

Economizing and strategizing¹

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Research in business strategy explores how organizations create and capture economic value. Two of the leading economic approaches that inform this field are the economizing and strategizing perspectives. In this chapter we define and explore the strengths and weaknesses of both perspectives. In particular, we explore the relationship between economizing and strategizing perspectives and how they interact to inform each other. Our exploration focuses on sunk costs as a central premise in both perspectives as they apply to business strategy. Finally, we assess the extent to which these perspectives provide necessary and sufficient perspectives for business strategy.

What is business strategy?

Successful firms are believed to have unique business strategies that create value for customers by producing products and services at sufficiently low outlays such that resulting profits exceed the cost of capital. A necessary condition to maintain these profits appears to be that actual and potential competitors find it difficult to imitate the strategy. Yet, business strategy is a term that has many definitions in business and academic arenas (Ghemawat et al., 2001). For instance, scholars have defined strategy as ‘a long-term plan’ (Chandler, 1962), ‘actions of player’ (Camerer, 1991, p.139), and ‘fit’ among internal activities (Porter, 1996). Although managers and scholars have different definitions for strategy, all can agree that ‘strategic decisions are concerned with the long-term health of the enterprise’ (Chandler, 1962, p.11).

A course on business strategy in Masters in Business Administration programs was first urged by the Ford Foundation and Carnegie Corporation Reports on business education in late 1950s (for an interesting discussion see Arben, 1997). Harvard Business School was the first business school to add a ‘Business Policy’ which “‘integrated what the student had learned in the functional courses, serving as a capstone to the core curriculum’” (Rumelt, Schendel, and Teece, 1994, p.10). Business strategy then grew from a capstone course of the 1960s to a field unto

itself today. Because of this history, the intellectual roots of strategic management draw sustenance from many disciplines.

Research disciplines such as economics, organizational sociology, political science, and psychology contributed to the development and evolution of the strategy field (Rumelt, Schendel, and Teece, 1994). Yet, many view that economics has been foundational to business strategy (Rumelt, Schendel, and Teece, 1991). That said, economic contributions to the field of strategy are not monolithic (Hesterly and Zenger, 1993) with various economics sub-disciplines separately and distinctly contributing to the field. In this article, we focus mainly on two of these sub-disciplines, namely strategizing and economizing, and explore how they can inform each other in the context of the field of business strategy.

What is the strategizing approach to business strategy?

There are many perspectives on the notion of strategy but they all agree that strategy should contribute to the performance improvement of the firms. For example, Porter (1980, 1985) emphasizes the importance of strategic positions in the product markets and the competitive advantages derived from the fit among the activity systems of the firms. Moreover, resource based view (RBV) emphasizes the possession of the valuable resources and capability-based view focuses on the integration, recombination and development of the resources to create value. This chapter, however, focuses on the ‘strategizing’ perspective that explores the effects of strategic interactions on the creating and capturing value.

Teece, Pisano, and Shuen (1997) define the strategizing approach as those organizational actors ‘engaging in business conduct that keeps competitors off balance, raises rival’s costs, and excludes new entrants.’ More formally, strategizing is associated with the methodology of game theory. Mas-Colell, Whinston, and Green (1995) define strategy from a game theoretic perspective as a ‘complete contingent plan, or decision rule, that specifies how the player will act in every possible circumstance in which she might be called upon to move’ (emphasis original, Mas-Colell, Whinston and Green, 1995, p. 228).

Game theory offers a mathematical approach to the analysis of strategic interaction between individuals who can contemplate what their counterparts think and can act on the basis of this contemplation (von Neumann and Morgenstern, 1944). When applied to business, the game

theoretic methodology largely is used to explore signaling, preemption and coordination among firms in concentrated industries (see Saloner, 1991, Shapiro, 1989, Tirole, 1988). The application of game theoretic approaches has been a growth area in economics for the last three decades with the development of highly specific models with each model applicable to a precise set of assumptions and conditions. Employing the set of firms as the unit of analysis, common assumptions associated with game theoretic models of industrial organization typically involve a small number of firms with expectations about their and others' strategy set, self interest and perfectly rational decision making (for a discussion on the assumption of the degree of rationality see Saloner, 1991). Tirole (1988), in his Theory of Industrial Organization, offers an early and comprehensive compilation of the topics in game theoretic industrial organization.

