Revisiting economizing as a fundamental strategy

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ABSTRACT

The current competitive landscape calls for firms to consider rivals in current markets and invisible competitors across the far reaches of the globe. The playing field is increasingly more uneven as a result of structural and resource diversity across global markets. Firms have to compete with rivals that have significantly different cost structures. Economizing considerations must be embedded in strategic decisions in order to sustain competitiveness. Transaction cost economics offers a viable framework for evaluating economizing by considering internal and external dynamics while putting into context unforeseeable future events and acknowledging behavioral shortcomings of organizational actors. For small firms, economizing is an effective fundamental strategy. Market power in large firms is unsustainable in the long-run. Firms with market power are better off implementing an economizing-strategizing sequence. Given the time lag between identifying economizing opportunities and implementing adaptive mechanisms, firms are constantly efficiency-seeking rather than in an ideal state of economizing.

Keywords: economizing, strategizing, efficiency, transaction costs.

INTRODUCTION

The present state of interfirm competition calls for a fresh look at how rival firms compete with each other. Effects of globalization can be felt in most firms and across all levels of many organizations. Firms cannot compete on the basis of strategy alone. Firms have to consider existing rivals in current markets and invisible competitors across the far reaches of the globe. Globalization has led to an uneven competitive landscape due to multiple regulatory environments and increased resource diversity, among other structural differences. It is not enough to acknowledge the unfairness of the playing field. Firms must constantly adapt in order to maintain competitiveness. In light of this reality, organizations have to learn how to compete with rivals that have significantly different cost structures and production functions. Many firms have found the solution to this problem in outsourcing non core activities, activities in which they lack core competence and those activities that they cannot implement locally efficiently. However, even outsourcing, as a strategic move to take the competition to the rivals, has limits because it does not address the full range of the firm's costs, especially when competitors are in a different spatial environment. In order to sustain competitiveness, economizing considerations must be embedded in every strategic decision both within the firm and external to the organization. This paper theorizes that under the current conditions, economizing is a viable strategy of sustaining competitiveness. While performance benefits of economizing may be obvious, there is a need to situate economizing in the right place, with respect to other strategies. Transaction cost economics (TCE) provides A viable framework through which economizing can be evaluated. TCE is relevant in economizing because the framework offers a strategic perspective of the firm, where the firm exists in part to minimize transaction costs in all aspects of the business at all times.

The paper begins by describing the concept of economizing. Next, economizing through TCE lens is revisited. Economizing, as applied in two dominant strategic frameworks, positioning and resource-based view (RBV), is then evaluated. Following is a summary of relevant empirical findings in an attempt to cast economizing a critical strategic consideration and implications for sequencing economizing and strategizing. Next is a discussion. This is followed by implications, limitations and potential avenues for future research. In the conclusion, the paper highlights the potential rightful place and role of economizing in sustaining competitiveness.

ECONOMIZING

Efficiency is concerned with adapting the most cost-effective processes by reducing waste, bureaucracy, and slack, while constantly seeking to innovate and deploy best practices. Economizing goes beyond internal organizational processes by also seeking to minimize external costs. Economizing is concerned with adapting the most cost effective governance structures in factor markets while engaging with external entities such as suppliers and customers. Although the concept of economizing precedes organizations, it has not received due attention strategy scholars. Economizing focuses on choices that are aimed at improving organizational efficiency and effectiveness (Williamson, 1991). In many cases, this area of the business is often assumed to be well-executed and does not need much refinement. In reality, this is not the case. The recent recession is a case in point. Many firms have been forced to reduce waste and slack only under the threat of insolvency. This suggests that while some firms are efficient, others were

operating in a comfort zone of sub-optimal efficiency or had to create more efficient processes. One way of articulating the significance of economizing is through TCE lens. TCE lends itself to economizing because it looks at the firm in its entirety including *ex ante* and *ex post* transactions, a long term view of the firm's existence, while making realistic assumptions regarding the entities involved. Economizing on transaction costs is the main case for TCE (Williamson, 2008) as executives in general, and within limits, wish to make their organization efficient rather than wasteful (Knight, 1941). Economizing goes beyond existing organizational processes by focusing on how firms can adapt and integrate with the emerging environment in the most efficient manner. There is an interest in ensuring that factors of production are placed where their value is highest (Coase, 1937). The governance of resource endowments is critical to sustaining competitive advantage.

Economizing has two main dimensions, first-order and second-order economizing (Williamson, 1991). First-order economizing is a conscious effort to craft adaptive internal coordinating mechanisms, such as efficient production processes and technology while minimizing bureaucracy, slack and waste. First-order economizing is focused on streamlining organizational processes. Scholars often allude to this dimension of efficiency while referring to organizational efficiency. While first-order gains are obvious, there are structural and behavioral constraints that inhibit effective execution. Second-order economizing refers to overall allocative efficiency gains from first-order economizing that are bound to arise through price mechanism effects. Allocative efficiency gains are obtained when there is efficient use of resources and benefits from reduced costs that may be passed on to consumers in the form of price reduction or retained to benefit shareholders. The level of resultant price reduction and other social benefits are contingent upon an efficient competitive environment. Figure 1 below, adapted from Williamson (1991), is based on partial equilibrium welfare economics and highlights first-order and second-order economizing. Partial equilibrium analysis facilitates the examination of equilibrium and efficiency of two variables, while holding other variables constant. This is important for illustrative, pedagogical and research purposes. In the illustration, quantity q1 can be sold at price p1. By reducing bureaucracy and waste and assuming no change in price, there will be cost savings represented by rectangle W. If, on the other hand, price is reduced from p1 to p2, there will be further allocative efficiency gains represented by rectangle L (a change in quantity sold is represented by Δq). First-order economizing gains (W) are much higher than second-order efficiency gains (L). First-order gains are also reflected directly in firm performance as profits. On the other hand, allocative efficiency gains are passed on by the supplier subjectively, therefore, not guaranteed. Second-order gains may also represent arbitrage earning during frictional periods of turbulence or in monopolistic regimes. Regulators and other stakeholders may be interested in this "triangle" argument to regulate monopolies or other antitrust action. However, that is a matter of public policy debate. It is clear that, regardless of whether the objective is to craft firm strategy or design public policy, the focus should be on first-order economizing which is concerned with efficiency rather than second-order economizing which has marginal benefits (Williamson, 1991) and no immediate value creation for the firm.

