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DIFFERENT FACES OF THE JAPANESE DISTRIBUTION SYSTEM:

Low voltage AC drives

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Abstract

The Japanese market is the biggest national low voltage AC drives market in the world and a very interesting market for non-Japanese low voltage AC drive manufacturers. The main objective of this research was to find out what is the structure of the Japanese distribution system in the field of low voltage AC drives. Another subject of interest was to find out possibilities for non-Japanese low voltage AC drive manufacturers to enter the market in Japan.

The research was conducted by a qualitative research method due to the fact that the research subject was new and there was not previous knowledge of it. The case study method was used and the data was collected by eight half structured interviews conducted in Japan by the help of the Swedish Trade Council. The interviewed managers represent a wide range of Japanese companies distributing low voltage AC drives from the upper stream to the down stream.

It was discovered, that the face of the Japanese distribution system is still a very complex and multi-layered, and the keiretsu system is furthermore maintaining its binding nature in the network of the member companies. Non-Japanese companies have a possibility to enter the Japanese market if they study the characteristics of the market carefully and have a local partner.

Key words

Japanese distribution system, keiretsu, low voltage AC drive, entry barriers

Place of storage

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1 INTRODUCTION

Japan is one of the biggest market areas in the world. Japanese economy has suffered from severe economic problems in the recent years, but nevertheless is maintaining its intriguing nature as a profitable market. Culture and traditions have been respected for centuries in Japan and for a non-Japanese it is hard to take an objective viewpoint of the norms and the values nurtured in this land of the rising sun. Thereupon non-Japanese companies entering the Japanese market are likely to face remarkable challenges in the business life if they do not study the Japanese culture as a whole.

Low voltage AC drives are highly developed industrial products controlling machines. The usage of low voltage AC drives saves energy and they are used in every conceivable industry. Rising energy costs have strengthened the importance of lowering energy consumption. At the same time, detrimental environmental effects of energy generation, such as rising pollution levels and global warming, have set in motion a movement towards environmentalism. Low voltage AC drives have the potential to save as much as half the energy wasted and therefore the usage of AC drives is growing steadily. AC drives prices are falling while energy costs are rising, thereby the payback period of a drive is rapidly getting shorter especially in regions with higher energy costs such as Europe and Japan. This is one of the reasons why the AC drive market is large in both regions.

The Japanese market is the biggest national low voltage AC drive market in the world, and therefore a very intriguing market for non-Japanese manufacturers. So far local manufacturers have dominated the Japanese market in pursuance of blocking out non-Japanese low voltage AC drive manufacturers. The concentrated and oligopolistic nature of the Japanese market has prevented non-Japanese manufacturers successfully breaking into the market. Entry barriers include the long term relationship between drive manufacturers and Japanese industry inside the keiretsu system; as well as the unique nature of the multileveled distribution system; both of which have been criticized all around the world (see e.g. Todeva 2005).

1.1 The Background of the Study

The purpose of this research is to achieve an understanding about the Japanese market and its complex distribution system from the viewpoint of non-Japanese companies manufacturing low voltage AC drives. Japan is a very challenging market for non-Japanese companies manufacturing low voltage AC drives due to the fact that the local players dominate it. The market for low voltage AC drives in Japan is big and therefore non-Japanese companies are interested in establishing a firm foothold in this steadily growing market. So far non-Japanese companies have not succeeded in this demanding task.

This research will be made to acquire better understanding of the Japanese distribution channels in the field of low voltage AC drives, and the organizational backgrounds of the distribution companies in the field. Additionally the operational principles of the Japanese distribution companies distributing low voltage AC drives and the future of the field in Japan are in focus. The research tries to find means for non-Japanese manufacturers to enter the low voltage AC drives market through understanding how the market and its distribution network operates. On a common level the research also discusses about the Japanese economy, the unique business culture, and the challenges non-Japanese companies run into when entering the Japanese market.

Considerable number of studies about the Japanese distribution system in general, and about entry barriers for non-Japanese companies trying to enter the market in Japan, has been conducted in the course of time (see e.g. Todeva 2005, Lai 1999, Martin, Howard, & Herbig 1998, Min 1996). However, the Japanese distribution system from the non-Japanese low voltage AC drives manufacturer's point of view has not been thoroughly under examination. Most of the studies about the distribution system in general compare the differences between the distribution system in the USA and in Japan. In the background of this research, there is a desire to understand the Japanese distribution system of low voltage AC drives from the viewpoint of non-Japanese low voltage AC drive manufacturers, not from the point of view of a particular country. Hence, this research tries to find new information about the phenomenon, which is exploitable for all non-Japanese companies manufacturing low voltage AC drives.

This research is conducted as a qualitative research in order to get deeper knowledge about the phenomenon of the Japanese distribution system of low voltage AC drives and to find out possibilities for non-Japanese companies to enter the market in Japan. This research does not require control of behavioural events but it focuses on contemporary events and therefore the case study method is probably the best strategy for this research. Due to the challenging data collection circumstances, co-operation was made with The Swedish Trade Council, who conducted the interviews in Japan with the help of the researcher. Altogether eight half structured interviews were conducted with the managers of Japanese distribution companies distributing low voltage AC drives.

1.2 Research Problems

The research questions have been formulated as follows:

- What is the structure of the Japanese distribution system in the field of low voltage AC drives?
- Is it possible for a non-Japanese company manufacturing low voltage AC drives to enter the distribution system in Japan?

1.3 Structure of the Thesis

This thesis is divided into seven chapters. After the introduction, the second chapter describes the economical situation in Japan and the unique way of doing business in this distant country. In the third chapter, the different layers of the Japanese distribution system and the nature of the keiretsu system are being under examination. The fourth chapter delineates what the low voltage AC drives are and how we can benefit from their usage. The situation in the market of low voltage AC drives in Japan is also presented. Methodology of this research is illustrated in the fifth chapter. Thereafter the findings of the research are presented in the sixth chapter, finally followed by the conclusions in the seventh chapter.

2 JAPANESE ECONOMY

Japan is the world's second largest economy, by nominal Gross Domestic Product (GDP), and due to that, it has a lot of economic power in the world. Japan is also the world's largest international creditor as well as a member of the United Nations (UN), G8, Asia Pacific Economic Corporation (APEC), World Trade Organization (WTO), and Organisation for Economic Co-operation and Development (OECD). (Pukkila 2002, 9-13.)

According to the publication of Ministry for Foreign Affairs of Finland "World's market 2006" (2006, 90) the population in Japan is 127 million and GDP per person is more than 30 000 dollars. Pukkila (2002, 9) points out that Japan is a wealthy nation because of the economical policy followed after the Second World War. Welfare has divided equally to the people in Japan and in 2002 over 90 % of the Japanese felt that they belong to a middle class.

2.1 Economical Development

According to Pukkila (2002, 10) the national income in Japan increased steadily from the 1950s until the year 1991. Pekkanen & Tsai (2005, 29) characterize that in the late 1980s and early 1990s there was a huge amount of books with titles promising to disclose "the secrets behind the Japanese economic miracle". People in Europe and America were afraid of the Japanese takeover. Suddenly everything changed and Japan faced big complications.

Furthermore, Pukkila (2002, 10) discussed in her book that at the end of the 1980s the government allowed too much money into the market because they blindly believed in the ongoing upswing in the economy. At the end of the decade Japan experience "the bubble economy": stock and real estate prices were unbelievable high and the industry over invested since money was flowing so easily from the banks. These uncontrolled goings-on came to an end when the government shut down the money streams into the market. After that the bubble economy burst.

Pukkila (2002, 10-12) says that after the bubble banks were left behind with unsecured loans, which were changed into trash. Demand decreased year by year from 1992 until 2001. People were afraid to consume because of the high prices and the fear of getting unemployed. According to the publication of Ministry for Foreign Affairs of Finland "World's market 2006" (2006, 90) the economy in Japan started to recover from long period of stagnation since 2002. Positive development continues these days and GDP is growing much more than in the 1990s. It seems that the problems Japan had, have been overcome and the Japanese economy is in a steady phase.

The time after the bubble created an opportunity for foreign companies while regulations against direct foreign investments were removed and the government is nowadays supporting foreign companies investing in Japan. Stiff industrial structures, like keiretsu, are little by little breaking up in the pressure of high costs. (Pukkila 2002, 12.) It is considerably good time for non-Japanese companies to enter the Japanese market now when the attitudes have changed and the regulations have been removed.

2.2 Japan's Trade Liberalization Politics

After the Second World War Japanese trade politics was to export a lot but at the same time protect its home market with trade barriers. Other countries did not believe that Japan would become so strong in the global trade and after they realized the potential of Japan's export competitiveness they started to demand more open trade. USA and other countries demanded that Japan co-operate with them and USA became the biggest trade partner with Japan by mutual trade liberations. Japan still kept its economy closed from the others and it was accused of unfair trading. (Pekkanen & Tsai 2005, 67-69.)

Pekkanen & Tsai (2005, 67-69) point out that in 1955 Japan acceded to the General Agreement on Tariffs and Trade (GATT) which is the predecessor of the WTO. This was to govern post-war period's global liberalization efforts. Being a member of the WTO have played an enormous role for Japanese trade liberalization until today. Japan is considered to be a late liberalizer and the Japanese government has adapted to the WTO trade regime by emphasizing legal processes in its policy arsenal. In the future we should expect to see the Japanese government make concerted efforts to reduce quantitative and other trade barriers to

trade within the context of the WTO rules and to emphasize the utility of the WTO rules in its overall trade diplomacy.

According to the publication of Ministry for Foreign Affairs of Finland "World's market 2006" (2006, 95) the Japanese trade policy has been directed towards bilateral free trade contracts and to contribute regional integration since millennium. Japan wants to have also other options beside WTO processes when creating trade relations with other countries. They are trying to improve reformation of the economy in Japan and it is positive to see reforms carried out in the economy and in the regulation environment.

The situation has changed drastically from the old days and nowadays the trade with Japan is more open than ever. The image of closed market and too difficult business environment is still in many Westerner's minds. However, some non-Japanese companies have been already successful in Japan and that gives confidence to other non-Japanese companies wanting to do business in the Asia's top market place.

2.3 Doing Business in Japan

Japan is a geographically isolated island where difference between modern and western is made. At first glance it seems that Japan is a western society, but it is just the surface, and underneath a unique culture is to be found. Japan is culturally very coherent and ethnocentric: a separation between the Japanese and the outside world is made, and Japanese pick up only the best phenomenon from the outside world and Japanize them. (Pukkila 2002, 93-94.)

Even though Japan has suffered from the economic downhill from the beginning of the 1990s, it is still a very interesting market area in the world. There is a lot of potential in the Japanese market and if succeeding in this demanding market, it is possible to make really profitable business. In order to do that, non-Japanese companies must carefully study the cultural aspects, which have a strong influence on business life in Japan.

2.3.1 Business Culture

According to Hofstede (1997, 3-5) people, groups, and nations in the world all think, feel and act differently. Every person has within him or herself patterns of thinking, feeling, and potential acting, which were learned during their life. In most Western languages culture commonly means "civilization" but Hofstede extends the concept of culture to mean the patterns of thinking, feeling and acting. Hofstede says that; "Culture is learned, not inherited". Culture originates from the social environment of a person, not from one's genes.

The culture in Japan is very different to Western cultures. It has arisen within the long history of Japan. Harmony, hierarchy and group thinking are the basics of the Japanese social and business life. Individuality is not encouraged. Even nowadays Japanese respect the old values and norms and it seems hard to change the way of thinking quickly in Japan. New generations have more modern way of thinking but nevertheless the old core of the cultural behaviour stays the same. It evokes pressure for non-Japanese companies trying to enter the market in Japan.

Good relationships, loyalty and trust are the foundation of fortunate business in Japan. Without right contacts it is hard to progress in the business life. It takes time to build up good relations and patience is needed when starting negotiations with the Japanese. Good relationships with the Japanese might give a possibility to gain a lot of advantage through the partner's relationship network. After earning the trust of the partner, trust will be gained by everyone belonging to the partner's network. On the contrary, if the trust is not earned, it cannot be acquired from anyone in the same relationship network. Jussila, Lehtipuu, Pukkila and Riipinen (1997) discussed in their book that politeness is the key word in the Japanese business life.

2.3.2 Harmony and Hierarchy

Harmony is the base of all communication and it is a thousand's of years old requirement. Harmony is maintained with respectful and modest behaviour and way of talking. The exterior of Japanese is modest and polite and the manner of speaking avoids conflicts. Behind this exterior is what Japanese truly feels and thinks. Only an unmannerly person speaks in

public about his/her true feelings and for example says “no”. Japanese says usually the things the opponent wants to hear and leaves all the negative things uncommented. This assures peace and everybody is able to save his or her face. This is why a peaceful style avoiding conflicts in business meetings is desirable in Japan and hurry and nervous behaviour is considered to be bad. (Pukkila 2002, 96.)

Additionally Pukkila (2002, 97-102) describes that a Japanese society is very hierarchical and group oriented. Individual’s position in a group hierarchy is determined by age, social status, seniority, and title. No one is anything by himself or herself. A group, not an individual, makes decisions. There are three basic politeness levels in Japanese and the used language will show the level of respect to the others. In Japan status, wealth, and position are things not to be shown. That is considered to be rude and loosing face is a punishment from it.

The most important human relationships are the relationships to your own group’s superiors and inferiors. Collegial relationships are not so important. Superiors have to be fair to their inferiors who are loyal to them in return. People inside the same group make favours to each other. Hence everybody lives in the complex network of *giri* (commitment) and *on* (debt of gratitude). In the Japanese business life long-standing giri obligations can bypass the business advantage for people cannot loose their face. Old commitments might even prevent economically transcendent offers. Reciprocity is in key position in the Japanese business life. (Pukkila 2002, 98.)

2.3.3 Business Manners

Business manners in Japan differ from the Western ones. Non-Japanese executives doing business with the Japanese should study the specialities of the Japanese business behaviour before first meetings. Once loosing face in front of the business partner makes it difficult to repair the relationship in the future. However, Japanese do not expect non-Japanese to understand all about the polite business behaviour and therefore some mistakes are borne.

