

A Research on Networks within and across the Industrial Cluster in Tsubame

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Abstract

Historically, Japanese polishing companies in Tsubame area prospered as foreign-style tableware industries started flourishing. After WWII, foreign-style tableware began to be exported from Japan to all over the world. At that time, Japanese polishing companies, which polished foreign-style tableware surfaces as subcontractors, earned huge profits.

However, over a period of time, they have been threatened by two economic shocks. First, the competition from Chinese companies in the 1990s. Second, the worldwide recession led by the “Lehman Shock” in 2008. To respond to these threats, Japanese polishing companies reconstructed their business systems and weathered the crisis. What enabled them to adapt to changes in the business environment was their network of craftsmen within the industrial cluster.

Facing competition from the Chinese companies which could polish the easy products, the Japanese polishing companies in Tsubame enlarged their markets with a wide range of products from foreign-style tableware to automobiles, electronic appliances, i-Pods, and so on by employing their highly sophisticated techniques. As they entered new markets, they reconstructed their business systems making use of their network and their own unique B2B website.

During the recession period in 2008, Japanese polishing companies in Tsubame once again reconstructed their business systems. They collaborated with each other in the network to develop new products. Up to now, working as subcontractors under the ‘Keiretsu system,’ they had limited themselves to the processing of only a part of products usually ordered by parent companies. But to respond to the recession, they exchanged their technical knowledge, which finally enabled them to develop some innovative products of their own brand, despite a

lack of experience in product development.

At first this study illustrates the importance of business systems based on both the network of craftsmen within the industrial cluster and B2B websites. Then, it sheds light on the role of a charismatic leader who decides new directions of the network, then attracts demands outside the cluster, and promote collaboration across various industrial clusters. Finally it also covers a knowledge sharing style between craftsmen in the industrial cluster.

Introduction

This paper focuses on the problem how the industrial cluster can adjust their business according to the change of its business environment. Indeed the industrial cluster has many advantages such as Marshall's 'Externality.' (Marshall1920) But it seems to have a kind of inertia, which promote the cluster to stay in the present business. The polishing industrial cluster in Tsubame has shifted their business system and adapt to the turbulence of today's business environment.

In the industrial cluster, companies develop or have their specialty. Then they shape co-relationship of transaction. In addition, if many special companies join the cluster, they can cope to various kinds of orders from various industries. As one company takes charge of one process based on its specialty, and other companies take charge of other processes, the cluster can manufacture the high-quality products. Piore and Sabel (1984) call this network effect as 'flexible specialization.'

However this paper raises a research question, "Why can this network have flexibility?" The companies in the cluster must values partnership with many present companies to gain many orders. The network of present companies prevents the company from challenging a new product and shifting its business. Why can the companies in the cluster shift their business because they shape tight partnership with other companies in the cluster? In addition, why can an industrial cluster shift the business system?

Industrial Cluster

Marshall (1920) asserted that industrial cluster contains the function of the local labor market, suppliers serving specific demands, and the technology spillover. It is easy for the companies in the industrial cluster to employ the staff with specific skill and also procure the

specific goods. However these merits lead to the risk of technology spillover. The employees with specific skill may be head-hunted by other companies and the suppliers with specific goods may serve other companies. Krugman (1991) stands the similar position as Marshall. Based on Marshall, Krugman (1991) discuss the birth and the growth process of industrial cluster such as industrial cluster of carpet industry in USA and that of apparel in Milano. Especially Krugman (1991) pays attention to the role of the local labor market and suppliers serving specific demands rather than the technology spillover. Quoting the apparel cluster in Milano, he illustrated the importance of specific labor in Milano such as designer, model, and tailor and suppliers serving materials. In addition he asserted that companies in the industrial cluster could have the accessibility to information about trends.

From the view point of competitiveness of the industrial cluster, Porter (1998) refers the accessibility to technical and market information. Due to geographical proximity, companies in the cluster can obtain the information easily. He also points out the role of subsidiarity. if one takes charge of a part in value chain, others compliment the one with taking charge of the other parts in value chain. This kind of subsidiarity leads to the creation of customer value. Moreover cooperation of delivery and marketing in the cluster leads to the effectiveness. As Porter (1998) assume the competitiveness of industrial cluster, he couldn't pay attention to the dynamics of industrial cluster.

Therefore here is a theoretical question; why industrial clusters can change business system adapting to the shift of business environment. It is difficult for the companies in the cluster to shift their business, because they never want to break tight partnership with the present network. Then, as mentioned, preceding theories haven't paid attention to the dynamics of the business system well.

Polishing Industry in Tsubame

Historically, Japanese polishing companies in Tsubame area prospered as foreign-style tableware industries started flourishing. After WWII, foreign-style tableware began to be exported from Japan to all over the world. When foreign-style tableware was exported to all over the world, industrial cluster of polishing companies was shaped. Then complement companies such as machinery were founded in this area. At that time, Japanese polishing companies, which polished foreign-style tableware surfaces as subcontractors, earned huge profits.

However, over a period of time, they have been threatened by two economic shocks. First, the competition from Chinese companies in the 1990s. Second, the worldwide recession led by the “Lehman Shock” in 2008. To respond to these threats, Japanese polishing companies in Tsubame reconstructed their business systems and weathered the crisis. What enabled them to adapt to changes in the business environment was their network of craftsmen within the industrial cluster.

