Corporate Turnaround beyond Industrial Change

—From Case Studies of Japanese Electronic Component Firms—

Naoto Iwasaki
Hidetaka Kaiho
Todd Bennett Neff

INTRODUCTION

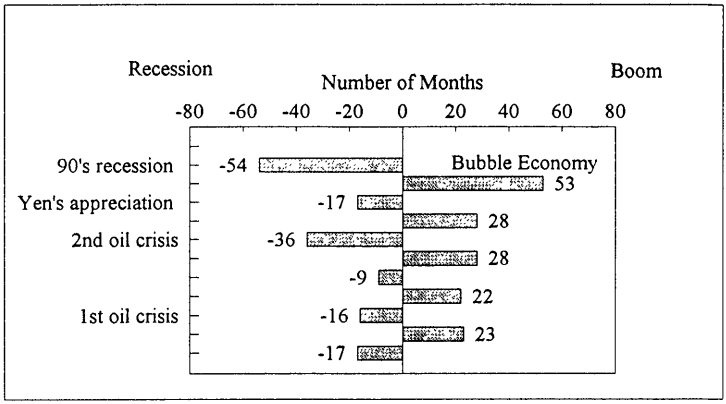
1. The 90's Recession

Japan's Economic Planning Agency defines the Japanese economic cycle, as a "business boom and recession"[1] According to this definition, the Japanese economy enjoyed a business boom from February 1983 to June 1985 (**figure** 1). After that, the drastic appreciation of the yen introduced by The Plaza Accord triggered the next severe recession, which continued until November, 1986. The higher yen, having risen from 241 yen per dollar to 171 yen, greatly affected Japanese firms which depended on a large volume of exports. Positive corporate performances in these years turned negative compared with the previous year. Even now, a lot of Japanese firms recognize this recession as one of the most severe changes their business environment has experienced.

Fortunately, this recession caused from the yen upswing in 1985 recovered quickly, because the Japanese economy subsequently came to

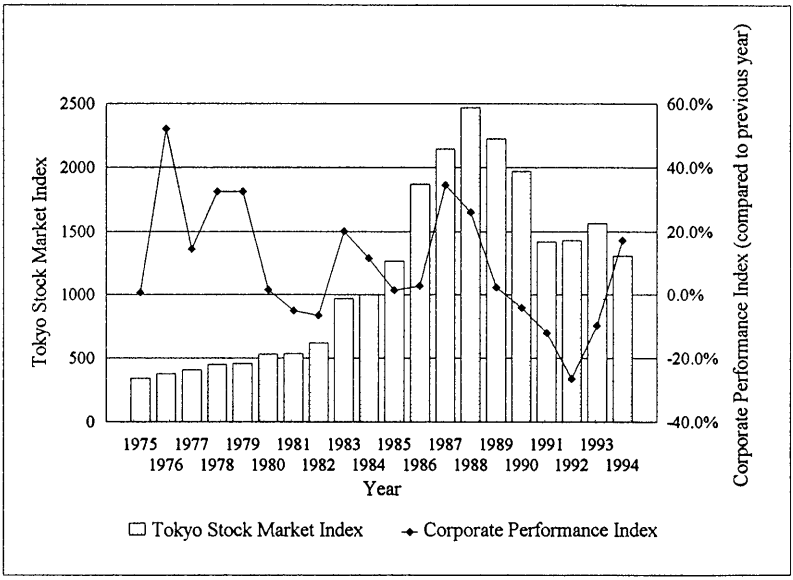
1) Asahi Shinbun, *JAPAN ALMANAC 1995*, Tokyo, 1994.

Figure 1. Length of Past Recessions and Booms in Japan



source : Economic Planning Agency.

Figure 2. The Bubble Economy and Drastic Recession



source : Toyo-Keizai, Long Term Economic Statistics

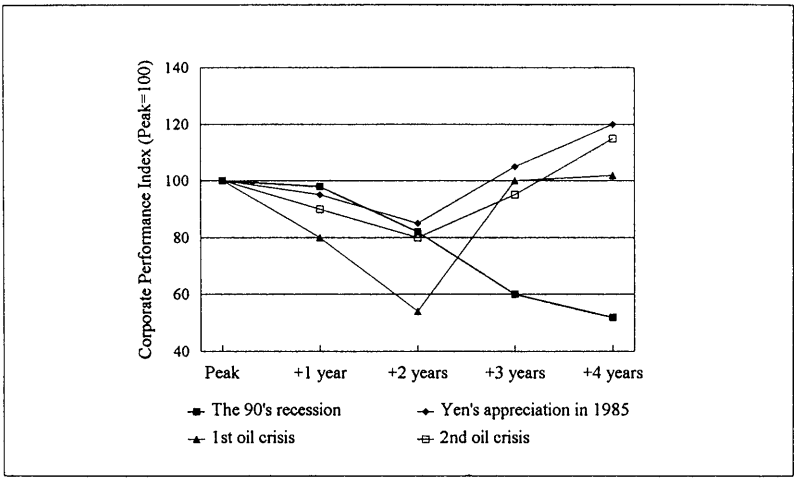
enjoy the "bubble economy", an unprecedented business boom in Japan (**figure 2**). The boom period continued from the end of 1986 to April, 1991. During this period, the stable yen-dollar rate brought high performance to export-oriented firms. Furthermore, asset prices, such as land prices, housing prices and stock prices jumped to unprecedented levels and sales of luxury goods took off.

Nevertheless, all the economic indices drastically dropped from their peak in the former half of 1991. At that point, the bubble economy collapsed. The "90's recession", which some called "complex recession", began, from this bubble corruption, the end of which is only now becoming visible but not so clearly. Japanese industries and firms have never faced an economic recession so severe. It has generated tremendous pressure which caused not only product prices but also value of assets to take a precipitant fall. And it may upset or transform the whole of the Japanese industrial structure. Even most of the firms in the automobile and electronics industries, which had been intensifying their international competitiveness throughout the 1980's, have been forced to change their corporate strategies drastically.