Business cards, *meishi*, are essential when doing business in Japan and a business card expresses the status of a person to the others. Business cards, written both in English and in Japanese, should be given by both hands, text side towards the recipient. Simultaneously the

business card should be received by one hand while bowing. With foreign guest handshake might be done as well. After receiving a business card it should be carefully studied and commented. It should be never put into the pocket right away. Business cards are changed in hierarchical order from the highest to the lowest. Hosts will hand over their cards first and this way their ranking is showed. After knowing the status of the opponent one will know the politeness level of Japanese to be used and how deep to bow. (Pukkila 2002, 101-102.)

2.4 Entering the Japanese Market

Entering the Japanese market and doing profitable business within is a very challenging task. When having deeper knowledge about the Japanese market, one should be aware of very demanding customers and several other challenges in the market. Pukkila (2002, 127) illustrates that industrial goods exported to Japan should be top quality and references should be in order. Japan should not be considered as a test market. Technical and after sales support are in key position while selling industrial products in Japan. Japanese are really precise of delivery times and late deliveries can ruin your business relationship easily.

Pukkila (2002, 129) also points out that the presence on the spot is considered to be the easiest way to do business in Japan. On the other hand it is also the most expensive way. A Japanese partner is essential for making profitable business due to the fact that usually a non-Japanese product comes to the market where the competition is already severe. However, partner's keiretsu relations (described in paragraph 3.2) should be studied carefully because his own group always comes first.

Czinkota and Kotabe (1999) claim in their article that there are very severe market impediments for foreign companies entering the Japanese market. These obstacles are the uniqueness of the Japanese business practices, strict quality expectations and regulations, high operational costs, and preference for Japan-made products. However, the most important market impediment for foreign companies is the keiretsu system.

In sum, non-Japanese companies have better prospects in the Japanese market if they conduct a thorough market research, practise service-oriented business, enter into collaborative ventures, have a long term orientation, and are ready to response to the changes in the

Japanese market (Czinkota & Kotabe 1999). In conclusion, non-Japanese companies have to determine the nature of the Japanese market and make adequate investments to attain key information assuring chances to do profitable business in Japan. Without thorough devotion to learn about this complex market it is nearly impossible to succeed in it.

3 THE JAPANESE DISTRIBUTION SYSTEM

According to Martin, Howard & Herbig (1998) the historical background of the Japanese distribution system stems from the early seventeenth century when cottage industries and the rapidly growing urban population generated a merchant class in Japan. This system remains since the Japanese companies are used to operate with little equity capital and much dept. It also led to the fact that personal relationships between channel members became a norm. It's a well-known fact that the Japanese companies are accustomed to pool and share information. This probably has its root in the rural village life where planting, watering, and harvesting of rice are tasks to be done together. Furthermore, the manufacturing class has always enjoyed greater authority than the merchant class due to the fact that the Japan's post-Second World War economic success was their merit.

The Japanese distribution system is a unique system in the world and it is rather hard to understand from the Western point of view. Japanese culture and values, which have been respected for centuries, have a strong effect to the distribution system in Japan. The system has many layers and good relationships are the most valuable asset in it. Min (1996) points out that the Westerners have misunderstood the Japanese distribution system and it should be examined from the Japanese point of view.

Min (1996) defines that; "The Japanese distribution channel is often characterized as a long, complicated network of relation-driven middle men who are interacting closely with "fellow-trade" wholesalers, brokers, manufacturers, importers, and retailers". The nature of the Japanese distribution system is complex and therefore it should be carefully studied before trying to do business in this challenging environment.

3.1 The Japanese Distribution Channels

Connecting buyers and sellers regardless of their geographical locations is one way to describe marketing channels. Intermediaries are needed to reduce the physical distance between the point of production and point of consumption between manufacturers and the

actual users of products and services. Exchange process exists when something tangible or intangible is transferred between two or more social actors. Marketing channels make this exchange process possible. The underlying reasons for this exchange relationship are the needs of the market and the serving of these market needs. Channel members have to be aware of the changing needs and wants of the market. (Pelton, Strutton &Lumpkin 2002, 6-7.)

In the Japanese distribution system a product changes hand from manufacturer to general distributor to special distributor to special sub-distributor to retailer to consumer. Sometimes only the paperwork is done and the actual product never physically changes place. Primary, secondary, and tertiary wholesalers exist and each group performs different functions in the distributions physical and financial aspects. Often goods are just trucked from one warehouse to another within the same block and the Japanese customer bears the costs. (Martin et al.1998.) Industry type, financial linkages between channel members, retailer's size, and the size and brand recognition of the manufacturer ordinarily determine the length of the wholesaler channel (Min 1996). Therefore the system is very complex and inefficient. In addition, moving goods through so many hands makes it unnecessarily expensive for the customer.

According to Martin et al. (1998) Japanese customers rank quality and service highest whereas price is the least important marketing instrument. Martin et al. also point out that there is an intense competition between wholesalers and retailers in Japan. This creates great pressure on manufacturers to continually bring out new products. However, the Japanese distribution channel is very long and that makes it difficult for manufacturers to keep pace with the market.

3.1.1 Relationships Between Channel Members

The Japanese distribution system exists to serve both social and economic purposes. Sometimes the social or societal goal even overshadows economic logic. Channel members are like family members within all levels and members are tied together by tradition as much as by emotion. Because of this, it is a traumatic and even tragic decision if channel members have to be dropped. Such members may not be able to bear the social consequence of losing their face and pride. Because of that, even economically useless channel members are often

retained and borne. (Martin et al. 1998.) In addition Min (1996) describes that the government protects many small retailers because they provide secure jobs and income for a large segment of Japanese society.

According to Martin et al. (1998) long-term commitment between Japanese channel members is an outcome of relationship building. Business relationships are based on trust between customer and supplier and this mutual trust is the foundation of solid relationships. One special trade practice in Japan is that traders try to solve their disagreements very flexibly and not necessarily based on formal contracts but on their mutual trust and confidence built up in their mutual history. This makes it expensive to acquire new business relationships and maintain the old. It also gives disadvantage to non-Japanese or out-group manufacturers to create new relationships.

Moreover Martin et al. (1998) discusses in their article that good relationships between channel members are often far more important than the actual sales level of a particular product or short-term profitability. These relationships are built through frequent visits and elaborate respectfulness. Wholesalers also supply a substantial number of personnel to retailers in order to support their product sales. Many times the support staff work in the retail store but are paid for by the wholesaler. Besides of that, it is often expected that distributors and wholesalers will provide product-specific sales training and extensive after-sales service for retailers.

3.1.2 Manufacturer and Supplier Relations

It is typical that the Japanese manufacturer has a network of hundreds of primary wholesalers who are solely its own. The manufacturer takes good care of its distribution network and it is considered to be an extension of the company itself. Usually manufacturers are equity partners of their key distributors and the manager of the manufacturer usually sits on the board of the local distributor. Distributors are dedicated to one manufacturer in each product category and they will only sell the brand they are contractually committed to sell. To offer any other brands would be a violation of *giri* (loyalty) to the manufacturer. Result to this, the large manufacturers, who enjoy higher prestige, greater political power and social legitimacy than smaller firms, dominate the distribution system in Japan. (Martin et al.1998.)

Additionally, tight relationships between suppliers and manufacturers increase innovation. Frank and open exchange of information enables innovative problem solving and because suppliers and manufacturers are so closely linked, it is very hard for a new supplier to cut in to this relationship. In order to cut in, the supplier should have something significantly different; a lower price is usually not enough. (Martin et al. 1998.)

3.2 Keiretsu

Todeva (2005) illustrates in her article that the historical background of keiretsu date back to the pre-war era when family-controlled business networks called z*aibatsu* run the Japanese industry. The historical zaibatsu system combined the wealth of rich merchant families and some of the family businesses, remaining undivided for more than 300 years. In the post-war period the occupation forces tried to dismantle the Japanese holding companies and the reunification of formerly connected businesses through cross-shareholding, and mutual business dealings were created by the Japanese government under the name *keiretsu*. The old zaibatsu practices, traditions, and network formations were resurrected.

In addition to Todeva, Pukkila (2002, 26) characterizes that after the Second World War the Japanese economy was built up by co-operation between the government, private large-scale industry and public servants. High savings rate brought cheap loan money to the banks for the main companies investments, undervalued yen supported export industry and regulation kept foreign competitors away. Domestic market was growing rapidly and the government prodded for an oligopolistic competition and for the building of a keiretsu structure.

According to Cutts (1992) Japan is tied together by a web of informal cartels and with the formal derivatives, keiretsu. Lai (1999) describes that keiretsu is a Japanese word for an organizational arrangement created for a group of companies and it is universally used in the literature. Todeva (2005) illustrates that the present keiretsu network represent a web of overlapping financial, commercial, and governance relationships. Pukkila (2002, 40-41) points out that the biggest keiretsu have also their own trading houses for foreign trade, own shipping companies and insurance operations. Additionally Pukkila illustrates that the biggest keiretsu are: Mitsubishi, Mitsui, Sumitomo, Fuyo, Sanwa, and Dai-ichi Kangyo. Keiretsu in the same domestic market fight harsh from the market shares, however, the competition is

implemented in a way that they all survive. This has effectively kept domestic and foreign competitors out of the market.

According to Todeva (2005) there are three different structural conditions to facilitate interactions in keiretsu relationships: corporate groupings, financial centrality, and industrial interdependency through value chain activities. Companies in the keiretsu system are linked through cross-shareholding investment, the exchange of personnel, shared debt and equity, and mutual strategic plans. The decision makers of the strategic leadership are the presidents of s*hacho-kai*, which is an institution representing the interest of the inner circle of the keiretsu. It supports group solidarity and mediates intra-group activities as well as settles disagreements between keiretsu members. The Japanese keiretsu business network according to Todeva (2005) is represented in figure 1.

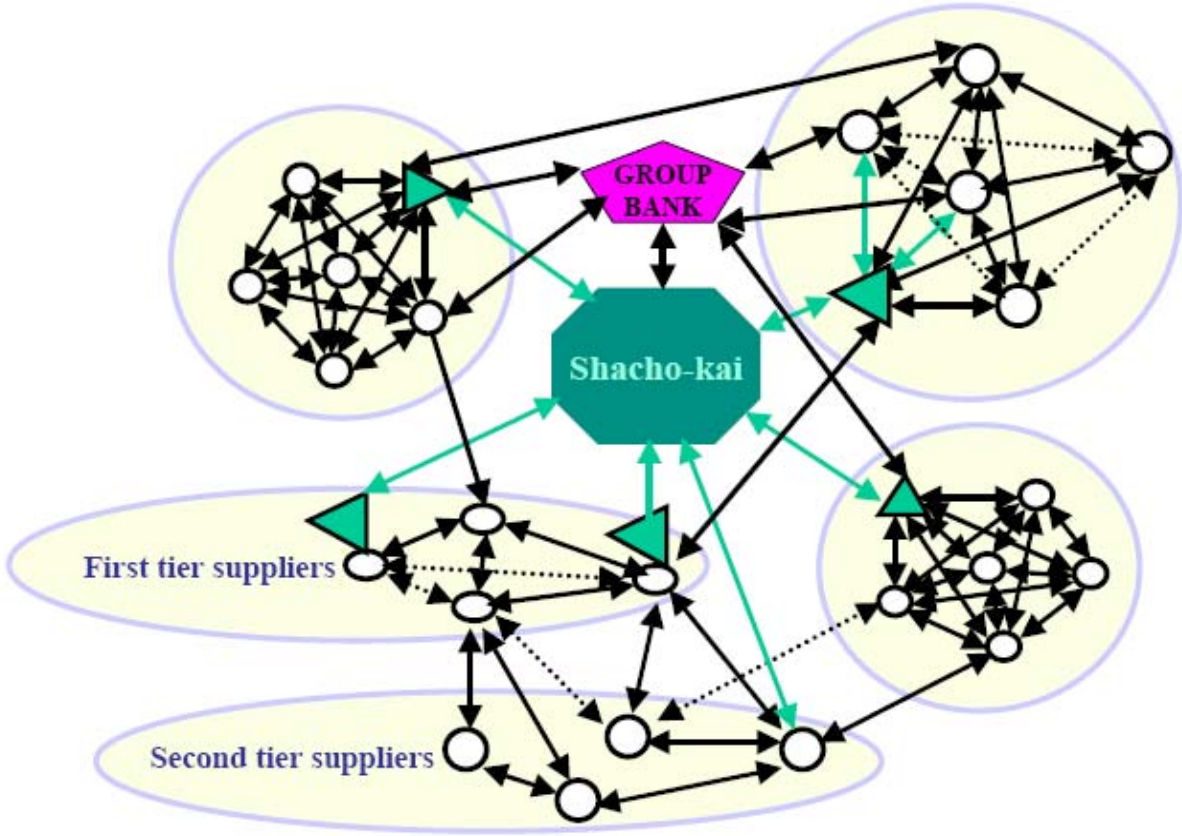


FIGURE 1 Japanese Keiretsu Business Networks (Todeva 2005, 100)

Todeva (2005) describes that keiretsu members face lower risks compared to independent companies in Japan. It is a result of keiretsu companies sharing individual risks. Other advantages of the keiretsu system are their flexibility, adaptability, information and knowledge exchange, financial assistance, and collaborative problem solving. Japanese keiretsu system makes capital out of these assets in their home market as well as in their international operations.

Furthermore the government subsidizes keiretsu system in Japan. Lai (1999) describes that the Japanese government provides keiretsu members bureaucratic and political support. The Japanese government allows keiretsu system to be formed and strengthens it by institutional arrangements. In return, keiretsu members co-operate by implementing industrial policies. Pukkila (2002, 26) characterizes that Japan's business life is very centralized and the relationships between the administration and the industry very close.

3.2.1 Horizontal and Vertical Keiretsu

Keiretsu typically consist of related companies, which share common interests, common banks, and typically even interlocking boards of directors and cross-equity participation. Depending on the formation and principles of keiretsu, they are commonly divided into two types: horizontal and vertical. (Min 1996.)

According to Min (1996) the horizontal keiretsu are usually organized around a bank consisting a variety of companies performing different functions in diverse fields. Pukkila (2002, 40-42) says that the horizontal keiretsu is a group of companies with cross ownership and they are funded by the same bank. In addition, Min (1996) defines that the horizontal keiretsu is similar to cartels, in that they tend to limit business interactions with non-keiretsu organizations, and this is why they have been strictly criticized by many US business and political leaders.

