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Abstract

Using a Transaction Cost Economics (TCE) approach, this paper explores which organizational forms Accountable Care Organizations (ACOs) may take. A critical question about form is the amount of vertical integration that an ACO may have, a topic central to TCE. We posit that contextual factors outside and inside an ACO will produce variable transaction costs (the non-production costs of care) such that the decision to integrate vertically will derive from a comparison of these external versus internal costs, assuming reasonably rational management abilities. External costs include those arising from environmental uncertainty and complexity, small numbers bargaining, asset specificity, frequency of exchanges, and information "impactedness." Internal costs include those arising from human resource activities including hiring and staffing, training, evaluating (i.e., disciplining, appraising, or promoting), and otherwise administering programs. At the extreme, these different costs may produce either total vertical integration or little to no vertical integration with most ACOs falling in between. This essay demonstrates how TCE can be applied to the ACO organization form issue, explains TCE, considers ACO activity from the TCE perspective, and reflects on research directions that may inform TCE and facilitate ACO development.

Keywords

Organization theory, Transaction Cost Economics, Accountable Care Organizations, Vertical Integration

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Introduction

The issue that we address in this essay concerns possible organizational forms that Accountable Care Organizations (ACOs) are likely to adopt. Almost any organizational form may make for an acceptable ACO so long as three preconditions are met: (a) the provision of a continuum of care that includes at least ambulatory and inpatient care, and postacute care services; (b) the capacity to develop, implement, and monitor prospectively planned budgets; (c) sufficient size to be able to report comprehensive, valid, and reliable performance measurement across a wide variety of organizational and clinical activities (Devers & Berenson, 2009).

At the heart of any question about which particular form an ACO might adopt is the extent of vertical integration of services the organization provides. Indeed, industry observers and ACO researchers have commonly questioned the degree to which ACOs will foster vertically integrative activity among health care providers. Such questions include the following: "What degree of integration will ACOs pursue" (Kreindler et al., 2012, p. 458); "How integrated are ACOs"; and "Are certain types of ACOs more likely to be integrated than other types of ACOs" (Casalino, 2014, p. 1879). Within the canon of organization theory, transaction cost economics (TCE) is particularly relevant to the topic of vertical integration (e.g., Mick & Conrad, 1988), centering on the comparative costs of economic exchanges in markets versus internal exchanges within organizations. From this perspective, individual services offered by providers to patients may be viewed as *transactions* or *exchanges*, and the continuum of care may be depicted as a chain of transactions throughout the health care delivery process. Accordingly, health care providers face the decision of whether they will offer services throughout the continuum of care *internally* as an integrated delivery system or whether they will exchange with external providers to meet patients' needs for certain services (Stiles, Mick, & Wise, 2001). For example, multihospital systems that care for patients who require inpatient rehabilitation services after their general, acute care stay face the options of either providing inpatient rehabilitation within the organization by vertically integrating postacute care offerings or referring such patients to external inpatient rehabilitation providers, thereby completing an "exchange" in the market. A similar example could be made with preacute services and their "exchanges" with general, acute care hospitals (e.g., wellness centers, primary care clinics). In short, although ACOs are still in the early stages of development with, for instance, only about one in four physician practices joining an ACO (Shortell, McClellan et al., 2014), TCE nevertheless provides a perspective from which to examine and explain integration activity throughout the continuum of care among health care organizations (Luke, Ozcan, & Olden, 1995; Mick & Shay, 2014).

A careful consideration of ACO arrangements within a TCE framework also suggests that, rather than simply characterizing ACO forms according to the dichotomous groups of strictly internal (i.e., "make") or external (i.e., "buy") exchanges, a continuum of ACO forms is possible, even if full integration of some services like behavioral health (Lewis et al., 2014) and substance abuse therapy (D'Aunno, Friedman, Chen, & Wilson, 2015) is not yet common. At one extreme, an ACO may be organized around

numerous small structures offering various professional services linked together by legally binding contractual arrangements (Robinson, 1997). At the other extreme, an ACO may be a large highly integrated organizational system under single ownership, similar to classical integrated delivery systems and health maintenance organizations (Shortell, 1997; Shortell, Gillies, Anderson, Erickson, & Mitchell, 2000). Between these two extremes, there are endless combinations of organizationally integrated and contractually linked services. In this sense, TCE offers an "explanation for organizational variety" by acknowledging that organizations' structures and forms will differ, given varied transaction types, exchange characteristics, and resources required for governance (Scott, 2004, p. 6; see also Mick, 1990; Williamson, 2005).

