Transfirm Organization View

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Abstract: In modern day Japan, an “organization” often comprises multiple, legally separate firms, although it appears as a single organization to customers and external users and may actually operate as one organization. The concept of an “organization” differs from that of a “firm.” The organization is a network or system functioning in practice, whereas the institution of a firm defines the boundary or partitions off a part of the organization by nature. Acknowledging that firms and organizations are different concepts significantly enhances our understanding and conception of the everyday scene of multiple firms functioning as one organization. Theories based on such a way of viewing organizations and firms are called “transfirm organization theories.” Theories on keiretsu corporate affiliation or supplier system, architecture-based interfirm specialization, value networks, Japanese industrial agglomeration, and transnational companies are a few examples. Transfirm organizations are created for economic reasons; however, transfirm organization theories are not concerned with the reasons to create transfirm organizations, but rather with the performance of the transfirm organization as a whole.

Keywords: network, keiretsu corporate affiliation, multinational corporation

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Introduction

Firm versus market; organization versus market; researchers often analyze firms and organizations in comparison with the market without thinking deeply. Perhaps many assume that firms and organizations are synonymous terms.

However, in the case of Japanese airlines, the percentage of affiliated companies at the frontline of business described as the “face” of airline has been dramatically increasing in recent years. For example, in one major Japanese airline, three-quarters of staff providing airport passenger services and one-fifth of cabin attendants (CAs) were said to be employees not of the company itself but of affiliated companies.

This trend has been observed in Japanese factories since the 1950s. In *The Japanese Factory*, based on field surveys conducted in 19 large factories and 34 small factories in Japan in 1955 and 1956, Abegglen (1958) noted that large factories hold a substantial number of subsidiaries and affiliated companies and the employees of such subcontractors at times work in the parent companies’ factories. This phenomenon is still observed in Japanese factories and is not limited to large factories. At one manufacturer factory, nearly 150 people work in two shifts (day and night), of which only 50 are the company employees, the rest (100 workers) are from several subcontractors. The company quite aptly refers to this as “insourcing,” although the correct wording would have been “outsourcing.”

Economic Reasons

What is behind this phenomenon? In the airlines mentioned above, cost control is one of the aims of such “functional subsidiaries.” The mean annual income in affiliated companies is kept lower than in the parent airline company itself at the same age or the same length of
service. The staff of airport passenger services and CAs, who are mostly women of mean age 25–30 years, always has a very high turnover rate compared to other departments. Moreover, the turnover rates of airport passenger services and CAs of affiliated companies are more than double that of the company itself, resulting in a further lower mean age. In the seniority wage system, this keeps overall staff costs at a lower level.

Another notable example is the Japanese foreign-going shipping companies which rapidly evolved in the postwar period. Among major regular services in the world, containerization started in the latter half of the 1960s and had almost completed by 2000. When the world’s first container shipping service was launched in 1957 for carrying goods along the U.S. coast, it took just 14 people and 8–12 hours to unload cargo, which, in case of a conventional ship, would have required 150 people and four days. Thus, a high-speed container ship was said to be the equivalent of five or six conventional ships.

On conventional ships at ports, the handling mode of cargo was extremely labor intensive. The course of actions for loading and unloading barges relied on the amazing expertise of a “supervisor,” who would efficiently arrange the tasks by taking a quick look at the barges alongside the ship. The know-how for accurate assessment of the handling cost of cargo was injected into Shipping Conference’s tariff which set the freight charges. As a result, conventional ships were not made larger. Even if conventional ships had been made larger, cargo handling at ports would not have been able to keep up with the increase in size. Ship turnover dramatically decreased due to the lack of stevedores. There were cases of ships waiting for 20–30 days at offshore ports with heavy traffic. Moreover, in the case of conventional ships, weather-related schedule changes were made on a daily basis as cargo handling had to be interrupted in rainy weather.
In contrast, container ships significantly increased loading tonnage per unit of time due to the use of gantry cranes installed at ports. This also required fewer personnel. In addition, containers are sealed and then they can be loaded and unloaded in rainy weather. Therefore, the disruption of schedule was reduced to hourly units. Today, regular services are characterized by high punctuality and are provided in the form of fixed-day weekly services\(^1\) that call at each port on a fixed day of every week. Not only are the ships larger, but also container ships can carry cargo on the upper deck, which allows a substantial increase in cargo volumes compared to conventional ships (Takahashi, 2003).

