

Business Structural Reform Needed for Electronics Companies

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The winning formula of Japanese companies, which was observed in the past, has not been applicable to the Japanese electronics industry since the second half of the 1990s. It can be said that a contributing external factor is the electronics industry being caught up on the wave of product maturation or “commoditization.”

Internal factors that have brought difficulties to many Japanese companies are as follows: (1) business portfolios are not clearly defined and there are no original business areas; (2) emphasis is placed on market share, abandoning long-term business strategy; (3) product planning does not include marketing; (4) management decision making remains slow; (5) a new competition mechanism has emerged which causes a sharp drop in prices; (6) planning strategies and their implementation are weakened.

In the electronics industry where commoditization is expected to develop even further in the future, the following measures are needed to maintain profitability: (1) to concentrate on business portfolios in the strongest business areas of each company; (2) to create new sources of earnings; (3) to establish a system to respond to the needs of users; (4) to make management judgments based on the phenomenon of commoditization of products; (5) to accelerate the management decision making process; (6) to take advantage of corporate acquisitions at the time of restructuring of business and industry.

Old-style management would be unable to carry out the above-mentioned measures and to make business structure profitable. As Japanese companies are supposed to have high problem-solving abilities in general, it is important that corporate headquarters should enhance its ability to make drastic changes in corporate strategies and to set high business targets.

At the same time, it is also important that headquarters should possess the ability to implement corporate strategies. As the promoters of corporate strategies, they have to review its role of the “muscular strategic planning” center and to strengthen its ability to implement corporate strategies as quickly as possible.

I Japanese Electronics Companies Failing to Make a Profit

Looking at trends in the global market of the electronics industry, we see a constant decline in the market share of Japanese electronics companies year by year as shown in Figure 1. One of the reasons for this is that Japan's electronics companies have been losing their industrial competitive edge against foreign companies. Since the year 2000, the market share of companies in Asian countries, excluding Japan, has increased remarkably, and we can see that competitive environments have undergone dramatic change.

In this report, after analyzing the winning formula of Japanese companies in the past, we will consider problems that they now face and their solutions.

Until the 1990s, the winning formula of Japanese electronics companies was made up of the following characteristics, which organically functioned well.

(1) Market cultivation through the development of new products

Companies diversified their lineup of products and made a profit by accelerating the development of new products and by taking advantage mainly of miniaturization and weight reduction of products during the high growth period of the market. When latecomer companies entered the market, old ones successively introduced one new product after another and eventually succeeded in fending them off.

(2) Reduction of costs by shifting production bases overseas

When the market reached maturation, Japanese electronics companies shifted their production bases overseas and secured profits through cost reduction by taking advantage of low wages in the local markets.

(3) Brand strategy

Japanese electronics companies maintained sales prices by avoiding price-cutting competition by making a wide variety of products and publicizing brand images through advertisements.

In the second half of the 1990s, however, because of the reasons shown in Figure 2, Japanese electronics companies could no longer use their old-style industrial strength. They were buried in a competition where there was "no winner, but busy." They were exposed to a war of low profit margins against foreign competitors. In the following section, we will examine details of the reasons for the decline in competitiveness of Japanese electronics companies.

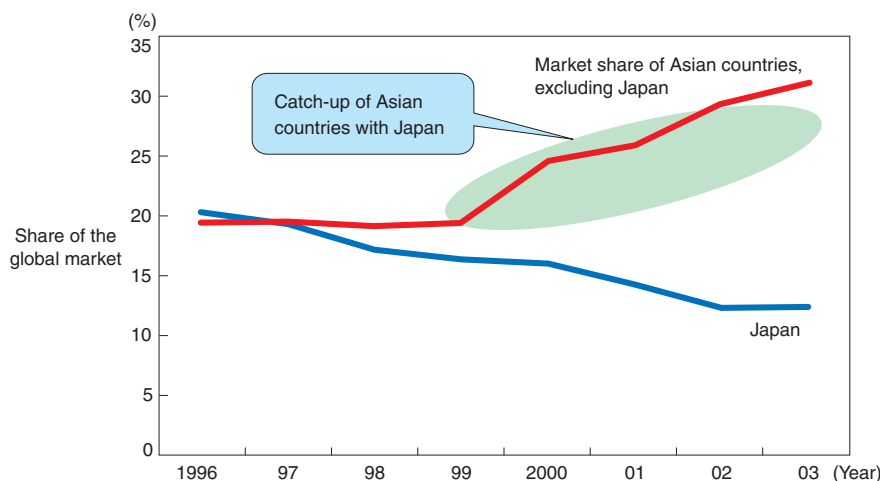
1 Source of Added Values Shifted from Assembly to Production of Devices and Software

As digitization, miniaturization and weight reduction of products progressed, processes that Japanese electronics companies were traditionally good at became less important and devices that would determine function increased in importance. As a result, as the so-called smile curve indicates, the source of added value shifted to devices and software and that of product assembly declined. Moreover, the relative strength of the technology of Japanese electronics companies eroded in the face of catch-up by Asian countries.