Given the diversity and fragmentation of the U.S. health care system, the continued trends of consolidation and integration throughout the health care industry, and the highly different market and environmental contexts that exist within the nation, the issue of what ACO arrangements are likely to develop with what performance consequences and under what conditions strike us as a central concern. For example, it is unlikely that a "one-size-fits-all" approach to ACOs will work, just as was learned from the narrow 1973 federal requirements for health maintenance organizations, mandates that frequently led to organizational mismatches between organization forms and specific market circumstances (Brown, 1983; Coombs, 2005; Luft, 1981). Fortunately, TCE is relevant to the question of vertical integration, and the remainder of this essay demonstrates how TCE can be applied to the broad ACO organization form issue, including an explanation of TCE, a consideration of ACO activity from the TCE perspective, and a reflection on future research directions that may inform TCE and facilitate ACO development.

The Theory: Transaction Cost Economics

Originally proposed by Coase (1937), detailed and developed by Williamson (1971, 1975, 1985), and popularized by Ouchi (1977, 1980), TCE explores the issue of diverse organizational forms from the perspective of firm boundaries, assessing the efficiency of hierarchical versus market exchanges as a criterion for boundary definition (Santos & Eisenhardt, 2005). TCE focuses on *nonproduction* costs, which historically include a multitude of market activities: vendor searches, due diligence, contract negotiations, contract enforcement, and the like.

Traditionally, advocates of TCE have treated transactions arising from institutional control or executive fiat as *costless*, subsumed into the production process. But, some scholars have argued that transaction costs exist *internally* in organizations (e.g., Mick, 1990; Mick & Conrad, 1988; Stiles et al., 2001). As Charles Perrow (1981) argued, if organizational boundaries are extended so as to encompass the troublesome market transactions (i.e., if organizations vertically integrate), unless the factors that made the transaction costly in the market are adequately addressed, the inefficiency experienced in the market will manifest internally as well. Furthermore, inside organizations, transaction costs also result from human resource activities including hiring and staffing, training, evaluating (i.e., disciplining, appraising, or promoting), and otherwise administering programs.

In any event, TCE states that a number of environmental circumstances may lead to increased transaction costs in the market, including uncertainty and complexity, small numbers bargaining, asset specificity, frequency of exchanges, and information "impactedness," each of which we elaborate below as they relate to ACOs. Collectively, these exchange characteristics contribute to the impact of opportunism and bounded rationality—two central factors within exchange processes assumed by the TCE perspective—on transaction relationships (Oliver, 1990). *Opportunism* refers to the tendency of actors to pursue self-serving behaviors, even with guile, in order to take advantage of any given situation, while *bounded rationality* refers to the imperfect rationality exhibited by decision makers due to informational, cognitive, or temporal limits (Williamson, 1985). Thus, actors' efforts to address these limiting forces in the market exchange process require such significant transaction costs that the internalization of exchanges needed to provide or produce a given service or good may be more favorable and less expensive, thereby explaining the necessity and emergence of integrated organizations.

But, as noted above and argued explicitly by Mick and Shay (2014), transaction costs within organizations are variable, and one cannot count on the assumption, as do Williamson and others, that internal exchanges will almost always be lower than market exchanges even when extreme market forces lead to high market transaction costs. This may be particularly true when accounting for the costs of decision making, control, or enforcement within organizations, as well as troublesome factors that may make exchanges costly regardless of whether they are internal or external (Perrow, 1981). Thus, external market exchanges should be balanced against intraorganizational exchanges, with a decision on whether to "make" or "buy" depending on which set of costs is higher (Mick & Conrad, 1988).

At the same time, although TCE's arguments are often generalized to suggest that organizations simply face a "make-or-buy decision," the perspective allows for more than just two possible outcomes in terms of organizational forms. In other words, the degree to which activities in the production of a service or product are integrated within an organization varies given the nature of the market, the organization, and the transactions themselves.