Pukkila (2002, 40) characterizes that every large-scale enterprise owns its own subcontracting and distribution networks, known as vertical keiretsu. Furthermore Min (1996) defines in his article that major industrial corporation and its suppliers or distributors in a certain industry

comprise the vertical keiretsu and it can be further subdivided into supply keiretsu and distribution keiretsu.

Supply keiretsu are groups of companies, which are integrated along a supply chain dominated by a major manufacturer, and it has interlocking interests in their upstream suppliers. In contrast to that, the distribution keiretsu makes a web of relationships with their downstream distributors and retail outlets. Because the distribution keiretsu usually blocks both foreign and domestic non-keiretsu companies and keeps retail prices high for consumers, it might be the cause of distribution inefficiency. Anyhow, the Japanese culture values mutual trust and loyalty, and these are the facts that make the distribution keiretsu still an accepted form of business practice. (Min 1996.)

3.2.2 Change in the Keiretsu System

According to Pukkila (2002, 42) the economical problems in 1990s were the fact that created complications to the keiretsu system. Companies in the same group became too expensive partners and the banks with big debts could not help financially anymore. Lai (1999) points out in his article that Japanese consumption behaviour has changed and this is weakening the influence of the manufacturer-dominated distribution system. Furthermore exhausted bottom-tier suppliers and growing overseas production are causing problems to the keiretsu system.

Lai (1999) claims that, even though it is said that keiretsu as a way of doing business would be dying; keiretsu relationships do not disappear overnight. This is why all international executives need to understand the nature of keiretsu if they want to do business with the Japanese. In addition, Pukkila (2002, 42) notes that because keiretsu is still an obstacle for non-Japanese companies doing business in Japan, they have to be careful when selecting a Japanese agent and clarify the ownership history of the partner thoroughly.

Subtle and pervasive relationships predominate the keiretsu system. Some say that these relationships are not going to disappear because keiretsu are a fundamental way of doing business in Japan. On the other hand, the nature of the system is changing and it will give opportunities for non-Japanese companies to enter the distribution system with better prospects than before.

3.3 Trade Practices

According to Martin et al. (1998) manufacturers in Japan provide sales support and routinely offer rebates in order to get retailers to move their products. Rebates may include rebates for quantity, early payments, achieving sales targets, performing services, keeping inventory, sales promotion, loyalty to supplier, following manufacturers' price policies, and co-operation with the manufacturer. These rebates mean the same as a non-tariff barrier, which is considered to be discriminatory, unfair, and illegal in most countries in the world.

Rebates are negotiated with every channel member separately and they are typically paid at the end of the year. Rebates are provided as stimulants for distributors because a portion of the business profit returns to the distributors in order to motivate them to buy and sell manufacturers' products. Along the years this has become regularized as a normal trade practise. Given rebates are confidential information between a manufacturer and a distributor. (Martin et al.1998.)

Moreover Martin et al. (1998) describe another widely accepted trade practice, which is the return of unsold goods, *henpin* (returning unsold items to suppliers at no cost). It adds to cost of product but on the other hand it strengthens loyalty between channel members. Usually anywhere else in the world returns are not accepted unless goods are broken-down or deficient but in Japan retailers can return unsold goods for any reason. Naturally this increases the retail prices and manufacturers have to bear the risk of the unsold products.

In brief, Marvel (1993) points out that the Japanese manufacturers tolerate this kind of inefficient trade practise system just because they can gain distributors loyalty in that way. At the same time it functions as a barrier to entry by possible competitors.

3.4 Future of the Distribution System

According to Maruyama (2004) major changes in the retail structure have changed the wholesale structure too. Retailers have changed their distribution strategies by using new information technology. Manufacturers are revising their agent systems and starting to do

direct transactions with large-scale retailers, which pass by wholesalers completely. Intermediate distribution sector is hence encountering remarkable change. There is also a trend, which is changing the way of thinking from production-driven distribution strategies to consumer-driven distribution strategies and channels. Wholesalers and distributors do not operate so much as the sales agents of the manufacturer; on the contrary they are more as the purchasing agents of consumers and retailers. This kind of development promotes the opening up of the Japanese distribution channels.

In short, Martin et al. (1998) claim that traditional relations between channel members are weaker than before or even broken. Previously retailers were in poor position against big and powerful manufacturers. Now the situation is changing due to the close relationship that the retailers have with their customers. This is changing the power structure as a whole.

In sum, it appears that the traditions and structures respected for ages are changing, and this creates opportunities for non-Japanese companies wanting to do business in Japan. Non-Japanese companies can take an advantage of this turning point in the Japanese distribution system and look out for a niche in the Japanese market.

3.5 Clusters – Related to Keiretsu or Not?

Clusters are a global phenomenon creating competitive advantage for companies. Keiretsu, on the other hand, is also a phenomenon creating competitive advantage for companies in Japan. Clusters and keiretsu have some resemblance in their operation principles and they also partially share the benefits of being part of each system. After characterizing the nature of the clusters these two different systems are compared to each others and the existing differences and similarities are described.

3.5.1 Characteristic of Clusters

Porter (1998) has created an economic cluster theory, which states that clusters are geographic concentrations of interconnected companies and institutions in a certain field. Porter claims that the competitive advantages in a global economy lie increasingly in local matters.

Knowledge, relationships, and motivation are things, which are hard to duplicate by the rivals. Clusters comprise a variety of linked industries and entities, which are important for competition, and they affect competitiveness within the countries as well as across national borders. Furthermore Carrie (1999) illustrates, that a cluster is a network of companies, their customers and suppliers of all the relevant factors, such as materials and components, equipment, training, and finance. Educational establishments and research institutes provide a large part of the clusters' human and technological capital.

Clusters include, for example, suppliers of specialized inputs, and providers of specialized infrastructure. They include upstream suppliers and downstream customers. Clusters often extend downstream to channels and customers, or alternatively to manufacturers of complementary products and to companies in related industries. Additionally, several clusters include universities, think tanks, vocational training providers, trade associations, and even governmental institutions. Clusters promote both competition and cooperation, and competition is the key for the clusters success. Competition can coexist with cooperation due to the fact that they occur on different dimensions and among different players. Therefore, a cluster can be seen as an alternative way of organizing the value chain. (Patti 2006; Porter 1998.)

Porter (1998) describes that clusters contribute better coordination and trust. A cluster of independent and informally linked companies and institutions offers particularly advantages in efficiency, effectiveness, and flexibility. Clusters usually increase the productivity of the companies based in the area by driving the direction and pace of innovation, and by stimulating the formation of new businesses which strengthens the cluster itself. Each member benefits from the cluster as if it had greater scale or as if it had joined formally with the others without losing its flexibility.

According to Patti (2006) some well-known examples of clusters are Silicon Valley (computers and high-technology electronics) and Hollywood (film-making) in the USA, high-performance automobile cluster in the southern Germany, fashion shoe cluster in northern Italy, and environmental cluster in Finland.

3.5.2 Keiretsu Versus Clusters

Keiretsu and clusters are both systems formed by a network of companies. Keiretsu system exists only in Japan but clusters are globally well known. The most similar character, when comparing keiretsu and clusters, is the importance of the relationships. In both systems cooperation is made between the member companies. Good relationships boost information sharing and it helps companies in these systems to develop their products more and gain a good competitive foothold in the market. These systems create also a better access to employees due to the fact that companies in the same network can help each others with the exchange of personnel. The strength for keiretsu and cluster members is the power to keep the competitors away with the cooperation and support to each others. The cooperation with the government is also a shared characteristic and it helps these systems to maintain their functionality also in the long run.

Location is essential for clusters and usually companies in the same cluster are situated close to each others. Clusters might even arise from unusual or stringent local demand. This creates advantage for their customers, while they are able to visit many vendors at the same time. On the other hand clusters might cross state or even national borders to gain better competitiveness. The situation is different with the keiretsu system because member companies can locate in the different parts of Japan, anyhow inside the national borders. Therefore location in a particular area is not a key issue for companies in a certain keiretsu.

Clusters require a decade or more to gain real competitive advantage. Anyhow, clusters might loose their competitive edge suddenly due to the external and internal forces, like technological discontinuities, and the cluster's assets may become irrelevant. Keiretsu on the other hand, does not rely only to one particular asset and it has very long and respected traditions, so therefore it can be considered to be more sustainable system.

It can be pondered, if clusters have been imbued with the keiretsu system. Keiretsu system's roots go historically much deeper than clusters' origin and the effectiveness of the Japanese industry is a well-known fact appreciated by the Western companies. Clusters embody flexibility, efficiency and pace of innovation created by a group of interlocked companies. Companies in the Western countries want to achieve the same kind of loyal network of companies collaborating with each others that can be seen already for example in Japan.

However, Western companies belonging to clusters have a long way to go before they can have the similar kind of loyalty inside the network that they have in keiretsu system. Members of the same keiretsu take care of each others in and out of season. This kind of trust and respect to the others has been valued for centuries in Japan and it is a way of living, not a character to be learned.

As a conclusion, it can be argued that there are lot of similarities between the clusters and keiretsu system, even though there are also some differences. For both of these networks, relationships are the most valuable asset, which should be cultivated. The co-operation and the trust between the member companies maintain their vitality as well as keep the competitors away.

4 LOW VOLTAGE AC DRIVES

This research tries to understand the Japanese market and its complex distribution system from the viewpoint of non-Japanese companies manufacturing low voltage AC drives. In this chapter the characteristics of the low voltage AC drives and the market situation in Japan will be described.

Low voltage AC drives are highly developed industrial products controlling machines. The usage of low voltage AC drives saves energy and they are used in every conceivable industry. It is said, that if the motor is considered as the muscle, the drive is the brains of a system. The promise of energy savings in the world as energy costs rise together with the environmental benefits of energy conservation, are key factors ensuring the worldwide growth of the AC drives market.

Generally the market for low voltage AC drives is geographically divided into four areas: America, Asia Pacific, Japan, and Europe, the Middle East and Africa (EMEA). The Japanese market is the biggest national low voltage AC drives market in the world. Local manufacturers dominate the Japanese market in pursuance of blocking out non-Japanese low voltage AC drives manufacturers trying to enter the Japanese market.

4.1 Characteristic of the Low Voltage AC Drives

AC (alternating current) drives, called also variable speed drives, are industrial products mainly marketed and sold to various manufacturing companies. The main purpose of an AC drive is to control the speed, torque, acceleration, deceleration, and direction of rotation of AC motors, and save energy by tailoring the power delivered to meet the actual load. Advantages of AC drives include an accurate and wide range of smooth and stepless control of speed and torque, high efficiency, reduced maintenance, compact size, and versatile functions. (Automation Research Corporation 2002.)

According to Automation Research Corporation's study (1998) AC drives can be divided into five system sizes based on drive output ratings as follows:

- Micro: AC drives with output between 1 and 4 kilowatts
- Low-end: AC drives with output between 5 and 40 kilowatts
- Midrange: AC drives with output between 41 and 200 kilowatts
- High-end: AC drives with output between 201 and 600 kilowatts
- Mega: AC drives with output above 600 kilowatts

Low voltage AC drives, term used in this research, covers all of these system sizes. However, AC drives manufactured for general distribution, have an output of 300 kilowatts at the maximum. These AC drives are standardized and mass produced. AC drives with bigger output are tailor-made and manufactured for certain purpose.

AC drives, by varying the speed of the motors, are able to adjust energy usage according to need, and this way it can drastically reduce a company's energy consumption. Furthermore AC drives increase machinery life, accuracy & reliability, and improves product quality & throughput. AC drives are used in every conceivable industry, for instance in manufacturing food, rubber, pharmaceuticals, paper, steel, automobiles, planes, fabricated metals, machinery, and in water & waste treatment plants, conveyors, ski lifts, cranes, and elevator control. (Automation Research Corporation 1998.)

AC drives can save as much as half the energy wasted, or more, for applications such as variable speed fans that replace dampers. Additionally, with AC drives price falling while energy costs are rising, the payback period of a drive is rapidly getting shorter. The payback period to recover the price of a drive in terms of the energy saved is shorter in regions with higher energy costs, such as Europe and Japan. This is one of the reasons why the AC drives market is also very large in Europe and in Japan. (Automation Research Corporation 2002.)

The low voltage AC drive market totalled 4, 1 billion US dollars in 2002 and is forecasted to top 5, 1 billion US dollars by the end of 2007. A trend in the worldwide AC drive business is the increasing functionality and performance of drives with corresponding declines in prices due to mass production and growing volumes. Energy savings, environmental concerns,

mature and reliable technology, and sophisticated control features are contributing the growth in AC drives market. Leading suppliers regularly add new features and variations to their product lines to keep the market alive. Other competitive strategies are pricing and alliances between suppliers. (Automation Research Corporation 2002.) While the differences between the products of different manufacturers are relatively small, service is becoming more and more important mean to differentiate products from the competitors.

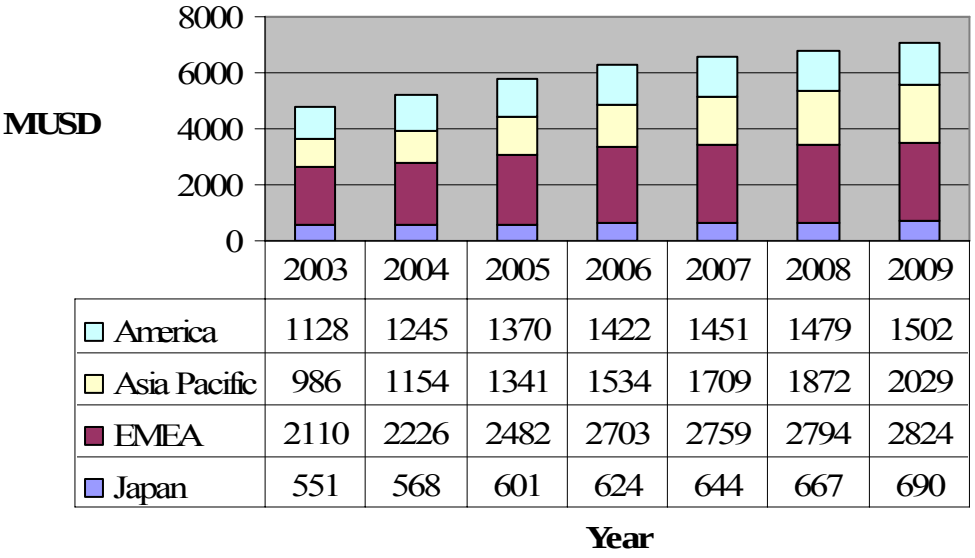
Most of the electricity consumed in industry is used to drive motors. Under the Kyoto Protocol (United Nations Framework Convention on Climate Change), signed in 1997, developed countries agreed to cut overall greenhouse gas emissions by 5.2 % below 1990 levels by 2008 – 2012. Therefore the Kyoto Protocol impacts to the low voltage AC drive market, due to the fact that the use of variable speed drives can significantly reduce the amount of energy wasted. According to Automation Research Corporation's study (2002) rising energy costs and environmental threats are forcing governments to formulate energy conservation policies. On that account, the AC drives market has especially grown in countries that already have energy conservation legislation.