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There are different ways of evaluating economizing in existing firms. Real-time communications and technological advances imply that most firms know how to access best practices and other efficiency options. However, due to structural and resource constraints, not all organizations are able to operate as efficiently as they should. Other behavioral factors such as bounded rationality, resistance to change, inadequate training and low morale may also get in the way of effective implementation of economizing principles. Where there are more efficient cost-minimizing alternatives, firms have to consider organizational implications of migrating from current technologies to new processes and the consequential cost of selecting the wrong technologies. As a result, economizing is not always implemented firsthand and has continued to elude many aspiring firms. The notion that economizing is an organizational norm as suggested by some scholars does not seem to be tenable under these circumstances. A view of the firm through external lens exposes another dimension of economizing that has been widely ignored; how the firm adapts and sustains governance mechanisms with third parties in a cost-minimizing way. This dimension of economizing was acknowledged by early scholars as being fundamental to competitiveness (Coase, 1937; Knight, 1941). Over time, scholars have paid lopsided attention to internal firm efficiency and largely ignored the external dimensions of economizing. The external dimensions of the firm equally attract significant level of transaction costs if not streamlined.

ECONOMIZING IN STRATEGIC FRAMEWORKS

An evaluation of three dominant strategic paradigms demonstrates how scholars on both sides have staked their positions (Barney, 1991; Peteraf & Barney, 2003; Porter, 1996; Williamson, 1991). Broadly, Porter submits that economizing is a given in most organizations and cannot be easily leveraged to be a source of competitive advantage. Peteraf and Barney have identified efficiency as part of the RBV model but it is not clear how efficiency is enacted given resources that are valuable, rare, inimitable and not substitutable. Presumably economizing is developed during the bundling of these resources and in the enactment of organizational capabilities. Williamson's position is that because most firms do not have market power, the only available source of competitive advantage is through economizing. There have also been attempts to seek a common ground and reinforce the complementary nature of both perspectives (Madhok, 2002; Peteraf & Barney, 2003). This situation is aggravated by limited theoretical formulations and empirical studies with economizing as a key variable. However, there have been research efforts towards this end in recent times (Foss, 2002; Nickerson, Hamilton & Wada, 2001).

Most strategy frameworks implicitly support the argument that economizing is a significant part of the strategic process. Earlier work by Porter suggests that a dimension of economizing, first-order economizing, is an option under generic strategies where firms can opt to differentiate or minimize costs. However, this seems to diminish the significance of economizing while interacting with external forces and ignores institutional pressure from external stakeholders to demonstrate second-order economizing principles. Porter's later position is that efficiency is given in most firms and should not be considered as a strategy (Porter, 1996). Tactical activities aimed at reducing waste and improving productivity are easy to imitate and diffuse among competitors. In order to achieve sustainable competitiveness, firms must seek unique competitive positions and fit across different market environments. Porter's framework assumes economizing is an attainable standard across competing firms regardless of disparities in resource endowments and environmental contexts. Presumably, inefficient firms, and those that

cannot implement economizing principles internally, are quickly weeded out of competition. Finally, Porter contends that the means to deploy efficient strategies is available to all firms and an emphasis on efficiency as a fundamental strategy would merely result in an arms race without a clear competitive advantage to any firm (Porter, 1996). While Porter's observations may apply within similar competitive markets, many firms in the current environment have to deal with rivals from diverse economic environments, some of which may compete from significantly different regulatory environments. Within the same markets, information on best practices is not always symmetric among rivals, and information-seeking costs may be attached to efficient options. Economizing also goes beyond internal efficiency. Economizing is also concerned with seeking the most efficient organizational adaptations due to changes in the external environment. Positioning strategies must be accompanied by explicit economizing strategies in order to sustain competitiveness.

Proposition 1: Positioning strategies that are preceded by explicit economizing strategies will lead to better firm performance than positioning strategies that stand alone.

Within the RBV framework, economizing has been given some consideration. RBV implicitly assumes that resources are used efficiently. RBV considers efficient resource endowments and not efficient activities as key to competitiveness. Consequently, the RBV perspective of efficiency is a result of intrinsic characteristics of a resource. Superior resources are deemed to deliver greater benefits more efficiently, leading to a competitive advantage (Barney, 1991; Peteraf 1993, Peteraf & Barney, 2003). Further, unique firm capabilities and efficiency can also be extended through organizational learning (Miller, 2003). Economizing looks beyond resources by evaluating the efficiency of the processes that exploit such resources and efficiency in the governance of those resources. This dynamic nature of economizing provides the link between superior resources and the manner by which they are exploited to lead to sustainable competitiveness. Where the firm has the best resources, efficient competences to exploit such resources need to be developed. Inefficient exploitation of the resources will result to forgone opportunities on performance and even cause the firm to be less competitive. The dynamic nature of economizing also helps resolve the static limitations of RBV (Eisenhart & Martin, 2000) by constantly renewing the efficient bundling and governance of resources.

Proposition 2: Firms that pursue both resource-based strategies and economizing will perform better than firms that pursue resource-based strategies alone.

The two illustrations are by no means exhaustive, but merely point to the benefits of explicitly complementing any given strategy with economizing. It is clear that dominant strategic theories are concerned with economizing to some extent, especially first-order economizing. Given the significance of economizing on performance, these theoretical formulations do not go deep enough to explicate how firms go about creating and sustaining economizing as strategy. The TCE framework and assumptions lend themselves to understanding the significance of efficiency in firm strategy. TCE incorporates the dynamic nature of business, which leads to a more realistic view of emergent strategy, multiple stakeholders and their impact on the strategizing process both within and outside the firm. TCE also highlights contract incompleteness that is partly due to asymmetric information, and bounded rationality. Initial TCE assumptions held technology as constant for purposes of bringing other variables into focus (Williamson, 1985). Subsequent studies have considered technology and other production

functions as dependent variables, with mixed results. Because parties to a transaction have a long-term view of the relationship, provisions for technological uncertainty are assumed to be embedded in the calculus.

ECONOMIZING THROUGH TCE LENS

Looking at economizing through TCE lens provides a multidimensional perspective. Through TCE, economizing is explicated as a dynamic problem of constantly adapting to optimize efficiency (Williamson, 1991). TCE offers a more realistic lens by making a business transaction the level of analysis (Williamson, 1985) through which different perspectives of economizing can be discerned. Different transactions are unique in context and texture and therefore lend themselves to unique economizing alternatives. Parties to the transaction often seek to maximize both profits within realistic assumptions such as conflicting organizational goals, long-term sustainability and asymmetric information. Through TCE lens, considerable inroads have also been made towards better understanding the utility of TCE in enhancing internal governance structures and production process, given specific firm capabilities (Hoetker, 2005; Jacobides & Winter, 2005; Leiblein & Miller, 2003). Other studies have analyzed TCE from the context of internal efficiency (Delmas and Tokat, 2005; Nickerson, Hamilton, and Wada, 2001; Murray & Kotabe, 1999; Poppo & Zenger, 1998).