However, containerization made Shipping Conference’s know-how useless, and newcomers entered the regular services one after another. This reduced the level of freight charges and worsened shipping business conditions. In particular, Japanese shipping companies were crucially damaged by the sharp rise of yen following the 1985 Plaza Accord. In addition to chartering foreign ships, Japanese shipping companies set up subsidiaries in countries such as Panama and Liberia, and then the subsidiaries owned ships and employed foreign crew. Japanese parent companies chartered and operated such tie-in-ships over the long run (Japan Shipping Exchange, 2004). In this way, three Japanese companies—Nippon Yusen Kabushiki Kaisha (NYK), Mitsui O.S.K. Lines, and Kawasaki Kisen Kaisha—managed to survive, whereas American shipping companies with regular services disappeared.

\(^1\) One round requires 35–40 days on North American routes and 55–60 days on European routes. By dividing the number of days by seven, it becomes possible to operate with one fixed-day weekly service, using 5–6 ships on North American routes and 8–9 ships on European routes.
Transfirm Organizations

In each case, we, customers, and external users see a single organization. Indeed, the firms do not only appear as such but also actually operate as one organization. However, in reality, they are made up of multiple firms. The firm and the organization are conceptually different. The organization is a network or system functioning in practice, whereas the institution of a firm defines the boundary or partitions off a part of the organization by nature. Organizations, or organized activity, must already have existed in prehistoric times and probably before mankind was even born. By contrast, the institution of firm was “invented” at most a thousand years ago. Therefore, organizations and firms cannot be identical concepts in nature.

Acknowledging that firms and organizations are different concepts significantly enhances our understanding and conception of the everyday scene that multiple firms function as one organization. A clearer vision and deeper insight from the point of transfirm organization view can be gained.

This paper refers to organizational theories based on the view as adopted by “transfirm organization theories” (Takahashi, 2000). Transfirm is a newly coined term and means “beyond the boundaries of the firm” or “multi-firm.”

A transfirm organization can be viewed as a network that spans multiple firms beyond the boundaries of firms. Alternatively, it can be viewed as an organization that bundles multiple firms. In any case, it is important that much attention is focused on transfirm organizational actions, whether internal or external. In our example of airlines, we are no longer satisfied with the best operation of the airline company separately from its functional subsidiaries. It is impossible to improve performance without successful operation of the transfirm organization including the functional subsidiaries of
airport passenger services and CAs. In other words, our focus will always be on the performance of the transfirm organization as a whole.

More precisely, Japanese shipping companies survive as transfirm organizations. Japanese registered ships constitute less than 10% of the “Japan merchant fleet” in terms of both numbers and shipping tonnage. Moreover, the percentage of Japanese crewmen is in continual decline. NYK founded the private Mitsubishi Nautical School, currently the Tokyo University of Marine Science and Technology in Japan in 1875 to train Japanese seamen. In 2007, it set up a mercantile marine college in the Philippines (NYK-TDG Maritime Academy) to actively engage in training Filipino seamen with the aim of maintaining and improving the performance of the operations of NYK’s merchant fleet as a whole (Takahashi, 2013a).

At this point, it is necessary to clarify the distinctions between similar concepts. First, an interfirm/interorganizational approach (Pfeffer & Leblebici, 1973; Pfeffer & Salancik, 1978) is not appropriate for analysis of the transfirm organization’s performance. Beyond the interfirm/interorganizational dependence and influence, we should analyze the performance of the transfirm organization as a whole that spans multiple firms beyond the boundaries of firms, analogous to a virtual team (Gassmann & von Zedtwitz, 2003; Lipnack & Stamps, 1997) but not actually being “virtual.” In fact, it is a “real” organization in which people work across the boundaries of firms. Second, the evolution into the transfirm organization differs from internalization (Rugman, 1981) and integration (Teece, 1986), which respectively enclose transactions and complementary assets within the boundaries of the firm. They are not “organizing” beyond the boundaries of firms.