Shapiro (1989) boldly summarizes the progress and contributions of game theoretic work in industrial organization and claims that this collection of specific models of business rivalry in concentrated markets is better described as a general 'theory of business strategy' (Shapiro, 1989). The central insight from this general theory of business strategy is the role that 'commitment' plays in analyzing the dynamics of strategic interactions (Shapiro, 1989).

Strategic commitment

Strategic commitment is perhaps the most important key to a firm's long-term performance. Commitment creates sunk costs that can be a credible signal (threat) to the competitors regarding the focal firm's future actions (for a comprehensive treatment on commitment see Ghemawat, 1991). These irreversible investments signal to others that there is no profit should they proceed with a certain action because 'it changes other players' expectations about your future responses' (Dixit and Nalebuff, 1991, p.120). Hence, the game theory approach of business strategy emphasizes the irrecoverability of strategic investments (Shapiro, 1989) as means to shape competitor behavior and capture value. Generally speaking, costlessly reversible actions do not constitute commitments and have no strategic role.

Following this logic, the theory suggests that 'firms may try to convert recoverable costs into sunk costs for some strategic purpose' (Shapiro, 1989, p 128). Dixit provides a classic example of the role of an irrevocable commitment of investment in entry-deterrence in altering the 'initial conditions of the post-entry game to the advantage of the established firm, for any fixed rule

under which that game is to be played' (Dixit, 1980, p.106). Therefore, strategizing is a means to create and exploit market power.

Empirical evidence on strategizing

Despite the empirical studies that Shapiro (1989) has summarized and the fact that game theory is a powerful apparatus to analyze the dynamics of business interactions, it remains a puzzle that strategy scholars do not widely apply this approach (Ghemawat, 1997). Peltzman's (1991) critic on the game theoretical IO models may be relevant. He argues that researchers' emphasis of the theoretical modeling without the obvious applications to business practices cannot sustain the growth of the theory. Ghemawat offers another reason which is that 'game theoretic models have not lent themselves to conventional large-sample tests' (Ghemawat, 1997, p.1) and thus researchers are suspect to the utility of game theoretic models. Ghemawat responds to this puzzle and presents several detailed and persuasive case studies to illustrate various strategizing behaviors in the real business settings. For instance, Ghemawat presents two different studies on capacity decisions. One is the capacity expansion in titanium dioxide industry for the purpose of pre-emption, and the other is capacity reduction in declining chemical industry (Ghemawat, 1997).

What is the economizing approach to business strategy?

In contrast to Shapiro (1989), Williamson (1991a) boldly argues that economizing 'is the best strategy' (Williamson, 1991a). Economizing refers to designing governance arrangements to align with the transaction attributes in order to 'economize on transaction costs' due to fundamental transformation (Williamson, 1985). The performance advantages of economizing behaviors can be examined in Williamson's discriminating alignment hypothesis, which predicts that managers who align organizational structures with exchange attributes will achieve performance benefits, which can manifest higher profitability and greater survivability (Williamson, 1993, Silverman, Nickerson and Freeman, 1997).

Williamson (2005) summarizes the discriminating alignment hypothesis in three steps. First, identify the exchange attributes of asset specificity, uncertainty, and frequency that make some transactions simple and others complex. Of these three attributes, asset specificity, defined as 'a specialized investment that cannot be redeployed to alternative users or by alternative users

except at a loss of productive value' (Williamson, 1996, p.377), is the main locomotive. Second, specify the costs and competencies of alternative modes of governance such as the differences between market, hybrid, and hierarchy. For example, in autonomous adaptations, market mechanisms excel because price signals are the only necessary information needed to complete the transactions. On the contrary, cooperative adaptations are those for which coordinated responses are required and for which hierarchies surpass markets. Moreover, the argument extends to include hybrid forms that are located between markets and hierarchies, such as long-term contracts, joint ventures and so on (Williamson, 1991a). Third, the discriminating alignment hypothesis predicts that transactions are aligned with governance structures so as to realize a transaction-cost economizing result (Williamson, 2005).