The identifying feature of the 90's recession has been its length, which has stubbornly eclipsed that of all predecessors, especially as compared with the recession in 1985 (**figure 1**). Even before that, the Japanese economy had faced various recessions which badly influenced the steady growth of the economy. The first and the second oil crisis in the 1970's caused a sudden rise of commodity prices and a decrease in corporate performance.

Furthermore, in all of the past recessions, the corporate performance index of all Japanese firms turned around after two years from the

Figure 3. Recovery of Corporate Performance after Recessions

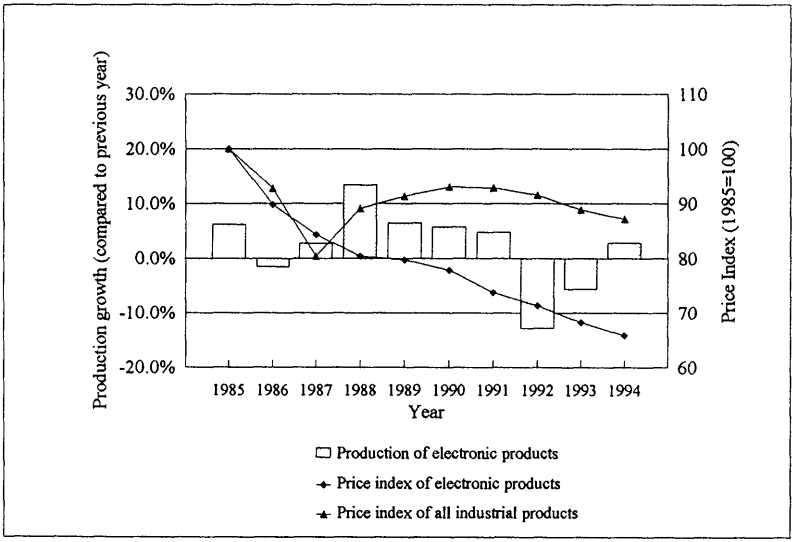


sourece : Nikko Research Center

peak (**figure 3**). Thus, the Japanese economy has never experienced four consecutive years' decline in the corporate performance index, as is currently the case.

In addition, it is the first time that the production of the Japanese electronics industry decreased in two consecutive years (**figure 4**). Although production dropped by 1.5 percent as compared to the previous year in 1986, it had turned around within a year. However, in the 90's recession, production dramatically fell by 12.8% in 1992 and by 5.6% in 1993. During the 1980's because of technological innovation, prices of electronic products dropped steadily without the influence of the business cycle. The 90's recession was marked by the fact that not only production volume, but also prices of products dropped drastically. Especially, the pressure of falling prices was much more severe than ever before.

Figure 4. Production and Price Index of Electronic Products (1985-1994)



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2. Research Questions

In spite of the 90's recession, there are a number of companies whose performance has improved. Why do these companies sustain high performances in such a severe recession ?

In this paper, we would like to clarify the methodologies for corporate survival through such economic conditions and for creating core competencies[2], with case studies of four typical electronic component firms in Japan, TDK, ROHM, OMRON and ALPS. All of these have global competency, furthermore, they have similar features,

2) Hammel G. and C. K. Praharad, *Competing For the Future*, Harvard Business School Press, Boston, 1994

such as size of business, product line and technology structure. We will discuss the following research questions :

1) What kind of strategic behavior did they select, when Japanese electronics component firms confronted in the past recessions, such as that of 1985 ?
2) As opposed to this, how did they develop their strategy in the bubble economy ?
3) How did they implement their strategy in the 90's recession ?
4) What distinguishes the 90's recession from its predecessors ?
5) How has strategic behavior established during the last boom period influenced their recent performance ?

TDK Corporation : Back to Material Technology[3]

1. Changing Strategic Domain in 15 years

TDK was established in 1935 to commercialize ferrite, a versatile magnetic compound consisting of ferric oxide and one or more other metallic oxides. TDK's primary business is the development, manufacture and application of materials used to make electronic components, especially using ferrite technologies. In addition to ferrite, the company produces dielectric, piezoelectric, semiconductor, metallic and organic materials, among others. Typical products among electronic components are ferrite core, multilayer chip components and integrated circuits for hard-disk drives. Each of these holds a 50% share of the world market. Typical products among recording media include audiocas-

3) TDK Corporation, *Annual Report*, Tokyo, 1995. TDK Corporation, *Value and Performance Indicators*, Tokyo, 1995.

settes (30% of world market share[4]) and videocassettes (20% of world market share).

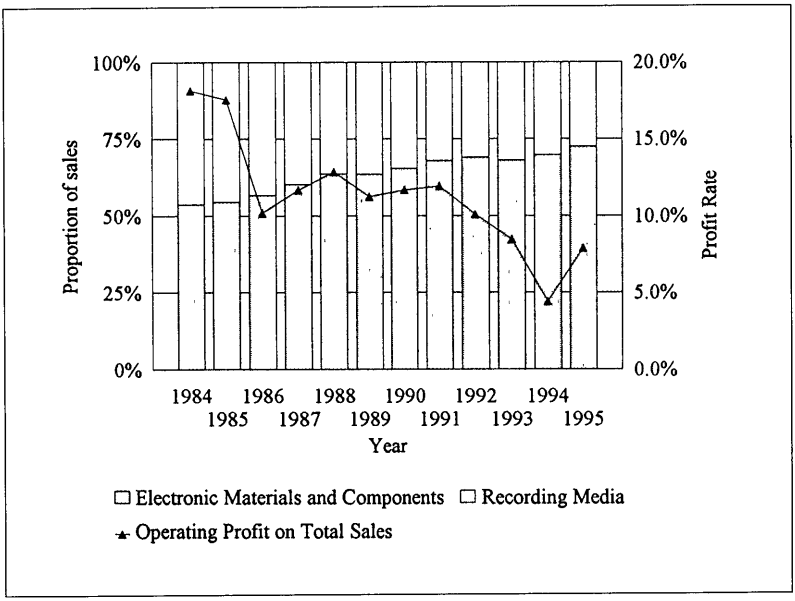
For the fiscal year ended March 31, 1995, consolidated net sales were 485.1 billion yen ($5,451 million), while operating profit was 38.1 billion yen ($431 million). The company has 27,276 employees in Japan and around the world. Consolidated net sales of electronics materials and components made up 73% of total sales, with sales of recording media comprising the remaining 27%. However, the consolidated operating profit of electronics materials and components accounted for 85% of total profit, and the profit of recording media only 15%. Thus, electronic materials and components generated the majority of the company's profit.