2 Old-Style Front Runner Model No Longer Works

As the source of added value for products shifted to devices, the speed of catch-up by foreign companies increased because they purchased devices from outside suppliers and manufactured products using them. Therefore, even though Japanese companies succeeded in the development of new products, foreign competitors

Figure 1. Share of Japan and Asian Countries in Production of Electronics Industry



Source: Reed Electronics Research, *The Yearbook of World Electronics Data*.

Figure 2. Reasons for Decline of Competitiveness in Japanese Electronics Industry

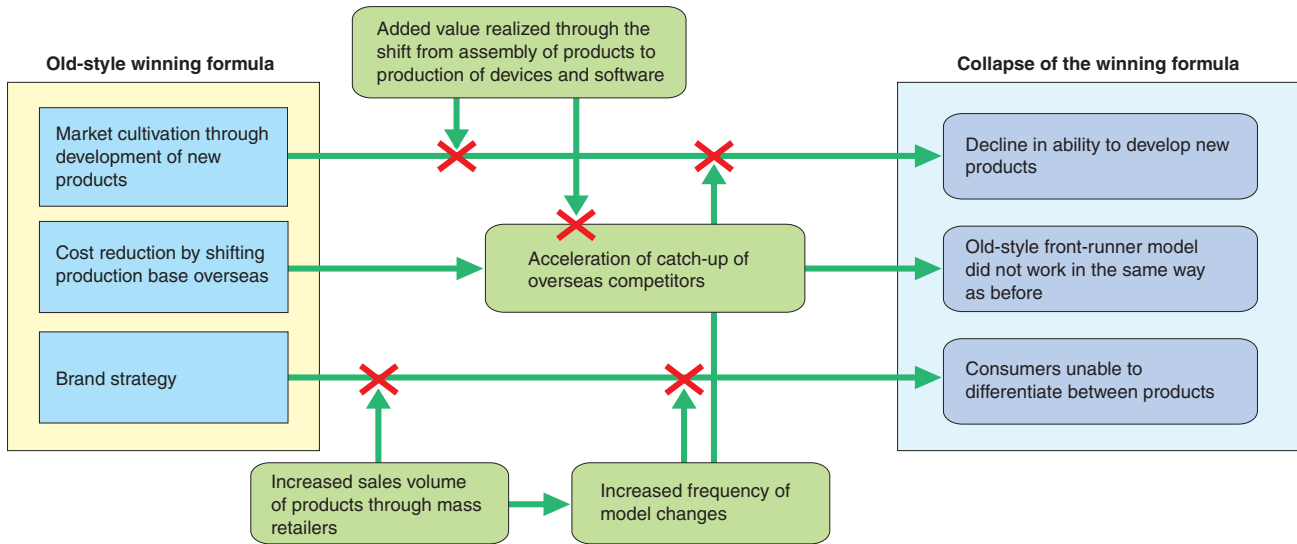
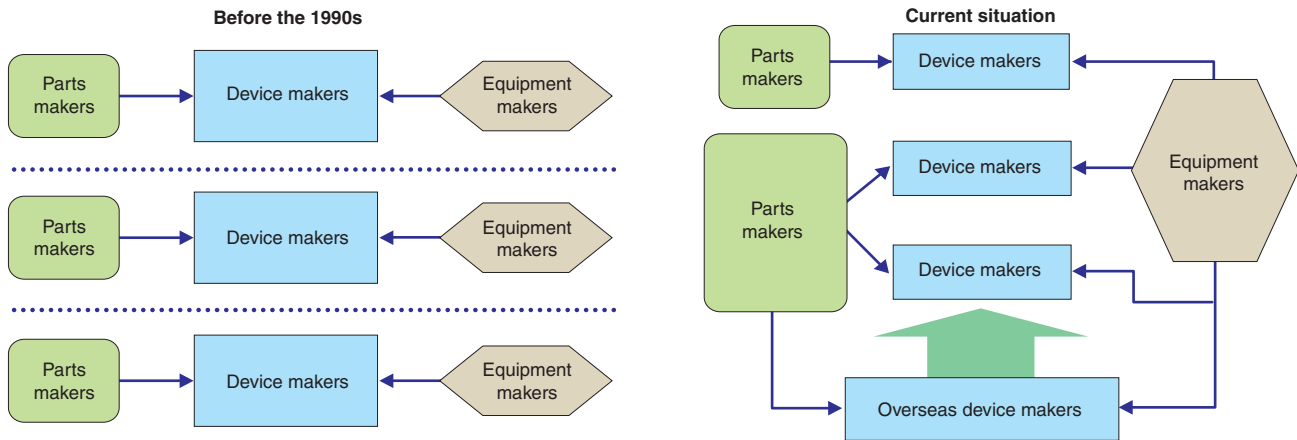