The Context: Accountable Care Organizations

The ACO movement provides a good organizational context for applying TCE. The central question addressed by TCE is what organizational form or forms will be most appropriate such that transaction costs are minimized and the efficient delivery of health care services will result. Should ACOs adopt contractually based structures tying together numerous freestanding units—private practice physician offices, clinics, urgent care centers, hospitals, nursing homes, hospices, among others—or should ACOs adopt more integrated, self-contained, single-ownership arrangements typical of staff and group model health maintenance organizations? What will be the comparative transaction costs between market purchases of units that are required to compose an ACO versus internalization of these units in a single overarching structure?

To present a foundation from which such questions may be explored, we consider each of the previously mentioned factors potentially affecting market transaction costs: small numbers bargaining, information impactedness, asset specificity, frequency of exchanges, and uncertainty and complexity.

Small numbers bargaining—when an organization is confronted by a limited number of product or service choices that increases the likelihood that a buyer will be exploited due to the lack of alternatives—favors internalizing the production of the product or service. In other words, situations characterized by few buyers or sellers are likely to result in market failure given TCE's assumptions of opportunistic exchange partners, thereby promoting vertical integration activity (Ouchi, 1980). For example, as ACOs promote the oversight and control of medical services throughout the continuum of care, hospital-based providers operating in local markets with relatively few providers in other areas of the care continuum (e.g., physician practices, postacute care providers) may pursue vertical integration, particularly in smaller or rural markets (Cutler & Morton, 2013).

Yet another market feature causing internalization is information "impactedness" or information asymmetry. This factor describes the situation in which one market actor has, while another lacks, information to understand adequately the circumstances surrounding a potential exchange, which reinforces the notion of "bounded rationality" among economic actors. For example, as ACOs aim to reduce the fragmentation among physicians, hospitals, and other providers, the ability of ACO members to work cooperatively in acquiring and sharing information—from patients' medical information across the full continuum of care to organizational learning regarding key successes and failures—is key to their collective success (Fisher & Shortell, 2010). According to the TCE perspective, vertical integration throughout the continuum of care may enable an ACO and its members to more effectively manage information, such that regardless of where a patient seeks and receives care along the continuum, providers are better informed as to the patient's history, condition, and needs, and the organization is better equipped to manage health services capably and effectively. In this respect, scholars have highlighted the importance of robust health information technology infrastructure and exchange among integrated providers within successful ACOs (Burns & Pauly, 2012; Diana, Walker, Mora, & Zhang, 2015; Fisher, Shortell, Kreindler, Van Citters, & Larson, 2012; Kreindler et al., 2012).

Argued by some to be the most significant determinant of vertical integration among the transaction characteristics described by TCE (e.g., Sawant, 2012), asset specificity pertains to durable and specialized investments that are made and customized to support a specific transaction. As transaction relationships develop, those that become idiosyncratic—such that the exchange parties' *specific* identities matter—may be characterized by heightened asset specificity, and both buyers and suppliers become fully committed to the transaction (Williamson, 1979). Such a description may apply to a variety of contexts, including the exchange of transaction-specific assets involving physical, human, or site-specific capital as well as intangible assets such as brand name capital and temporal specificity (Joskow, 2008; Tadelis & Williamson, 2012). Shay and Mick (2013) highlight examples of ways in which asset specificity observed

across these different contexts may become heightened in exchange relationships prompted by ACO membership, noting that providers' shared pursuit of advanced care coordination demands investments in personnel, equipment, and infrastructure. The TCE perspective suggests that circumstances characterized by heightened asset specificity—such as we see in the development of ACO models—require such significant investments that they tend to favor internal exchange in lieu of market-based transactions.

Furthermore, in the presence of asset specificity, increases in exchange frequency of transactions between parties motivate hierarchical, integrated structures, allowing organizations to minimize monitoring costs, gain efficiencies, and control the overall sequence of exchanges (Williamson, 1979). For example, as ACO arrangements motivate hospitals to increasingly pursue exclusive relationships with partnering medical groups or postacute care providers, the combination of asset specific investments and increased exchanges within these relationships may lead to vertical integration activity as a more efficient means for the ACO to conduct transactions.