In contrast, TDK's historical strength has been in magnetic tapes. The TDK brand of audiocassettes and videocassettes is familiar around the world. The traditional business of magnetic tapes expanded along with the growth of VCRs and audio decks. In the early 1980s, net sales of magnetic tapes occupied more than half of total sales of the company, with operating profit on net sales hovering higher than 20%. Such high returns made the market very attractive to potential entrants. In particular, since the videocassette market had a lower technological barriers to entry than the audiocassette market, major consumer electronics manufactures such as Hitachi-Maxell, Panasonic, JVC, and Sony entered the market. At the beginning of the entrance to the videocassette market, Panasonic and JVC were supplied by TDK

4) Takashina K., 'Differences among Companies in the Electronic Component Sector', *Investment Report of Daiwa Institute of Research*, Tokyo, 1995.

through OEM (Original Equipment Manufacturing), but they quickly began production themselves. Increasing OEM supply for distributors expanded total supply to the market, which in turn resulted in severe price competition. As a result, the price of videocassettes dropped dramatically, gradually lowering TDK's overall profitability.

Figure 5. TDK : Consolidated Business Makeup and Profit Rate



source : TDK Corporation.

The yen's appreciation in 1985 cut profit on sales in half. In fiscal 1986 alone, consolidated operating profit on net sales tumbled from 17% to 10%. At the same time, overseas sales had reached a level of 48% of total consolidated net sales. However, the company had not begun to produce overseas in volumes high enough to combat the yen's dramatic rise. Thus, the yen's appreciation directly influenced the company's

profitability. For TDK, this appreciation of the yen from 1985 to 1986 was the most serious change of circumstances in the 15 year period.

TDK intended to overcome the crisis by expanding overseas production. As a result, the overseas production of recording media, which includes magnetic tapes, accounted for 52% of total sales in fiscal 1995, up from 26% in 1990. As overseas sales of recording media make up 62% of total sales, the overseas production system has nearly enough capacity to supply all overseas markets. Furthermore, the company boosted the share of yen-denominated exports from Japan, mostly to overseas subsidiaries, from 40% to 75% during fiscal 1995.

During the bubble economy from 1987 to 1990, the company's performance was stable. At that time, top management decided to redefine the company's strategic businesses. One important strategic change was the redefinition of the magnetic tape business, which had long been the heart of TDK's profits, as the recording media business, broadening significantly its range of output. Another major strategic decision made at this point concerned the company's long standing focus on ferrite as its main technological strength. Ferrite, the company's core technology and center of material technology, would have to share its position in the company eye with a broad range of emerging materials technology.

However, TDK faced recession in the 90's and consolidated operating profit on net sales dropped again. This decline had two root causes. One was that the company could no longer count on high profitability in the recording media business as experienced before. The other was that profitability in the electronic components business was lower than that previously enjoyed in the area of magnetic tapes. Thus, the

company saw a need to develop high value-added electronic components. TDK felt pressure to change its business structure. The company succeeded in doing so and accomplished a turnaround by means of the three strategic actions outlined below.

2. Overcoming the 90's recession

(1) Focus on Products

In the bubble economy, like other competitors, TDK executed "multi-product, small-lot-sized production" according to assemblers' needs. The company produced all kinds of components intended for all sorts of electronic products. In fact, during the boom, the company manufactured 200,000 types of components. At that time, the company's view was that a broad component line was its responsibility as a component manufacturer. However, this perceived need to satisfy even marginal customers with specific, low-volume demands led to lower profitability in the electronic component business. After the bubble economy, the company stopped increasing its forms of components other than strong components which could win number the one or number two position in each market. Then it focused on competitive components born of materials technology. In addition, by integrating plural components , the company succeeded in reducing the numbers of various component types.

The technologically strong products increased the range of TDK's customers. To that point, TDK had only one sales division, which handled all the company's products, structured by customer's product type. For example, TDK's TV sales section handled all types of components having to do with TV manufacturing. In such a sales

organization, it was difficult to build specific technical expertise among the sales staff. Realizing this, the company divided its sales division into four sections, each corresponding to one of the company's main business units in April, 1994. This led to closer alignment of the sales and production divisions.

Consequently, focusing on strategic components and increasing the number of customers who use each component has enabled the company work economies of scale. This increase in efficiency has lowered TDK's break-even point from 90% to 84% over the course of the 90's recession.

(2) **Reduce Fixed Costs**

Sales and profits per employee had been deteriorating because of the increasing number of employees. In order to make the organization profitable even without net sales growth, TDK rolled out its "MIP (Management Innovation Plan)" a cost-reduction program. Its initiatives included aggressive attention to such practices as hiring freezes, the restructuring of subsidiaries, and the introduction of a flat organizational structure. With its personnel evaluation program, TDK became one of the pioneers in changing the traditional Japanese seniority system to the merit-based system. The mass-media picked up this action as one of the current topics in 1992. Efforts such as these enabled the company to reduce fixed costs (selling, general, and administrative expenses), from its peak in 1991 by about 20%, to its current levels.

(3) **Foster Core Technologies Centering on Materials**

The time-consuming and complicated process of developing material technology act as a formidable barrier to entry, while they in turn increase the competitive strength of electronic components with high

levels of material technology. As an example of the levels of technology being considered, a TDK ceramic capacitor used in cellular phones contains 220 layers of dielectric substance and electrode, but measures just 3.2 x 1.6mm in size. Competitors simply cannot easily analyze the cost structure and production systems of products consisting of this kind of material technology.

TDK began to develop material technologies other than ferrite 15 years ago. In the bubble economy, the company categorized these material technologies into four strategic business fields; magnetic heads, high-frequency components, optical disks and semiconductors. At that point, the company strategically allocated managerial resources to these four business fields. As a result, sales of products from four strategic areas will reach 35% of total sales in fiscal 1997.

