to supervisory and peer communication effectiveness. But most of the studies reviewed utilized selfreported productivity measures. The use of external objective data for performance measures was glaringly absent. No studies were found of private sector companies where financial performance data were related to communication effectiveness and efficiency.

As recently as 1993, Clampitt and Downs point out that "one largely overlooked avenue of study has serious implications for business communicators, namely, the relationship between communication satisfaction and productivity" (p. 5). Yet even these distinguished scholars rely on self-reported productivity data to investigate the issue. Clampitt and Downs (1993) find several concerns about the "current state of knowledge. . . . First, productivity has been defined in a variety of ways. . . . Second . . . these conceptual differences lead to concerns about measurement. . . . Third, the majority of these studies look at productivity from only one level of the organization" (p. 9).

Many of these difficulties can be overcome through a comprehensive communication audit process (Downs, 1988) which can be related to published financial performance data. Such a study would function as a first approximation for testing some of the relationships represented in Figure 1 herein. Eight propositions have been offered through the theory-based development of the present paper. Each of these propositions can be disaggregated into working hypotheses for empirical tests. Operationalization of the models and relationships of Figures 1 and 3 can provide a rich set of data and findings to provide better understanding of OCS Firm Financial Performance relationships, the relationships between knowledge bases and communication as internal strategic capabilities, the Process School of resourcebased theory, and the relative importance of internal strategic and asset-based capabilities as sources of competitive advantage. In addition, longitudinal, fine-grained grounded research could begin which would focus on understanding the performance impacts of various

experiments underway on the utilization of new organization forms and management technologies (NFMT).

Conclusion

The resource-based view of the firm provides a theoretical basis for the centrality of organizational communication processes to the development of competitive advantage. The emphasis on enhanced communication capabilities within NFMT and the increasing prevalence of such communication-based organizational forms illustrate a market awareness of the potential for effective and efficient communication systems to influence financial outcomes through the development of internal strategic capabilities. The knowledge-based view of the firm provides theory regarding the central role of communication in the development of firm-specific internal strategic capabilities which lead to sustainable strategic competitive advantage. Propositions and directions for future research are suggested to provide empirical evidence to support the resource-based linkage between communication theory and organizational outcomes.

The authors have attempted to encourage cross-disciplinary research into modern issues revolving around communicated knowledge and NFMT. Empirical work is encouraged to test the models which were theoretically developed. We realize some limitations to what is suggested. First, measurement issues exist for operationalizing the indicated variables. Second, the ideal studies would be longitudinal – studying NFMT introductions from inception and carefully tracking financial results. Sites for such studies may be difficult to find. Finally, it could well be that NFMT implementation will be so difficult in corporate bureaucracies that the whole movement will be dropped as just another management fad.

But we do not believe that this will be the case. The increasingly competitive environment in which firms now operate will drive them to seek internal strategic capabilities and, to the extent that NFMT contribute to these capabilities, adopt them. Those firms which cannot make the transition from bureaucracy to new forms will find themselves at a competitive disadvantage relative to the firms that can adapt. It is, therefore, all the more important that organizational researchers examine this link between the enhanced knowledge-base and organizational communication system brought about by these NFMT and the greater capabilities and performance which will ensue.

NOTES

¹Throughout the paper the term effective is used as "setting the correct goals" or "doing the right things." Efficient is used as "productive with minimum waste" or "doing things right."

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