# Transaction Informational Characteristics and Changes in Corporate Strategy and Structure

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*This study attempts to explain the relationship between strategy, structure, and transaction informational characteristics. Transaction informational characteristics refer to organizational communication-informational characteristics such as codification and diffusion of information in intra-organizational transactions. It is assumed that governance mechanisms are matched to transaction informational characteristics. This study examines two models of fit which evolve from transaction informational characteristics: market-to-hierarchy and hierarchy-to-market.*

## Introduction

Over the past decade, the topic of transaction failures in markets and hierarchies has gained considerable attention. Williamson (1975, 1985), from the transaction (communication and information) cost economics perspective, revitalized the topic. He argued that transaction costs may arise and lead to transaction failures where one or more of the following conditions exists: First, bounded rationality in an environment characterized by high levels of uncertainty or complexity; Second, opportunistic behavior in a circumstance where there are small numbers; and finally, information impactedness. That is, bounded rationality, opportunism, and information impactedness may cause asymmetric information, high transaction costs and transaction failures. Organizations attempt to reduce transaction costs by improving information processing, changing governance structure, and adopting more efficient strategies of diversification and/or cooperation. Research on transaction failures, however, has focused on much attention on market failures. By contrast, hierarchical failures have not received much attention.

Boisot and Child (1988) focused on hierarchical failures in analyzing the problem of governance in the Chinese economic reforms. Extending the study by Boisot and Child, the current study attempts to explain both market and hierarchical failures and their effects on corporate strategy and structure from transaction informational characteristics perspective. This study focuses on changes of governance mechanisms through diversification and cooperation.

In addition, organizational researchers have attempted to explore the concept of fit in organizational studies (Tushman, O'Reilly, and Nadler, 1989). They have studies the fit between internal and external factors, or between strategy and structure (in particular, governance mechanisms) to transaction informational requirements and its implications for diversification and cooperation. This study also examines this topic.

## Transaction Informational Characteristics, Strategy, and Structure

### Transaction Informational Characteristics

Transaction informational characteristics have been well studied by Boisot (1983, 1986), and further applied by Child (1987), and Boisot and Child (1988). Transaction information is characterized by its levels of codification and diffusion: codified-uncodified and diffusedundiffused. Codification refers to the social equivalent of the structuring of information by individuals. It refers to a coding process in which both information compactedness and specificity are achieved. Diffusion refers to the extent of information sharing within a given population and is therefore directly related to a scope of a communications or transactions network. According to Boisot (1986), codification and diffusion are closely related. For example, the more transaction information codified, the more it is diffused.

Transaction mechanisms (in particular, markets and hierarchies) can be classified according to their transaction informational characteristics. For example, well codified and widely diffused transaction information is necessary for an efficient market. Where transaction information is well codified but either not diffused or only partially so, the market becomes a less efficient transaction mode. By contrast, the timely and structured flow of transaction information upwards or downwards is required for an efficient hierarchy. At the top of hierarchy, decisions rely on the use of uncodified information while at the base decisions rely on the use of codified information. Transaction information within a hierarchy generally depends on information not diffused outside the organization. Therefore, unless the governance structure matches transaction informational characteristics, transactions between (markets) and within organizations (hierarchies) may result in high transaction costs and transaction failures. Williamson (1985) argues that transaction failure exists only to the extent that frictions associated with one form of governance are prospectively attenuated by shifting the transaction or a related set of transactions to an alternative form of governance.

In addition, changes of transaction informational characteristics (or requirements) also affect the strategy and structure of organizations. For example, new scientific and technological development and innovation which are based upon uncodified and undiffused information may create new requirements for organizations. Organization may view this as either opportunity or threat and may choose diversification or cooperation to utilize the opportunity and reduce the threat. However, the relation between changes of transaction informational characteristics and its affects on strategy and structure (in particular, diversification and cooperation) have not been explored much and needs additional analysis.

In particular, when organizations need to shift the transaction to an alternative form of governance and externalize (or expand) some of their functions such as research and development, production, and marketing, the decision facing organizations is whether to make or buy. Make-or-buy decisions include a number of diversification and cooperation strategies such as diversification, vertical integration, joint ventures, and strategic alliances.

## Strategy and Structure

For many years, organizational researchers have studied the relationship between strategy and structure (Rumelt, 1974; Tushman, O'Reilly and Nadler, 1989). Some controversies still exist. For example, as organizations grow, they need to adopt different strategies and structures. For diversification and growth strategy, firms may consider various alternatives. Vertical integration and/or joint ventures/strategic alliances are two from which they may choose. However, a question may arise: What relationship, from transaction informational characteristics, exists between diversification and cooperation?

**Diversification**. Transaction failures in exploring synergy via the market mechanism may lead to hierarchical governance mechanism for an economic rationale through diversification, and vice versa. Unrelated diversification is related to the benefits of gaining financial benefits from its ability to increase leverage due to a greater stability of cash flow: economies of internal capital markets. By contrast, related diversification is related to the benefits of operating synergy or economies of scope. According to Goold and Luchs (2003), therefore, related diversification has the potential for realizing the highest level of economic benefits, but it is also associated with the highest level of bureaucratic costs. Unrelated diversification has the lowest potential benefits, but also the lowest level of bureaucratic costs. Both types of diversifications and their relationships with transaction informational characteristics deserve additional analysis in this study.

**Cooperation**. When organizations pursue growth and diversification to either utilize the opportunity or reduce the threat, they face make-or-buy decisions. Vertical integration is the practice whereby the market mechanism is replaced by internal transactions. Advantages of vertical integration are based upon the uncodified and undiffused information in transactions. But uncodified and undiffased transaction information also includes disadvantages such as reduced flexibility, loss of specialization, and increased capital requirements.