The major problem of seeking new technological seeds is to grow numbers of R&D projects in the company's R&D sections. It generates confusion in management control, and as a result a company cannot launch new products frequently. In order to develop new products, the company integrated its R&D sections into "Technical Center" in Ichikawa city, Chiba prefecture, in 1991. The company's president visits every week and is keenly committed to R&D activities himself.

3. Back to Material Technologies

TDK is now creating core competencies based on its core technologies. In the bubble economy, the company intended to broaden its product line and technological field, and the company thought that such expansion was its responsibility as a component manufacture. However, this expansion strategy made resources so widely distributed that it

could not create a competitive advantage. Facing the 90's recession, TDK found that only strong products generate profits.

Thus, TDK changed its strategies from mere expansion to taking a technological advantage. The company focuses on new materials and new products generated by the core technologies, centering on ferrite. TDK's strong products appeal to their customers. Nevertheless, even while having technologically strong products, TDK does not aim at the strongest position in each market. If it occupies whole shares of a market, the company must supply components at any time and any volume according to the assembler's needs. The company introduces competitors in order to share responsibilities for steady supply.

Such a change can not be accomplished in a day. Needless to say, the retrenchment during the 90's recession played an important role. But if there were no redefinition of strategic fields and no developing new technologies during booms, TDK would still stick to only ferrite and magnetic tapes, and it could not have been able to turn around.

ROHM Co., LTD : Developing Flexible Production System[5]

1. Growth Process

ROHM was established in 1954, when Mr. Kenichiro Satoh, the present CEO of ROHM, acquired a patent right concerning resistors. Hence it does not have a long history, and is not a matured company. Since its foundation it has struggled to research and develop technologies not only concerning resistors and sensors, but also light

5) ROHM Co., LTD., *Annual Report*, Kyoto, 1994. ROHM Investor Relations Div., *Fact Book 1994*, Kyoto, 1995.

emitting diodes, condensers, IC and LSI in response to contemporary market needs. In 1984, ROHM was the first company in the world developed laser diodes for practical use. As a result, ROHM became a famous company in the electronic component industry. Thereafter it implemented large investment for R&D through a public stock offering.

Now the total amount of sales of ROHM, which supplies electronic components for computers & OA, visual & audio appliances, Automobiles and so on to many assemblers, is 2400 billion yen ($2,160 million) with a secure position as one of the leading electronic components firms in Japan.

The proportion of overseas sales accounts for 40% of the total, and is increasing by 3% every year. Also, the export rate of Japanese production is 34%. Broken down by region, Asia occupies 67%, North & South America 19%, and Europe and others 14%. As these figures show, exports to Asia have been rapidly increasing since the early 90's. This area has become more and more important for ROHM and other Japanese components firms, because Japanese assemblers have built their product bases in this area following the economic growth of Asia. Similarly, Foreign Direct Investment (FDI), mainly for South East Asia has been increasing since the late 1980's. ROHM has now established nine production bases, mainly in Asia. Thus, the strategic importance of Asia is constantly increasing.

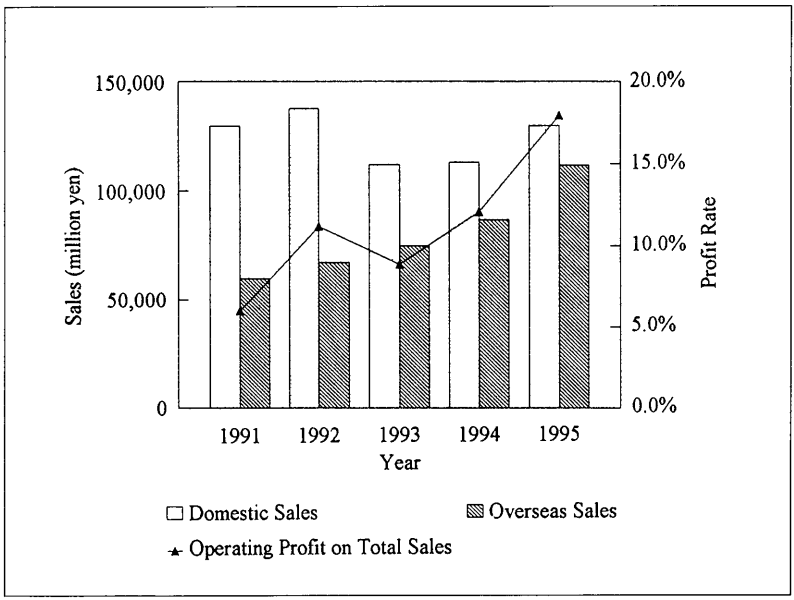
2. Transforming Its Structure

(1) Triggers of Strategic Change

At first we shall chronologically look at the strategic process of ROHM confronting the business cycle of the 80' and 90's. In the early

80's, the main products supporting ROHM's growth were AV components. The demand for VCR in the world market amounted to 20 million units annually. Under such market growth conditions, the company increased its production to supply Japanese VCR assemblers. As a result, it was able to list stock on the Tokyo Stock Exchange, Osaka Stock Exchange and Kyoto Stock Exchange since 1984, and collect money for investment as mentioned before. When the appreciation of the yen attacked the Japanese economy in 1985, the company's sales were affected briefly. At that time, ROHM used funds acquired through the listing stocks for expanding foreign bases and preparing for future business expansion.

Figure 6. ROHM : Consolidated Sales and Profit Rate



source : ROHM Co., LTD.

After this yen recession, the Japanese economy rapidly recovered in 1987. With other Japanese companies, ROHM's sales began to increase, topping 100 billion yen ($1,123 million). However the company's rate of net profit declined in inverse relation to increasing sales amounts. It bottomed out at around 3% in 1991, the peak of the bubble economy.

One of the reasons for the fall was the collapse of the business system which the company used to correlate mass production with large volume sales. Until 1991, ROHM manufactured many kinds of components in compliance with assemblers' needs, regardless of the amount of their orders. The over-adaptation to many assemblers who used "Just-in-Time" (JIT) methods, without considering the number of orders caused a large increase in selling overhead, including delivery cost, sales management cost and so on. It gave birth to the conjuncture "Increasing sales amount, but no profit" and caused net profit to decrease year by year. Moreover, with the tremendous recession in 1991 and with the market change concerning prices, assemblers forced the component manufactures to lower their, giving rising to intense price competition among component makers.

