Sales Network in Japanese Industrial Distributors

Masaaki Takemura
School of Commerce, Meiji University
1-1 Kanda-Surugadai, Chiyoda, Tokyo, #101-8301
Japan
takemura@kisc.meiji.ac.jp

Yi-jen Wang
University of Marketing and Distribution Science

Ken-ichi Hosoi
Hiroshima University of Economics

Abstract

The purpose of this paper is to presume the determinant factors of the business performance in the industrial business marketing in Japan. In spite of a lot of sophisticated scientific analytical methods had been developed during a past decade, they did not provide a persuasive explanation about the differences among firms. As Sutton and Staw (1995) suggested, since the method was not as rigorous as a theory, we would try to develop a plausible explanation with deep interview to some business practitioners to improve it.

Even there are several limitations, though we were trying to use some confidential data and interviews with a Japanese paint wholesale distributor, to specify the network structure of business transaction by using the network structuring method. Furthermore, we had tried to find the factor that generated several differences of the sales performance among these sales offices. In a sense, our methodology is unable to define by an orthodox scientific manner; rather we had better say it was the logical compound synthesis method (Itami and Numagami 1997). This method is not authorized by academic world yet. It is, however, useful when we only can treat with some fragmented data to make research. The method consists of the repetition of the fact and the inference.

During our research process, we had got several findings. The network structure analysis helped to reveal the business network structure status of sales offices. This analysis captured some characteristics of the status of network structure, but the analysis did not provide sufficient explanation why the performances were different. To theoretical findings, we found that network structure analysis did not provide a convinced explanation to tell us why the differences of the performance among sales offices within a firm occurred. In other words, it shows us the fact, the status of the sales network, but does not tell us why it became so.

In contrast to network structure analysis, a case research gave us rich information what has been going on. Applying theoretical framework to the case, we will conjecture the mechanism what has happened, and what will happen in the future working with this mechanism. During past three months, we had held five interviews. In addition to this, we are frequently in contact with them by e-mail and telephone. The results gave us valuable information to explain why those sales network structures were formed, and gave us hint to interpret why the differences of sales performance shown among sales offices. To managerial finding, manufacture companies may escape from the value-network that they don't like by well using of distributors. The strategy is, reevaluating the indirect transaction first, and through this indirect transaction to improve the direct transaction between a provider and buyer in the industrial marketing.

Keywords: Sales Network Structure, Japanese Distributor, Sales Performance, Logical Compound Synthesis method.

Introduction

A purpose of this work-in-progress paper is to presume the determinant factors that affect the business performance in the industrial business marketing in Japan. Through processing this work, we may suggest some theoretical and managerial implications. We may suggest that there is some problem to apply the network structure analysis to industrial marketing research.

Network analysis has been adapted in business marketing studies. For example, Hakansson (1987) edited a pioneering work on product development research in an industrial marketing context, and had provided a generic framework about business network successfully. This framework has three elements; activity links, resource ties, and actor bonds. Axelsson and Geoff (1992) presented the business network as “a new reality”. In the consecutive work, Hakansson and Snehota (1995) completed a comprehensive research on industrial network of business marketing. If we are going to learn something about the business network, there are more than 300 papers that we can get from the IMP website.

In spite of all these tremendous works, there are still two reasons to make us to do more studies. First, we would like to know how Japanese economy had been changed, since the big recession in 1990s. Second, it seems to us that there is a lack of effort to develop a convincing explanation between the network structure and the performance. It is needless to say that conventional industrial organizational theory (or economic organization) had tried to do so. But it is a statistical analysis of industrial structure and its performance, not a research for its mechanism. And the network structure analysis rarely referred to the relationship between the structure and its performance, either. Different to the conventional industrial organization theory, the network structure analysis provides us an insight to the industrial structure, so the latter is more useful for us to make some managerial implications.

To achieve our purpose, in this paper, we will construct our discussion as following. First, we will review some previous works to find theoretical concepts. Then, we will introduce our methods to analyze the Japanese industrial networks. In this paper, we refer to the distributor as a wholesaler of industrial goods, i.e. paint and coatings. The reason why we did not use the term of “wholesaler” is that this firm does not play just a middle merchant, but has logistic function and the maintenance business of paint shop in automobile plants as its competitive advantages. Because of this strategic using of these functions, this company acts not just a wholesaler but a strategic distributor. Third, we will describe the facts in this case. Last, we will interpret this case by some theory which is reviewed in first section in this paper. We will propose a kind of strategic implication as well.