Figure 3. Collapse of Keiretsu Groups and the Transfer of Know-How in the Device Industry



The keiretsu production system was organized around device makers. Production know-how was kept within keiretsu groups, which contributed to the maintenance of international competitiveness.

Manufacturing know-how has shifted to equipment makers. Being faced with catch-up by foreign companies weakened the competitiveness of device makers.

promptly developed similar products, which easily canceled out the efforts by the Japanese electronics companies to differentiate their products from those of their competitors. As a result, the period for Japanese electronics companies to rake in profits that were supposed to stem from the development of new products was shortened.

In addition, the process of standardization and low-cost production of devices was accelerated by the introduction of models of devices produced by foundries, which were commissioned by specialized manufacturers of chips for semiconductors at the request of clients.

Traditionally, manufacturing of products was made within keiretsu groups in Japan, so that manufacturing expertise rarely leaked outside the group. However, as shown in Figure 3, the supremacy of the keiretsu production system, or vertically integrated production system, was lost because of the accelerated process of standardization and low-cost production of devices, leading to an accumulation of manufacturing know-how

at the level of equipment manufacturers and parts manufacturers. Consequently, manufacturing know-how that had been monopolized by Japanese electronics companies could no longer be kept in a black box. This is another reason why Japanese companies have been fighting an uphill battle.

In the process of mounting and assembly, EMS (electronic manufacturing service) companies also improved their level of technology and started to produce outsourcing models in the same way as the device industry. A recipe for manufacturing (in other words, the process of production) is now publicized and the international division of labor of production is promoted as well. Competition has intensified because of rapid catch-up with Japanese companies by local companies, in particular by Korean and Taiwanese companies. Failing to build an effective barrier to new entry to the market, Japanese companies lost their overseas market of low-grade and middle-grade products to foreign companies.

In response to these changes, Japanese companies increased their tendency to specialize their products in niche markets, and lost incentive to compete in the market in which the commoditization of products were becoming more evident. Eventually, the market position of Japanese companies deteriorated.

3 Mass Sales by Power Retailers and Increased Frequency of Model Changes

As the number of products sold by mass retailers increases, the speed of decline in the prices of products increases. The reason for this is that mass retailers adopt sales methods to clear inventories of old models as soon as possible by reducing their sale prices soon after the new models are put on sale. Therefore, mass retailers are forced to enter price competition.

The higher the ratio of sales through the channels of mass retailers becomes, the more difficult it is to predict market trends. Because manufacturers have lost direct touch with end users, they cannot develop products by directly addressing their needs. To prevent falling prices, they concentrate their energies on improving the quality of existing products and making minor changes to them. Under these kinds of situations, they sometimes tend to design products that do not fit the real needs of consumers or concentrate their energies on developing products with surplus functions. As a result, they tend to fall into the situation where they cannot develop products that are truly attractive to consumers.

These three similar symptoms are also observed in other industries that are at their maturity. The time has come now when the electronics industry has to reform its corporate structure to make a profit even in the maturation stage of the industry, where many of its products are commoditized.

II Why Do Electronics Companies Become Structurally Unprofitable at Maturity?

Japanese electronics companies have the three problems listed below in common and have a strong tendency to force themselves to shift the focus of competition from functions or quality of products to prices.

- Japanese electronics companies do not define which business fields or product segments are strongest for them and, similar to carpet bombing, tend to produce a wide range of products in almost all product areas to meet the needs of all kinds of consumers. Therefore, their products tend to be standardized.
- Japanese electronics companies are good at making improvements and modifications to existing products, but are poor at developing their own technolo-

gies from scratch. Therefore, they have difficulties producing epoch-making hit products.

- If the product of one company is successful, then other competitors quickly follow suit to market a similar product. As a result, they are forced into price competition.

