



Resource Based and Knowledge Based Views as Complementary Perspectives to Transaction Cost Theory

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ABSTRACT

This article discusses how the resource based view and knowledge based view complement transaction cost theory in the explanation of firm integration strategies. Rather than treating resource based view and knowledge based view as opposing theories to transaction cost theory as generally regarded in the literature, I argue that resource based and knowledge based views provide useful complementary perspectives to transaction cost theory in enriching and completing our understanding of the existence of the firm and why firms decide to carry certain activities internally. Together, they provide a more concrete and comprehensive explanation of firm integration strategies.

Keywords: Resource Based View, Knowledge Based View, Transaction Cost Theory, Firm Integration Strategy

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INTRODUCTION

The strategic management literature on the firm decision to integrate (whether to make or buy certain intermediate products) is divided into two major approaches, one based on transaction cost theory, and the other based on resource based view and its variant – the knowledge based view. On the one hand, the literature recognizes the importance of transaction cost in determining the choice of organizational mode. On the other hand, there is debate within the management field regarding whether transaction cost is sufficient to explain the existence of firm and its integration strategy.

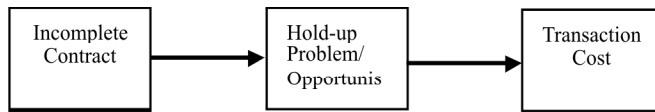
Resource based view and knowledge based-view regard the transaction cost explanation not sufficient to explain integration and there is also a revenue or value maximization side consideration besides the cost side consideration. In the following sections, I first survey the transaction cost theory, and then point out how it can be complemented by the resource based view and knowledge based view to offer a richer and more complete explanation of firm's integration strategy.

TRANSACTION COST THEORY

Coase (1937) builds the foundation of transaction cost economics. Coase first asked the question why there should be firms. More specifically, if planning mechanisms are not as efficient as price mechanisms (as can be seen in the superiority of market economy over planned economy), why are there still giant companies like General Electric, which use the planning mechanisms? He quotes Sir Arthur Salter in his vision of firms as “islands of conscious power in the ocean of unconscious co-operation like lumps of butter coagulating in a pail of buttermilk”. The answer, as Coase points out, is that “the operation of a market costs something and by forming an organization and allowing some authority (“entrepreneur”) to direct the resources, certain marketing costs are saved”.

“It is generally considered that Williamson (1975, 1985) further advanced the transaction cost theory. Williamson (1985) took two important steps: identifying some of the conditions that create transaction costs, which is contract incompleteness, which leads to the potential problem of opportunism, and suggesting that firms can deal with opportunism better than markets

because firms can use relational contracts. Firms and markets have different governance mechanisms; the hierarchy control of instructions by firms is more efficient than the price control by markets under situations of incomplete contracts and potential opportunism. After Williamson, the transaction cost theory is more complete. The following illustration shows the chain of logic in the transaction cost theory.



The transaction cost theory points out that firms and markets utilize different organization/governance methods to organize interdependencies, and therefore have different costs during the organizing process. Firms arise when they are the most efficient institution to organize these interdependencies. Williamson (1985) indicates that transaction cost is a friction cost existing when two firms exchange and it could be eliminated when the two firms merge their operations, but then replaced with another kind of coordination cost. In certain situations e.g. with asymmetric information, the coordination cost by the firm mechanism is lower than the transaction cost by the market mechanism. Therefore, under these situations it is efficient to internalize the transaction and bring them under the ownership and control of the firm itself.

Actually, the idea of contract incompleteness and firm as relational contract has already been partly expressed by Coase. Coase has made the point that a firm is essentially a form of relational contract and the existence of firm is to overcome contract incompleteness. Coase (1937, p391) points out that "There are, however, other disadvantages – or costs – of using the price mechanism. It may be desired to make a long-term contract for the supply of some article or service. This may be due to the fact that if one contract is made a longer period ... then certain costs of making each contract will be avoided. Or, owing to the risk attitude of the people concerned, they may prefer to make a long rather than a short-term contract. Now, owing to the difficulty of forecasting, the longer the period of the contract is ..., the less possible, and indeed, the less desirable it is for the person purchasing to specify what the other contracting side is expected to do. ... Therefore, the service which is being provided is expressed in general terms, the exact details being left until a later date. ... When the direction of resources (within the limits of the contract) becomes dependent on the buyer in this way, that relationship which I term a 'firm' may be obtained." By this, Coase is essentially

saying that by being a relational contract, the firm can save on transaction cost as opposed to the market system.