4.2 Low Voltage AC Drives Market in Japan

Several hundred AC drive suppliers exist globally and about a dozen companies restrain the market. Hiltunen's presentation "Where does the growth come from" (according to IMS May 2006) states that five leading AC drives companies worldwide in 2005 were ABB (17%), Siemens (12%), Yaskawa-Omron (7%), Rockwell (7%), and Mitsubishi (7%). Geographically different companies have different part of the market shares. Japan's low voltage AC drive market is dominated by local manufacturers and until today it has been relatively closed for non-Japanese manufacturers.

Additionally Hiltunen (according to IMS May 2006) points out in his presentation that the market size for low voltage AC Drives in Japan was 624 million US dollars in 2006 and it is estimated to be 690 million US dollars in 2009. The Compound Annual Growth Rate (CAGR) in Japan was 3, 8 % in 2006. It can be seen in figure 2, that the market size has been growing year by year in Japan and the market for low voltage AC drives is still expected to grow.

Other regions, America, Asia Pacific, Europe, the Middle East and Africa (EMEA), have all bigger markets for low voltage AC drives. It should be noticed, however, that the Japanese market is the biggest national low voltage AC drives market in the world, and because of that, a very intriguing market for non-Japanese manufacturers.



	2003	2004	2005	2006	2007	2008	2009
America	1128	1245	1370	1422	1451	1479	1502
Asia Pacific	986	1154	1341	1534	1709	1872	2029
EMEA	2110	2226	2482	2703	2759	2794	2824
Japan	551	568	601	624	644	667	690

FIGURE 2 The Worldwide Market for Low Voltage AC Drives by Region- Millions of US Dollars (Hiltunen 2006, according to IMS May 2006)

The Japanese low voltage AC drive market is dominated by domestic players. The Japanese market is highly concentrated with the three largest manufacturers: Mitsubishi, Yaskawa and Fuji Electric, which were responsible for over 60 % of the total market volume in 2002. Market shares of the leading suppliers of low voltage AC drives in Japan in 2002 are presented in figure 3. (Automation Research Corporation 2002.) According to J. Nurmi (interview 7.2.2007) the situation has been quite stagnant in the Japanese market during the past few years, and the market shares have changed only slightly from the figures in 2002.

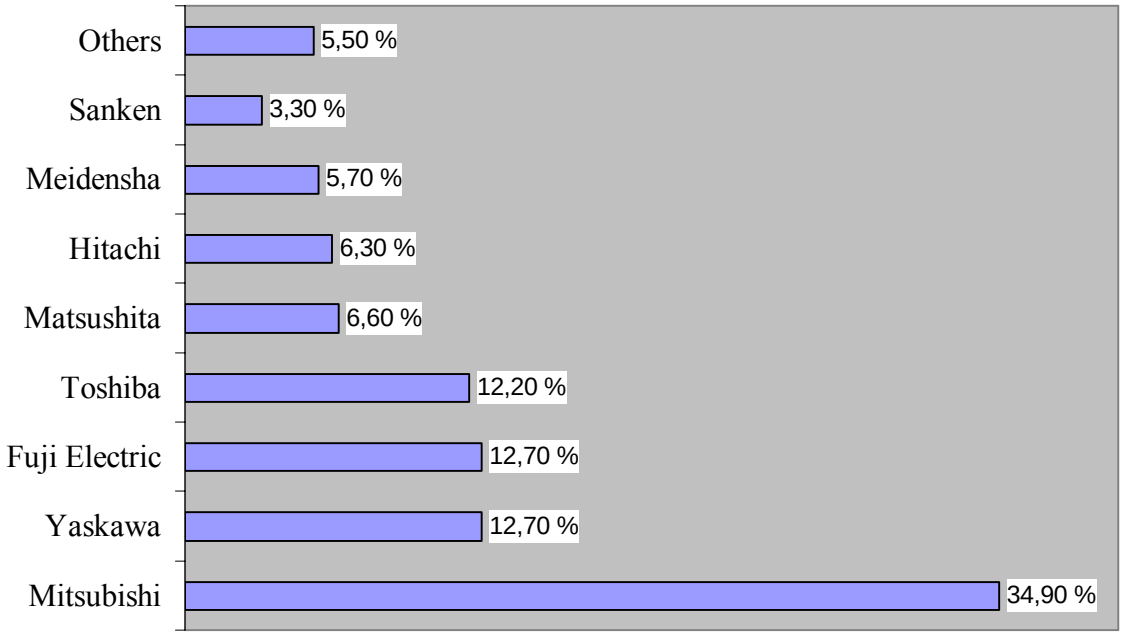


FIGURE 3 Market Shares of the Leading Suppliers of Low Voltage AC Drives in Japan in 2002 (Automation Research Corporation 2002)

The concentrated and oligopolistic nature of the Japanese market, described in previous chapters, has prevented non-Japanese manufacturers successfully breaking into the market so far. Barriers to entry include the long term relationship between drive manufacturers and Japanese industry, as well as keiretsu relationships.

4.3 General Distribution Channel in Low Voltage AC Drive Business

Industrial products are distributed through different kind of distribution channels depending of the nature of the products. According to J. Nurmi (interview 7.2.2007) low voltage AC drives suppliers generally distribute products through four different main channels. Low voltage AC drives are generally distributed through industrial distributors, original equipment manufacturers (OEMs), system integrators, or directly to the end users. Additionally industrial distributors deal out low voltage AC drives to OEMs. The general distribution channels in low voltage AC drive business are represented in figure 4 and the characteristics of the different distributors are described thereafter.

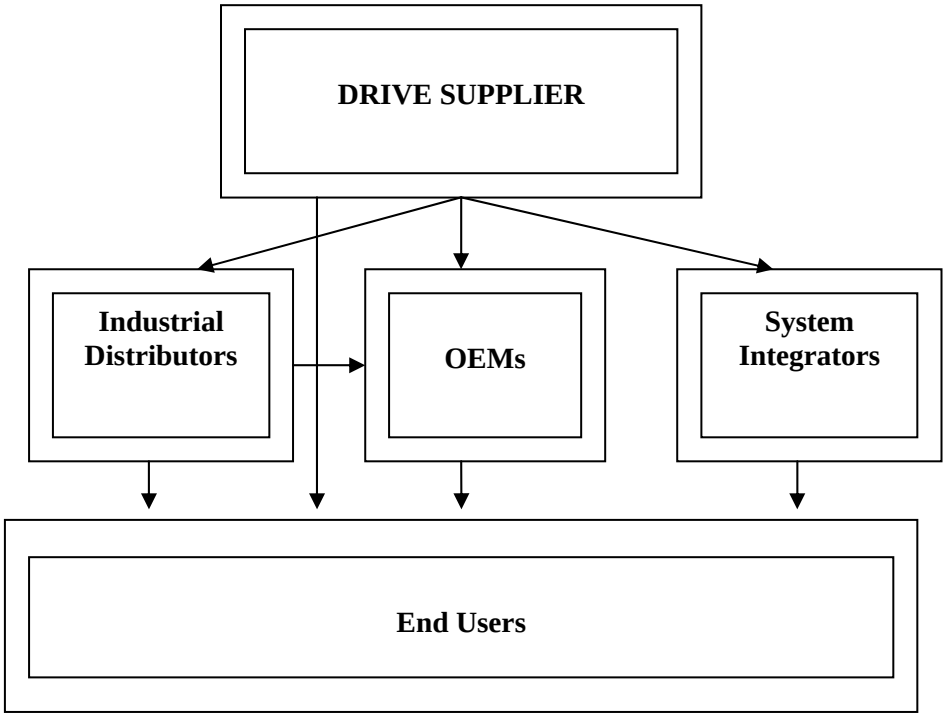


FIGURE 4 General Distribution Channels in Low Voltage AC Drive Business

According to Automation Research Corporation (1998) *industrial distributors* are one of the widely used distribution channels for industrial drives. Industrial distributors sell products to end users within their geographic territory. Due to the increased emphasis on services in the industrial marketplace, many distributors are adding more value to their equipment sales.

OEMs, original equipment manufacturers, are another important distribution channel for low voltage AC drives. OEM is a company that builds products or components that are used in products sold by another company. (Automation Research Corporation 1998.)

According to Automation Research Corporation (1998) *System Integrators* (SI) are playing an important role in the industrial marketplace. A system integrator is a person or a company that specializes in building complete computer systems by putting together components from different vendors. SIs includes Consultants, Architects Engineers & Constructors (AECs), and all types of system houses.

Generally low voltage AC drives are distributed through these particular distributors and the aim of this research is to find out is the distribution channel for low voltage AC drives similar to this in Japan. The nature of the Japanese distribution system in general, as described previously, is very different compared to other countries. Based to that, the researcher hypothesize that the distribution system for low voltage AC drives differs as well from the general distribution model of low voltage AC drives.

5 METHODOLOGY

In this chapter, the implementation of this study will be described. First the use of the qualitative research method is rationalized and defined. Thereafter the research strategy and the use of a case study method are explained. Data collection methods and sample selection of the Japanese low voltage AC drives distribution system data are described, and finally the validity and reliability of the research are taken into consideration.

5.1 Qualitative Research Approach

There are two different methods to be used when conducting a research: qualitative and quantitative method. Both of the methods try to create a better understanding of the society we are living in. According to Creswell (2003, 74-75) in qualitative method the research problem can best be understood by exploring a concept or phenomenon. Qualitative research is exploratory and it is usually used when the variables and theory base are unknown. In quantitative method, on the other hand, the research problem is best addressed by understanding what variables influence an outcome. Therefore quantitative research material will be presented in numeric form and qualitative research material in verbal form.

The qualitative research is primarily interpretive and the researcher makes an interpretation of the data. Qualitative research takes place in the natural setting and this enables the researcher to be involved in actual experiences of the participants. Data collection methods in qualitative research are interactive and humanistic. Traditionally the data collection methods have been open-ended observations, interviews, and documents. They may involve text data and image data. (Creswell 2003, 181-182.)

This research is conducted as a qualitative research because the variables and the theory base are inadequately known. This research tries to get new knowledge about the phenomenon of the Japanese distribution system of low voltage AC drives and find out possibilities for non-Japanese companies to enter the market in Japan. The reasons for not conducting this research by a quantitative method, is that the nature of the research requires interactive participation

and interviews as means of data collection. Moreover the sample size in this research is fairly modest and consequently too small to conduct the research in a quantitative way.

5.2 Research Strategy

According to Yin (2003, 3-5) researcher has to choose a strategy for the research and each strategy represents a different way of collecting and analyzing empirical evidence. Each strategy has its own advantages and disadvantages. Yin lists five major research strategies: experiments, surveys, archival analyses, histories, and case studies. These strategies differ by three conditions consist of (a) the form of research question, (b) the extent of control a researcher has over actual behavioural events, and (c) the degree of focus on contemporary events. These situations are presented in table 1.

TABLE 1 Relevant Situations for Different Research Strategies (Yin 2003, 5)

Strategy	Form of Research Question	Requires Control of Behavioural Events	Focuses on Contemporary Events
Experiment	how, why?	Yes	Yes
Survey	who, what, where, how many, how much?	No	Yes
Archival analysis	who, what, where, how many, how much?	No	Yes/No
History	how, why?	No	No
Case study	how, why?	No	Yes

When comparing situations for different research strategies described in table 1, it can be noticed, that only case study is eligible strategy for this research. This research's objective is to find out how the Japanese distribution system for low voltage AC drives works and why is it so hard for non-Japanese companies manufacturing low voltage AC drives to enter the market in Japan. This research does not require control of behavioural events but it focuses on contemporary events. Consequently, case study is probably the best strategy for this research and it is discussed in the next paragraph.

5.3 Case Study Approach

According to Yin (2003, 1-2) researcher has to choose a strategy for the research and each strategy represents a different way of collecting and analyzing empirical evidence. The case study is one way of doing social science research. Case studies are the preferred strategy when "how" or "why" questions are being posed, when there is only little control over events by the researcher, and when the focus is on contemporary phenomenon within some real-life context (represented in table 1). Need for case studies arise out of the desire to understand complex social phenomena. It allows researchers to retain the holistic and meaningful characteristics of real-life events like individual life cycles, organizational and managerial processes, international relations, and the maturation of industries. Therefore, not surprisingly, the case study has been a common research strategy among others in psychology, sociology, political science, and business.

Koskinen, Alasuutari and Peltonen (2005, 154) describe that the case study is one of the most commonly used strategies in business economics studies while conducting a research by a qualitative method. Case study stands for a research, where one, or not more than a few, consciously selected cases are studied. Company or part of the company comprises usually the case. Case can also be functional, such as a process or a structural attribute of a company. Studied number of cases is typically small but occasionally several cases are studied.

Yin (2003) divides case studies into three different types: explanatory, exploratory, and descriptive researches:

- Explanatory research is used when focusing on cause-effect relationships, explaining which causes produced which effects. It answers the question by using theories and knowledge already gained.
- The research is exploratory when the researcher deals with a new topic on which little research has been done previously and it is difficult to state the research problem clearly.
- The purpose of descriptive research is to describe various phenomena connected to individuals, situations or happenings that occur. It presents a phenomenon within its context.

This research is mostly exploratory due to the fact that the studied phenomenon is new and there is not previous research done about the low voltage AC drives distribution and about the entry barriers of non-Japanese low voltage AC drives manufacturers. Moreover the research is also descriptive because it tries to describe the phenomenon of low voltage AC drives distribution and entry barriers of this field in Japan.