Joint venture is a mutual organization formed by a set of independent co-contractors engaging in a recurring relationship, in which the parties are both principals and agents (Faulkner, 2003). According to Faulkner (2003), motivations or advantages of joint venture include: 1) reduction of uncertainty and transaction costs; 2) competitive uses for strengthening current strategic positions; and 3) strategic uses for augmenting strategic position. Therefore, joint venture partners share either technical or market know-how. The situation indicates the environment in which the uncodified-diffased transaction information exists. Some drawbacks of joint ventures also exist. Drawbacks include anti-trust problems, sovereignty conflicts, loss of autonomy and control, and strategic flexibility.

It will be interesting to understand how transaction informational characteristics, strategy, and structure fit together.

## Two Models of Fit

This study defines 'fit' as appropriate matching of corporate strategy and structure to transaction informational characteristics. In particular, when strategy, structure, and environment do undergo rapid changes, the fit decides the fate of firms involved.

### The Market-to-Hierarchy Model

The codified and diffused transaction information in which market mechanisms function suggests that many individuals and organizations share transaction informational characteristics (know-how) because the more know-how becomes codified, the more it becomes diffused. However, when transaction informational characteristics and requirements need to change to overcome new competition, a change from markets to more efficient hierarchy is necessary. Unless firms match strategy and structure to the changes and new requirements, they will face transaction failures.

**Market-Joint Ventures-Hierarchy**. The more industry becomes mature, the more transaction informational characteristics (know-how) become codified and diffused. In such place where codified and diffused transaction informational characteristics exist, market mechanisms dominate transactions unless they face transaction failures. In situations where transaction failures exist, as Williamson (1975) argues, an alternative efficient governance mechanism becomes necessary. Therefore, joint ventures are created as a way of avoiding transaction failures in markets. However, joint ventures sometimes meet obstacles such as cultural differences, government restrictions, and information impactedness. Unless both partners handle the problem appropriately, joint ventures will be in trouble and lead to transaction failures again. In situations where transaction failures exist again and one partner withdraws from the joint ventures, it may result in hierarchy (vertical integration) for other partner(s). It also creates different transaction informational requirements: the uncodified and undiffused transaction information.

**Market-ICJV-Hierarchy**. Internal corporate joint ventures (ICJV) are defined as the creation of separate units within the corporate structure to promote new venture development (Faulkner, 2003). From the same motivations for joint ventures, a firm can create internal corporate joint ventures which are based upon the uncodified (outside the firm) and diffused (within the firm) transaction information. Then, it will also have a chance to meet the same obstacles that joint ventures face. Those obstacles may result in transaction failures. Thus, unless the internal corporate joint ventures do not show satisfactory performance, a firm may decide to merge that with other division or business unit: backward or forward vertical integration. This means a change from markets to hierarchies via quasi-hierarchies.

### The Hierarchy-to-Market Model

Similar to the market-to-hierarchy model, the hierarchy-to-market model also explains the relationship between strategy and structure from the changes of transaction informational characteristics and requirements.

**Hierarchy-Related Diversirication-Market.** According to Goold and Luchs (2003), related diversification focuses on three types of synergy. This assumes that firms attempt to utilize transaction informational characteristics they already have. Unlike transaction failures in markets which are frequently caused by opportunism and information impactedness, transaction failures in hierarchies are frequently caused by environmental changes surrounding firms. Therefore, firms attempt to adapt to the changes and avoid transaction failures. Related diversification is one of these alternatives. Before moving to markets, firms may pursue related diversification via joint ventures (or ICJVs) to achieve efficiency (cost-related) and keep the uncodified information (know-how) from competitors while transaction information becomes diffused between partners in joint ventures. Firms may stay in joint ventures until transaction information becomes more Widely codified and diffused, and transaction failures may exist again. They may switch from joint ventures to market mechanism. Hierarchy-unrelated diversification-market. Unrelated diversification puts emphasis on gaining financial benefits from its abilities to increase leverage due to a greater stability of cash flow: economies of internal capital market (Goold and Luchs, 2003). In situations where transaction information becomes increasingly codified and diffused whereas significant financial requirements arise, firms may consider unrelated diversification. Unrelated diversifications can be achieved by joint ventures, acquisitions, or mergers. However, transaction failures may exist again. As financial needs decrease and transaction information becomes widely codified and diffused, firms may be attracted again by relying on market mechanism instead of continued quasi-hierarchies. Thus, firms move from hierarchies to markets, follwing the changes of their financial and transaction informational requirements.

### Limits of Two Models

Each model of fit shows its own merits. But, they still have some limits. Both the market-to-hierarchy and the hierarchy-to-market model are limited in explaining exceptions. In many cases, firms change their strategies and structures directly from markets to hierarchies without joint ventures or internal corporate joint ventures. Technology transfer through contractual arrangements such as licensing or production/ distribution agreements may contribute to create direct changes from markets to hierarchies. The hierarchy-to-market model has similar limits: direct changes from hierarchies to markets.

In addition, corporate restructuring may be a form of hierarchy-to-market strategy. But, corporate restructuring is a move back to hierarchy not to market. Therefore, this issue should be further explored to refine future models.

## Conclusions

From the transaction cost perspective, organizational researchers have focused on the broader concept of transaction in intra- and inter-organizational structures. They listed some human and environmental factors to explain transaction failures in markets or hierarchies. This study, focusing on diversification and cooperation, attempted to deal with both market and hierarchical failures in terms of transaction informational

characteristics. However, transaction informational characteristics alone can not fully explain the relationship between strategy, structure, and environment. Therefore, a broader and an integrative approach are required for future research.

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