In the presence of asset specificity, TCE suggests that increases in uncertainty also lead to increased transaction costs. Market uncertainty and complexity may lead to efforts to internalize the market's components that contribute to such uncertainty and complexity. For ACOs, sources of uncertainty and complexity are many, including referral patterns, electronic health record interoperability, competitive responses, regulatory changes, and financial and legal arrangements, among others. Internalization through organizational structure—what Williamson (1975) refers to as *hierarchy*—may enable organizations to achieve clearer and more coherent decisions, controlled processes, and convergent goals. In other words, internalization is theorized to yield benefits that offset the impact of uncertainty and complexity on market exchanges. For ACOs, examples of such internalization could include a hospital system's acquisition of a physician group or postacute provider to stabilize referral patterns or develop a common electronic health record platform.

Milliken (1987) described various forms of uncertainty, including the unpredictability and complexity of an organizational environment (i.e., "state uncertainty"), the unpredictability of the effects of environmental change (i.e., "effect uncertainty"), and the inability of organizations to adequately discern their options when responding to contingencies or to determine the consequences of such options (i.e., "response uncertainty"). More recently, Weber and Mayer (2014) expanded on the concept of uncertainty in TCE by introducing and examining interpretive uncertainty, which emphasizes the role of bounded rationality in organizations' adoption of hierarchical forms and suggests that conflicts in exchange partners' cognitive frames and expectations generate considerable transaction costs. According to this logic, hierarchical forms may be preferred even in the absence of asset specificity when exchange parties exhibit incompatible cognitive frames or highly divergent traits, as these frames and traits shape each firm's interpretation of the exchange (Weber & Mayer, 2014).

A variety of factors contribute to exchange partners' differing cognitive frames or traits, including membership in different industries or sectors, reliance on different technologies, or adherence to different laws and cultures, among others (Weber &

Mayer, 2014). Recognizing the varying characteristics, cultures, regulations, dominant technologies, and financing models observed in other sectors throughout the continuum of care (e.g., primary care, postacute care, end-of-life care, etc.), different cognitive frames may exist between a general, acute care provider and its other partners within an ACO, thereby contributing to interpretive uncertainty. For example, an acute care hospital may fear shared savings reimbursement models that incentivize providers to keep patients out of hospitals, whereas a primary care practice partnering with that hospital in an ACO may view the same model as an opportunity. Considering the uncertainty and complexity that has long characterized the contemporary U.S. health care delivery system, we suggest that ACOs promote increased exchange opportunities while presenting opportunities for heightened uncertainty. For example, the inclusion of separate provider organizations in an ACO requires a challenging degree of coordination, including legal, technical, strategic, and financial considerations as well as transparent communication, relationship management, and teamwork to collectively realize quality and process improvements (DeVore & Champion, 2011; Shortell, Casalino, & Fisher, 2010).

The TCE perspective suggests that vertical integration may remedy transaction costs stemming from diverse sources of uncertainty, providing ACOs with a means to limit opportunistic behavior, defend competitive advantages, adeptly pursue adaptive strategies in the face of unforeseen contingencies, and enforce common interpretations and expectations of the organization and external environment. At the same time, internal transaction costs may well increase due to the administrative complications and challenges of continually internalizing exchanges wrought by vertical integration. Hence, we argue that a full application of TCE theory includes a simultaneous comparative analysis of external and internal costs.

Caveats and Research Challenges

On the one hand, TCE predictions that ACO models may direct organizations to pursue vertical integration are consistent with scholars' claims and assertions that ACOs encourage vertical integration activity (e.g., Burns & Pauly, 2012; Richman & Schulman, 2011). On the other hand, there is nothing automatic or deterministic about TCE's logic predicting a highly vertically integrated ACO or one that is not. Because of the difficulties of measuring comparative transaction costs, it might be unreasonable to expect that health care managers would even be able to apply a TCE approach to the integration decision. Adroit managers may be able to figure out where high transaction costs are located both within their organizations and between theirs and other organizations, and if they can, then they may be able to guide their organizations to improved efficiencies by successfully pursuing the levels of integrative activity that best fit their exchange needs based on an almost intuitive or qualitative sense of comparative transaction costs.