Third, transfirm organization theories embody the concept of a network. On the other hand, social network theories treat “network” in mathematical terms, for example, in some cases, the node means a
person (Burt, 1987; Granovetter, 1973),\(^2\) while in others, the node is the firm (Burt, 1988; Gulati, 1998). By contrast, transfirm organization theories use the concept of “network” to define “organization” as an “organization that goes beyond the boundaries between firms” and an “organization that goes beyond the boundaries between the firm and the market,” that is, on a different plane to that of firm/market.

**Theories of Transfirm Organizations**

In fact, keiretsu corporate affiliation or a group of an assembly plant and its parts suppliers is an organization that straddles boundaries of multiple firms. “Intragroup transactions” are common in the Japanese automobile industry. From parts suppliers to auto stores, organizational actions are closely linked in many respects, including information and finances. Despite being a collection of separate firms, people work across the boundaries of firms and the group functions as one system/organization (Dyer, 1997; Dyer & Singh, 1998). This phenomenon is not limited to the Japanese automobile industry. Partnerships of suppliers, software vendors, and sales companies are widely observed in various industries (Mohr & Spekman, 1994; Schreiner, Kale, & Corsten, 2009). Japanese industrial agglomeration is not simply a cluster of firms but an organization within which the division of labor takes place. For example, it includes people who capture demand from the market outside the industrial agglomeration and arrange the production network within it. They can exploit the strength of the industrial agglomeration (Inamizu & Wakabayashi, 2009, 2013).

At the same time, there is a considerable range in the degree of

\(^2\) Note that there are gaps in the arguments about the strength of weak ties by Granovetter (1973) and questions about its validity (Takahashi & Inamizu, in press).
organizing of transfirm organization. A substantive example of factors determining this degree is “product architecture” (Ulrich, 1995). This is a design concept used when designing the division of functions and interaction between product components. Desktop personal computers (PCs) are a typical case of modular architecture. Since the interface (in the broad sense) is standardized, there is a high degree of freedom in the development of each module. This freedom facilitated outsourcing. There are many autonomous suppliers of parts such as memory and monitors. As a result, users can even assemble their own PCs. In contrast, there is a high degree of interdependency between components of automobiles—a typical case of integral architecture (Fujimoto, 2012). It is essential to secure appropriate suppliers within the group in such cases of integral architecture.

When an industry employs modular architecture, its product structure is believed to be reflected in the division of labor that goes beyond the boundaries of the firms within the transfirm organization (Langlois & Robertson, 1992). For example, Sanchez and Mahoney (1996) argued that modular product architecture reflected a loosely coupled organization. This was later known as the mirroring hypothesis (Cabigosu & Camuffo, 2012).

In the concept of a value network, developed through discussions on technological trajectories (Dosi, 1982), focus is given to commercial relationships between relevant firms and suppliers/customers regarding parts/products. It is argued that decision-making within a firm is also affected by value networks that extend beyond the boundaries of firms (Christensen & Rosenbloom, 1993).

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3 However, there are fundamental questions (Takahashi, Shintaku, & Ohkawa, 2013) regarding the derivation of disruptive technological trajectories as set forth by Christensen (1993), Bower and Christensen (1995), Christensen and Rosenbloom (1995), and Christensen and Bower (1996).
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1995). The values, required functions, and costs assigned to parts/products are different in each value network. For example, the required functions and costs of hard disk drives for mainframes are completely different from those for notebook PCs.