During the sales growth volume mentioned above, the basic strategy of ROHM was to adapt to the customers' needs, whose numbers were over 30,000 some of which were very small. Thus, it was inevitable that rate of net profit declined.

(2) Re-building a Profitable System

In order to defeat aggravating conditions and to build a profitable business system, ROHM implemented a reorganization plan. The largest point in this was a reform of the sales system, in which assemblers had maintained a hegemony. One of the Japanese ways of business was.

the focus of this organization plan, which was the trade practices through personal human relations between customers and a salesman, on the base of the satisfaction of business partners regardless of the business logic. ROHM reformed its sales organization and business system including personnel shifting. By abolishing small orders and adapting to every need overwhelmed the company with internal conflict, it could reduce indirect costs under the strong leadership of the CEO.

Furthermore ROHM embarked on the reduction of investment in plant and equipment without decreasing the amount of sales. During the period of growth in the late 80's, its investment was for the purpose of both increasing yield and satisfying "the small quantity but multiple-items" needs of customers greater than its cash flow. However such investment lead to the dispersion of business resources and a shared lack of a strategic viewpoint. After 1991, when the company implemented large investment, it redefined its investment principle, which was to confine its investment within the boundary of cash flow. It goes without saying that if a company does not increase yield in compliance with market needs in global competition, not only growth but also survival is at risk. Such a company also cannot realize its reliability of supply for customers. Therefore, ROHM pursued a strategy in which it could make productivity go up in such a turbulent business environment.

One of the measures devised to resolve the problem was the use of overseas production bases. In addition to using production bases established in the 80's, it began to use overseas sales bases as International Procurement Offices (IPO) to build a logistic system for

realizing cost reduction. In this way, the periodic global strategic meeting is presently becoming more important.

On the other hand, in the domestic market, ROHM strives to specialize in corporate group companies and to construct a system which divides labor among them. At the same time, it enhances production flexibility by utilizing its human resources, who are very familiar with machines. One of the reasons for this is that Kenichiro Satoh, CEO of ROHM, is a machinery technology specialist. Due to this, all production equipment in ROHM was made internally, and ROHM is now able to change its production systems in accordance with customer needs more easily than its competitors. Thus, It is possible for ROHM to supply its customers without stopping or disordering production plans.

3. Beyond Constraints for a Components Manufacturer

It goes without saying that ROHM is influenced by the fluctuation of the final market, though it does not sell retail products. Under the conditions of severe price competition and technological changes as mentioned before, even components manufacturers must scan the trends of the final market and the strategic movement of assemblers all over the world, as well as the direction of technological trends. This leads component manufacturers to ask where will assemblers products ? ; how big and what kinds of products will they develop in their business ? ; which technological direction will they pursue in the future? Gathering and analyzing this information is an indispensable factor in building competitive edge and assuring reliability of supply to assemblers. Thus, the reorganization of ROHM's sales system purposely

against traditional Japanese ways of business has been effective. Nevertheless, ROHM cannot gather all types of information; and if they do so, they might revert to the old system which did not allow for net profit. From this point of view, it was a good decision for ROHM to focus on the business field where it can exert its strength and in which many large assemblers do not enter, while utilizing its flexible manufacturing system as a weapon.

OMRON Corporation : Supply with Consultation[6]

1. Growth Process

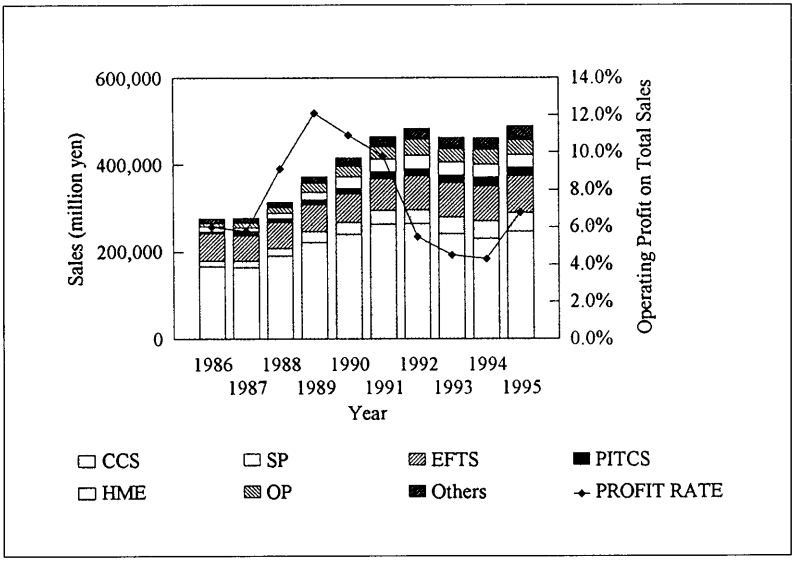
OMRON was established in 1933 as a specialty manufacturer of relays. Presently, it produces not only relays, switches, and timers, but also programmable controller mechatronic devices and FA computers for factory automation ; CCTS, ATMs and cash dispensers for banking systems ; EFTS, area traffic control systems and road traffic control systems for traffic control systems ; PITS, digital blood cell analyzers and electronic thermometers for health-care & medical equipment ; HME, computer hardware and system supplies ; OP, and so on. Its products vary from special-use of electronic components to those found in the retail products which we see in our neighborhoods. One of the largest driving forces for OMRON's growth was products related to control components and systems promoting FA after the early 1980's.

6) OMRON Corporation, *Anual Report 1994*, Tokyo, 1995. OMRON, *Financial Fact Book*, Kyoto, 1994. OMRON, *OMRON Corporate Profile*, Kyoto, 1994. Shimoi N., *OMRON Monthly Investment Report May 1994*, Nikko Research Center, Toyko, 1994. Usui S. & Daimond Harvar Bsusiness, *Creating 21st Century Comapny* , Daimond Press, Tokyo, 1991.