Koskinen et al. (2005, 157) defines that the subject of the case study is usually a process, an operation, series of events, or history of a certain company. The case can be in branch level, organization level, department level, group level, or on individual level. In this research the case is in a branch and organizational level. Yin (2003, 86) lists six different data types to take into consideration when doing a case study: documentations, archival records, interviews, direct observations, participant-observations, and physical artefacts. Again every source of evidence has its own strengths and weaknesses. This research uses half structured interviews as a means of data collection and the method is described further in the next paragraph.

5.4 Data Collection Methods

In this research data was collected by half structured interviews. Peculiar to the half structured interviews is that some aspect, like the form of the questions, is nailed down beforehand but not all of the aspects (Hirsjärvi and Hurme 2000, 47). Through interviews the researcher is able to focus directly on the case study topic and at the same time the researcher can make an insightful analysis of the case. The biggest advantage of interviews is that they are the only way to collect the meanings and interpretations people have given to matters. At the same time the researcher is also able to get perceived causal inferences through the interviews. The research topic in this case study is nearly unknown and interviews were probably the only way to get deeper knowledge about the distribution of low voltage AC drives in Japan.

Data collection for this research was very challenging due to the geographical location of Japan and the significant language barrier. The researcher is not able to make extensive interviews in Japanese, and all the interviewees would have not been able to answer in English. In order to get the best results for the research, interviews were to be conducted in Japanese. Therefore local help was needed.

Co-operation was made with the Swedish Trade Council located in Tokyo with experience of 35 years in international business development. The Swedish Trade Council helps Swedish companies to grow internationally by offering a local, sustained presence and development networks of contacts in the market. One of their services is to carry out comprehensive market surveys and this is why they were a good partner for this research.

The researcher prepared the questions for the interviews in English and a Japanese project leader of the Swedish Trade Council translated the questions into Japanese. The questions were divided into five themes and the themes were: the Japanese distribution system, the organization structure of the distribution companies, entry barriers, business practices, and the future of the Japanese distribution system (see interview outline, appendix 1).

All the questions were open-end questions, in order to give the interviewees a possibility to answer in their own words and give their own opinion on matters. Due to the fact that the researcher was not able to be the interviewer, the half structured interview method was used. The questions within the themes for all the interviewees were the same, in order to make the interviews similar and gather as comparable data as possible.

The researcher had a meeting with the project leader of the Swedish Trade Council in Tokyo before the interviews were conducted. In this meeting the researcher briefed the interviewer about the research and went through the questions together. In the meeting it was decided not to use a recorder in the interviews due to the shy nature of the Japanese. According to the project leader of the Swedish Trade Council, interviews are a rather new way of data collection in Japan and the interviewees would have been too afraid to answer freely, or even refused to being interviewed if the recorder would have been used. Therefore it was settled that the interviewer will take notes from each interview conducted in Japanese and afterwards translate all the interviews into English.

The task for the Swedish Trade Council was to identify the companies to be interviewed. After that they sent an introductory letter to the suitable companies and thereafter contacted the companies by telephone to explain the background of the study and asking a permission to make the interviews. The questionnaire was sent to the interviewees prior to the meeting, in order to make them acquainted with the topic. Finally they were tasked to conduct the interviews and compile the minutes.

The Swedish Trade Council conducted altogether eight half structured interviews with different Japanese companies distributing low voltage AC drives. Six face-to-face interviews were conducted in the Tokyo area by visiting the interviewee's office and two interviews were conducted through telephone, due to the remote distance of the interviewee. The average duration of an interview was one hour. The first interview was conducted on the 19th of March and the last interview on the 24th of April year 2007.

The researcher also participated in two first interviews in Japan, attending the interviews as an assistant and observer. During these two interviews the interviewer had a possibility to ask the researcher clarifications to the questions if needed. The researcher knows Japanese that much, that she was able to follow the interviews essentially. After these two interviews, the project leader of the Swedish Trade Council conducted the rest of the six interviews without the researcher. Finally, the researcher received the lettered interviews in English an interview by interview. Due to the fact, that the interviews were conducted through five different themes, the results were analyzed through the same themes.

5.5 Sample Selection

The aim of the researcher was to get specific and deep knowledge about the distribution system of low voltage AC drives in Japan. The target was to conduct ten interviews with different companies distributing low voltage AC drives in Japan. The Swedish Trade Council contacted more than ten companies and managed to conduct eight interviews in total. The researcher believes that with this amount of interviews, it is possible to draw conclusions about the distribution system of the low voltage AC drives in Japan.

In order to get extensive understanding about the whole distribution system from the upper stream to the down stream, employees representing Japanese companies in the different levels of the distribution system were interviewed. The interviewed companies were: Toshiba Mitsubishi-Electric Industrial Systems Corporation, Toshiba Industrial Products Sales Corporation, Yaskawa Siemens Automation & Drives Corporation, Kanaden Corporation, Ryoden Shoji Co., Ltd., Dowa Technos Co., Ltd., Tanaka Co., Ltd., and Kyowakiden Industry Co., Ltd. The interviewed companies and their areas of businesses are represented in table 2.

TABLE 2 Interviewed Companies

Area of business	Number of interviewed companies	Companies
AC drive manufacturer	1	- Toshiba Mitsubishi-Electric Industrial Systems Corporation
Sales subsidiary of a manufacturer(s)	2	- Toshiba Industrial Products Sales Corporation, - Yaskawa Siemens Automation & Drives Corp.
Manufacturer-affiliated first-tier distributor	3	- Kanaden Corporation, - Ryoden Trading Co., Ltd. - Dowa Technos Co., Ltd.
Independent first-tier wholesaler	1	- Tanaka Co., Ltd.
Machine integrator	1	- Kyowakiden Industry Co., Ltd.

From these eight companies, managers with the knowledge of the companies' distribution policies and organizational structure were chosen to be interviewed. The interviewed managers have 8-27 years of working experience. Managers of the companies were interviewed due to the fact, that the key personnel are most likely able to provide in-depth understanding of perspectives.

These selected eight companies distribute low voltage AC drives to different parts of Japan and all except Kyowakiden Industry Co., Ltd. have regional branch offices. This makes it possible to generalize the findings of this research to cover the whole Japan. Furthermore, the interviewed managers represent a wide range of companies distributing low voltage AC drives from the upper stream to the down stream. These companies were selected to interview both employees of the companies that belong to a certain keiretsu, and also employees of the companies that do not have an obligation to any particular manufacturer of low voltage AC drives. This way it was possible to gather up as wide-ranging data as possible.

5.6 Validity and Reliability

Validity means trustworthiness in the sense that is the subject that should be studied really studied. Generally validity is divided into internal and external validity. External validity tells the domain to which a research's findings can be generalized. Internal validity on the other

hand means the trustworthiness of the research itself. (Metsämuuronen 2005, 57; Yin 2003, 34.)

Internal validity is only a concern for causal case studies, where the investigator tries to prove a causal relationship between event x and event y. Since this case study is exploratory and descriptive, it can be argued, that this logic is inapplicable to this study. At the same time, external validity has been a major barrier in doing case studies. Case studies rely on analytical generalizations, where the researcher is striving to generalize a particular set of results to some broader theory. Without replicating the findings in a second or third time to another similar target group, generalization of the findings is not possible. (Yin 2003, 36-37.) In this research the target group was interviewed only once, so the research findings cannot be automatically generalized. However, the interviewed managers represent a wide range of companies distributing low voltage AC drives in Japan from the upper stream to the down stream, and due to this, the characteristics of the Japanese distribution system can be determined.

The main issue that dilutes the trustworthiness of this research is that a recorder was not used during the interviews. Due to the fact, that the interviewer took only notes while interviewing makes it possible, that the interviewer was not able to write down everything that was said and additionally, the interviewer's own opinions might have influenced the written notes. The other point to reduce the validity is that during the data collection questions were translated from English to Japanese, and after that the notes from the interviews were translated back into English. While translating data from a language to another, meanings might change, and this can foreshorten the data of the research. These things can reduce the validity of this research. Finally, the fact that the researcher did not participate in all the interviews and was not the actual interviewer, observations from the interviews were limited and the researcher was not able to make such a deep insightful analysis of the case through the interviews.

Cultural variables create also a challenge to the researcher while analyzing the data. The interviews were conducted in Japan with the Japanese and as explained in paragraph 2.3, Japanese are very modest, polite and they do not show their true feelings in public. Japanese might even say just the things the opponent wants to hear and leave all the negative things uncommented. The data might be skewed for example due to the fact, that the interviewees did not wanted to say any negative about the distribution system of low voltage AC drives in

Japan. Moreover, while analyzing the data, the researcher's Western way of thinking might bias to the outcomes of the research.

Reliability demonstrates that the operations of a research can be repeated with the same results. The objective of the reliability is to minimize errors and biases in a research. (Yin 2003, 34-39.) The facts mentioned above concerning the validity of this research contribute to the reliability of the research as well. The same interviewees could be interviewed again, but due to the cultural differences, the outcomes of another research might be different. In addition, the fact that the interviews were not recorded affect to the reliability of the research. If the research would be repeated, the same interviewer should be used in order to get same results.

6 FINDINGS

In this chapter, the findings of the research are presented. First, the results from eight half structured interviews are represented through five different areas of businesses where the interviewed companies operate. These areas of businesses are: AC drive manufacturer, sales subsidiary of a manufacturer, manufacturer-affiliated first-tier distributor, independent first-tier wholesaler, and machine integrator. Subsequently the sum up of the findings is presented through five different themes and represented through thematic analysis. The themes are: the Japanese distribution system, the organization structure of the distribution companies, entry barriers, business practices, and the future of the Japanese distribution system.

6.1 Findings Through Areas of Businesses

6.1.1 AC Drive Manufacturer

The interviewed representative of an AC drive manufacturer was Toshiba Mitsubishi-Electric Industrial Systems Corporation's (hereinafter called as TMEISC) manager from the strategic management planning division. TMEISC is a joint venture between industrials systems division of Toshiba and Mitsubishi Electronics. TMEISC plays a role as a manufacturer and sales company for large-sized industrial systems. They distribute total solutions for industrial systems through in-house distributors to machine integrators and manufacturing companies. Due to the nature of their products, TMEISC have direct relationship with the end users to understand the need of the customers and the interviewee thinks that the system is practical. TMEISC produces Toshiba's and Mitsubishi's products and consequently distributes these brands only.

TMEISC works only domestically and the interviewee thinks that the distribution companies are organized effectively in Japan, because it is essential to sell and have maintenance service all over Japan. They have both production and sales divisions, and under the head quarters sales department they have regional branch offices.

The interviewee named ABB, Siemens, and GE when asked if he knows any non-Japanese low voltage AC drive manufacturers. According to the interviewee the main entry barrier for non-Japanese manufacturers to enter the market is meeting the requirements for service and maintenance. Other barriers are the need for tailor-made industrial products in Japan and understanding the strong position of the Japanese end users in the distribution system. The interviewee had never heard of a non-Japanese manufacturer of AC drives to contact them in order to distribute their products.

The interviewee says that TMEISC gives an incentive to in-house distributors based on volume and they also take an inventory risk by having storage. According to the interviewee the added margin depends case by case but in general in-house distributors take from 0.5 % to several percentages of the turnover.

The interviewee sees the future in the field of AC drives mainly unchanged, as no heavy Japanese industry manufacturers will open new plants in Japan. Anyhow, he believes that the drives market is still developing. He says:

> "As competition in motor business is matured and there is no more innovative research and development expected, manufacturers need to concentrate more on drives business."

The interviewee sees the cooperation possible with non-Japanese companies as merger and acquisition could be an option for them, even though he does not see TMEISC in the buyer's side. Joint venture would as well be an option.

The interviewee sees the aging Japanese society and fewer students majoring in engineering as threats in the future. He does not think that there would be any big changes in the TMEISC's distribution channel. Moreover, the future challenge for TMEISC is to increase their overseas sales.

6.1.2 Sales Subsidiary of a Manufacturer

The Group Manager of marketing and sales promotion of Toshiba Industrial Products Sales Corporation (hereinafter called as TIPSC) and the Section Manager of the sales of Yaskawa

Siemens Automation & Drives Corporation (hereinafter called as YSADC) were interviewed as representatives of manufacturer's sales subsidiaries. TIPSC span off from the sales division of Toshiba Group. Their products are manufactured by Toshiba Industrial Products Manufacturing Corporation, Toshiba Schneider Inverter Corporation and by other Toshiba Group Partners. Toshiba Corporation is one of the shareholders of the company. YSADC on the other hand, is a joint venture between Yaskawa Electric and Siemens, and they play the role of the sales arm of these companies in the Japanese market.

Both of the interviewees think that the current distribution system is practical because of the effective utilization of the limited human resources and adequate penetration of the necessary services. It would also be hard to cover all Japan and get information of the end users without this kind of system.

At the moment TIPSC handles Toshiba's and Schneider's products as an independent sales division of Toshiba Group. In the case of YSADC, they handle Yaskawa's and Siemens' products as an independent sales arm of Yaskawa Group. When asked is it usual to distribute products manufactured by one company only, the YSADC's manager says:

> "If the capital and human relationship exist between the manufacturer and the sales company, it is common to have one manufacturer's products."

In case of YSADC, they have a rather simple network. Both head quarters sales department and four regional branch offices have selected distributors or independent business partners who will make direct sales to machine integrators, manufacturing companies etc. Inside the YSADC's own network, there are two types of distributors; independent ones and the others into which Yaskawa Group companies make capital participation. Their major distributors are located in Tokyo and Osaka areas. The interviewee believes that they can cover most of the customers in Japan because their branch offices are concentrated in the big cities like Tokyo and Osaka. On the other hand in case of TIPSC, they have a nationwide network. Their head quarter's sales department and seven regional branch offices control several sales offices nearby. Each sales office has a selected distributor or independent business partner who will make direct sales to contractors, machine integrators etc.

Both of the interviewees said that these networks in the distribution system are important and the networks operate only domestically. According to the TIPSC's manager, they are able to cover Japan from corner to corner only by establishing these networks. In YSADC's managers opinion the system works because the major customers have decision making function for purchasing in the big cities like Tokyo or Osaka, even if the installation site would not be in the big cities.

According to the YSADC's manager, distribution companies are organized effectively in Japan. However, the TIPSC's manager thinks that in terms of efficiency, it is not always efficient to allocate sales forces all over Japan but it is essential to have them in order to ensure high quality service. As both of these companies belong to the manufacturer's group, they do not usually cooperate with competitor's distributors. Both of the interviewees understand that in case of an independent distributor, the cooperation with other distributors is strong.