The basic reasons for Japanese electronics companies falling into the “no winner, but busy” situation are described in the following six points. These points are also supposed to be the major issues that need improvement as soon as possible to reform the business structure to yield profits.

1 Undefined Business Portfolio and the Lack of Their Own Business Areas

It is important for Japanese companies to make exact and quick decisions in which business areas management resources should be allocated, to restructure business that deserves it as soon as possible, and to retreat from business areas that are difficult to be restructured. However, there are many cases where, because they do not have any clearly defined guiding principles for restructuring business portfolios, Japanese companies tend to maintain a collection of gradually declining businesses over a long period.

Against this background, because they place too much emphasis on every type of customer, Japanese companies have little concept of concentrating management resources by defining their own business areas. Japanese companies give credence to the idea known as the “one-set principle” that means they should have a full complement of products. As is typically seen in the case of integrated home appliance companies, they seem to be overly obsessed with having a full lineup of products, and all the products in each product class, in order to compete with competitors and gain all kinds of customers.

2 Put Emphasis on Market Share and Abandon Long-Term Strategies

In the past, an increase in market share at the early stage of marketing products was supposed to lead to increased profits during periods of high economic growth. However, as the position of mass retailers strengthened in relation to that of manufacturers, manufacturers struggled to yield a profit even though they shipped more products because the pressure to slash selling prices was heightened. However, because they adhered to the old-style image that an increase in market share meant an increase in profits, which was correct particularly in the startup and pre-growth periods of the market, they were caught in a price war during the latter half of the growth period and the maturity period.

As a result, even though they gained a larger market share in the early stages of marketing products, they

could not make a profit because of increasing pressure to cut prices from mass retailers because they did not have any long-term strategies in place for the period after product maturity.

On the other hand, even if they succeeded in differentiating their products in a niche market, these products did not contribute to corporate earnings because of the lack of business strategies for growth.

3 Product Planning without Marketing Strategies

Japanese companies focused their marketing strategies too much on how to respond to competition and to requests from their sales departments rather than on the needs of the users of products. Their product planning lacked marketing strategies. Accordingly, Japanese companies repeated competition by making products that had almost no differences from those of competitors. They also struggled to create original products that had greater potential for success. Concerning digital products, they should reorganize their marketing methods that pay more attention to the trends of consumers and their needs.

Japanese companies obviously tend to adopt a “product-out” type marketing method in accordance with the concept of made-up products from the beginning. The tendency still seems to be deeply rooted in Japanese corporate culture that product ideas offered by the marketing staff are not easily reflected in the process of product development because the power of the staff members on the shop floor is generally stronger.

Depending on the product ideas offered by the staff members on the shop floor, efforts tend to be focused on improving existing products rather than on developing original products. As a result, there is a tendency to develop products with too many functions for the user to use them effectively even with provision of a thick instruction manual. This is because they fail to define the “appealing points” of their products in spite of the multi-functionality of products. In this kind of environment for product development, it is difficult to look for merits such as the realization of operability and user-friendliness that are essential criteria for evaluating products.

4 Decision Making by Management Remains Slow

Generally speaking, Japanese companies can make a profit when the yield ratio of products is low. However, once the yield percentage of products such as DRAM (dynamic random access memory) and displays generally exceeds 70 percent, Japanese companies are inevitably faced with rapid catch-up by foreign companies and, accordingly, their profit margin tends to shrink. As the time to improve the yield ratio of a product is

declining these days, the period when Japanese companies could make a profit by taking advantage of their relatively high yield ratio is also declining.

Japanese companies should not look for only improving yield ratio but have to resolve to invest in improving technologies and manufacturing equipment with an eye on the future increase of supply and basic changes in production technologies after commoditization of such products as CCDs (charge coupled devices), flexible substrates and their materials for which they still maintain a relatively superior position over foreign competitors.

The real problem facing the management of Japanese companies is not to speed up the production process of each product, but to speed up the decision making process. It is necessary not only to promote efficiency in each of the processes of planning, development and manufacturing, but also to shorten the lead time of putting new products on the market. It is also necessary to improve management’s decision making process concerning the shift of power from a development division to a manufacturing division.

5 Competition Mechanism Leading to the Sharp Decline of Prices

Japan’s vertically integrated model of supply and demand is losing its superiority, while foreign companies are emerging as major players in the fields of parts and devices. Though still maintaining competitiveness in the fields of basic materials, parts, equipment and components, Japanese companies are faced with the following dilemma of the demand-supply structure: on the demand side, demand from Korean and Taiwanese companies has been rapidly increasing, but on the supply side, prices which Japanese companies offer are also declining sharply in business negotiations with Korean and Taiwanese companies. Because of this situation, the Japanese industry is losing its competitiveness.