Previous Researches and Research Method

In this section, we will review some previous works which are related with our purpose. There are at least two theories might be related to our concerns. They are, 1) traditional network theory, especially, power-dependence theory and 2) social capital theory, namely structural network theory. Because the relationships that showed in the industrial business are long-term-relationships. And some researchers use the “Power” concept to explain these long-term-relationships.

Checking theories that usually use to explain the power relationship between companies, we found there are two types of theories. First type of theory uses the power base concept to explain the relationship (cf. French and Raven 1959). And the other type of theory deals the power from a dependence point of view (cf. Emerson 1962). From the latter point of view, according to Emerson (1962), we can specify a definition of dependence as following. The dependence (Dab) of actor A upon actor B is (1) directly proportional to A’s motivational investment in goals mediated by B, and (2) inversely proportional to the availability of those goals to A outside of the A-B relation. In contrast, the power (Pab) of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A. We can represent a power-dependence relation as a pair of equations: Pab=Dba, Pba=Dab.

The reason why we refer to dependence theory is, because it is able to point out the idea that the dependency will be influenced by the network structure. Emerson (1962) indicated the change of

power-dependence relation when network structure changed. He illustrated this case when children played together. Consider two children played equally motivated toward the pleasures of collective play and equally capable of contributing to such play. These children, A and B, form a balanced relation if we assume further that each has the other as his only playmate, and the give-and-take of their interactions might well be imagined, involving the emergence of such equalitarian rules as “taking turns,” etc. Suppose now that a third child, C, moves into the neighborhood and makes the acquaintance of A, but not B. The A-B relation will be thrown out of balance by virtue of A’s decreased dependence upon B (Emerson 1962, p.35). When the network structure changed then the dependency between two actors will change. And when the dependency changed the power relationship get change too. According to the change of power relationship, sometimes the actor will get some kind of advantage over the others, or maybe it can help actor A to improve from a worse condition. It is useful for using this idea to explain the power relationship among the actors that constructed a network.

Even though in Emerson’s idea there is a possibility for the third actor to enter to the network, but basically his idea built on a dyadic relationship base. White (1988) applied Emerson’s idea to his network studies. White (1988) argued the actors do actions not because of its customer but because of its competitor. This idea had influenced the concept of “structure equivalence” very much. In other words, the rival who takes the same position effected on any other actor. Furthermore, Burt (1982, 1992) argued the effect that comes from the third actor. Within a network structure, Burt (1982) called the constraint that any actor accepted as “structural constraint”. The “structural constraint” that any actor accepted, is the sum of constrains that an actor accepted from the others.

In this meaning, the less the structural constrain is, the actor accept less control from others and can keep higher degree of freedom. Burt (1992) mentioned the “structural hole” concept to explain the autonomy character in the network as well. In Burt’s definition, “structural hole” means a kind of a relationship (Burt 1992, p.18). A structural hole is a relationship of nonredundancy between two contacts. A concept of structure hole told us the benefit of social capital that was resulted from the diversity of information and the brokerage opportunities created by the lack of connection between separate clusters in a social network. Players who occupied brokerage positions between those clusters had better access to information and enjoyed comparative advantages in negotiating relationships, which allowed them to know about more opportunities and to secure more favorable terms in the opportunities they chose to pursue. Conversely, an actor strongly tied to cohesive contacts has little autonomy to negotiate his role vis-à-vis his/her contacts (Gargiulo=Benassi 2000,p.184).

The structural hole theory had the tradition of research in network. This theory is positioned in the successor to Granovetter’s (1973) work, the strong weak tie. He revealed that weak tie sometimes had the strong connection in his empirical study. It is, however, difficult to think that the weak tie is able to connect with every other society as a bridge. We may consider that the structure hole is regarded as the power of connectivity of weak ties. To connect with this structure hole to the other might contributes to the efficiency of the network.

Analogical to these theories, to connect with different sub-networks sometimes makes power. Some wholesalers and brokers play these roles in the business contexts. In the next section, we will introduce a case of industrial distributor in Japan then we will apply this theoretical framework to this case.