In fiscal 1995, total sales of was 489.7 billion yen ($4.4 billion) and net profit was 33,478 million yen ($300 million).

Since its foundation, the major market for OMRON has been the Japanese market. It has occupied 80% of OMRON's sales. Consequently, the yen's appreciation in 1985 did not have great impact on profits, enabling the company constantly grow until the 1992 recession in Japan. During this period, the main products were control components and systems, whose share of OMRON's sales was 50 - 60%.

Figure 7. OMRON : Consolidated Business Makeup and Profit Rate



source : OMRON Corporation.

Organizational corpulence under the condition of such growth gradually eroded the pioneer spirit of the company's initial era, and it could not keep its organizational dynamics. In fact, OMRON had depended on manufacturing products related with control components

and systems business for 20 years, and it did not create and develop new business domains, which changed with the traditional business process even in the late 80's, as the Japanese economy rapidly grew. Mr. Kazuma Tateichi, the founder and CEO at the time, noticed the syndrome which he named "big-companies-itis (daikigyou byo)", and launched an initiative to transform its corporate constitution and organization in 1988. In May 1989, after one and half years of discussion in the company, OMRON declared its vision for the 21st century, "Golden 90's (G'90)", and aimed to become the technologically the No.1 company in the world. Even now, this vision underlies OMRON's business strategies.

The polar concept of this vision is "to balance sub-optimum and total-optimum" and "to enhance each business and corporation as a whole". In the traditional management system, the balance of the corporate as a whole often was neglected, because each department tended to focus on their own business and not consider the organization as a whole. Then the CEO defined the enhancement of strength as a corporation, through not only strengthening individual business but also creating synergy by aligning these businesses.

At the same time, OMRON constructed the global system of dividing labor for adapting to globalization in accordance with the vision. It consisted of four regional head-quarters (RHQ) at the time, though these become five RHQ with the inclusion of China. Also, against the rapid yen appreciation since 1994, the company planned to increase the proportion of overseas production from only 3.4% in 1993 to around 10% in 1996 when the middle-range plan will finish, in order to enhance its global competitiveness.

2. Toward Realizing G'90

(1) Defining Three Business Domains

OMRON defined three business domains for realizing its G'90 vision. These are the Micro-Electronics Business (MEB), Service Creation Business (SCB) and Human Renaissance Business (HRB).

MEB was the business domain which has traditionally supported OMRON. This business domain consisted of three businesses, including the components business, system business and service business. The components business was based on control components and systems, and was regarded as the main source of net profit at the time. The role of the systems business was to promote the construction of banking systems and FA for expanding the component business. Moreover, the service business was put in place to create new customers through supporting the components business.

The main purpose of MEB was to generate synergy though combining these businesses and to create a core technology which would be possible to use as a whole. In order to create such a core technology, OMRON undertook M&A and strategic alliances, and needless to say the enhancement of basic research internally. Although many of them succeeded, the collapse of the bubble economy caused the movement to shake out after 1992.

The second domain which underlies G'90, SCB concerned the business of supporting staff functions of customers. However, this was not only to help outsourcing of staff tasks which already existed, but also to propose how to construct the systems to correspond to the Information Era. That is to say, the concept of this business was to supply consultation service realizing fusion of human intelligence and

technology through utilizing know-how accumulated in OMRON.

The third domain, HRB, was a new business for OMRON and it had many unknown aspects. The business domain whose key concept was to "satisfy human needs through fusing industrialized society and cultural society", was very wide, and also contained many kinds of business that had strong future potential. The Human Research Institute, which was established in 1990, has tried to develop the new domain for the future.

(2) **Cost Reduction as A Result of Recession**

OMRON advanced the restructuring of its business on the basis of the vision of G'90, and tried to improve corporate constitution and profit, which have been declining since 1990. Manufacturing products depending on control components and systems technology did not contribute to increasing profit and did not add value, because these business had presupposed economic growth. In other words, recession in the early 90's revealed the dilemma of OMRON caused by dispersing business resources and ignoring its strength, adapting only to turbulent market change. From this view point, specification of business domain by G'90 was useful for confirming core-technology and enhancing its proper strength in areas outside of the core products which had long been the focus.

Moreover, OMRON established an anti-recession task force and launched a program to reduce sales management cost and total asset, and to reform its logistics system for the purpose of management improvement, in accordance with the intermediate term planning which started from 1994.

(3) **Developing Consulting Sales**

The other strength supporting the growth of OMRON until now was a strong sales network, in addition to manufacturing a full line of products related with components and systems control. For OMRON, whose major competitors have to proud a full line of products, and are in Keiretsu relationships, it will be very important to establish de facto standards globally. Therefore, it is strategically indispensable for the company to create new markets faster than competitors and to increase market share as quickly as possible. To do this, OMRON is developing what it calls "consulting sales". This is sales stressing consultation with customers. In order to build such a sales system, OMRON needs to propose how a customer can use its products and what retail products the customer will need in the future, but not to supply products following customer needs as in the past. Then strong sales networks of OMRON will result in becoming one of the most useful weapons for not only gathering information but predicting future markets.

The current management strategy is to synthesize MEB, SCB and HRB and begins to focus on core technology. This directly links with the company's promotion of "consulting sales" for creating high value-added business. In other words, OMRON's new strategy is founded on accomplishing its reliability of supply to customers through proposing and creating new ideas.