In addition, the so-called “no winner, but busy” mechanism is working, leading to the acceleration of a downward spiral of values and prices among Japanese companies. Nevertheless, industrial consolidation, which is needed to prevent such a vicious cycle, is not adequate and is also one of the reasons for the decline of competitiveness in Japanese companies.

6 Weakening Function of Strategic Planning and Strategic Promotion

The basic reasons that have caused the above-mentioned five problems are supposed to stem from “the weakening function of strategic planning and strategic implementation.” The function to plan strategies is assigned to each operating department that is forced to make a short-term profit so that the company-wide strategies are just “an accumulated strategy” of strategies of operating departments.” In other words, the ability of headquarters to set

corporate goals and to implement corporate strategies, which is the main role of headquarters, has been deteriorating.

III Companies in Other Industries Continue Making a Profit at Maturity

There are companies that continue to make more profits than other companies in the same industry at the maturation stage by reforming their business structure and business models. In this section, we will summarize the cases of other industries where commoditization of products becomes common at maturity.

1 Expanding Services by Specializing in Their Important Customers

This is a strategy to identify a potential customer group in order to take advantage of the strength of main products, and then to expand related businesses targeted at this group.

Some companies that adopt this strategy are GE (General Electric Co.) and Miura Co. GE, for example, provides not only hardware products such as turbines and medical equipment but also additional value services such as remote maintenance through communication lines to their customers. Miura sells medical agents and provides maintenance services to existing customers who buy its compact boilers. They try to attract a good customer base over time by providing them with new services.

2 Expanding Users by Specializing in Specific Technology

Specializing in specific technology is equivalent to the strategy of Shimano, manufacture of bicycle parts, and Mabuchi Motor Co., manufacture of small DC motors.

Shimano specializes in metal processing and accumulates unparalleled technologies in this field through direct sales to leading-edge customers and a joint development of technology with them. As a result, they are always supported by customers who demand a higher performance level of products. Mabuchi also specializes in the production of small motors and sells products at lower prices by standardizing them.

These two companies share the common approach of specializing in development of their own technology and emphasizing development of products that meet the needs of customers.

3 Change of Source of Profits

In the past, manufacturing companies regarded sales of products as the source of profits. Recently, we have been able to observe examples in other industries where some companies have shifted their source of profits from products to material processing.

For example, cement companies receive fees by disposing of industrial waste, resulting in a decline in cement prices. Another case is elevator manufacturing companies that make a profit by selling expendable supplies and providing after-sales maintenance service of elevators.

4 Acceleration of Management Decision Making

Some companies have enhanced their competitiveness by establishing a system of on-demand supply and a system to shorten the lead time from the stage of planning until the shipment of products to users. Customer value can be improved by not only making efficient processes of planning, development and manufacturing, but also by improving the decision making process by management based on a customer oriented policy.

Tostem Corp. is another example of a company that shortens delivery time and accelerates the development of new products. The company first of introduced the

Table 1. Examples of Models Which Can Make Profits at the Stage of Maturity

	Outline of strategies	Points of earnings
(1) Specialize in good customers and expand services to them	<ul style="list-style-type: none"> Concentrate on customers for which strength of companies can be utilized 	<ul style="list-style-type: none"> Expansion of value chains (expansion of contents of services to be offered)
(2) Expand users by specializing in specific technology	<ul style="list-style-type: none"> Specialize in technology in which the strength of a company can be utilized Obtain information from leading-edge customers, high accumulation of technologies 	<ul style="list-style-type: none"> Standardization of products, make technology secret in a black box
(3) Reform of sources of earnings	<ul style="list-style-type: none"> Make a profit except for sales of hardware 	<ul style="list-style-type: none"> Make a profit through material disposal technology and maintenance
(4) Increase in speed of management decision-making	<ul style="list-style-type: none"> Differentiation of products by making prompt response to needs of customers 	<ul style="list-style-type: none"> Shortening of delivery time, increase in speed of development
(5) Increase bargaining power (power of grips) by consolidation of companies	<ul style="list-style-type: none"> Expansion of size by consolidation 	<ul style="list-style-type: none"> Enhancement of bargaining power at the time of purchase of material and sales of products Gain benefits of survivors in the matured market

system to accept orders and to produce aluminum sashes for housing use. It then established a system to make prompt delivery of products that are received at sales agents ahead of competitors. Though being a latecomer in the market, the company now enjoys the highest market share because it established a system to accept orders from customers in real time, to produce the ordered amount of products at a factory and deliver the products the following day. The company also puts emphasis on development of new products in a short cycle by absorbing needs of customers.