The Case: Japanese distributor, O-well

In this section, we will introduce the sales network structures of an industrial distributor. We got active transaction data from O-well Co., LTD (hereafter O-well) in its paint product business. We will describe O-well at the case section later in more detail. O-well gave us network data of the salespersons in three different sales offices. They are Mizushima office at Okayama prefecture, Oppama office at Kanagawa prefecture, and Ota office at Gunma prefecture. These three offices, in turn, are corresponding to the Mizushima factory of Mitsubishi Motors, the Oppama factory of Nissan Automobile, and Ota factory of Subaru, respectively. O-well delivers paint and coatings to their factories and maintains their paint shops in the factories.

Table 1 is listed on sales performance of these offices for past six years. At a glance, performance of Ota office keeps low level compared to the other two offices. In the network structure showed us that Ota office could be described as high-density office.

Table 1 Performances of each office (Gross margin; unit: confidential)

	1999	2000	2001	2002	2003	2004	Ave.
Mizushima	186	196	187	197	209	165	190.0
Oppama	222	170	194	224	152	174	189.3
Oota	134	148	124	118	126	93	123.8

To develop an adequate explanation of the differences among sales offices, we have arranged several interviews. We attempted to have several interviews since December 2005 to June 2006. We had the interviews more than five times, met more than 20 salespersons and managers in total. Not only this kind of formal interview, we contributed the meeting of study and consulting to this company. Through these interviews we acquainted, at least, the attempt that a practitioner took. As we wrote above, the company data for our analysis was provided by O-well. Here, let us have a brief review about the history of O-well.

O-well was founded in 1943 as Ohmi Kogyo Co. LTD (Ohmi Kogyo hereafter as well) at Osaka, Japan. Ohmi Kogyo was founded to treat the transaction of paint and coatings. The paint and its material had become to be governmental control goods in 1947. In order to grasp information about the Japanese government and General Headquarters / Supreme Commander for the Allied Powers (GHQ/SCAP), Ohmi Kogyo was forced to establish its Tokyo branch. Since then, the branch network had been expanded widely in Japan. The branch network was expanded according to important customer. The subsidiary companies were established according to business of important customer. There are seven subsidiary companies under O-well group now. Uni-electronics Inc. is the subsidiary that established in 1966, the first established subsidiary of O-well. The business of Ohmi Kogyo was extended, so the name of the company was changed into “O-well Corporation” in 1992. It is a new name which merges "WELL." with “O” that comes from “Ohmi Kogyo Co. LTD”.

O-well has grown to be the industrial goods trading company of the capital of 860 million yen (6.14 million Euro, 1 Euro = 140 yen) and the annual sales of 50 billion yen (35.7 million Euro, 1 Euro = 140 yen) in 2005. Now, O-well have 38 branch offices and 3 colors-mixing factories. And O-well is dealing with not only paint but also paint equipments, interior design goods, miscellaneous goods and so on. O-well not only sells paint and paint equipments, but also contracted to design and to manage the painting process of a customer company. Moreover, O-well is dealing with electronic products, building materials through seven subsidiaries, and forms the large group of industrial goods. It is O-well's competitive advantage.