A brief review of TCE is relevant. The TCE framework has undergone substantial evolution following Ronald Coase's (1937) seminal work. The theory is well-described and refined by Williamson (1985). Boerner & Macher (2003) and David & Han (2004) provide a detailed analysis of different extensions to the theory. Since there is no paradigm consensus or cohesive empirical support for core areas of the framework (David & Han, 2004), most studies have continued to cite and apply Williamson's formulation. Early work by Coase (1937) sought to understand why it was sometimes more efficient to use the firm rather than the market to conduct business. Coase demonstrated fundamental flaws with the economic theory of price mechanism: there is a cost to using the price mechanism, transaction costs. Arrow (1969) defines transaction costs as the costs of running the economic system. If the organization is an engine, then friction is the transaction cost. Williamson uses the lens of governance modes, associated with a variety of contracting forms, to explicate the TCE problem. Where transactions can be efficiently supported by general-purpose assets, identity of the parties is irrelevant with little need for protective governance structures. High-powered market incentives are adequate and such activities can be conducted outside the firm within the realms of contract law. The second governance structure is the hybrid mode that has autonomous parties but a given level of dependency. Such transactions are supported by a neoclassical contract that is 'elastic' and offers a threshold for renegotiation of maladaptations and misalignments. Hierarchical structures (internal organization) are suitable where there is significant exposure and safeguards against exposure cannot be effectively implemented. Activities without safeguards must be conducted within the firm where the contract law of forbearance obtains. Evidently, each structure seeks to minimize governance costs while simultaneously guarding against threats of opportunism.

TCE distinguishes ex ante and ex post costs. Ex ante costs relate to the costs of seeking information, drafting contracts and designing safeguards. Such sunk costs are not easy to mitigate in the event of misalignments. Ex post costs arise after implementation of the contract. While it may be theoretically possible to retrospectively review ex ante costs, efficiency gains to contracting can be best realized from economizing transaction costs through ex post incentives. Where there are inter-organizational disputes that cannot be resolved through contract, parties to

the contract will opt for private ordering due to inherent limitations of court ordering. From a TCE perspective, there is uncertainty, behavioral variables, and a derivative condition of information compactedness (Williamson, 1985) that leads to incomplete contracts. Information impactedness occurs as a result of idiosyncratic or technical information that may not be easily decipherable by third parties. The situation is complicated further when third party players do not have a monetary stake in the transaction. A court-ordered system is a good case of impactedness. Courts and regulatory agencies often lack the expertise, information or enthusiasm to fully grasp finer details of the plans and intentions of contracting partners. Courts lack the capacity to resolve highly idiosyncratic and complex transactions in a manner that maintains integrity of strategic relationships. Further, due to opportunism, parties to the contract are constantly adapting advantageous bargaining positions as a routine matter. Finally, regardless of the efficacy of a court-ordered outcome, such an outcome rarely provides a mutually amenable environment that is necessary for future strategic bilateral exchange relationships. A scorchedearth situation envelops both parties, leaving them with little appetite for further collaboration. In such situations, incomplete contracts provide an economizing framework with elements of trust, forbearance and a possibility of future negotiations of unforeseen circumstances.

Several behavioral assumptions are necessary in explaining TCE: bounded rationality and opportunism. Bounded rationality holds that human beings are intendedly rational, but only limitedly so (Simon, 1961). Cognitive competence is limited to the extent that there is diminished capacity to process complex information while decision processes and decision choices between alternative governance modes are not always optimal. A realistic, semi-strong form of bounded rationality is more representative of organizational conditions in the practical world. Opportunism arises because of the human tendency of self-interest seeking with guile (Williamson, 1985) and self-believed threats and promises (Williamson, 1996). A strategic posture that is grounded on promise is naïve and should be supported by credible commitments and other hazard mitigating safeguards. TCE appeals to a strong form of both ex ante and ex post opportunism.

In summary, bounded rationality and opportunism affect economizing in different ways. Bounded rationality impairs the ability to determine the most economizing strategies and to execute such strategies most effectively. On the other hand threats of opportunism are bound to cause the firm to incur additional costs of securing safeguards and ensuring that contractual obligations are effectively executed. If the firm is the opportunist party, there is a likelihood of making arbitrage profits by acting opportunistically. TCE lays emphasis on the emerging organizational imperative: to organize transactions in order to economize on bounded rationality while safeguarding against the hazards of opportunism. These two variables provide a more realistic assumption of man as he is (Coase, 1984) with frailties of motive, reason and opportunism that have consequences on efficiency, as opposed to homo economicus descriptions of human actors in other strategic frameworks.

Proposition 3: Bounded rationality will moderate the relationship between economizing and firm performance.

Proposition 4: Opportunism will mediate the relationship between economizing and firm performance.

Key variables in TCE are asset specificity, uncertainty and frequency. Asset specificity can be further decomposed into different types (Williamson, 1985) that include site specificity

(Joskow, 1985; 1987; 1990), idiosyncratic investments (Palay, 1984), geographical proximity (Pirrong, 1993) and interfirm co-specialization (Dyer, 1996). High asset specificity calls for credible commitments or safeguards against holdups, absent which the firm has to opt for internal governance rather than the market. High frequency of contractual relationship is associated with establishing better working relationships and trust, while reducing the need for monitoring and consequent associated costs. Uncertainty creates conditions with asymmetric information and possibilities of opportunism among the actors. Globalization, an aspect of the current environment, has created considerable environmental pressure and ensuing performance consequences for many organizations. Other dimensions of uncertainty are bound to ensue in an open and rational system where price system failure can be partly attributed to complex environments and uncertainty regarding future conditions (Scott, 1987). Within these contexts firms have to be in an efficiency-seeking mode by constantly responding to the environment through first-order economizing. Such strategic actions may involve proactively redirecting resources to a new strategic goal in order to reduce waste.

TCE is concerned with the worst case when all the three variables (asset specificity, uncertainty and frequency) are joined to create a world of governance. The three variables have cost implications for organizations. By considering these variables, firms can create substantial savings by creating efficient contracts and governance structures with third parties. In addition, when the firm evaluates its strategic options with the three variables in mind, other chosen strategies such as price, technology and governance structures will be determined simultaneously with a far-sighted approach (Williamson, 1985; 1991). A strategic perspective of economizing is a logical approach at evaluating the firm's strategic options. Economizing would project both future environmental conditions and the necessary adaptations to internal governance mechanisms that would b required to be most efficient.

ECONIMIZING AND STRATEGIZING

One way of analyzing the significance of economizing in sustaining firm performance is by comparing both economizing and strategizing simultaneously. TCE is a viable vehicle for evaluating the two concepts because each activity within and outside the organization is evaluated in its entirety. TCE aims to resolve market failure, one of the fundamental contributions of the theory (Coase, 1937; Williamson, 1985). This does not imply that other concepts that have been developed to resolve market failure are less important. TCE is also concerned with the cost of choosing to make something for which it is well-equipped, competitively (Madhok, 2002). This characteristic, that emphasizes economizing, helps to distinguish TCE from other concepts such as resource-based view, dynamic capabilities and industrial organization. The economizing theme goes back to Coase's speculations that are evident in his writings:

"... (the question of why there are firms) does not tell us what the institutional structure of production should be. That depends on which firms can carry out this particular activity at the lowest cost and this is presumably largely determined by the other activities that the firms have undertaken...For an activity to be organized internally, costs need to be lower than market and competition...most market transactions will be interfirm exchanges (Coase, 1988)."