ALPS ELECTRIC Co., LTD : Optimal Allocation of Business Resources[7]

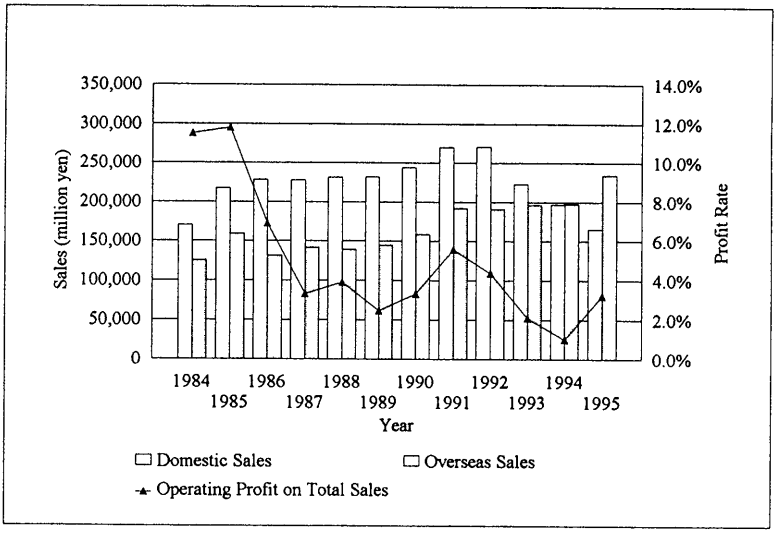
1. Success in Turning Around

ALPS is the leader of electronic component manufactures in Japan.

7) ALPS ELECTRIC Co., LTD., *Annual Report*, Tokyo, 1985-1995.

The company's rapid growth has paralleled the increasing demand of consumer electronic products, like audio decks, TVs and VCRs. Among Japanese electronic component manufactures, it has a presence as the "department store of electronic components", which means that the company deals with almost all sorts of electronic components. In addition, the company has a good reputation among assemblers as the most reliable manufacturer. Therefore, it is very difficult for ALPS to drastically change relationships between customers and the company.

Figure 8. ALPS : Consolidated Sales and Profit Rate



source : ALPS Electric Co., LTD.

In fiscal 1995, the ALPS group which has 9,510 employees, had consolidated net sales accounts of 399.7 billion yen ($3,597 million) and operating profits of 12.9 billion yen ($11.6 million). Broken down by business field, sales of electronic components occupies 68% of total sales, with audio products and others comprising the remaining 32%.

Contrary to this breakdown of sales, in operating profit, the audio products and others generates 68% of total operating profit. Thus, it can be seen that the company has an strong incentive to make the electric components business more profitable.

In surveying the company's sales longitudinally, we see that after sales slightly declined in the yen's appreciation in 1985, they steadily grew during the bubble economy. Facing the recession of the 90's, however, due to decreasing domestic production by assemblers, the company's domestic sales declined drastically from its peak in 1991. As ALPS produced almost all of its products in domestic factories, declining volume of sales and the dropping price of components directly influenced the company's sales. Paralleling the sales decline, profitability also dropped, because the company had strength in mass production, which generated earnings only when the production line was running at high capacity.

Originally, ALPS had strength in molding technology to produce components. Robust molds enabled the company to make large numbers of components in long-runs. The company realized cost advantages in mass production. Nevertheless, in the 1980's, with the increasing use of NC (numerical control) machine tools, competitors could easily make molds for components themselves. In addition, as assemblers drastically increased types of products, "multi-product, small-lot-sized production", not mass production, became the mainstream of component production systems. Under these changing conditions, the company's strength, robust molds and mass production systems, lost effectiveness. Thus, after the latter half of the 1980s, ALPS's profits continued to tumble.

Even facing such difficulties, ALPS succeeded in turning around in fiscal 1995, increasing its consolidated sales and profits as compared with the previous year. One main reason of this success was that the company could make progress in overseas sales , although domestic sales were still dropping. In fiscal 1995, the company's overseas sales exceeded domestic sales for the first time. At the same time, the company continued to boost overseas production. Another reason was aggressive retrenchment in its organization. The company reduced its employee count to two-thirds of its peak level in 1992 and reduced types of components produced to one-tenth of their peak. Although ALPS didn't drastically change its pricing to customers, the company undertook a drastic restructuring and retrenchment internally.

2. Restructuring and Retrenchment

(1) Restructuring: From Domestic to Overseas

During Japanese high economic growth in the 1960's, ALPS started production in the Northeastern region of main island in Japan. At that time, the company could procure inexpensive labor power, and other production facilities in Tohoku which was a developing area in Japan. Even now, a high percentage of ALPS' factories are located in this region. The dominant logic at ALPS was "domestic production, competition among factories" Each factory started production with only one product and competition among these factories would drive ALPS growth. Factories were allowed to expand their product lines as they saw fit. Also, each factory had its own sales force. Therefore, the company consisted of a loosely bound collection of entrepreneur factories. However, this approach caused the company to fall behind

competitors who aggressively expanded overseas production. As a result, the company also began to produce overseas in order to protect its leading position. Now, ALPS has 20 overseas production sites. Sales due to overseas production rose from 23% of total sales in fiscal 1992, to 30% in fiscal 1993, and is expected to exceed 50% in fiscal 1996.

ALPS developed its overseas production adhering to the philosophy "Made in Market", which meant that products sold in a market would be manufactured in the same place. For example, the products sold in China should be produced in China. However, according to this philosophy, the allocation of the company's resources became inefficient, because under this production system, the same product was produced in various places. Presently, its strategy has been altered to "Value-added products domestically, other standard products overseas". In order to maximize efficiency, the company is currently contemplating the optimal allocation of its production base.

(2) **Retrenchment: Reduction of Types of Components and Employees**

ALPS is a customer-oriented company. Therefore, in the bubble economy, it expanded its product line according to customers' needs without hesitation. For example, it produced all the various types of VCR magnetic heads. Thus, after the collapse of the bubble economy, the company planned to reduce component types from 100,000 to one-tenth of that, with the vigorous cutting of unprofitable components. By reducing component variety and focusing on profitable components, the company felt it could realize higher performance as a whole.

However, they realized that it would take a long time to reduce

component types. Therefore, the company changed its production system while it continued to try to reduce the number of types of components. At that time, the company was manufacturing using the Just-In-Time (JIT) system. The JIT system was efficient only when there was large volume of demand. Generally speaking, during the recession, the volume of each component was such that JIT could not be used efficiently. Thus, the company gave up the JIT system and returned the traditional system, which called for some inventory on hand for demand prediction. As a result, the new system brought the higher efficiency to the product line.

Not only did ALPS dramatically cut component types, but it also drastically cut labor by 3,239 employees from 12,749 in 1992 to 9,510 in 1995.