5 Increased Negotiation Leverage by Consolidating Companies

The materials industry, including the steel industry, underwent industrial consolidation on a global scale over the last ten years. What promoted this consolidation is the progress of the consolidation of global natural resource development companies such as iron ore mining companies, coal mining companies and oil-well drilling companies and the reorganization of major users of these materials such as car assembly companies and shipbuilding companies. In order to maintain bargaining leverage during negotiations, both for purchasing materials and selling products, companies should have a corporate size greater than a certain level.

In Japan for instance, JFE Steel Corp. was established through the merger of Kawasaki Steel and NKK, strengthened its bargaining power at the time in both purchase of materials and sales of products, which led to a remarkable improvement in earnings. In this company, because steel mills of former companies were located nearby, the consolidation of the mills brought about a dramatic reduction of fixed costs and contributed to an improvement in earnings.

There is another company that adopted a strategy to increase market share and to enjoy the benefits of being a survivor by acquiring competitor companies in a specific business field that were at the maturity stage. An expansion of the vinyl chloride pipe business by an American subsidiary of Shin-Etsu Chemical Co. and expansion of business in a suburb by Wal-Mart, both of which were made by acquisition of companies, are cases in point. Even if a target company did not yield a profit, it can be considered a success by increasing market share through gaining a marketing area and thereby improving earnings.

IV Points to Be Strengthened by Electronics Companies

In light of the winning formula of other industries, we would like to make six recommendations for Japanese electronics companies to follow to strengthen their market positions.

1 Concentration of Business Portfolio into Strongest Business Fields

Because of the extreme diversification of businesses, Japan's major integrated electronics companies have lost their own characteristics. Diversification of business is a natural development, but there are many cases where strategic choices and life cycles of products are so different according to business type that management has difficulties making decisions. Therefore, management should take initiatives to restructure businesses on a corporate level. The role of headquarters is becoming more important in discussing how to consolidate businesses (in other words, the definition of businesses) or what businesses should be separated or strengthened.

Therefore, it is extremely important to have a method of evaluating businesses or defining the business portfolio in order to identify critical business areas and to concentrate management resources in these areas or to make a quick reform of businesses which should be restructured. Details of this subject will be discussed in Chapter V.

It is also an urgent issue at the level of operating departments or in-house companies to determine and promote a strategy to specialize in products that have the potential to be superior to those of competitors. The method of evaluation is essential in selecting businesses at the product level. As to the method of evaluation, it is more crucial to prioritize targeted businesses based on the level of the importance of strategies and within the limit of management resources by judging whether they can create future value with the return coming from investment of capital, human resources and equipment rather than the level of earnings.

2 Creation of New Sources of Earnings

(1) Start services business at the downstream

In the past, the electronics industry made a profit by differentiating hardware from those of its competitors. Now, however, electronics companies are required to create a new source of profits by expanding the value chain in addition to hardware. In this regard, Canon has already embarked on a new business of providing expendable goods in the business machine market, and Sony Corp. has created a new model of yielding a profit in the content business.

Value-added services that are offered in the digital home electric appliance market are expected to become a model of ensuring profits in the electronics industry.

Soon, high-capacity hard disk drives will make it possible to soon record all programs of ground-based broadcasting television stations for 24 hours, and TV is expected to break new ground for users as mass media. In addition, the business model of the broadcasting industry will be forced to turn to a new model including real-time response of viewers by the introduction of two-way communications. This will herald an era of media

innovation. There are many service business opportunities associated with developments in TV broadcasting.

(2) Cost reduction at the upstream

There is another model that is intended to strengthen an earning base by securing materials in a stable way through the recycling of materials as is already done by the cement industry.

In the past, the recycling business was regarded as unprofitable because of the high costs of recovering industrial waste. Therefore, it was difficult to re-use recycled materials without enforcement of public regulations. Because the network of recycling is established and technologies to dispose of industrial waste are developed, the recycling of industrial materials is expected to become one of the major ways to obtain materials. If waste disposal companies and manufacturing companies form a joint development for a recycling system and technologies, the recycle business is likely to become profitable.

(3) Key device and protection of patents

As a new source of earnings, it is also conceivable to sell a key device containing original know-how as a black box. In the future, models to supply users with key devices are expected to increase in the process wherein companies specialize in their strongest business fields. However, in selling key devices, patent strategies should be used effectively to obtain royalties.

3 System to Absorb Needs of Users

In the IT industry, a major issue is how to elicit potential needs of customers.