Subsequent research by Williamson (1991) provides more clarity on transaction costs from the perspective of adaptation to the external environment and economizing. Williamson

posits that strategizing appeals to a power perspective and is only relevant to firms with significant market share. Market power is the firm's ability to influence the action of others in a product-market (Shervani, Frazier & Challagalla, 2007; Harrigan, 1983; Makhija, 2003; Porter, 1980). Shervani et al. argue that firms with significant market power have the ability to lower transaction costs without resorting to credible commitments, even under conditions of high asset specificity and uncertainty. In many situations, market power enables the firm to economize and also have the freedom to strategize. Negotiating power, economies of scale and other scale benefits are some of the factors that will affect unit costs. Such firms are often a small fraction of the total firm population. From a Schumpetarian argument, market power is sustainable in the short-term but cannot be sustained over the long-term since rivals are always alert to new opportunities (Schumpeter, 1947). There seems to be support for this phenomenon from business history (Foster & Kaplan, 2001). Changes caused by the process of creative destruction (Schumpeter, 1950) often guarantee the demise of market power in the long-run unless there are substantial artificial barriers to entry. Schumpeter may have been concerned with non price competition and biased towards smaller firms. However, Schumpeter's description of industrial mutation that causes economic revolution from within the firm seems to bear some similarities to the concept of economizing.

For firms with market power, there is increased competitive advantage through economizing, in addition to existing advantages of scale and scope. In dynamic markets, market power offers opportunities for early returns and recoupment of research and development investments after the launch of new products. Where there are effective economizing principles, the firm will be in a better position to prolong its product life cycle and sustained competitiveness. Such firms will also make gains from arbitrage and allocative efficiency. Given that not all firms have market power and that market power is unsustainable in the long-run, there is a clear case for including economizing in the strategic process. Within comparable firms such as in a strategic group, smaller firms that pursue economizing as the main strategy are likely to perform better than smaller firms that pursue strategies other than economizing. Within similar groups, larger firms that exploit market power strategies while economizing will perform better than their counterparts. Smaller firms in the industry are inherently disadvantaged due to inability to exploit scale and scope economies and must find other ways of managing their cost functions.

Proposition 5: Smaller firms that pursue economizing as a fundamental strategy will perform better than comparable firms that pursue other strategies.

Proposition 6: Large firms that pursue deliberate economizing will perform better than comparable firms that pursue other chosen strategies.

DISCUSSION

Economizing involves reducing cost excesses due to inferior organization and maladapted operations. An inferior organization is likely to occur when the firm selects an inefficient mode of governance structure. For example, contracting out refining services by an oil company is likely to escalate monitoring costs and occasionally lead to holdups. More fundamentally, the oil company will lose control over the composition and quality of core products – oil products. From an economizing perspective, the oil company will seek the most efficient credible commitments firsthand and then move on to implement the refining

arrangements. An economizing culture is essential in the organization because opportunities are not wasted. In managing internal processes most effectively, bureaucracy and waste can be minimized through harmonizing internal organizational structures, designing credible commitments, and aggressively engaging efficiency initiatives such as enterprise resource planning and Six Sigma. While bureaucracy and waste management are technically applicable in any governance mode, they are best implemented within a hierarchical governance structure through the contract law of forbearance. The assumption that most organizations have perfected internal efficiencies, governance structures and minimized waste and bureaucracy has not received overwhelming empirical verification. Economic events in the past forty years demonstrate how Japanese car and electronics manufacturers were able to race United States manufacturers to the top primarily through painstaking efforts at reducing waste and processdriven economizing principles (Dyer, 1996; Hamel & Prahalad, 1989; Lieberman & Demeester, 1999). The wave of outsourcing to Asia in the past two decades was partly driven by an urgent need to play catch up by many western manufacturing industries after missing early opportunities to implement fundamental minimizing strategies locally. In fact, from a strategizing perspective, Mexico and other Latin American countries would be destinations of choice for activities that have been hollowed out of corporations based in the United States. Evidently, while such moves may address production economies, the larger issue of governance structures remains unresolved. Since economizing is more fundamental, Asia continues to dominate as the destination of choice for most outsourced activities. This trend is bound to continue as inefficient structures are embedded within the organization, making adjustments/transformations even more challenging. Another issue is the disparity between CEO compensation (both composition and actual value) between the US and comparable firms in Europe and the Far East, especially when firm performance is taken under consideration. There is yet, no justifiable reason for this phenomenon. Can economizing strategies provide a rationale for creating a global parity in how CEO performance is evaluated and compensated?

Despite the mundane nature of economizing, strategizing is futile if economizing principles have not been accomplished by the firm;

"All the clever ploys and positioning, aye, all the king's horses and all the King's men, will not save a project that is seriously flawed in first-order economizing respects (Williamson, 75:1991)."

Clearly, economizing has not been accepted as a fundamental or complementary strategy in many organizations. Within two major strategic frameworks, positioning and RBV, little effort has been made in defining the role of economizing. One argument is that there is more interest in strategizing than economizing because it is widely held that economizing is well-developed and does not need further analysis. Contrary to this view, there is very little that is known about relative efficiency of internal organizational processes. There has been little research to address issues of relative efficiency among comparable firms. Practicing managers are left to figure out benchmarking with the best-in-class as a rough measure of relative efficiency. Internal efficiency has also been associated with managerial fads of the moment such as JIT, Six Sigma, TQM and outsourcing. Such initiatives may, or may not, result in actual efficiencies. Economizing is therefore not as well-refined as it should.

Foss (2002) argues that TCE should be at the center of the strategizing process. Since transaction costs are instrumental in creating, capturing and protecting value, if transaction costs are hypothetically set at zero, these processes do not pose any strategic problems. Strategic problems would only arise when transaction costs are involved. Real-life situations with zero

transaction costs are hard to find, unless one goes back to the "Robinson Crusoe" situation (Cheung, 1998), which by most accounts is fiction. When transaction costs are positive, opportunities for value creation through the reduction of inefficiencies caused by transaction costs exist. Protecting and appropriating value are costly activities that dissipate value. On the other hand, creating more value involves adding more transaction costs. The problem of strategizing is a problem that inevitably leads to the problem of economizing. Foss (2002) suggests that a transaction cost perspective directs attention to the important role of contracting and expectations in the competitive process. While this perspective seems tautological, it highlights the constant balanced that needs to be achieved while deciding when to economize or strategize. More important, this perspective elevates the role of economizing in the strategic process.