Empirical evidence on economizing

Despite three decades of empirical research and hundreds of empirical transaction cost economics studies (David and Han, 2004, Macher and Richman, 2006, Masten, 1995, Shelanski and Klein, 1995), most empirical studies on TCE are pre-occupied with testing whether the discriminating alignment hypothesis is supported, assuming that firms are optimally organized given the transaction attributes. Consequently, the number of empirical studies on economic performance at a transaction level or on firm survival remains surprisingly small.

Armour and Teece (1978) provide one of the earliest empirical tests on Williamson's M-form hypothesis, a version of the discriminating alignment hypothesis, which predicts the performance advantages enjoyed by large corporations organized as a multidivisional (M-form) rather than organized as a centralized functional form (U-form). Masten, Meehan and Snyder (1991) provided the first estimates of economic performance at a transaction level in shipbuilding components (pipefitting). They found that overall organization costs in ship construction were lower when transactions and organizational forms were aligned according to the discriminating alignment hypothesis. Mayer and Nickerson (2005) provided the first estimates of profitability at a transaction level based on the discriminating alignment hypothesis. By examining the contracts of an information-technology company, they estimated that when the project's governance structure is misaligned with project attributes, the project's profit margin drops by 20.8% and 200% for the expropriation concerns and 99.6% and 28.6% for the measurement costs, depending on whether they predict outsourcing or insourcing. This asymmetric impact on profits

shows that for different transaction attributes (expropriation concerns or measurement costs), the relative costs of misaligned governance structures depends on the type of misalignment.

Besides investigating profitability at the transaction level, research has explored the extent to which transaction misalignment impacts firm survival. In two papers, Nickerson and Silverman studied discriminating alignment of the employment relation in the trucking industry for more than a decade following deregulation in the United States. Silverman, Nickerson, and Freeman's (1997) empirical analysis is among the first to show increased mortality when firms do not adhere to operating policies consistent with transaction cost minimization principles. Nickerson and Silverman (2003) further found that poorly aligned firms (according to transaction cost reasoning) realize lower profits than their better-aligned counterparts, and that these firms will attempt to adapt so as to better align their transactions. In another study on firm survival, Argyres and Bigelow (2007) analyzed the early U.S. auto industry (1917-1933) to explore the effects of the discriminating alignment on firm survival during the pre-shakeout stage and during the post-shakeout phase. They found that aligning the engine transaction according to transaction cost economizing principles had a significantly larger impact on increasing survival during the shakeout stage than during the pre-shakeout stage; although alignment did not have a statistically significant impact over the entire period. Argyres and Bigelow's theory indicates that transaction-cost theory needs to account for variation in selection pressures across the industry life cycle.

What is the relationship between strategizing and economizing?

To explore the relationship between economizing and strategizing, we first identify one common feature embedded in both approaches. This commonality is the notion of sunk costs. Sunk cost is the set of expenditures that, once incurred, cannot be recovered. In the strategizing perspective, sunk costs represent the commitment that sends a signal to shape competitors' behavior. For instance, in a review of sunk costs, Tirole argues that the decisions to buy equipment today may have strategic consequences because competitors, while observing this action, will expect the focal firm to 'be around tomorrow if it cannot resell the equipment' (Tirole, 1988, p.315). Rivals will thus interpret the focal firm's action of buying equipment as a credible signal to stay in the business and "bad news" for the profitability of the product market, and they may decide to cooperate by reducing production scale or to not enter the market at all.

Specific investments, a term associated with transaction cost economics, represent sunk costs that emerge through the fundamental transformation. While sunk costs may affect competitor behavior through strategizing, the focus in transaction cost economics is on the ability of specialized investments to create value by lowering production cost or enhancing quality. For instance, investments in specific physical assets like machine dies or human asset specificity that arises in learning by doing provide just two illustrations of specific investments that can create value.