As the electronics industry is obsessed with an idea of product planning with a needs-push method, which takes advantage of a newly developed technology regardless of the needs of customers, the probability of failure in the development of new products seems to increase. In the future, it will be necessary to fundamentally restructure a marketing system in order to develop successful products. For this purpose, instead of depending on old-style mass marketing of consumer products, it is desirable that a new original marketing method, which pays close attention to attributes of users, should be made and that a new concept of products should be created through two-way communications with potential users.

Especially recently, it is not easy to differentiate digital products from those of competitors. Thus, it is important to assess what judgment criteria users eventually depend on when they buy.

From the viewpoint of manufacturers and suppliers, a "slight" difference sometimes determines the relative positions of products in the marketplace. Therefore, it is not sufficient for a company simply to trace users who buy its products. Rather it is important to aggressively consider the needs of potential users. By comparing its own products with competing ones and by clearly deter-

mining what are the decisive factors for users to decide whether to buy, a company can look for factors to enhance customer satisfaction. Therefore, the question that should be asked concerns the essence of the method of marketing.

Previously depending on retailers for tracing customers after sales of products in the present distribution network of electronics products, it is becoming more important than before for electronics companies to establish their own user network and to obtain high-quality marketing information about end users.

Fortunately, Japanese users have extraordinarily high sensitivity to and strict evaluation ability about products compared with foreign users. Some of them are sometimes called *otaku* in Japanese, which is the equivalent of somebody who is completely preoccupied or obsessed with something as well as anime and video or computer games. They are early adopters because they usually buy a new model soon after it is brought onto the market. They have the ability to form an advisory board that gives appropriate advice to ordinary users when they buy. While establishing both their own high-quality information network and their own method of evaluation, companies have to create an aggressive system to plan hot-selling products.

It is also necessary for management to make the drastic decision of developing narrowly focused products that could appeal to a specific segment of consumers rather than average products that satisfy all kinds of consumers. If companies succeed in developing products that are strongly supported by a specific group of consumers, they can establish a well-known brand image so they can maintain prices by avoiding the usual follow-up attacks by latecomer competitors. Moreover, by expanding a lineup of products and a menu of services for these consumers, they will gain new business opportunities.

4 Management Judgment with an Eye on the Trend of Commoditization

There are several options about how to compete against competitors. One option is to realize low-cost production by drastically increasing production capacity. Another is to keep the process of production secret in a black box. In consideration of a supposed change of competitive situations, it is necessary to cope with the trend of commoditization of electronic products by making well-timed capital investments and at optimal size. For this purpose, the corporate sector, which supports management who are responsible for making investment decisions, must establish a system to allow management to make objective judgments about the timing of changes to corporate strategies by making "visible" changes of the presumption of strategies and vital points in the implementation of the strategies.

Though it is not easy to change the way of competing with the trend of commoditization by bringing out the

winning formula of the past, it is extremely important to start a revolution of consciousness that encourages companies to counter commoditization of electronics products and to work out a long-term product strategy.

5 Acceleration of Decision Making by Management

(1) Acceleration of speed of development with the two targets of advanced development and product development

It is also important to identify elemental technologies effective for establishing an advantageous competitive position and to develop products ahead of competitors. Toyota Motor Corp. and other Japanese automakers, for example, have been working on changing their business structure to accelerate the speed of product development in order to differentiate their own products from those of competitors. At the same time, by assessing the needs of users, it is necessary to build a development model that could remarkably improve the speed of product development from product planning to a pre-production prototype.

(2) Speed up of transfer of a product from the developing sector to the manufacturing sector

It is also critically important to speed up the transfer of a developed product to the manufacturing sector for manufacturing after development is complete. Whether companies have the ability to make a quick transfer is the key to success of a new product. The overseas production ratio of Japanese companies has been on the rise because of pressure to reduce labor costs and the work force at factories. There are misgivings about the declining “strength of the shop floor” of factories, which is supposed to be a source of strength of Japanese companies.

Recently there have been several cases where new production systems such as the cell production system (in which small lots of products are produced by a small number of multifunction workers) is adopted to make a quick response to changes of the market by minimizing inventories and making quick deliveries of successful

products in small quantities. Unmanned factories, which Fanuc introduced a long time ago, are supposed to be an ultimate realization of the best production strategy for the electronics industry in Japan.

We dare to say that the key point to strengthening the ability of the production of goods is centered on how to increase the speed of decision making by management. Kaizen activities or continuous efforts to improve the production process are routinely carried out on every shop floor of Japanese companies. However, as these efforts are not necessarily closely linked to the reform of the management as a whole, for many companies the tangible results of these efforts by companies have yet to be seen.