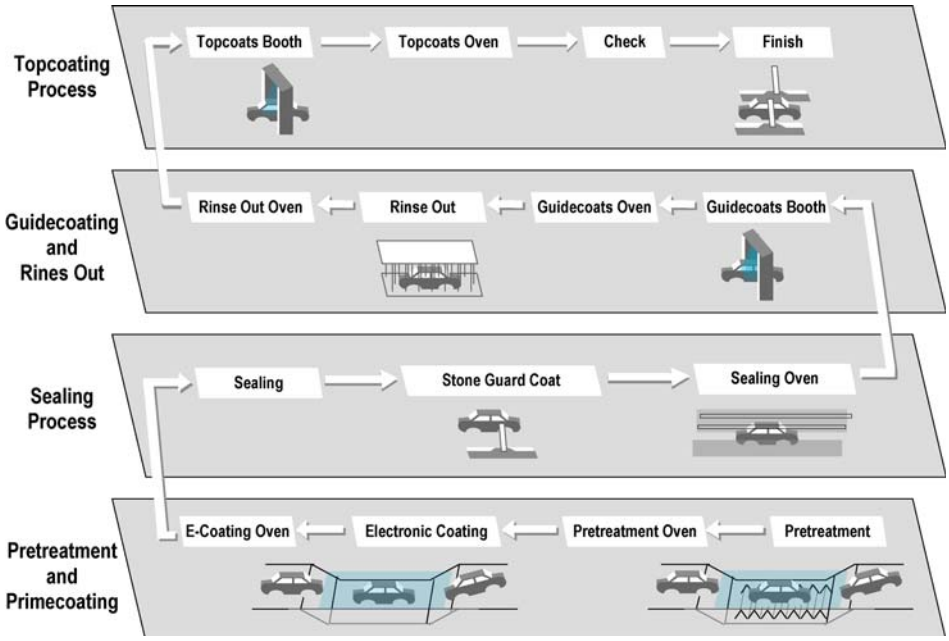

Figure 1 Typical paint shop

In early 1990s, new CEO Fumiyoshi Miyamoto made a new growth strategy. It made O-well to be a strategic distributor but not just a wholesaler. According to Miyamoto's idea, a wholesaler means merely a tradesman who visits the customers on its regular route. As a wholesaler, O-well had waited for the order from its customers until they needed something. To overcome this situation, he found another function of painting more than coloring. He made a concept "wrapping things over the painting layers." Holding up this new concept, O-well went into action in the customer's factory. Gradually, O-well came to take maintenance work of the paint shop. Salespersons of O-well are required to find something protected or wrapped by painting layers. O-well not only sells paint, but also maintains painting process, painting tools and robots. And O-well even does floor arrangements of the factory. Now, O-well does this business for three automobile factories, Mitsubishi, Nissan, and Subaru. Figure 1 illustrated typical paint process. O-well generally maintains pretreatment, electric coating, guidecoat booth, topcoat booth, and undercoat process. In fact, this maintenance business has greatly influenced the performance of O-well. The maintenance business saved the crisis of O-well.

The distribution forms of paint were roughly classified into three types (figure 2-a, b, and c). In our case, Nippon Paint (Nippon Paint Co., LTD., one of the Japanese major paint supplier) sometimes sells paint directly with its own sales force to its end user (e.g. Nissan) (2-a). Nippon Paint often sells paint to independent dealers, e.g. O-well, which in turn sells to Nissan (2-b). In other case, Nippon Paint negotiates about price with Nissan and sells paint to Nissan directly, but Nippon Paint does not deliver paint (2-c). According to this typology, O-well was necessitated its transaction with Nissan from 2-b to 2-c in the last a decade. Now, O-well has two types of transactions. As for Nissan and Mitsubishi, O-Well works as type 2-c distributor. As for Subaru, it works as type 2-b distributor.

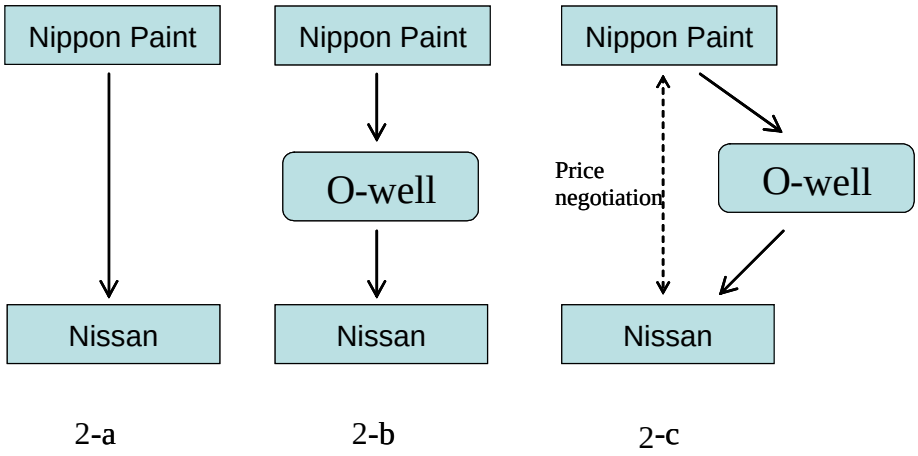

Figure 2 Three types of transaction in Paint delivery in Japan (example)

Especially, since strategic change of Nissan was achieved with tremendous success in terms of financial performance, this revitalization was called "revival plan". New President of Nissan, Carlos Ghosn from Renault, reformed several management way of Nissan did. Reduction of a number of suppliers was included in this reform. Nissan aimed to purchase high quality parts and raw material form small number of outstanding suppliers. These suppliers were called Tier-One. Nissan reduced 1150 suppliers to less than 600. This reduction was called "Ghosn shock". Reduction of this purchasing cost brought Nissan what is called the V-shaped turnaround of profitability.