YSADC's manager named ABB and Siemens, where as TIPSC's manager named Schneider, ABB, Siemens, and Danfoss, when asked to name non-Japanese low voltage AC drive manufacturers. Both of the interviewees think that it is difficult for a non-Japanese low voltage AC drive manufacturer to enter the market. According to YSADC's manager, it is difficult due to the fact, that Japan is one of the centres of the AC drive manufacturing in the world. He says:

> "It is tough for a foreign manufacturer to enter into such fiercely competed market in which the end users are also inside Japan. It is also difficult for foreign manufacturers to meet the requirements for services and lead time, requested by the Japanese customers particularly, without local partners like Yasukawa for Siemens. However, foreign manufacturer can use the advantage if the end users are located outside Japan."

In TIPSC's manager's opinion entering the market is not difficult solely because of the distribution channel. He says:

> "To enter the Japanese market means to enter the most competitive and sophisticated market, as majority of leading AC drive manufacturers in the world are based in Japan. New competitors need to meet domestic demands with brand-new technologies."

At the moment these companies distribute non-Japanese manufacturers, Schneider's and Siemens' products due to the joint ventures of Toshiba Schneider Inverter Corporation and Yaskawa Siemens. Due to the joint ventures, they are able to offer customers a bigger variety of products and the Japanese manufacturer can have a bigger presence in the overseas market where they can expect growth in the future. Both of the interviewees said, that except Schneider and Siemens, no other non-Japanese manufacturers of low voltage AC drives have contacted them in order to distribute their products.

Both of the companies give incentives to distributors or business partners mainly based on volume during the promotion campaigns, while performance will be taken into account to some extend. Both companies also take an inventory risk by having storage. In both cases, head quarter controls the storages, while branch offices do not store by themselves. The interviewees said that the margin structure depends case by case but in general they add 5-10 % to the price when selling it to the next step. If the products are very exclusive the margin might be higher.

According to the YSADC's manager, merger and acquisition between the Japanese manufacturers or with the non-Japanese manufacturers may happen in the future. In general he does not think that there would be any big changes in the Japanese distribution system due to the fact that each phase of the system plays a necessary role in it. YSADC already makes cooperation with Siemens and he sees the difference of the language, culture, and the distance as an obstacle to the cooperation with a non-Japanese company in general. He had experienced the difference of the control and the delivery deadlines by himself while working with a non-Japanese partner. He thinks that the status of the Japanese economy will remain unchanged overall. However, he expects the AC drive business in Japan to go down due to the aging Japanese society, which will affect all in all in a debilitating way to the domestic manufacturing industry.

Additionally, TIPSC's manager thinks that drive-related equipments are one of the promising segments where the sales increase 10 % annually in the matured market. Nevertheless, he sees and fears the rapid demand in overseas. He says:

> "Major machine integrators are now busy setting up operation in abroad where the end-users are. If this trend exceeds, it is natural for their end-users to source AC drives locally and sales operation in Japan might not be always necessary."

He also thinks that the current trend will affect to the distribution system, and the small second or third-tier distributors need to find solutions to survive in the limited Japanese market, if they are not willing to operate abroad. As for the Japanese AC drives market he believes the sales will remain unchanged in the near future while the penetration rate of drives is relatively high and the domestic market is matured. He personally believes that U.S, Europe, and other Asian markets are more promising as there will be plenty of spaces where they can install drives.

6.1.3 Manufacturer-Affiliated First-Tier Distributor

The interviewed representatives of manufacturer-affiliated first-tier distributors were the Manager of Factory Automation Division of Kanaden Corporation, the Manager of Facilities Sales Promotion Group, industrial system of Ryoden Trading Co., Ltd., and the Section Manager of Corporate Planning of Dowa Technos Co., Ltd. Kanaden and Ryoden Trading are affiliated sales companies of Mitsubishi and act as the middle man. Dowa Technos on the other hand is a first-tier sales company of Yaskawa.

All of the interviewees think that the distribution system is practical. Ryoden Trading's manager says that it is because the manufacturer can distribute their products with lower cost compared to the situation where they would alone cover the whole distribution channel from the top to the end. According to the manager of Kanaden the system is practical, as each lower stream actor makes sales activities; instead of the upper stream actors would have big sales forces to cover Japan from corner to corner by themselves.

Kanaden handles only Mitsubishi's AC drives as the basic policy but they can handle other manufacturer's products if the customer requests the brand. In case of AC drives, Ryoden Trading handles only Mitsubishi's products. Furthermore, Dowa Technos have found out that the demand for Yaskawa Siemens' products is the biggest in their business area.

The manager of Kanaden thinks that in case of a first-tier distributor, it is common to distribute products manufactured by one company only. Ryoden Trading's manager says that it used to be common but it is getting more common to have products from several manufacturers to offer better selection to the customers. Also Dowa Technos' manager thinks that this trend is gradually changing. Companies are sometimes facing the situation where the customer requests other manufacturer's products.

All three companies operate only domestically. Ryoden Trading has a nation-wide network and do not have agents under the sales office in the AC drive business. Each sales office has its own network with contractors, machine integrators, construction companies, and design offices. Kanaden has also a nation-wide network. Its head quarters sales department and regional sales offices have second-tier distributors under the organization. Each sales office has a network with contractors, machine integrators, construction companies, and design offices directly, or through the second-tier distributors. In case of Dowa Technos, they put emphasis on not only the direct relationship with large-sized machine integrators and general construction companies, but also to smaller machine integrators and manufacturing companies.

All of the interviewees think that these networks are important. Kanaden's manager says that through the system they can cover Japan from corner to corner and third or fourth-tier distributors are important to cover smaller projects. Ryoden Trading's manager thinks that they are important in order to get the projects through the system. Finally the manager of Dowa Technos thinks the system would not work without the relationship between the contractors.

Kanaden has a tree organization which consists of the branch offices in regional basis under the umbrella of head quarters sales department and both of them have second-tier distributors under the organization. Head quarters sales department and regional branch offices make the sales activities to the second tier distributors; the design room or purchasing section of the contractors, machine integrators, construction companies, and design offices. In case of Ryoden Trading, they have a matrix organization which consists of the sales promotion group in head quarters and sales offices in regional basis. Sales promotion group makes strategic planning and technical proposals while each of 21 sales offices in regional basis play the role of daily contacts to the customers by visiting them frequently. Dowa Technos has a tree

organization which covers Kyushu Island in the south and a part of the main island Honshu and they have their own organization for sales.

All the interviewees think that the distribution companies are organized effectively in Japan. Kanaden's manager thinks that the system is cost effective at each tier and they can cover Japan from corner to corner through it. According to Ryoden Trading's manager distribution companies do not make cooperation with each others because they are competitors. On the other hand, Kanaden and Dowa Technos make cooperation with other distribution companies. In case of Kanaden, if a sales office in a region does not have a stock for specific products, and another distribution company has the stock, Kanaden uses the stock of another distribution company not to keep the customer waiting. Dowa Technos has a relationship with trading companies as business partners and they help in the case if the end user have requested for the products which the company does not handle regularly.

When asked to name non-Japanese low voltage AC drive manufacturers, the manager of Ryoden Trading named ABB, Siemens, and Rockwell, where as the manager of Kanaden named Siemens, Rockwell, and Schneider, and finally the manager of Dowa Technos named Siemens and Schneider. Two of the interviewees think that it is difficult for a non-Japanese manufacturer of low voltage AC drives to enter the Japanese market. Dowa Techno's manager thinks that the Japanese customers have not been satisfied with the customer care operations carried out by the non-Japanese manufacturers. He also thinks that the responsibility level of a non-Japanese manufacturer is lower than of a Japanese manufacturer. The manager of Kanaden thinks that the quick delivery, quick response for the maintenance and support would be the bottleneck for non-Japanese manufacturers if they do not have capable Japanese partners. On the other hand, the manager of Ryoden Trading says:

> "It is not difficult because I know some installation cases. I know a case of an non-Japanese manufacturer with motor as the starter and then AC drive as the follower. However, I think that the network for the maintenance and support would be the bottleneck for non-Japanese manufacturers wanting to enter the market."

At the moment Kanaden and Ryoden Trading do not distribute any non-Japanese low voltage AC drives due to their commitment to their parent company. Dowa Technos on the other hand handles Siemens' products. So far Kanaden and Ryoden Trading had never heard of a non-Japanese manufacturer of low voltage AC drives to contact them in order to distribute their

products; even though the manager of Ryoden Trading thinks that it would be possible. Dowa Technos have been contacted by Siemens and Schneider.

Ryoden Trading do not get any incentive from the manufacturer and do not provide one to the sales forces. Dowa Technos gets the incentive from the manufacturer mainly based on volume during the campaigns for the promotion and the intensive sales promotion prior to the end of the fiscal year. Kanaden provides the second-tier with an incentive based on volume some times. Dowa Technos do not have storage and they believe it is cost effective to have stocks at the manufacturer's site or at the manufacturer's sales subsidiaries. Kanaden has storage at the branch offices depending on the customer's demand on the location. Ryoden Trading do not store AC drives and the manufacturer ships the products to the customer in their case.

The added margin is 5-15 % in case of Kanaden, Ryoden Trading and Dowa Technos. When selling to the to the second tier Kanaden adds only around 5 %, so the price at the customers do not differ much despite they have a middle man under them or not. Only the manager of Dowa Tehcnos answered who is in charge of decision making of choosing the products, and in their company the top of the sales department makes decisions in line with the customer's requirements.

The manager of Ryoden Trading thinks that the market will be changed and the competition will be fiercer in the future. He expects the entry of some non-Japanese manufacturers into the market. On the other hand he does not expect the market expansion for AC drives because he thinks the market has already matured. The interviewee says that in general the Japanese distribution system will change and less middle phases are expected. He does not think that they would make cooperation with non-Japanese companies in the future due to their keiretsu relations. The manager thinks that the Japanese economy will keep growing gradually for a couple of years and the Japanese manufacturing industry will keep some part of production facilities inside Japan, even if they know it would be cheaper to operate for example in China. Furthermore, he expects a stagnant demand for the AC drives to continue.

The manager of the Kanaden thinks that the AC drive market will be changed due to the customer base expansion into the environmental industry or medical equipment industry. He thinks that in general the Japanese distribution system will be changed. He expects some manufacturers to make sales activities directly to the customer and the distributing company

under the manufacturer just makes delivery and handles payment. He thinks that the cooperation with a non-Japanese manufacturer is not likely to happen in the future due to their keiretsu relations. Furthermore he expects the Japanese economy to keep growing gradually for a couple of years and the demand for the AC drives to be stagnant.

Finally, the manager of Dowa Technos thinks that there will be no big changes in the future. However, he thinks that the competition will be fiercer in the field of AC drives, because the domestic market has already matured. He expects the competition between manufacturers in international level to get more severe. He personally thinks that the company would like to establish cooperation with non-Japanese manufacturers if it is necessary to meet the customer's needs. However, he doubts if non-Japanese manufacturers can meet the Japanese customer's needs and are the sales personnel of the distributor able to trust them from the view point of a reliable partner.

6.1.4 Independent First-Tier Wholesaler

The interviewed representative of an independent first-tier wholesaler was the head of Tokyo sales office of Tanaka Co., Ltd. They are an independent wholesaler who acts as a middle man in the distribution system. The interviewee thinks that the distribution system is practical because each phase of the system plays a role to add value by knowing the specialty of each one's customers. Tanaka decides the products they distribute according to the need of their customers; for example construction companies and design offices. Their customers nominate the products and Tanaka selects them by considering the price, after sales service, and lead time with the acceptance of the customer. For Tanaka it is common to distribute products from several manufacturers as it is the role of a wholesaler.

Tanaka operates only domestically and they have 48 branch offices around Japan. Each office has its own network with contractors, construction companies and design offices, and the interviewee thinks that these networks are important for them. These offices make the daily sales promotions of their distributed items by visiting their customers frequently. According to the interviewee the distribution companies are organized effectively due to the fact that they provide the manufacturer only a limited number of sales contacts instead of thousands of random end users. He also thinks that distribution companies do not usually cooperate with

each others because they are competing against each others. Tanaka acts as the sales arm of a manufacturer while they can get technical input back from the manufacturer according to their needs.

The interviewee was not able to name any non-Japanese low voltage AC drive manufacturers when asked and at the moment they are handling Mitsubishi's, Toshiba's, Hitachi's, and Yaskawa's products. He thinks that the entry barriers for non-Japanese low voltage AC drive manufacturers are to establish a good brand image and to get Japan Industrial Standard (JIS) for their products. The interviewee had never heard of a non-Japanese manufacturer of low voltage AC drives to contact them in order to distribute their products.

Tanaka does not get and do not provide any incentives. They also do not have storage because they make an order to the manufacturer when they have a request from their customers. The added margin in Tanaka's case is approximately 10 % when they sell to the next step. The final decision maker in Tanaka's side is the head of the sales office according to the needs of the customers.

The interviewee sees the future of the distribution system changing. He thinks that only the strongest players will survive and some wholesalers might face big challenges. He says:

> "I expect that the manufacturers will make capital participation into the independent wholesalers. Foreign manufacturers will also enter the market and middle phases in the distribution system will diminish because Japanese do not care so much anymore if the manufacturer is domestic or not and this way the middle men are not so valuable anymore."

Tanaka has no objection to handle non-Japanese products if the products are attractive and the non-Japanese players can play the necessary action. The interviewee thinks that lower perception of a non-Japanese manufacturer's brand name would prevent them to consider the cooperation. He is nevertheless confident that the economy has turned into a growing stage and the market for the low voltage AC drives has already hit the bottom.

6.1.5 Machine Integrator

Machine integrators are represented through the interview with the Manager of Sales Department of Kyowakiden Industry Co., Ltd. They work as a machine integrator and provide repair and maintenance services to the end users. The interviewee thinks that the current distribution system is practical because their company gets good support from the trading companies in the upper stream. Kyowakiden chooses the products that they distribute according to their customer's needs by benchmarking the manageability, performance, price, and endurance of the products. As a machine integrator, it is usual to represent several brands to meet the customer's needs as they are the middle man sitting very close to the end users.