Today, it can no longer be asserted that the shaping of a ground-breaking new product is a task for the manufacturer. Using patent data, it is demonstrated that R&D itself is not always intrinsic, but often extrinsic (Kishi & Takahashi, 2010). In areas such as scientific instruments (e.g., gas chromatographs) and semiconductor manufacturing equipment, it is the product user who initiates innovation, that is, “user innovation” (von Hippel, 1986, 1988). In the Japanese chemical industry, the product developers anticipating latent needs by directly approaching the “customer’s customer,” that is, the customer behind a company’s own customer, propose new product concepts to their customers in successful projects (Kuwashima, 2013). Thus, transfirm organizational ideas appear to be leading development projects to success.

Key Success Factors

Even within a transfirm organization, it may require human ingenuity to transfer technology across the boundaries of firms. Such costs of transferring are called “information stickiness” (von Hippel, 1994). However, as Kogut and Zander (1992) note that when a firm tries to grow through internal technology transfer, that is, replication of technology, cost reduction efforts of technology transfers derive not only internal replication but also external replication from the codification of knowledge. This is because it is unlikely that

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4 However, Kogut and Zander (1992) interpreted this in a negative sense and referred to it as the paradox of replication, arguing that it increases the risk of external imitation. The notion that technology transfer within an organization’s network can be controlled at the boundaries of the firm is a
information stickiness will significantly vary within and outside the firm. Actually, tuning of codified base case is also necessary for internal best practice transfers to achieve satisfactory performance (Szulanski, 1996). This probably even applies to the transplant of dominant logic, which is the logic of success shown to be superior to any other logic in leading the main business to success (Prahalad & Bettis, 1986).

A prime factor affecting the technology transfer performance of a transfirm organization as a whole is not the boundaries of the firms, but the existence of gatekeepers who are communication stars of the organization’s network (Allen, 1977; Harada, 2003). In fact, in multinational corporations, gatekeeper-type staff plays an important role in organizing the transfirm R&D team (Kuwashima, Takahashi, & Tamada, 2005). In particular, in development-oriented organizations where country differences are expected to be significant, gatekeeper-type staff is important to shape transfirm organizations.

Multinational corporations are special. National borders form boundaries among the parent company and its subsidiaries, and double as linguistic and cultural boundaries that generate psychic distance (Johanson & Vahlne, 1977). The psychic distance might enhance the risk of obstacles such as not-invented-here (NIH) syndrome (Katz & Allen, 1982). To improve the performance of the transfirm organization as a whole, local engineers who share implicit market knowledge with local customers could, for example, devise a product concept through effective coordination with technical resources in the home country, which enables them to observe and

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5 Note that the concept of not-invented-here (NIH) syndrome defined by Katz and Allen (1982) differs from the conventional concept (Takahashi & Inamizu, 2012).
interpret customer needs more accurately.

Since such psychic distance amplifies the boundaries’ effects, multinational corporations offer notable examples when considering the key success factors of the transfirm organization. For example, in the multinational corporation, shared understanding between the subsidiary and the headquarters regarding the subsidiary’s scope of responsibilities for business are referred to as charters (Galunic & Eisenhardt, 1996). Overseas subsidiaries compete for charters and the activities and capabilities of subsidiaries interact with charter changes (Birkinshaw & Hood, 1998). In fact, success or failure is dependent on whether the multinational corporation could be made to function as one organization (Oki, 2012).

New models were proposed for the multinational corporation in the second half of the 1980s based on such awareness of the issues involved. The most representative of these models is the transnational company, a flexible network organization that transcends national borders, combining headquarters and separate subsidiaries per country (Bartlett & Ghoshal, 1989). However, flexibility of the network goes hand in hand with the risk of disintegration. Multinational corporations that succeeded in integration had in common a business philosophy that permeated the entire transfirm organization. This point has been repeatedly highlighted since the first half of the 1980s as organizational culture. In other words, within successful multinational corporations, the corporation’s own culture overrides, or at least modifies, the local culture in each country. Creating and managing an organizational culture and management leadership are two sides of the same coin (Schein, 1985). It is likely that an organizational culture that goes beyond the boundaries of the firms exists not only in multinational corporations but also in transfirm organizations with high performance through the effect of cultural convergence (Birkinshaw, Bresman, & Hakanson, 2000).
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