Before Ghosn shock, O-well played as 2-b role in the transaction with Nissan. When Nippon Paint sold paint to Nissan, O-well bought paint from Nippon Paint, and stored it as inventory in its warehouse. Nissan ordered paint to O-well. In this case, O-well had a transaction account in Nissan. The transaction account meant literally that O-well had a financial account in Nissan. To maintain the transaction account is very important in business manner in Japan. That means a kind of membership of the business partnerships. After Ghosn shock, O-well plays as 2-c role in the transaction with Nissan. An interviewee in O-well told us that O-well was the delivery subcontractor in this case. Mitsubishi has switched to buy paint from O-well to Kansai Paint directly as well in middle of 1990s. Both Mitsubishi and Nissan would like to buy any materials, parts and components from manufactures directly (2-c). O-well was forfeited the transaction account in both Mitsubishi and Nissan (2-c).

However, Nippon Paint was not good at physical distribution management and paint shop maintenance. Since Nippon Paint was absolutely the manufacture, it did not manage such these works. Nippon Paint assigned such these works to O-well as it did. O-well lost the transaction account in Nissan, but it still delivers paint to Nissan instead of Nippon Paint. Because primary focus of the procurement change in Nissan was the reduction of the number of suppliers, Nissan did not care about it. Consequently, O-well did not trade with Nissan, but it still worked in the factory of Nissan. Now, Nissan tried to make the business contract of paint shop maintenance with O-well, not only as a wholesaler, but also as a logistic company.