Other scholars have proposed TCE's economizing tenet as a significant strategy that binds both the resource-based view (RBV) and the industrial organization (IO) strategies. Nickerson et al. (2001) assert that whereas TCE has made contributions to strategy literature through principles that include make-or-buy, organization of work, and centralization versus decentralization, TCE's economizing principles have been neglected in competitive strategy. TCE should move beyond using a single transaction as a unit of analysis to a constellation of transactions. Nickerson's argument is based on two factors. First, holding the nature of the good constant, economizing takes place with reference to the sum of production and transaction costs. Consequently, tradeoffs in this respect must be recognized. Second, the design of the good or service to be delivered is a decision variable that shifts demand as well as costs of both kinds, whence design is appropriately made a part of the calculus. Incorporating these factors into the economizing calculus should allow TCE to better inform firm-level strategy by considering technology and product choices. On this basis, an economizing strategy of the firm with four dimensions can be developed. The four dimensions are: positioning through targeting a specific set of customers, choosing a production-cost technology, making or not making specific investments to support the customer transactions, and selecting an organizational governance mode. This perspective of TCE seems to capture both organizational adaptation and contractual arrangements therein.

Scholars have analyzed the impact of transaction costs with respect to industry lifecycle. Following a study of the United States auto industry, Argyres & Bigelow (2007) found that transaction costs mattered more during the shakeout stage. Once the shakeout period begins, competition on costs becomes central and failing to achieve efficient alignment poses serious survival risks. The study further asserts that from an industry life cycle perspective, governance and production economies are conceptually inseparable and occur simultaneously. These findings raise more questions than answers. Could product design in the second phase be a manifestation of economizing at emergence stage that contributes to weeding out products that are fundamentally flawed in the next phase? The fundamental message is clear; a firm is more likely to survive if economizing principles are executed early in the lifecycle.

In an attempt to link RBV, IO and TCE, Nickerson, Hamilton & Wada (2001) found that a firm's market position, resource profile, and organizational choice are related in ways that are predicted by a strategizing-economizing perspective. Firms in an overnight delivery industry that were misaligned from a TCE perspective had slower delivery times. Such firms had flawed internal governance structures, and regardless of strategies adapted, would have continued to carry the cost burden. This seems to suggest that fit can be explicated from an economizing-

positioning perspective. In addition, if there is no deliberate strategy towards economizing, or external competitive pressure to do so, a firm may continue to exist in a sub-optimal bliss.

Recent findings seem to offer tacit support for dimensions of an economizing-strategy sequence. Nickerson & Silverman (2003) found that firms want and even make efforts to economize through internal efficiencies but are stuck with structural rigidities and a plethora of adjustment costs related to changing such structures. Those firms with large investments in specific fixed assets adapt less readily than those using generic assets; firms with unions adapt less readily than those without, while entrants adapt more readily than incumbent carriers. These findings reinforce the need to develop an economizing-strategizing sequence in order to avoid expensive reworks once the strategy has been executed. Getting out of contractual commitments that are inherently inefficient carries additional cost. If efficiency gains do not overwhelmingly outweigh adjustment costs, there will be reluctance to make such moves. Further, from a behavioral perspective, if the firm is making reasonable profits there will be reluctance on the part of senior executives to make expensive sacrifices that have long term economizing benefits, especially in uncertain competitive environments.

In attempting to synthesize two disparate theories, Gottschall (2007) hypothesizes that a competitive advantage is sustained through alternating and repetitive dynamics of economizing and strategizing. Economizing is constructed as refining productive efficiency. The main assumption in this framework is that market positions and resource endowments are not sustainable in the long run without change and adaptation. This position appears to be similar to Schumpeter's perspective of creative destruction. However, it is not clear how the costs associated with incremental economizing are managed. The ensuing cadence assumes a perpetual existence of firms, costless oscillations, and is silent on initial organizational choice. In reality, there is a cost associated with refining productive efficiency. Once a firm has committed specific assets, trained employees, and signed contractual agreements, the firm has to adapt specific technologies and production functions. In the event that there is more efficient technology in the market, the firm has to make the tough decision of living with the strategic choice or reworking the whole process or some of its parts. This framework also assumes unrealistically that there is symmetric and freely available information among firms. Unless there are deliberate efforts to understand competitive efficiency options through deliberate benchmarking efforts, inherent inefficiencies are likely to go unnoticed. Further, in dynamic markets with high growth, inefficient firms are likely to reap arbitrage profits in the short- run (Wernerfelt & Montgomery, 1986), delude themselves that strategic choices that they have adapted are effective, and as a consequence, entrench processes that may be fundamentally flawed. Evidently, once a firm has executed a chosen strategy, it has to deal with the consequences, at least in the short-term. Strategies that are complemented by economizing are more likely to be more effective than strategic actions that have not been matched with economizing principles.

In using TCE as a vehicle to highlight the critical role played by economizing, behavioral assumptions seem to be incomplete. Behavioral assumptions under TCE, bounded rationality and opportunism are just two among other behavioral variable that may impair executive decision-making. Within the limits of the CEO's discretion, there are other variables that might lead to sub-optimal decisions. Objectives of the firm also matter. While economizing has clear implications on firm performance, most firms have other objectives that may be at odds with economizing. In some cases, extreme actions towards efficiency are likely to have undesirable effects on the morale of employees and suppliers. Another assumption involves price and technology. TCE holds that price, technology and governance structures are determined

simultaneously and that parties to a transaction have a far-sighted approach (Williamson, 1985; 1991). While this assumption serves the purpose of illuminating the basic tenets of TCE, in reality there is a lot of uncertainty that surrounds the most efficient technologies and governance mechanisms. Some scholars have questioned these assumptions, hypothesizing that the assumptions do not do enough justice to production and coordination processes (Langlois, 2003; Langlois & Foss, 1999). Such scholars would like to see relaxed assumptions on production and coordination capabilities in order to fully explicate the problem of economizing. The main argument is that production technology is a critical variable in internal organizational efficiency. Lewis & Sappington (1991) have made attempts to model production costs and TCE within the same model. The choice of a specific production function may demonstrate efficiency, barring asymmetric information and bounded knowledge among the parties. This implies that to fully test the model, technology should be included along with other variables. However, it is noteworthy that Williamson did not imply that technology was a given constant in organizations. Technology was held constant in order to highlight other variables previously ignored that Williamson was interested in investigating. By holding production costs constant, transaction costs would be articulated more vividly. This paper adapts the perspective that by having technology and organizational form jointly determined from the onset (Williamson, 1985; Milgrom & Roberts, 1990) and looking at the transaction in its entirety, pertinent internal variables within the organization can be included in the decision process. Further, technological and organizational adaptations are often long-term strategies where choices made upfront have long-term consequences. This perspective is well-articulated (Williamson, 1975; 1980; 1985). Various studies have found that it is difficult to change course once a firm has established specific strategic paths and routines. Further, future strategic actions are significantly informed by history (Mitsuhashi, Shane & Sine, 2008; Amburgey & Miner, 1992) or at least subject to path dependency. This may part explain similarities and occasional differences in the internal structure of firms within the same strategic group. A variety of reasons can be given for this posture including inertia, experience-based capabilities and buttressed cognitive schemas among decision makers that may require radical transformation. The main issue is that the choice of efficient technologies and other production processes is critical to sustainable competitiveness of the enterprise.