For that matter, it merits further consideration that health care organizations may pursue a myriad of arrangements pairing integration with external exchange, as previously noted. Integration and deintegration decisions are not uniform across health care

organizations but can occur simultaneously in response to various forces and factors that are specific to individual organizations, their markets, and their environments (Mick, 1990). Thus, scholars have acknowledged the diversity of ACO forms, with varying degrees of vertical integration exhibited among different arrangements including those built on independent practice associations, combining independent practice associations with a group practice model, partnering hospitals with independent physicians and postacute providers, or existing entirely within a single integrated delivery system, among others (e.g., Kreindler et al., 2012; Shortell, Wu et al., 2014).

Furthermore, recent advances in TCE thinking emphasize the role that social dynamics may play in affecting the decision to internalize exchange processes. That is, relational characteristics may influence exchange decisions in addition to transaction characteristics, and exchange relationships characterized by high levels of trust, reciprocity, and information transfer may overcome motivations to vertically integrate, instead fostering innovation and joint problem solving outside of formal organizational boundaries (Remneland-Wikhamn & Knights, 2012; Shay & Mick, 2013; Weber & Mayer, 2014).

Thus, due to the social dynamics influencing exchange relationships ACOs may resemble partnerships that lack formal vertically integrated structures—including partnerships between providers and health plans, health systems and physician networks, and an ACO's primary care medical home providers and specialty associates (e.g., DeVore & Champion, 2011; Goldsmith, 2011)—and still be consistent with the TCE perspective. To the degree that the TCE perspective explains diversity in organizations' integrative activity, including *virtually* integrated structures that thrive on embedded network relationships, it also speaks to the diverse forms exhibited by ACOs in regard to their integration models (Kreindler et al., 2012; Shortell, Wu et al., 2014).

Where do we go from here? Future research opportunities abound as ACOs continue to develop and grow, and as we continue to learn more about their implementation, operation, and performance. In terms of research regarding ACOs, the TCE perspective may benefit scholars working to understand the difficulties confronted by ACOs, allowing for consideration of the complex factors that affect ACOs and their members. What market conditions and exchange characteristics relate to the presence of either formally or virtually integrated structures within ACO models? Would addressing varying exchange characteristics influence the operation and performance of ACOs? Are there certain elements of exchanges—for example, certain forms of asset specificity—that prove to be more influential in shaping ACOs' organizational forms and strategies? What external and internal transaction costs are actually being confronted by ACOs today, including those that may have been previously unanticipated or overlooked, and how might these costs be remedied?

Such questions may also benefit scholars of the TCE perspective, identifying ways in which the varying exchange relationships observed in varying ACO models influence organizations' decisions to internalize market transactions. As recent TCE thinking has emphasized the role of social dynamics in organizations' exchange processes, ACOs may prove a fertile ground from which the relationship between social dynamics and organizational transactions may be further examined and better understood.

In conclusion, we argue that the TCE perspective highlights ways in which organizations may rationalize decisions to integrate vertically, viewing the internalization of processes and steps within ACOs as more efficient and, ultimately, preferable compared with the collection of such steps outside of the organization. However, the ability to keep internal transaction costs from outstripping external costs—even in the case where external transaction costs are high—may be linked to the skill and aptitude of ACO management to keep a sober eye on the size and complexity of administrative structures put in place to manage increasingly complicated internal exchanges surrounding patient care.

Thus, the transaction costs raised in the pursuit of ACO models may foster consolidation among participating providers, but at what net cost? This question becomes more salient as industry observers have noted vertical integration and consolidation activities in the wake of ACO development, and recent research points to an association between ACO formation and provider integration (Auerbach, Liu, Hussey, Lau, & Mehrotra, 2013). At the same time, TCE allows for a range of organizational boundaries as exchanges vary according to diverse transactional *and* relational characteristics, consistent with the different ACO forms that have already emerged in just a few years (Shortell, Wu et al., 2014). Those looking for a simple "make-or-buy" decision when applying TCE thinking to the ACO model may find this to be perplexing, but we suggest the ACO model reflects the complexity and richness of the TCE perspective, challenging us to think more deeply about ACOs and how they relate to our understanding of health care organizations, their boundaries, and the conditions in which they operate.

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