Gifford provides a way to measure the transaction costs. Gifford derives transaction cost from the cost of writing contracts, which is determined by the opportunity cost of attention. Gifford (2003) models firm's 'make or buy' decision via a choice of allocating limited entrepreneurial attention among writing a new contract or evaluating an existing contract. The conclusion is: An increase in market governance power, reflected in the ability to negotiate a market transaction makes market transactions more valuable. A higher internal governance power, due to a greater ability to direct internal transactions makes internal transactions more valuable.

Empirical studies in management have supported the relationship between cost of writing contract on the one hand, and the integration decision on the other hand. For example, Agarwal and Ramaswami (1992) studied how contractual risk affects firm's choice to integrate or not. They operationalize contractual risk into three dimensions: one of them is the cost of making and enforcing contracts; and the other two are risk of dissipation of proprietary knowledge, and risk of deterioration in the quality of services if operated jointly with another partner or licensee. Their study used survey to obtain measures of cost of making and enforcing contract from manager's perceptions. The result of their study confirmed that if the cost of writing contract is high, firms are more likely to choose integration.

The transaction cost not only explains the two extremes, i.e. firm vs. market, it can also explain the choice along the whole spectrum of organizational mode from pure internal integration to pure market transactions. This includes joint ventures, alliances, franchising, licensing, etc. All these decisions involve a calibration of the trade-off between transaction cost on the market and coordination cost within a firm.

There are many factors that cause contract incompleteness, including bounded rationality, difficulties in performance measurement, asset specificity, and asymmetric information (e.g. in knowledge transfer), etc. In the following I give two examples of these factors that make market transactions more difficult or costly than organizing activities within the firm.

Hennart looks at measurability of output as the critical reason for the level of transaction cost. Hennart argues that when output is hard to measure, market transaction cost tends to be high, and therefore

switching to the firm may be preferable. Business history provides many examples of manufacturers integrating into distribution of products for which the output is hard to measure, and more specifically, the quality standards are hard to define and enforce contractually (Wilkins 1970; Nicholas 1983). Inversely, there are also examples of distributors backward integrating into production when the quality of the products was difficult to assess and write down in contracts. A famous case is the banana industry. The quality of bananas is affected by rough handling at the cutting and shipping stages, but this is hard to assess by the distributor because it won't show up until it reaches the customers much later. This explains why US banana distributors have integrated into banana plantations (Litvak and maule 1977; Read 1986).

Another example of output measurability is in the franchising vs. employment decision. Hennart (2001) says that franchising will tend to be chosen if the quality of the franchisee's output can be easily described and enforced by contract, and employment contract will be chosen otherwise. Examples of the first category include fast food, hotels, employment agencies, and car rentals; while examples of the second category include banking, advertising, management consulting, and high-level advice.

Transaction specific assets or asset specificity is another important factor causing high transaction cost and the preference over integration. In transaction specific investments, parties need to write long-term contracts to prevent opportunism by the other party. However, due to bounded rationality, it is hard to anticipate every contingency. Therefore, the cost of writing contracts is inevitably high in situations that involve transaction specific assets. Thus, in these situations, internalization is often preferred over long-term contract.

For instance, transaction specific assets explain why aluminum companies have vertically integrated into bauxite, but tin smelting firms have not integrated into alluvial tin mining (Hennart 1988) and why car assemblers tend to choose to own engine plants but subcontract many other car components. They also explain why US steel companies have integrated into iron ore mining and then due to lack of expertise, have to use specialist companies to run their captive iron ore mining operations. Hennart (1982) also gives the case of Singer. Because the distribution service for Singer's sewing machines – a new product at that time — was manufacturer-specific, independent agents were unwilling to learn to demonstrate its sewing machines, and did not want to risk carrying stocks of this new product. Therefore, the sewing-machine manufacturer

had to initially integrate vertically into domestic and foreign retailing.