There are other behavioral and institutional barriers in economizing that deserve consideration. Williamson notes that TCE comes into play because first-order economizing alignments are not always as obvious as they should be and are sometimes at odds with managerial preferences. For instance, vertical integration, a dimension of economizing, may appeal to management for self-interested reasons such as increased compensation and power while generating limited transaction cost utility. Given this fact, internal managerial actions that are at odds with economizing can have deleterious effects on firm performance. In such situations, selection of economizing as a precondition for strategizing would clearly not lead to better firm performance. Organizations are based on, among other things, creating real structures that include physical structures, machinery and non-tangible items such as software, contracts, human skills and an organizational culture. A better-than-the market or satisficing mix of these elements is likely to survive at least in the short run. However, TCE economizing principles that are fundamentally flawed cannot withstand the test of time and must be ultimately reworked in order to sustain viability. Reworking efficiency options is a punitive and monumental undertaking given organizational inertia and resistance to change behaviors that are embedded in most organizations. There is a cost of adaptation associated with achieving a higher level of

economizing. Such costs can be mitigated or avoided altogether by constantly implementing efficiency-seeking strategies as an ongoing priority.

Evidence from the industry seems to support the notion of efficiency as an effective strategy. One such industry is the airline industry. The airline industry is a suitable case due to its volatility, relatively homogeneity of resources, and availability of a large body of literature regarding the industry's strategic actions and productivity performance. In a 10-year study, Oum, Fu & Yu (2005) used residual factor productivity, cost competitiveness and average yields to compare ten major North American airlines. Overall, there was incremental change in productive efficiency. Financial performance was dependent on both strategy and efficiency, while those airlines with significant efficiency processes in place were able to cope with adverse external shocks such as the 9/11 terrorist attack. Using data envelopment analysis in a 5-year study, Greer (2008) found that the events of 9/11 forced many airlines to seriously focus on efficiency as the main strategy due to fear of bankruptcy. Similarly, in a study of 29 European airlines over a six-year period, Barros & Paypoch (2009) report that different strategies and resource heterogeneity lead to different efficiency options. However, low-cost airlines with the least resources, have perfected efficiency processes that later serve as industry benchmarks. In a strategic variance analysis of Southwest, one of the most enduring airlines, 50% of the operating income is derived from internal efficiencies while the rest can be attributed to market share and pricing strategies (Mudde & Sopariwala, 2008). Evidently, economizing as strategy has led to sustained competitiveness in the industry, enabled airlines to survive and even set some industry benchmarks on efficiency.

Another industry with unique activities on efficiency is the pharmaceutical industry. The pharmaceutical industry is a good case study because it is predictable and has unique strategic components of innovation and exploitation of intellectual property (IP). Fearing inadequate protection of IP, many pharmaceutical companies have been laggards when it comes to offshoring (Blosh, Dhankar & Narayanan, 2006). However, large pharmaceutical companies have come to realize that in addition to exploiting idiosyncratic resources and positioning themselves in the market, economizing as strategy is essential in sustaining competitiveness. In pursuit for efficiency, the largest big pharma such as Eli Lilly, Norvatis, Brystol-Myers Squibb, Merck and Pfizer have moved to offshore chemical synthesis functions and clinical trials to China and India. The decision to make such bold economizing decisions is due in part to the fact that regardless of other marketing and R & D strategies, generic competitors in emerging markets will copy products and position themselves to invade western markets. In a recent study of the top 25 global pharmaceutical manufacturers, Cremer, Lorsch & Schrader (2009) found that after considering scale economies, the highest performers outperformed the industry due to deliberate economizing actions in operational-equipment effectiveness. The result was a savings worth five to six percentage points of gross earnings. The other factor is that 60 % of IP in the pharmaceutical industry is imitated within four years while on average imitation costs are 35 % lower than innovation costs. (Mansfield, Schwartz, & Wagner, 1981). Inability to sustain protection of IP in global markets and stagnation of R & D productivity over the years (David et al., 2010) have forced many top-performing firms in the industry to embrace economizing by internalizing externalities (Demsetz, 1967) in the most efficient way.

The notion that economizing is given is noteworthy. Due to the interconnectedness of competitive rivals and industry boundaries, there is an implicit assumption that efficiency-seeking practices and industry best practices are known and available to all competitive actors. Evidence from industry suggests otherwise. While some economizing options are available

industry-wide, there are often performance differentials due to contextual factors, one being execution. Other economizing principles require managerial creativity, innovation and managerial commitment. One such process is Six Sigma. The efficiency concept of Six Sigma involves using statistical methods to constantly reduce defects and waste. First launched at Motorola in 1986, the company has since then documented savings of \$ 17 billion over a period of 17 years (Reynard, 2007). Likewise, General Electric invested a half billion dollars and received over two billion in return (Pande et al., 2000). It is prudent to see beyond efficiency metrics such as Six Sigma. Like other economizing initiatives, the measures must translate to actual firm performance, otherwise one runs the risk of what has been described by Richard Rumelt as "smooth sailing fallacy" (Webb, 2009). This fallacy occurs when the firm is unduly occupied with measurements to the extent that it loses sight of the big picture. Evidently firms that have effectively implemented Six Sigma have reaped innumerable benefits. By continuously seeking efficiency, economizing has been internalized as a way of doing business. Such firms seem to be in better position to weather external shocks such as 9/11 events and recession.

CONTRIBUTION, LIMITATIONS AND FUTURE RESEARCH

There is limited research on economizing as a critical element of strategy. This paper contributes to the strategic research debate by highlighting different aspects of economizing that are useful in the strategic process. The critical role of economizing has been highlighted both as a standalone concept and its complementary role to other strategic frameworks. The main areas where economizing strategies can be applied to sustain competitiveness include internal organizational processes, governance structures around firm boundaries and adaptive mechanisms to the external environment. Firms should seek to economize first hand rather than implement economizing as a reactive measure to competition. Rather than assume that economizing is given, there is a need to proactively seek out and implement efficiency-seeking strategies. Economizing options in organizations are often haphazardly implemented. Many firms in dire straits have been known to seek the path of least resistance such as layoffs or outsourcing when confronted with threats of insolvency. A more effective approach should involve complementing strategic actions with economizing as an organizational imperative. Besides maintaining competitiveness, this approach would maintain the integrity of the firm's core competence.