The networks around Kyowakiden are domestic and consist of trading companies who act as a buying agent for them and selling agents for the manufacturers. He says:

> "In order to limit the number of trade accounts and clerical work on sales, some companies appoint certain trading companies as their agents. Manufacturers and machine integrators request their customers or suppliers to trade with their appointed trading companies."

The interviewee thinks that these networks with trading companies are important as they can also introduce customers to Kyowakiden.

Kyowakiden has sections for design and integration under their sales department. The design section has contact with the purchasing section of the end users. According to the interviewee, distribution companies are organized effectively in Japan but he does not see close cooperation made with other distribution companies.

The only non-Japanese low voltage AC drive manufacturer that the interviewee was able to name was Siemens. He thinks that it is difficult for non-Japanese low voltage AC drive manufacturer to enter the market in Japan due to the fact that the key success factor in the market would be well-established after-sales support. At the moment Kyowakiden do not distribute any non-Japanese manufacturer's AC drives and he had never heard of a non-Japanese manufacturer to contact them in order to distribute their products.

As a machine integrator Kyowakiden do not use incentives as a business practice and they neither have storage. The interviewee says:

> "In general, machine integrators add about 20 % of the price at which they purchased when they sell it to the end users."

He thinks that the machine integrator provides the end users added value to the system by integrating the drive into other equipment. In case of Kyowakiden, their designers are in charge of the decision making when choosing the products they distribute while taking into consideration the needs of their end users.

According to the interviewee, the future looks good for the drives because he thinks that the demand will increase. If manufacturers shift to direct sales, he thinks there will be changes in the Japanese distribution system while the middle man will face pressure for merger and acquisition. In the interviewee's opinion, foreign brands would be applicable for use in overseas facilities constructed by Japanese companies. He also thinks that the status of the Japanese economy do not change a lot, even though he expects certain demand for the AC drives due to the fact that the Japanese manufacturing industry will enhance streamlining and energy saving further more.

6.2 Sum Up of the Findings

Thematic analysis is a way of seeing by perceiving a pattern or theme in seemingly random information. Thematic analysis can be used with qualitative methods and it allows for translation from qualitative information into quantitative data. It can be seen as a process of coding. (Sayre 2001.) Next, the sum up of the findings is presented through five different themes.

6.2.1 The Japanese Distribution System

The interviewees were asked to describe the structure of the Japanese distribution system. According to the interviewees the Japanese distribution system has many layers and products are distributed through a network of different actors. All the interviewees think that the

current distribution system is practical, because every layer plays an important role to add value in each level. It would be difficult for one company to cover geographically the whole Japan by itself, and at the same time be able to serve all the customers from the smallest to the biggest ones. Now upper stream companies do not need big sales forces that require a lot of capital and personnel because lower stream companies make sales activities on behalf of the upper stream companies. This also makes it possible to cover the market in Japan from corner to corner.

The first player in the Japanese distribution channel of low voltage AC drives is the manufacturer. It is followed by the sales subsidiary, which is the sales arm of the manufacturer. They make sales activities for the manufacturer and usually cover nation wide network. In the next layer, there are the first and second-tier distributors. In some cases even third or fourth-tier distributors exist. These tiers act as a selling agent for the tier above and a buying agent for the tier below. They work in the customer interface and try to satisfy the needs of the customers as well as possible. It is also possible to bypass some or even all of the layers, and for example a manufacturer can distribute directly to the end user if desired. The Japanese distribution channel of low voltage AC drives is represented in figure 5.

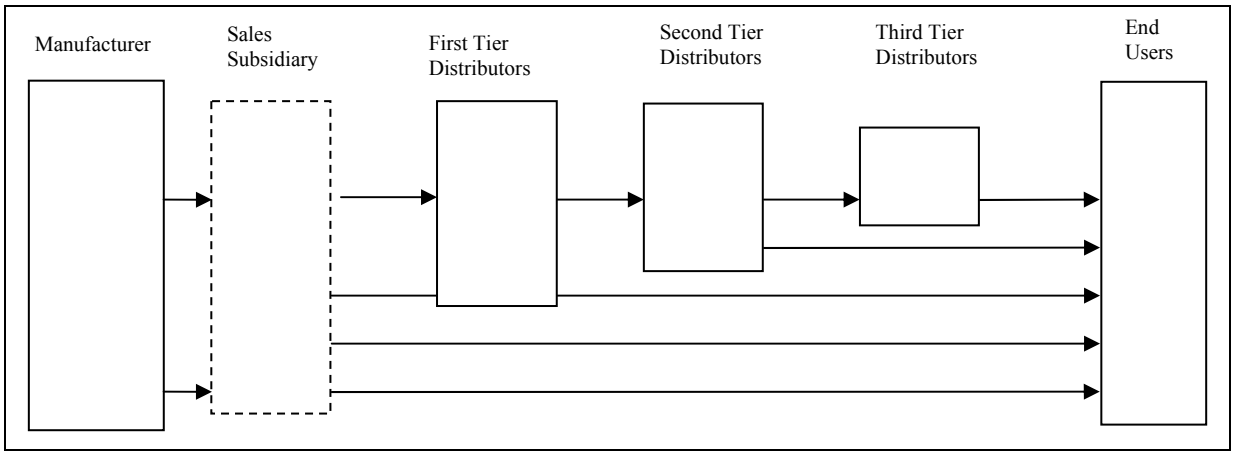


FIGURE 5 The Japanese Distribution Channel of Low Voltage AC Drives

According to the interviewees all the networks in the system operate only domestically and these networks are considered to be really important. Through the networks the distribution companies can cover the whole Japan as a market area and they can easily get projects

through the system. Third or fourth-tier distributors are also important to cover smaller projects. Each tier has specific information about the customers in different levels and about their needs in the market. Furthermore, one advantage of the system is to get new customers through other layers of the network.

Moreover, the interviewees were asked is it common to distribute products manufactured by one company only. In the case of a sales subsidiary of a manufacturer and manufacturer-affiliated first-tier distributor, it is common to distribute products manufactured by a certain company. In these cases financial support and tight human relationships between the manufacturer and the sales company are likely to exist. These companies basically belong to the same keiretsu. On the other hand, in the case of an independent wholesaler and machine integrator, it is common to distribute several brands to meet the needs of the customers. Independent wholesalers and machine integrators select their products according to price, endurance, manageability, performance, after sales service, and lead time. Customers can also nominate the products they want and their needs will be satisfied.

6.2.2 The Organization Structure of the Distribution Companies

The interviewees described the organization structure of the company they are working for. In the case of the upper stream distribution companies, it can be noticed, that they share the same kind of organization structure. In general, the organization structure of the upper stream distribution companies can be described as follows: The head quarters of the company holds a sales department, which is responsible of strategic planning and technical proposals. Regional sales and branch offices operate under the umbrella of the head quarters sales offices and they carry out the daily sales activities to the second tier distributors. The second-tier (or third/fourth-tier) distributors consist of machine integrators, construction companies, manufacturing companies, plant engineering companies, design offices, and contractors.

When asked are the distribution companies organized effectively in Japan, all the interviewees thought that they are organized effectively. In the interviewees' opinion, this kind of organization structure ensures high quality of service and maintenance, and the distribution companies are able to cover the whole Japan as their market area.

Furthermore, the interviewees were asked about the cooperation with other distribution companies. Five interviewees think that the distribution companies do not have close cooperation with other distribution companies. Distribution companies compete with each others and this is the main reason for non-existent collaboration. They can also have a tight commitment to a certain manufacturer, and due to that, they are not able to cooperate with other distributors. Exceptionally two manufacturer affiliated first-tier distributors said that they make cooperation with other distribution companies. This cooperation helps them to distribute products quickly to the customer in the case of stock shortage and if the customer is asking for products which the company does not handle regularly. In the case of independent distributors, the interviewees were conscious of the wide cooperation carried out between the distributors.

In addition, the nature of the cooperation with the manufacturer and the distribution company was described by the interviewees. The cooperation with the manufacturer of low voltage AC drives and the distribution companies consist of different roles and the tasks that they carry out vary from each others. In summary it can be found out, that the distributor's role is to act as the sales arm of the manufacturer, while the manufacturer gives technical input according to the request from the distribution company.

6.2.3 Entry Barriers

Currently the interviewed case companies distribute low voltage AC drives from different manufacturers. Represented low voltage AC drives manufacturers are presented in table 3. Some companies are committed to a particular manufacturer, whereas some companies represent several manufacturers. Represented Japanese manufacturers were: Mitsubishi, Yaskawa, Toshiba, Hitachi, Omron, and Sumitomo. Three companies represent also non-Japanese manufacturer's products at the moment. Two companies represent Siemens' products due to the joint venture of Yaskawa Electric and Siemens, and moreover one company represents Schneider's products due to the joint venture of Toshiba Schneider Inverter Corporation.

TABLE 3 Represented Low Voltage AC Drives Manufacturers

Company	Low voltage AC drives manufacturers represented
Toshiba Mitsubishi-Electric Industrial Systems Corporation	Toshiba, Mitsubishi
Toshiba Industrial Products Sales Corporation,	Toshiba, Schneider
Yaskawa Siemens Automation & Drives Corp.	Yaskawa, Siemens
Kanaden Corporation,	Mitsubishi
Ryoden Trading Co., Ltd.	Mitsubishi
Dowa Technos Co., Ltd.	Yaskawa, Yaskawa Siemens
Tanaka Co., Ltd.	Mitsubishi, Toshiba, Hitachi, Yaskawa
Kyowakiden Industry Co., Ltd.	Mitsubishi, Hitachi, Yaskawa, Omron, Sumitomo

The interviewees were asked to name all non-Japanese manufacturers of low voltage AC drives that they are aware of. These companies are presented in table 4. It can be seen that seven of the interviewees knew Siemens and half of the interviewees knew that ABB is also a low voltage AC drive manufacturer. Schneider was recognized by three and Rockwell by two of the interviewees, whereas only one interviewee knew both Danfoss and General Electric. One of the interviewees did not know any non-Japanese manufacturers of low voltage AC drives.

TABLE 4 Recognized Non-Japanese Manufacturers of Low Voltage AC Drives

Company	Recognized by the interviewee
Siemens	7
ABB	4
Schneider	3
Rockwell	2
Danfoss	1
General Electric	1
Do not recognize any	1

When asked about the difficulty for a non-Japanese manufacturer of low voltage AC drives to enter the market in Japan, all but one of the interviewees answered that entering the market is considered to be difficult. The main challenges for non-Japanese manufacturers are meeting the requirements for the maintenance and support, lead time requested by the customers, and establishing a reliable brand image. The market in Japan is considered to be the most

competitive and sophisticated market of low voltage AC drives in the world. Therefore a new competitor would have to meet the domestic demand with brand new technologies.

Moreover, the Japanese customers are very demanding and end users can demand tailor made products. This is why standard low voltage AC drives do not necessarily meet the case in Japan. The interviewees also think that it is hard for a non-Japanese manufacturer to understand the strong position of the end users in the market in Japan. Without a Japanese partner it is considered to be very challenging to enter the market. One of the interviewees thinks that the Japanese customers have not been satisfied with the customer care operations carried out by the non-Japanese manufacturers. The interviewee also thinks that the responsibility level of a non-Japanese manufacturer is lower than of a Japanese manufacturer.

Furthermore, the interviewees were asked do they currently distribute non-Japanese manufacturer's products, and if they are, what kind of benefits the company gains from it. Three companies out of eight are currently distributing non-Japanese manufacturer's drives besides the Japanese manufacturer's low voltage AC drives. These three distribution companies distribute non-Japanese manufacturer's products due to the joint ventures that Siemens and Schneider has with the Japanese manufacturers. Due to these joint ventures the distribution companies are able to offer customers a bigger variety of products and the Japanese manufacturer can have bigger presence in the overseas market where they can expect growth in the future.

In addition, the main reason not to distribute non-Japanese manufacturer's products is keiretsu relations. So far, the non-Japanese manufacturers had not been in contact with the interviewed distribution companies related to possible co-operation. Only those three companies already co-operating with the non-Japanese manufacturers are an exception. The rest of the interviewees had not experienced any contacts from non-Japanese manufacturers.

However, when asked about the interviewees' attitude towards prospects for cooperation with non-Japanese manufacturers in the future, the attitude is positive. Five interviewees sees the cooperation possible, although it has to be taken into consideration that three of them already make cooperation with non-Japanese manufacturers through joint ventures. The most important thing is to keep customers satisfied and if the products are attractive and the non-Japanese manufacturers can play all the necessary actions the cooperation might be possible.

According to one interviewee non-Japanese brands would be more applicable for the use in overseas facilities constructed by the Japanese companies.

On the other hand, three interviewees did not see the co-operation likely to happen. The reasons that would prevent the co-operation are keiretsu relations, the less established technical support level by the non-Japanese manufacturers, and the possible lower perception of the brand name. Also the cultural differences, such as the language barrier and different business culture, are obstacles for the cooperation. One interviewee also doubts that a Japanese distributor might not trust a non-Japanese manufacturer enough to make cooperation with them.

6.2.4 Business Practices

The interviewees were also asked to describe the business practices used by the distribution companies. According to the interviewees, incentives are used inside the distribution system as a motivation tool. Five interviewees told that incentives are used and the given incentive to a distributor is mainly based on volume during the promotion campaigns and the intensive sales promotion prior to the end of a fiscal year. Also performance is taken into account to some extent.

Moreover, half of the interviewed distribution companies take inventory risk by having storage. It can be noticed, that upper stream distributors stock up while lower stream distributors generally do not. It is considered to be cost effective for the lower stream distributors to have stocks at the manufacturer's site or at the manufacturer's sales subsidiaries.

Furthermore, the amount of the margin when selling low voltage AC drives to the next step inside the distribution system varies case by case. Generally it can be summed up; that the margin added after each tier by a distributor is around 5-15 %. In the case of a machine integrator the margin might be around 20 % due to the added value to the customer by integrating the drive into another equipment. If the distributed products are exclusive the margin might rise as high as to 30 %. The general margin structure in the field of low voltage AC drives is presented in figure 6.