These efforts turned the company's consolidated performance around. In fiscal 1995 alone, operating profit increased by 8.8 billion yen as compared with the previous year. Although selling, general and administrative expenses increased by 5.9 billion yen, an additional increase in sales generated 5.8 billion yen of profit and cost retrenchment generated 8.9 billion yen. This cost retrenchment was the key to ALPS increased operating profit in fiscal 1995.

3. Globalization for Turning Weakness into Strength

As ALPS is the leader of electric component manufactures in Japan, its strategic actions seem to be slower than these of competitors. However, facing the 90's recession, the company took more quick and drastic steps than ever before. They retrenched aggressively in terms of both production and labor. This retrenchment wad a "yellow-brick

road" to performance turnaround.

We must look at another key action of this turnaround. This is that the company has greatly expanded overseas production since the days of bubble economy. ALPS got behind competitors in developing overseas production bases, and was one of its main weaknesses. Therefore, by accelerating globalization, and consolidating and improving inferior overseas production sites, the company was able to attain vastly improved performance. Its sails now full and ballast jettisoned, ALPS is now turning past weakness into future strength.

Brief Conclusion

In this paper we have discussed strategies of the four Japanese electronic component companies discussed above. Their strategies were similar at a basic level, but there were noticeable differences caused by their respective conditions of foundation, growth, technological basis, customers and so forth. The traditional Japanese management system acted as a backdrop for all of these aspects. The differences of strategic behaviors among these companies, however, has become more and more clear through the 90's recession.

The following is a discussion of the common factors of these components manufacturers, and the strategic logic behind the differences during and after the recession.

1. Strategies under the Recessionary Conditions

Basically, Japanese electronic component manufacturers have developed new technologies and new components in accordance with

the assembler's new-product development. Electronic components define features of finished products. Technologically advanced components have enabled finished products, such as cassette recorders, VCRs, handy-cam recorders, compact disk players, and cellular phones to achieve small size and high performance. Furthermore, low-prices won through economies of scale have introduced and diffused new products into markets. The current manifestation of this phenomenon in Japan can be seen through products such as cellular phones and personal computers.

Component manufacturers have supplied various components in order to satisfy customer needs, that is the end-product assemblers' needs. It is usual that they increase their types of components according to customer's original specifications, and collaborate with these customers in research and development. Also, component manufacturers, following end-product assemblers, have long since begun overseas production. For example, in CD players and TVs, overseas production exceeds 70% of total production.

In the component company-assembler relationship as exists in the Japanese electronic industry, even in the case of Keiretsu relationships such as NEC, Hitachi, Toshiba, and Panasonic, an assembler rarely orders all of its components from one specified company. Rather, they order components from multiple component manufacturers, a practice called "multiple-ordering (Fukusu Hacchu)".

One reason why they adopt such a system of ordering is that it prevents the risk of interrupting production lines, due to some unforeseen accident during components delivery, a component manufacturer's problem, conflict with component manufacturers, and so

on. A second, and more important reason, is that the practice enables assemblers to lower prices, to heighten the quality of products, and to ensure prompt delivery etc., through stimulating competition among manufacturers. Multiple-ordering is particularly popular with assemblers. Thus, they have strengthened their bargaining power against the component manufacturers by using multiple ordering strategically[8].

On the other hand, components manufacturers have strengthened their position with respect to assemblers mainly by creating technological advantages. It has become patently obvious that if a manufacturer became the first component supplier with sophisticated technology, the manufacturer could gain power in its relationships with assemblers. However, if the level of technological advantage is not so high, the component manufacturer could lose its competitive position, consequently leading to downpricing. This is a reason why manufactures such as TDK, Murata and Kyocera, which have high level material technology, conceal the cost content and production process of their products.

Furthermore, unique technology allows manufactures to expand their customer base, and further enhance their bargaining power. In fact, the four components manufacturers discussed in our paper have been able to establish independent positions and to grow without entering into the Keiretsu relationships, by expanding their product lines and heavily investing in equipment and R&D during late 80's economic growth period.

Nevertheless, it is not enough only to develop high-technology

8) McMillan J., *Games, Strategies, and Managers,* Oxford University Press, New York, 1992.

products. It is an indispensable factor to maintain a long-term stable supply for components manufacturers. Indeed, technological advantages and exclusive supply make it possible for a manufacturer to attain high performance - if the competitors can not keep up. However, a large amount of investment is needed to do so. Also, the component manufacturer must ensure that large-sized assemblers do not have incentive to develop and produce the core components internally. This can be done through low prices and stable supply. If they cannot do so, the component manufacturers have lost the significance of their own existence. The reasons why most of the component manufacturers give licenses and thus open their technologies to competitors, is to alleviate the over-burdening of production lines, which can result from the volume demands made necessary by the exclusive supply in a rapidly changing environment.

Therefore, electronic components manufacturers have not only developed technologies for attaining bargaining power in relation to assemblers and competitive advantage, but also have realized a stable supply and lowered products prices. Moreover, it is a primary factor that the four companies discussed in our case-studies are implementing corporate restructuring, including the fusing of product lines.

2. Evolution of Strategic Logic

The 90' recession, however, urges these companies to fundamental change. They are required to evolve their traditional business logic beyond a corporate restructuring. This means they must reevaluate the strategic concept underlying the supply system, which we have pointed out as "the reliability of supply" in our paper. It is different from the

traditional logic of the responsibility of supply in compliance with assemblers, that is "to supply with lower prices, full lines of products and also stability". Instead, it is the interpretation which views reliability of supply from the standpoint of the components manufacturers.

For example, TDK is reforming its business system by translating the reliability of supply though the concept of "back to materials", and ROHM through the concept of "flexible production and supply system". OMRON has overcome their crisis by interpreting the reliability of supply though the concept "supply with consulting", and ALPS through the concept of "optimal allocation of business resources".

We can say, in conclusion, that these companies have not only changed their strategies themselves during the recession, but also have been evolving their strategic logic.

We consider that there are some problems in our paper. For example, as we discussed based on the case studies without quantative research, we have yet to construct a general theory. In near future, we hope to advance our research in this area.

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