RESOURCE BASED VIEW

Resource based view is the major competing theory to the transaction cost theory regarding integration decision in the management field. The resource based view of the firm has gained considerable currency in the management field since the late 1980s. It has emerged after the transaction cost theory as an alternative approach to understanding industrial/firm organizations and their strategies. According to this view, a firm is a broad set of resources that it owns, which include tangible and intangible assets (Wernerfelt, 1984). The resource based view suggests that owning resources that are valuable, scarce, and hard to imitate create long term sustainable competitive advantages in firms (Barney, 1991; Peteraf, 1993), and thus the acquiring, accumulating and utilizing of valuable and rare resources becomes the critical imperative in firm strategy. Therefore, the resource based view puts resources as the focus of its analysis about firm strategy, including its choice of organizational mode.

In contrast to the transaction cost logic, which emphasizes minimization of transaction cost in the choice of organizational mode, the resource based rationale emphasizes value maximization of a firm through acquiring and accessing valuable resources (Das and Teng, 2000; Kogut, 1988). Thus, firms are viewed as attempting to find the optimal resource boundary through which the value of their resources is best utilized. According to the resource based view, when efficient market exchange of resources is possible, firms are more likely to (Eisenhardt & Schoonhoven, 1996) rely on the market to access the resources they need. However, efficient exchanges are often not possible on the spot market. Certain resources are not perfectly tradable, as they are either mingled with other resources or embedded in organizations (Chi, 1994). Hence, firms may want to own these resources through integration, which include internal development, mergers and acquisitions, or partial integration such as joint ventures or strategic alliances.

In a sense, transaction cost theory and resource based view are two sides of the same coin, in that transaction cost theory looks more from the cost minimization perspective while resource based view looks more from the revenue or value maximization perspective. The reasons raised in resource based view for the existence of firm, e.g. core competency, difficulty in transferring tacit knowledge, etc. can at the same time be couched in the terms of transaction cost.

On the other hand, resource based view offers much more concrete insights about why transaction cost can be high in some circumstances, as in the concepts like absorptive capacity, digestibility, etc. If the resources that the firm wants to gain can be obtained at a low transaction cost through the market, although the resources are valuable, the firm can still obtain it through market transactions. In fact, resource based view is trying to find out what specifically constitutes the transaction cost, while transaction cost theory provides one abstract and all-encompassing concept for all these concrete factors. Therefore, resource based view, adds a useful perspective to the transaction cost theory, rather than being an opposing theory.

KNOWLEDGE BASED VIEW

In this section I move on to the knowledge based view, which is a close variant of resource based view, and how it can complement the transaction cost theory in explaining the firm integration strategy. Knowledge based view is quite similar to the resource based view logic except that it focuses on one type of resources: knowledge, which is particularly hard to transfer from one firm to the other through market transactions.

The knowledge based view (Kogut and Zander, 1993) presents the proposition that firms are repositories of knowledge and they make things instead of buying them when they think they have better ability to transfer knowledge within themselves than transferring it to other firms. Knowledge based view conceptualizes that firms are social communities that specialize in the creation and internal transfer of knowledge, especially tacit knowledge. The accumulation of experience and learning in an organization leads to a set of capabilities that are easier to transfer within the firm itself than to other firms. It recognizes the unique capabilities of each individual firm in utilizing knowledge rather than seeing firm as an abstract institution and all firms to be alike as in transaction cost economics. Therefore, knowledge based view makes the proposition that the difficulty of tacit knowledge transfer from one particular firm to another compared to within this one firm is the main reason for firm to integrate.

Similar to the resource based view, knowledge transfer is better thought as not an opposing theory to transaction cost theory but featuring it in a more vivid and concrete way. Knowledge based view's most important contribution is that it brings knowledge and knowledge transfer into the center of analysis in firm integration strategy. In the current knowledge based economy, the essential nature of firms as knowledge creating and exploiting entities is becoming more and more salient. Knowledge based view complements the

transaction cost theory by adding more dimensions to the analysis of firm integration strategy.

For example, one notably important application of the transaction cost theory is on knowledge transfer. Hennart (2001) explains that markets for knowledge suffer from the problem of asymmetric information, which makes the markets very inefficient or in some cases nearly impossible. The seller faces a dilemma in whether to disclose the details of the knowledge to the buyer. If he does so, he has transferred the knowledge to the buyer for free. If he does not, there is no way for the buyer to assess the value of the knowledge and be willing to pay a fair price. The solution for this is to set up a firm and transfer the knowledge within the firm. In this way both the buyer and seller of the knowledge are now rewarded for effective transfer of knowledge and not for cheating in a market setting.