Discussion

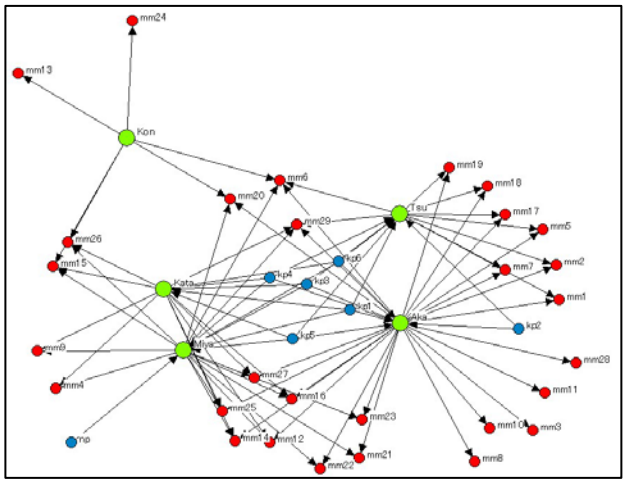

Figure 3: Network Structure of Mizushima

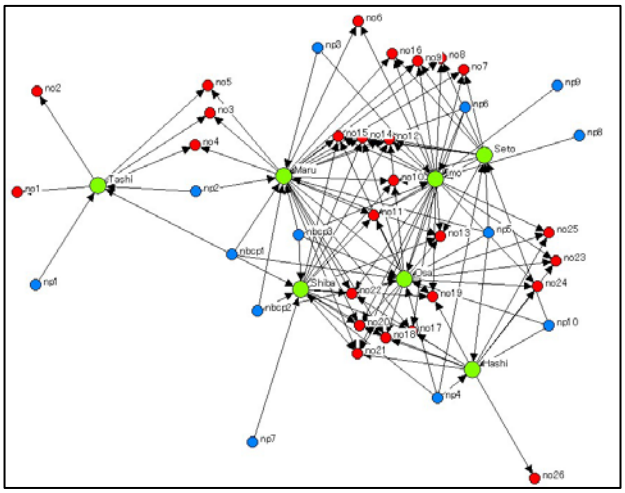

Figure 4: Network Structure of Oppama

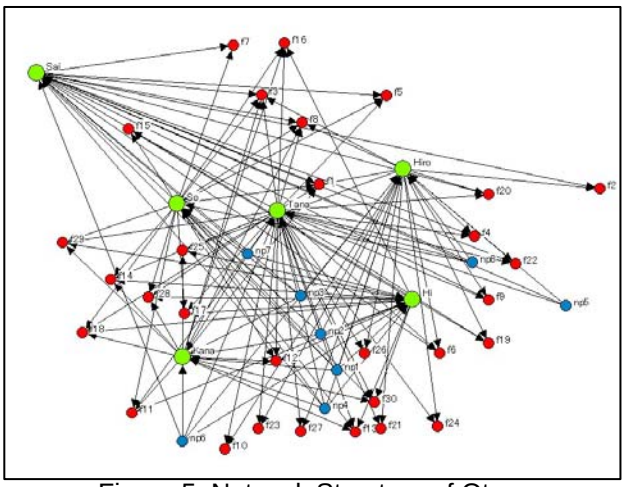

Figure 5: Network Structure of Ota

We were able to find that O-well outgrew its former self, wholesaler or delivery subcontractor, it depended upon the network, especially paint shop design and maintenance. In Japan, to design and construct paint shop, there needs to gather a lot of small firms. For instance, look at “Top coat booth” in Fig 1. The spray guns, hose and pipe, compressors, and so on compose with this booth. In these equipments, there are many of small firms which O-well found. Nippon Paint might have some ability to maintain the paint shop, but it certainly not has the network that O-well had.

We think that the reason why performance in Oppama office was recovered, once it was precipitated in 2003, but revived in 2004. O-well certainly lost the transaction account, but now it has another business. At Ota office, O-well still has the transaction account, but paint shop maintenance was not paid. Subaru made O-well to maintain the paint shop as incidental work within paint sales.

Office	Mizushima	Oppama	Ota
Transitivity:ADJACENCY			
Number of triangles with at least 2 legs:	1588	2161	3011
CENTRALITY (Multiple Measures)			
Outdegree	41.49%	39.41%	59.17%
Indegree	8.17%	9.88%	11.57%
Network Centrality Index (Eigenvector Centralities)	59.43%	42.99%	47.80%
Average Distance	2.124	2.414	1.987

Table 2 Network structural indicators

We would like to substantiate this fact by the data, and then we will formulate the network structure of these three offices (Fig. 3,4,5 and Table 2). We were entrusted to analyze the network data of salespersons at each office. This data was only included the records of O-well's salesperson who contacted with the paint companies and automobile companies during 2005. A corporate planning staff asked salespersons in six different sales offices to identify whom they contacted with in everyday work. For example, salesperson A contacted with B who is affiliated with Nissan, then he entered "1" in the spreadsheet. Sales office is located closely to the factories of automakers, so entering "1" informed us which automaker s/he contacted. We got complete data on December 2005. Even though this data has limitations to analysis, we can learn a lot of things from this data.

The result showed us that Ota office had the densest network among them, but the performance of Ota office was the worst. Ota office likely was involved in high structural constraint. Network performance could decrease when someone was involved in the inefficient network.

Salespersons of O-well are configured corresponding to customer paint process. This configuration may be said the "mirror alignment" (Arnett and Badrinarayanan 2005). In an effort to strengthen their partnerships, some firms are organizing their sales teams in ways that match or "mirror" the structure and processes of their key customers. As a result, core selling teams characterized by "mirror" alignment can more easily communicate with their customers and share information and knowledge with them.

As for these fact and interviews, we can propose the interpreting framework. In network structure analysis, Ota office is high density of the network structure. Because it is said that this kind of characteristics of network is more efficient, we may expect that Ota office will get higher performance. But, in the fact, the performance of Ota office is the worst one. The configuration of salespersons in Ota office was as the same like mirror alignment. This configuration of salespersons is adapted to its customers' activities.

Main Contribution

Theoretical Contribution

We had tried to understand what made the sales performance different. Our explanation employed both interviews and quantitative data. Conventional understanding of quantitative and qualitative researches corresponds to data and interviews. The quantitative data told us the state rigorously, but it did not explain what had happened. The business case told us the mechanism what was happened, but it could not show the rigorous network structure. We did not agree with this conventional view. There are two data, quantitative data and the interview data, and quantitative fact and interview facts. We did not say that we made it completely in this research. It might be said that our study was the dialogue between theory and practice (Itami and Numagami 1997). The theory gave us a framework what we should watch, the fact told us what we did watch.

Managerial Contribution

Our findings may contribute to innovation management. Manufactures sometimes embedded to the relationships with their customers, for transaction specific investment. Christensen (1997) described this embeddedness as value-network. Manufactures cannot switch the value-network when they were embedded in their relationships. If manufactures, like Nissan, can cope with distributor well, they can change the suppliers relatively easier.

We may suggest O-well that the low performance of Ota office was resulted in paint shop maintenance. Ota office did not maintain Subaru's paint shop as service. According to network theory, the network of Ota office may have a structural hole.

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