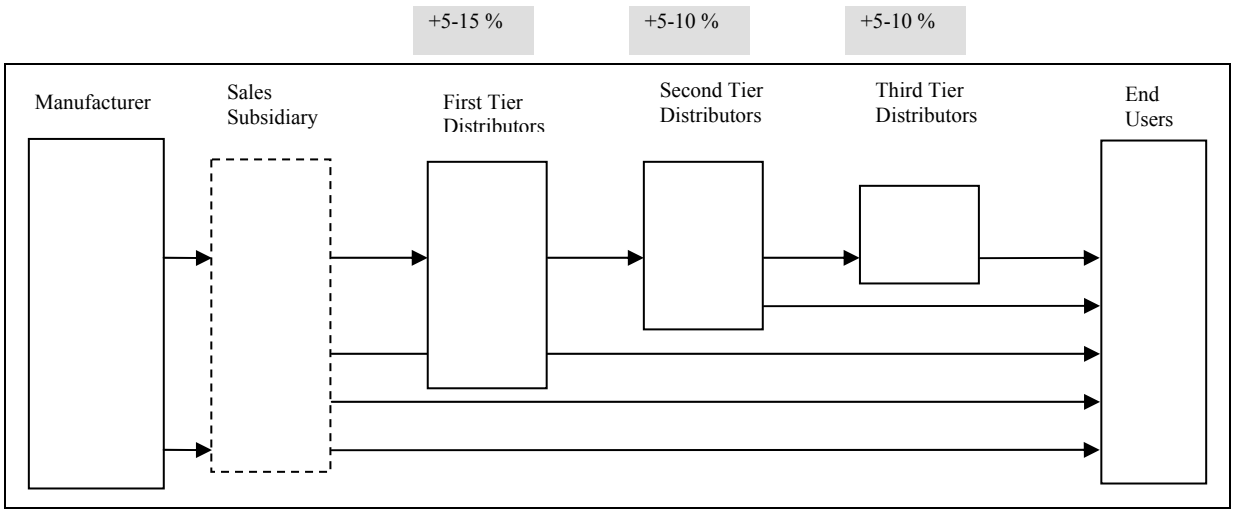


FIGURE 6 Margin Structure in the Field of Low Voltage AC Drives

The interviewees were also asked who is in charge of the decision making when they choose the products they distribute. Only three interviewees were able to give an answer, whereas all the others said that they are committed to distribute a certain manufacturer's products. In the case of a wholesaler, their customers nominate the products that they want to buy. After that the wholesaler selects the products according to their customers needs considering the price, after sales service, and lead time. The final decision maker at the wholesaler's side is the head of the sales office. In the case of the system integrator, their designers have the right to make the decision according to the needs and requests from the end user. Finally, one manufacturer affiliated first-tier distributor told that the top of the sales department makes the decision in line with the customer's requirements.

6.2.5 The Future of the Japanese Distribution System

The interviewees were asked to give their opinion about the future of the Japanese economy, the future of the low voltage AC drive business, and about the distribution system. When asked how the future look likes for the Japanese economy, three interviewees think that the economy will keep growing gradually for the couple of years. Two interviewees think that the status of the Japanese economy will remain unchanged and three interviewees did not give their opinion.

In the case of the demand for low voltage AC drives and the status of the domestic market, the interviewees have a rather positive image even though some threats are in evidence. It can be summarized, that most of the interviewees think that the demand for low voltage AC drives will remain the same and they believe that the Japanese manufacturing industry will keep some part of the production facilities inside Japan, even if they know that operating for example in China would be more cost-effective. However, the penetration rate in the Japanese drives market is relatively high and the domestic market is already matured. The present trend is to increase overseas sales and this creates challenges for the Japanese distribution companies. One another threat is the aging society of Japan, which will have an influence to the demand in all fields and to the whole manufacturing industry in Japan.

Furthermore, the interviewees also expect that non-Japanese manufacturers will enter the Japanese market and it will make the competition even fiercer in the matured market of low voltage AC drives. It can also be noticed, that the Japanese do not care anymore so much if the manufacturer is domestic or not. Anyhow, the competition is fierce and only the strongest players are likely to survive. Manufacturers are expected to make capital participation into the operations of the independent wholesalers. Major machine integrators are also setting up operations abroad where the end users are. If this trend continues, it is natural for their end users to source AC drives locally and this way sales operations in Japan might always not be necessary.

According to the interviewees the Japanese distribution system as well is going to change in the future. Six interviewees think that the system is changing, whereas one interviewee thinks that it is going to remain the same and one interviewee did not answer. The trend towards increasing overseas sales is going to cause the biggest change to the system. Small and middle-sized distributors, which generally operate in the second or third-tier of the distribution system, will face challenges to survive in the limited domestic market if they are not willing to operate abroad as well. Moreover, if the manufacturers will shift to direct sales, the middle men will be in trouble and they might face pressure for mergers and acquisitions. All in all, it can be summarized, that less middle phases are expected in the distribution system in the future.

7 CONCLUSIONS

This case study research provides descriptions of a situation faced by the managers of eight different companies distributing low voltage AC drives in Japan. The main objective of the research was to find out what is the structure of the Japanese distribution system in the field of low voltage AC drives. The Japanese distribution system has been examined by several researchers in a general level but in this research the focus was on the distribution system of a certain line of business. In addition the researcher wanted to find out is it possible for a non-Japanese company manufacturing low voltage AC drives to enter the distribution system in Japan. The answer was found for both of the research questions. However, as with all case studies, care must be taken when generalizing these findings.

7.1 Main Findings

The pre-existing theoretical knowledge of the Japanese distribution system in general supported the findings of this research. The Japanese distribution system was described as multi-levelled and complex system of several actors. The theory of the keiretsu system described that keiretsu system ties up member companies to each others through financial, commercial, and governance relationships. Keiretsu are restricting the operations of the companies at the same time as it supports them in many ways. The findings of this research indicate that the distribution system of low voltage AC drives had similar characteristics as the Japanese distribution system in general. The distribution system of low voltage AC drives had many layers and products were distributed through a network of different actors. The interviewed managers were relatively satisfied to the system and regarded the system to be efficient. Some of the interviewed companies belonged to a certain keiretsu and had an obligation to distribute only a certain manufacturer's products while being supported by the keiretsu system.

The researcher discovered that the distribution channel for low voltage AC drives in Japan differs from the general distribution model of low voltage AC drives as hypothesized. The general model had same players in the distribution channel as in the Japanese model but in the

Japanese model there were more layers and intermediaries. Keiretsu relations made the distribution of low voltage AC drives different due to the fact that in the Japanese model distributors belonging to some keiretsu are obligated to distribute only a certain manufacturer's products, whereas in the general model the distributors are not obligated to distribute particular manufacturer's products.

The interviewees thought that the Japanese distribution companies are organized effectively and the organization structure of the companies made it possible to cover whole Japan as a market area. Additionally, the system ensured high quality of service and maintenance. Service and high quality expectations were characterized as most important values for Japanese customers and it can be argued that the findings of the research strengthened this description.

Another main objective of this research was to find out is it possible for a non-Japanese low voltage AC drive manufacturer to enter the Japanese distribution system. The entry barriers for non-Japanese manufacturers were studied and the main entry barrier according to the interviewees was meeting the requirements for the maintenance and support. Also establishing a reliable brand image was concerned to be an obstacle. The sophisticated and matured market of low voltage AC drives in Japan was one of the concerns as well. The theory of the entry barriers emphasized the keiretsu system to be the biggest obstacle for non-Japanese companies trying to enter the Japanese market. A Japanese partner and thorough market research were also described to be essential for successful entry. The findings of the research support the theory due to the fact, that the interviewed managers thought it would be challenging to enter the market without a Japanese partner. The Japanese customers were described to be very demanding and it was also said, that it is hard for a non-Japanese manufacturer to understand the strong position of a Japanese end user. Three of the interviewed companies made already cooperation with non-Japanese low voltage AC drive manufacturers through a joint venture and this supports the fact that cooperation is needed to enter the Japanese market. On the other hand, three interviewees did not see the cooperation with the non-Japanese manufacturers possible due to their keiretsu relations, which confirmed the strong position of a keiretsu system as an entry barrier.

The natures of the distribution system and keiretsu networks were described to be in a state of change when concerning the future. The findings of the research supported the theory and it

was said that the trend towards increasing overseas sales is going to change the nature of the distribution system. Small and middle-sized distributors were most likely to face challenges in the case that the manufacturers shift to direct sales. In the future less middle phases were expected in the distribution system according to the interviewees, which supported the theory of the distribution systems future prospects.

In conclusion it can be argued, that for the moment it is considerably good time for non-Japanese companies to enter the Japanese market, due to the fact that the attitudes towards doing business with non-Japanese companies have changed and trade regulations have been removed. It could be even said that the trade with Japan is more open than ever. Some non-Japanese companies have already been successful in the Japanese market and it gives hope to the others as well.

In order to make profitable business in Japan the cultural aspects have to be studied carefully. Good relationships, loyalty and trust are the foundation of successful business in Japan. It takes time and patience to start doing business in the Japanese market and it should not be considered as a test market. The concept of loosing face has to be taken seriously when doing business with the Japanese and non-Japanese managers have to be aware how to behave with the Japanese business partners.

Furthermore, the Japanese distribution system has many faces. It has a long history and it is a very unique system. The distribution system is multi-levelled and good relationships are the base of successful business. Japanese rank quality and service as the most important marketing instruments whereas price is the least important. Keiretsu relations are part of the distribution system and they tie up companies through financial, commercial, and governance relationships while keeping competitors out of the market. Japanese culture values mutual trust and loyalty, and these values make the distribution keiretsu still an accepted form of business practice. Nowadays the distribution system is also facing challenges due to the increasing overseas sales and some of the middle phases in the distribution channel are likely to disappear in the future.

Additionally, the usage of low voltage AC drives saves energy and the market for the drives are growing steadily. The Japanese market is the biggest national low voltage AC drives market in the world and because of that, a very interesting market for non-Japanese

manufacturers. The findings of the research show up, that a Japanese partner is essential when wanting to enter the Japanese market in this field. The competition in the low voltage AC drives market in Japan is fierce and the market is already matured. The non-Japanese manufacturer's products have to be of high quality and the after sales services have to be in order if wanting to bypass the barriers to enter the Japanese market. In the researchers opinion a joint venture is one possibility to enter the market or another option is to make co-operation with the big independent distributors in Japan.

It can be argued, that the findings of the research support the pre-existing theory fairly widely and this way it can be discovered that the Japanese distribution system is still a very complex system with its many layers. Additionally it can be found out, that the keiretsu system is furthermore maintaining its binding nature in the network of member companies. Non-Japanese companies have a possibility to enter the Japanese market but they have to study the nature of the market carefully and create good relationships with the Japanese partner before the entry is possible.

7.2 Analysis of the Research

This research gives new information about the Japanese distribution system in a specific business area of low voltage AC drives. The research gives also a brief outlook to the Japanese business culture and to the challenges facing non-Japanese companies wanting to do business in Japan. The findings of this research cannot be generalized as such, but nevertheless an overview can be made about the challenges of the Japanese distribution system in the field of low voltage AC drives and about the challenges to the market entry. All non-Japanese companies interested in Japanese business can exploit the findings of this research to some extent, where as non-Japanese companies manufacturing low voltage AC drives are able to take the biggest advantage of the research while making plans about doing business in Japan.

The theme for the research was very challenging due to the lack of previous studies, the geographical location of Japan, and the data collection circumstances. The implementation of the research could be criticized to some extent, and in order to collect more reliable data, recorder should have been used in the interviews and the researcher should have conducted all

the interviews personally. However, due to the challenging nature of this research, the research was conducted in a best possible way available.

7.3 Suggestions for Future Research

In the future, the characteristics of the Japanese distribution system could be studied further in general as well as by certain areas of businesses. It would be also interesting to compare regional differences in the distribution system. Japan could be divided geographically into different distribution areas in order to see if there are distinctions in the distribution system regionally inside the Japan.

The distribution system of low voltage AC drives could also be studied further and more companies from different levels of the distribution channel could be studied. There should be several different cases to be able to compare the data to each others and get reliable information. The distribution system of companies belonging to keiretsu and not belonging to keiretsu could be compared in a more detailed way to see how these companies differ from each others.

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APPENDIX 1

INTERVIEW OUTLINE

Background variables of the interviewee:

- Name, age, gender
- Company where the interviewee works (name, size, line of business)
- Position in the company
- Work experience (in this company, others)
- Working years

Theme 1: Distribution system

- What kind of system is the distribution system of low voltage AC drives in general?
- How does the interviewee see the distribution system and is the system practical? Why?
- How do the distribution companies choose the products they distribute?
- Is it common to have products manufactured by one company only? Why?
- What kinds of networks exist around the distribution system?
- How important these networks are in the distribution system? Why?
- Do the networks operate only domestically or are there any international networks?
- Do distributors have their own organizations, and if they do, what is their role in the distribution system?

Theme 2: Distribution companies organization structure

- How is the distribution companies organized in Japan? Could you give an example concerning this company?
- Are the distribution companies organized effectively in Japan? If not, what should be different?
- Does distribution companies do close co-operation with other distribution companies? Why?
- How does the distributor cooperate with the low voltage AC drives manufacturers? What kind of roles each party has and what kind of tasks they carry out?

Theme 3: Entry barriers

- Does the interviewee know any non-Japanese manufacturers of low voltage AC drives? Can you name any companies?
- Does the interviewee think that it is difficult for a non-Japanese manufacturer of low voltage AC drives to enter the market in Japan? Why?
- Does the company where the interviewee works distribute non-Japanese low voltage AC drives? Why?
    - If yes, what kind of benefits the company gains from it?
- Has any non-Japanese manufacturers of low voltage AC drives ever contacted your company about distributing their products? Can you name any company?

(Continues)

Theme 4: Business Practice

- Is there any incentive as the business practice, and if there is, is it based on volume, performance or others?
- Do you have storage of AC drives when you purchase them from the manufacturer?
- What kind of margin structure do you have in the distribution system?
- Who is in charge of the decision making when choosing the products you distribute?

Theme 5: Future

- Does the interviewee see that there would be any changes in the field of low voltage AC drives in the future? For example in the products, in the business of low voltage AC drives in general, or in the distribution system of low voltage AC drives? If yes, what kind of changes?
- Does the interviewee see that in the future there would be any changes in the Japanese distribution system in general? If yes, what kind of changes?
- What kind of prospects there is to make co-operation with non- Japanese companies in the future?
    - What encourages to the co-operation?
    - What prevents the co-operation?
- In general, how does the future look like for the Japanese economy?