There are a number of limitations in this study. First, empirical data should be gathered to provide support for the propositions. Scholars and practitioners are familiar with the broad strategic implications of economizing. However, there is a limited body of knowledge on specific components of economizing. Within the industry, benchmarks on efficiency are difficult to develop and sustain due to the large amount of variables and dynamic nature of organizational processes. TCE has been used as a vehicle to highlight the significance of economizing in this paper. However, it is not the only vehicle. Other approaches may be more illuminative. Objectives of the firm also matter. Economizing basically assumes a rational profit-maximization motive. In reality, the firm has many stakeholders and may exist to satisfy motives other than financial.

Economizing offers many opportunities for future research. One of the most basic questions that beg for further analysis is whether economizing is given in organizations. Anecdotal evidence from the recent recession seems to suggest that economizing is an *elastic* process and that firms will always discover new ways minimizing costs. There is a need to empirically verify whether the firm can progressively economize without causing deleterious

effects on long-term competitiveness. It is important to empirically test the relationships between economizing, other strategic frameworks and firm performance. Industry-specific studies can serve to illuminate the interactions between different aspects of economizing. Finally, there is an interest in investigating behavioral aspects of organizational actors when confronted with pressure to economize.

CONCLUSION

This paper has revisited the role of economizing in the strategic process. Most current strategic frameworks have highlighted the significance of specific dimensions of economizing in formulating and implementing strategy. TCE goes further than other dominant theories by conceiving economizing as a key strategic component in all aspects of strategy. While TCE has its own shortcomings, it offers the most effective vehicle for evaluating economizing by identifying and isolating internal and external firm activities into contracts that can be examined for their level of efficiency. TCE is the only theoretical framework that explicitly identifies economizing as a significant part of strategy. TCE also provides a strategic perspective of the organization that puts into context unforeseeable future events while acknowledging behavioral shortcomings of organizational players. Economizing is an effective strategy for small firms that do not possess market power. Small firms can effectively deploy economizing as a fundamental strategy. Large firms have market power. While market power offers significant leverage in jostling for competitive positions, it is not sustainable in the long-run.

Does a firm stand to gain more by economizing than strategizing and what is the ideal sequence of these activities? Alternatively, is strategizing more effective if it is preceded by economizing moves? How do these choices affect firm performance? There are ample theoretical arguments to support the economizing-strategizing sequence as the more effective strategy. Initial evidence gathered from recent studies suggests that the economizing-strategizing sequence is more effective than the strategizing-economizing strategy. Small firms and even firms with market power are better off implementing an economizing-strategizing sequence as this will guarantee sustainable competitiveness over the long-run. In seeking to economize, there is recognition of the time lag between identifying economizing opportunities and implementing adaptive mechanisms. This constant friction and behavioral overrides result in a constant state of efficiency-seeking rather than achieving an ideal state of economizing.

Given the evidence, there is justification for strategy scholars to realign existing frameworks with economizing principles and develop new theories that appropriately conceptualize the role of economizing. Early attempts to seek empirical support for economizing have been encouraging. However, these can be fruitful ventures if there is a unified approach to craft new concepts that have more explanatory power for research and practice, regardless of their origins.

REFERENCES

Amburgey, T., Miner, S. (1992). Strategic momentum: the effects of repetitive, positional, and contextual momentum merger activity. Strategic Management Journal, 13(5), 335-348.
Arrow, K. (1969). The organization of economic activity. Issues pertaining to the choice of market versus nonmarket allocation. In The analysis and evaluation of public expenditure: the PPB system. Vol. 1. U.S. Joint Economic Committee, 91st Congress, 1st session. Washington, DC, US Government Printing Office.

- Argyres, N. & Bigelow, L. (2007). Does transaction misalignment matter for firm survival in all stages of the industry life cycle? *Management Science*, 53(8), 1332-1344.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
- Barros, C. & Peypoch, N. (2009). An evaluation of European airlines' operational performance. *International Journal of Production Economics*, 122, 525-533.
- Blosh, M., Dhankar, A. & Narayanan, S. (2006). Pharma leaps offshore. *Mckinsey Quarterly*, Summer, 2006.
- Boerner, C. & Macher, J. (2003). Transaction cost economics: an assessment of empirical work in the social sciences. *Working paper*, Georgetown University.
- Cheung, S. (1998). Transaction costs paradigm: Presidential address, Western Economic Association. *Economic Inquiry*, 36.
- Coase R. (1988). The nature of the firm: influence. *Journal of Law, Economics, and Organization*, 4, 33-48.
- Coase, R. (1984). The new institutional economics. *Journal of Institutional and Theoretical Economics*, 140, 229-231.
- Coase, R. (1937). The nature of the firm. *Economica*, 4(16), 386-405. David, R. & Han, S. (2004). A systematic assessment of the empirical support for transaction cost economics. *Strategic Management Journal*, 25, 39-58.
- Cremer, P., Losch, M. & Schrader, U. (2009). Maximizing efficiency in pharma operations. *The Mckinsey Quarterly*, April 2009, 1-4.
- David, R. & Han, S. (2004). A systematic assessment of the empirical support for transaction cost economics. *Strategic Management Journal*, 25, 39-58.
- Delmas, M. & Tokat. Y. (2005). Deregulation, governance structures, and efficiency: the U.S. electric utility sector. *Strategic Management Journal* 26(3), 441-460.
- Demsetz, H. (1967). Towards a theory of property rights. *American Economic Review*, 57, 347-359.
- Dyer, J. (1996). Specialized supplier networks as a source of competitive advantage: evidence from the auto industry. *Strategic Management Journal*, 17(4), 271-291. Eisenhardt, K. (1989). Agency theory: an assessment and review, *Academy of Management Review*, 14(1), 57-74.
- Eisenhardt, K. & Martin, J. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*. 21(10-11), 1105-1121.
- Foss, N. (2002). The strategy and transaction cost nexus: past debates, central questions, and future research possibilities. *Danish Research Unit for Industrial dynamics*. Working Paper No. 02-04.
- Foster, R. & Kaplan, S. (2001). Creative Destruction: Why Companies that Are Built to Last Underperform the Market-and How to Successfully Transform Them. New York: Currency Books.
- Gottschall, R. (2007). The cadence of economizing and strategizing: dynamic strategy loops. *Social Science Research Network*, Working Paper.
- Greer, M. (2008). Nothing focuses the mind on productivity quite like the fear of liquidation: Changes in the United States, 2000- 2004. *Transportation Research*, Part A 42, 414- 426.
- Hamel, G. & Prahalad, C. (1989). Strategic intent. Harvard Business Review, 67(3), 63-78.
- Harrigan, K. (1983). Strategies for Vertical Integration. Lexington Books: Lexington, MA.
- Hoetker, G. (2005). How much you know versus how well I know you: selecting a supplier for a