Facing competition from the Chinese companies which could polish the easy products, the Japanese polishing companies in Tsubame enlarged their markets with a wide range of products from foreign-style tableware to automobiles, electronic appliances, i-Pods, and so on by employing their highly sophisticated techniques. As they entered new markets, they reconstructed their business systems making use of their network and their own unique B2B website. Before the 1990s, all of polishing companies in Tsubame join the Keiretsu system, which is the Japanese supplier system. Therefore they were merely waiting for the order from parent companies. However, to receive orders from various industries, they must search new orders positively and develop their skills. Previously they had employed their skills to polish the surface of foreign-style tableware, which is small and not complex, but they had to develop their skills to polish various products, some of which were large or so complex. Then Kobayashi-Kengyo Co. took initiative so that other polishing companies in Tsubame could develop their skill and receive various orders. Kobayashi-Kengyo Co. received orders of polishing surface of i-Pod from Apple, but the order of i-Pod was so large volume that Kobayashi-Kengyo Co. couldn't polish all of them. Then Kobayashi-Kengyo Co. distributed some of orders to familiar craftsmen who were in the other companies and coached them how to polish i-Pod. Following Kobayashi-Kengyo Co., some companies tried to receive orders from electronics and automobile industries. Once they received huge volume orders, they distribute orders to familiar craftsmen and coached them as Kobayashi-Kengyo Co. did. Based on relationship among craftsmen, various partnerships to replace Keiretsu system were reconstructed in Tsubame. At the end of the 1990s, leader companies like Kobayashi-Kengyo Co. who positively received orders from various industries collaborated to found B2B website, which named ‘Migakiya Syndicate’ to obtain much more orders from various industries. ‘Migakiya Syndicate’ was decided to be operated by the public sector in Tsubame area.

During the recession period in 2008, Japanese polishing companies in Tsubame once again reconstructed their business systems. They collaborated with each other in the network to develop new products. In order to produce their own brand goods, there were two problems. One is about the market needs; the other one is about technique to product development. Up

to now, working as subcontractors, they had limited themselves to the processing of only a part of products usually ordered by large manufacturing companies. But to respond to this recession, they exchanged their technical knowledge, which finally enabled them to develop some innovative products of their own brand, despite a lack of experience in marketing and product development. It is 'Migakiya Syndicate' who helps companies in Tsubame to surmount these drawbacks. As 'Migakiya Syndicate' increased various members such as machinery companies, metal mold companies, and publishing company, it coordinated various companies in the cluster to product development. For example, the publishing company played an important role in marketing, metal mold companies took a charge of goods production, and polishing companies polished the surface of goods to elaborate their design. Due to this adequate specialization, they developed a beer cup that keeps the beer frothy, which has been a hot seller. Up to now, they also developed various kinds of beer cup, which are mainly sold for a gift.

Discussion

In Tsubame, the cluster of polishing industry shifts the business system two times. At first, the business system was based on Keiretsu system, which means a long term contracts between a parent company (a large manufacturer) and suppliers (SMEs) and shapes the figure like a pyramid. Under the Keiretsu, a parent company took a charge of marketing, sales, assemble and so on; suppliers supplied devices, components, or some parts of a process. This is no more than network within the industrial cluster.

Once facing with competition with Chinese polishing company of tableware, companies in Tsubame changed the business system. Indeed they remained suppliers, but they broke Keiretsu system. They tried to receive other companies (not previous parent company) via shaping a new network. Therefore they began to deal with consumer electronics and automobile devices. This is on the way to cross the industrial cluster. Then they had to develop their skill and knowledge to deal with new materials in consumer electronics and automobile devices. To tackle this problem, they reinforced craftsmen network. Leader companies such as Kobayashi-Kengyo Co. played leaders and coached their skills to familiar craftsmen in order to share some of orders, which was too much for only leader companies to deal with.

Then to cope with the recession of Lehman Shock, companies in Tsubame changed the business system again. During this recession, orders from consumer electronics and

automobile were so few that companies in Tsubame could survive. Therefore they tried to produce their own brand goods. Previously, they had been just waiting for orders from parent companies of tableware and consumer electronics; however they had to create demands by themselves. So they added new members such as machinery companies, metal mold companies, and publishing company to their network ‘Migakiya Syndicate’ so that they could collaborate to develop new products. Sometime ‘Migakiya Syndicate’ collaborated with other industrial cluster. For example, ‘Migakiya Syndicate’ and Japanese traditional crafts collaborated to produce sophisticated name plates for gift use. This is a network across the industrial cluster.

This case indicates that when the industrial cluster changes the business system must change (Table 1). At first, they served as subcontractor under the Keiretsu system to polish surface of tableware. Then, leader companies sought to receive various orders from various industries, while other SMEs in the cluster took some of the orders from leader companies. At last, companies in Tsubame collaborate to produce their own brand goods. Depending on shifting the business system, it is important for them to shift their capability and the shape of relationship.

<Table 1 Shift of Business System in Tsubame>

| | Post WWII | The 1990s | Post Lehman Shock |
|----------|-------------------------|---|--------------------------|
| Products | Foreign-style tableware | Consumer electronics | Own brand products |
| Leader | Parent companies | Leader companies such as Kobayashi-Kengyo Co. | ‘Migakiya Syndicate’ |
| Features | Keiretsu system | Receive orders from various companies | Production and Marketing |

Conclusion

This paper focuses on the shift of business system in Tsubame. Whenever the shift happens, the leader is changed. At first it’s parent companies. Then it’s leader companies that challenge to receive new orders from various industries. Finally it’s ‘Migakiya Syndicate.’ Here are three common roles of the leaders. First they must create and share knowledge like SECI model (Nonaka and Takeuchi, 1995; Ahmadjian, 2004). Second they understand the trend of demands. Third they reconstruct the network in the industrial cluster. This is the reason why the companies in the cluster can shift their business because they shape tight partnership with other companies in the cluster.

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