Sunk costs therefore are critical in both theoretical perspectives but for different reasons. Strategic commitment allows a firm to capture from competitors a greater portion of the profit pie because it sends a credible signal to the opponents to foreclose entry and investment or to signal cooperation and collusion. Investment in asset specificity, on the other hand, generates value because it can create the benefits of specialization in a transaction and enables the firm to capture value if its transactions are better aligned than at least some competitors. Transaction costs economists therefore argue that these specialization benefits can be realized by designing appropriate governance structures to mitigate potential opportunism. Although value is captured through differing mechanisms, sunk costs is a common feature in both theories and provides an opportunity to theoretically integrate strategizing and economizing approaches in the business strategy literature, which we now explore.

When does economizing inform strategizing?

Foss (2003, p. 139), in a methodological essay, argues that TCE is 'necessary for adequately understanding the nature of strategizing, because transaction costs are essential aspects of processes of creating, capturing and protecting value'. That is, strategic moves involving some costs have implications for governance choice, the cost of which may affect the choice of strategic move. Nickerson and Vanden Bergh (1999) provide a specific application of this perspective. In the context of competition between Coca-Cola and Pepsi-Cola in the fountain channel, their research explores the choice of asset-organization pair (a specific asset organized under hierarchy or a generic asset organized through a market) in Cournot competition. The model theoretically indicates that governance costs through strategic interactions can influence which asset-organization pair is chosen for each firm. Strategizing without consideration of economizing and its attendant governance costs can lead to different equilibria because of

differences in cost functions. For instance, governance costs vary not only by governance mode but also by institutional environment (Williamson 1991b). Without accounting for such differences game theoretic analysis not only can generate different equilibria but does little to inform organizational choices.

More generally, the economizing perspective can inform the strategizing perspective by identifying the set of feasible firm strategies and inform not only the choice of sunk costs but also organizational and pricing choices. These strategic alternatives then can be assessed employing game theoretic tools. For instance, recent approaches by Ghosh and John (1999), Nickerson (1997) and Nickerson, Hamilton, and Wada (2001) identify alternative strategies in various contexts by linking the economizing perspective with Porter's (1985, 1996) strategic positioning approach. Nickerson, Hamilton and Wada (2001), for instance, employ transaction cost economics to econometrically identify alternative strategic positions within the international courier and small package industry, identified by the nature of investment (co-specialized or re-deployable) along an activity chain, the organization (make or buy) of each activity, and the market position supported by these choices. This type of analysis provides a full set of feasible strategies that can then be analyzed in a strategizing context.

Boundary conditions of the strategizing perspective

Economizing can inform strategizing, but only within those boundary conditions where game theory offers an appropriate methodology. Teece, Pisano and Shuen (1997, p. 513) argue that strategizing 'is most relevant when competitors are closely matched and the population of relevant competitors and the identity of their strategic alternatives can be readily ascertained.' The boundary condition of the game theoretic approach is the number of competitors within an industry. The relevance of game theoretical predictions decreases as the number of market participants increase because developing expectations of other firms' alternatives and their effect on the focal firm's profitability becomes increasingly difficult and complex. The impact of strategic interactions on firm decisions thus decreases as the market approaches a traditional model of perfect competition.

When does strategizing inform economizing?

Strategizing can inform economizing on several fronts. Williamson argues that contracting parties can foresee, although not with perfect foresight, the potential for opportunistic behavior and then design appropriate governance structures to minimize transaction costs (Williamson, 1991a). This anticipation and ex ante contract design is consistent with the game theoretic logic of a contingency action plan. Therefore, in order to design transaction cost economizing contracts ex ante, firms should invest in foreseeing the potential opportunistic behaviors of its trading partners and the potential strategic moves of its competitors. This contemplation argues for considerations of strategizing when choosing economizing governance structures. Should strategizing models provide additional foresight then it should be folded into the transaction cost economizing calculus for designing appropriate contracts as well as efficient governance arrangements.

A weakness of the economizing perspective is that it offers little insight on which transactions a firm should pursue. Indeed, Williamson's (1985) conceptualization of transaction cost economics assumes that a firm already contains a core set of transactions for which a 'comparative assessment is unneeded' and therefore explores the organization of transactions that are added to the core and 'for which make-or-buy decisions can only be made after assessing the transformation and transaction cost consequences of alternative modes' (Williamson, 1985, p.96). Strategizing may inform economizing by helping to identify which transactions to undertake as well as the desirable level of asset specificity. For instance, Nickerson and Vanden Bergh's (1999) Cournot model informs the level of asset specificity firms should invest in; although, it does little to inform which transaction firms should enter into.