While agreeing that the difficulty of knowledge transfer can be the critical reason for firm's integration decision, Kogut & Zander (1993) question the necessity of the opportunism and market failure argument in the calculation of integration decision. They point out that the transaction cost theory misses the fact that different firms have differential expertise and capabilities, just like individuals do. Thus, the reason for whether a firm will transfer a technology internally could be that it is more efficient to transfer within this own special firm, with its uniquely accumulated capabilities in a specific area, than to any other firm, who may not be able to fully understand and absorb the knowledge. "The problem with the argument that the firm exists due to market failure is that it is over-determined. The assumption of opportunism is not needed, only the differential in costs in the transmission of knowledge within the firm as opposed to between firms (Kogut & Zander 1993)."

In other words, transaction cost theory attributes all the difference in costs of firm mode vs. market mode to opportunism, and fails to take into account the capabilities of what individual firms know and how well they carry out certain activities in certain areas. The knowledge based view adds that firm could arise not out of the failure of markets for buying and selling of knowledge, but out of its superior efficiency as an organizational vehicle by which to organize, transfer, and utilize knowledge in a specific area. In a similar vein, Cantwell (2001) points out that the retention of technology within each firm may have little to do with any failure of malfunctioning of the market for technological knowledge, but everything to do with the close association and coordination needed in the generation and utilization of a distinctive type of technology within each firm.

In summary, the knowledge based view complements the transaction cost theory on three aspects. First, transaction cost theory is only concerned with comparing firm vs. market, while the make or buy decision also involves the comparison of transferring knowledge within own firm vs. transferring to other firms. Second, it challenges that opportunism – the central link in the transaction cost argument – is not necessary for firm's decision regarding whether to make or buy. Third, the knowledge based view regards firms as dynamic entities of knowledge creation, retention and utilization, and this dynamic perspective certainly adds to the static and equilibrium-oriented approach of transaction cost theory.

CONCLUSIONS

In conclusion, the transaction cost theory is essential for understanding the existence of firm. It is indispensable for the analysis of internal production and provides a perspective into why certain organization/governance mode is chosen. It is an extremely insightful and powerful theoretical framework and carries great conceptual strength. However, the transaction cost theory remains a very static and abstract comparison of organizational modes between the firm institution and the market institution. It does not take into account of the idiosyncratic capabilities and advantages of each individual firm.

Therefore, it is helpful to complement it with the perspectives from the resource based and knowledge based views, which see firms as bundle of resources or knowledge repositories. These perspectives enrich the understanding of firms and their strategies. Examining the questions of how firms can best acquire and utilize the resources and knowledge they need have great significance in the current knowledge based economy. The contribution of this paper is that it connects the different theoretical frameworks on firm integration strategy: between the transaction cost theory on the one hand, and resource based view and knowledge based view on the other hand.

Combining the transaction cost theory together with the perspectives provided by the resource based and knowledge based views, we are better able to explain why firms integrate: firms on the one hand try to maximize value through acquiring and accumulating resources and knowledge; on the other hand firms try to lower the transaction cost in utilizing resources and knowledge by choosing the most efficient organizational mode for the situation. Therefore, the resource based view and knowledge based view complement the transaction cost theory by providing a different lens of perspective and enriching it with more

concrete, juicy and dynamic strategic concepts in the deliberation of firm strategy.

Biographical Note

Dr. Yanli Zhang is an Associate Professor in the Management Department at Montclair State University. Her areas of expertise are in strategic management and international business. Her research interests focus on firm strategy, technological innovation, networks and knowledge, and international strategy. Her paper on inter-firm networks and innovation won the Doug Nigh Most Innovative Paper Award and Best Paper Award at the Academy of Management Annual Conference. She was the Globalization Track Chair for IEEE International Technology Management Conference in 2012. She has a BA in Economics from Beijing University, China, and a MBA and Ph.D. in Management from Rutgers University. Before academia, she worked as an economic policy analyst in the Ministry of Foreign Affairs, China, and a management consultant in Accenture, Beijing office.

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