- technically innovative component. Strategic Management Journal 26(1), 75-97.
- Jacobides, M., Winter, S. (2005). The co-evolution of capabilities and transaction costs: explaining the institutional structure of production. *Strategic Management Journal* 26(5), 395-414.
- Joskow, P. (1990). The performance of long-term contracts: further evidence from the coal markets. *RAND Journal of Economics*, 21, 251-274.
- Joskow, P. (1987). Contract duration and relation specific investments: empirical Evidence from coal markets. *American Economic Review* 17, 168-85.
- Joskow, P. (1985). Vertical integration and long-term contracts: The case of coal-burning electric generating plants. *Journal of Law, Economics, and Organization*, 1, 33-80.
- Knight, F. (1941). Review of Melville J. Herskovits' Economic Anthropology. *Journal of Political Economy*, 49, 247-258.
- Langlois, R. (2003). Strategy as economics versus economics as strategy. *Managerial and Decision Economics*, 24(4), 293-290.
- Langlois, R. & Foss, N. (1999). Capabilities and governance: the rebirth of production in the theory of economic organization. *Kyklos*, 52(2), 201-218.
- Leiblein M., Miller D. (2003). An empirical examination of transaction and firm-level influences on the vertical boundaries of the firm. *Strategic Management Journal*, 24(9), 839-859.
- Lewis, R. Sappington, D. (1991). Oversight of long-term investment by short-lived Regulators. *International Economic Review*, 32(3), 579-600.
- Lieberman, M. & Demeester, L. (1999). Inventory reduction and productivity growth: linkages in the Japanese automotive industry. *Management Science*, 45(4), 466-485.
- Madhok, A. (2002). Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource-based theories of the firm and the institutional structure of production. *Strategic Management Journal*, 23, 535-550.
- Makhija M. (2003). Comparing the resource-based and market-based views of the firm: empirical evidence from Czech privatization. *Strategic Management Journal*, 24(5), 433-450.
- Mansfield, E, Schwartz, M. & Wagner, S. (1981). Imitation costs and patents: an empirical study. *The Economic Journal*, 91(364), 907-918.
- Milgrom, P. & Roberts, J. (1990). The economics of modern manufacturing: technology, strategy and organization. *American Economic Review*, 80, 511-28.
- Miller, D. (2003). An asymmetry-based view of advantage: towards an attainable sustainability. *Strategic Management Journal*, 24, 961-976.
- Mitsuhashi, H., Shane, S. & Sine. W. (2008). Organization governance form in franchising: efficient contracting or organizational momentum. *Strategic Management Journal*, 29, 1127-1136.
- Mudde, P. & Sopariwala, P. (2008). Examining Southwest Airlines strategic execution: a strategic variance analysis. *Management Accounting Quarterly*, 9(4), 20-32.
- Murray, J. & Kotabe, M. (1999). Sourcing strategies of U.S. service companies: a modified transaction—cost analysis. *Strategic Management Journal*, 20(9), 791-809.
- Nickerson, J., Silverman., B. (2003). Why firms want to organize efficiently and what keeps them from doing so: evidence from the for-hire trucking industry. *Administrative Science Quarterly*, 48, 433-465.
- Nickerson, J., Hamilton, B. & Wada, T. (2001). Market position, resource profile, and governance: linking Porter and Williamson in the context of international courier and

- small package services in Japan, Strategic Management Journal, 22, 251-274.
- Oum, H., Fu, X. & Yu, C. (2005). New evidence on airline analysis and yields: a comparative analysis of major North American carriers and its implications. *Transport Policy*, 12(2), 153-164.
- Palay, T. (1984). Comparative institutional economics: the governance of rail freight contracting. *Journal of Legal Studies*, 13, 265-88.
- Pande, P., Neuman, R. & Cavangh, R. (2000). The Six Sigma way: how GE, Motorola, and other top companies are honing their performance. McGraw Hill, NY.
- Peteraf, M. & Barney, J. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics*, 24(4), 309-324.
- Peteraf, M. (1993). The cornerstones of competitive advantage: a resource-based view, *Strategic Management Journal*, 14, 179–191.
- Pirrong, S. (1993). Contracting practices in bulk shipping markets: a transaction cost explanation. *Journal of Law and Economics*, 36, 937-76.
- Poppo, L. & Zenger, T. (1998). Testing alternative theories of the firm: transaction cost, knowledge-based, and measurement explanations for make-or-buy decisions in information services. *Strategic Management Journal*, 19(9), 853-877.
- Porter, M. (1996). 'What is strategy?' *Harvard Business Review*, 96, 61-78.
- Porter, M. (1980). Competitive strategy: techniques for analyzing industries and competitors. New York, NY: Free Press.
- Reynard, S. (2007). Motorola celebrates 20 years of Six Sigma. iSixSigma-magazine, Jan-Feb, 20-27.
- Shervani, T., Frazier, G. & Challagalla, G. (2007). The moderating influence of firm marketing power on the transaction cost model: an empirical test in a forward channel integration context. *Strategic Management Journal*, 28, 635-652.
- Schumpeter, J. (1947). The creative responses in economic history. *The Journal of Economic History*, 7(2), 149-159.
- Schumpeter, J. (1950). *Capitalism, Socialism and Democracy*. 3 ed. New York: Harper-Collins. Scott, R. (1987). *Organizations: rational, natural and open systems*. Engelwood Cliffs, NJ: Prentice-Hall.
- Webb, A. (2009). Management lessons from the financial crisis: a conversation with Lowell Bryan and Richard Rumelt. *The McKinsey Quarterly*, June, 2009, 1-5.
- Wernerfeldt, B., & Montgomery, C. (1986). What is an attractive industry? *Management Science*, 32(10), 1223-1230.
- Williamson, O. (2008). Transaction cost economics: the precursors. *Institute of Economic Affairs*, 7-14.
- Williamson, O. (1996). Economic organization: the case for candor. *Academy of Management Review*, 2(1), 48-57.
- Williamson, O. (1991). Strategizing, economizing, and economic organization. *Strategic Management Journal*, 12, 75-94.
- Williamson, O. (1985). The Economic Institutions of Capitalism. New York, NY: Free Press.
- Williamson, O. (1975). *Markets and Hierarchies: Analysis and Antitrust implications*. Free Press: New York.

FIGURE 1: FIRST-ORDER AND SECOND-ORDER ECONOMIZING UNDER PARTIAL EQUILIBRIUM.