Finally, the strategizing approach has been profitably employed to explore behavior within bilateral relationships. Numerous models employ a game theoretic methodology to explore vertical scope of a firm's activities (Grossman and Hart, 1986) and self-enforcing contract regimes (Klein, 1996). While these strategizing approaches do inform the economizing approach, we do not consider this class of models further because such analysis is between vertical trading partners as opposed to the horizontal competition discussed in this article, and it rarely takes into account potential strategic moves by horizontal competition (for a more comprehensive treatment see Rey and Tirole, 2007).

Boundary conditions of the economizing perspective

While strategizing does and can inform economizing there nonetheless are important boundary conditions. Most important is Williamson's (1985) assumption of bounded rationality where individuals are intendedly rational but limitedly so. In contrast, the strategizing perspective often and typically assumes perfect rationality. In relatively simple situations where the bounds of rationality do not pose constraints, both perspectives are compatible. This compatibility breaks down as cognitive limits are reached and represents a boundary condition for a joint economizing-strategizing perspective.

Bounded rationality imposes other boundary conditions as well. Economizing usually is treated as if it were, in principle, a strategy equally available to every firm all the time. However, not every firm may align transactions according to the discriminating alignment hypothesis and not all managers may have the capacity to recognize contracting hazards and ways to mitigate them. Argyres and Liebeskind (1999) described how prior contractual commitments that did not foresee new transactions may constrain governance choices. In all of these contexts, bounded rationality is sufficiently severe as to limit both the applicability of economizing and strategizing.

Are strategizing and economizing necessary and sufficient perspectives for business strategy?

The large numbers of academic papers that consider investments in sunk costs to signal to competitors and that explore the use of governance structures to safeguard investments in asset specificity indicate that these perspectives offer necessary insights to the field of business strategy. For instance, Saloner (1991) reviews work on game theoretic models and illustrates how game theoretic modeling techniques are relevant to the studies of strategic management and Williamson (1991a) does the same for transaction cost economics. These perspectives assist managers and scholars alike in determining ways to capture value either by holding competitors at bay or gaining cooperation or by appropriating returns from investments in specific assets. The economizing and strategizing perspectives undoubtedly provide necessary insights to understanding how firms capture value.

A more challenging question involves the extent to which these perspectives are sufficient foundations for the field of business strategy. Both approaches have a common weakness in that

they only address one of the fundamental strategy questions we mentioned in the outset of this article, namely, value appropriation. Neither economizing nor strategizing has much to say about value creation. For example, strategizing literature emphasizes the strategic moves to generate and exploit market power but relies on the assumed existence of demand and marginal cost curves. The literature on economizing, on the other hand, focuses largely on value appropriation from economizing on the transaction costs, assuming that the transaction in which it has engaged already is chosen. Therefore, these perspectives alone or in combination offer a necessary but not sufficient foundation for the theory of business strategy because they fail to provide insights into value creation.

By assuming that specific assets can create value to the transaction, Williamson can focus on the analysis of economizing on the costs of opportunistic behaviors. However, Williamson also emphasize that hierarchy is an effective mode of governance to deal with the cooperative adaptation. These adaptation benefits create value to the transaction and firms. There is a step further to examine the relationship between better cooperative adaptation and the reduction of opportunistic behaviors.

Conclusion

In this chapter we introduced the literature on economizing and strategizing in the context of business strategy. The value of transaction cost economics rests on the minimization of transaction costs with respect to potential opportunism and the performance benefits the discriminating alignment hypothesis engenders. On the other hand, the value of game theory rests on applying its method to develop a contingency action plan based on considering the strategic interactions among firms. Moreover, we described how investing in sunk costs is a central decision premise in both theories as they apply to business strategy, albeit enabling different mechanisms. Relying on this central decision premise we introduced research that explores the intersection of strategizing and economizing of business strategy and their boundary conditions. We concluded that while the economizing and strategizing perspectives are necessary foundations to business strategy they neither individually nor combined offer a sufficient theory of business strategy at least because they do not inform value creation.

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