In order to establish a system that makes a profit for all business departments by taking advantage of the strength of kaizen activities, reform should not only focus on manufacturing sectors but also on the acceleration of the process from planning, development, prototype and on to mass production (Figure 4).

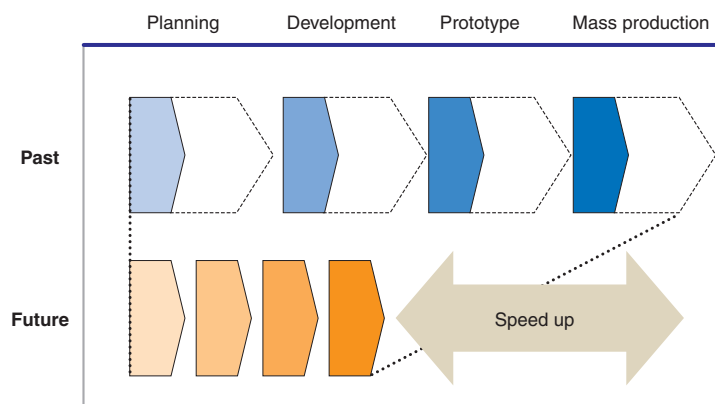
To optimize the speed of the entire process of the value chain and to reduce total costs, it is inevitable that each production process should be strategically related to each other. Therefore, it is necessary to listen to the voices of consumers with unbiased opinions, and to achieve numerical targets set by management to maximize corporate value. For that purpose, a mechanism is needed to make a comprehensive adjustment of policies.

6 Corporate Acquisition for Business Restructuring and Industrial Consolidation

In the future, new business opportunities in the electronics industry are expected to expand in a fused market with different markets such as the environment, energy, housing, security, medical and amusement.

Acquisition of companies is one of the ways to promote cooperation among different industries. For companies that put other companies under their control through acquisition or merger to make a profit exceeding acquisition costs, it is necessary that they give advance consideration to various strategies after acquisition. In

Figure 4. Concept of Increasing the Speed of Management Decision-Making



particular, when the characteristics of an acquiring company and an acquired company are different, it is essential to maintain the energy of an acquired company by paying due attention to its system. At the same time, in considering measures to streamline personnel and to optimize operational processes after a merger, it is sometimes necessary for headquarters to take the initiative as a main player and not rely on the relevant business departments.

Conversely, as mentioned in Chapter II, structural reform of the electronics industry as a whole should be made as soon as possible in order to avoid the disadvantages of excess competition and the decline of industrial price bargaining power in demand-and-supply relations. Particularly, in industries whose source of industrial competitiveness stems from technology, it would be necessary to look for a horizontal tie-up model and to form a community (where there is a horizontal division of labor between industries that belong to almost the same value chain but offer different goods and services).

V Headquarters Should Play a Strategic Planning Function

It might be difficult to put into practice the issues mentioned in the preceding chapter and to change corporate structure profitably by the old style of Japanese management. Japanese manufacturing companies shifted from a functional organization to an operational organization in the past. Recently, they have transferred considerable authority to execute business operations to business lines (in-house companies). As a result, the expertise of companies has deepened, and the speed of making decisions has improved. In contrast, there is the impression that corporate planning divisions seem to have suffered a relative decline in their ability to plan and implement corporate strategies.

These days, in integrated electrical appliance companies with greatly diversified business lines, arguments have been made that it is ideal for headquarters to be minimal and to have a requisite minimum function. Without a doubt, one of major challenges for Japanese companies is to make white-collar workers effective. In addition, corporations that are becoming too large and/or too bureaucratic should also be avoided. Conversely, looking for extremely small headquarters may lead to a weakening of the planning strategies so that the corporation seems to have lost its ability to set the direction for the entire company and to solve problems.

Though Japanese companies are believed to have the ability to solve issues, it is more important for headquarters to enhance their ability to propose issues themselves, which will enable them to effect a drastic change of strategies and to set higher targets. At the same time, it is important that corporate groups have the ability to

implement strategies. These two points are the major issues that management is now required to undertake.

The corporation should understand the essence of business strategies, to consistently monitor the progress of their implementation and to sharpen their senses to detect changes in competitive conditions and, finally, to make a judgment about the timing of the proper shift of competitive fields. Now is the time to make a fundamental reevaluation about the role to assist the command center.

There are major problems for Japanese companies to solve when they implement the issues mentioned in Chapter IV. Korean and Taiwanese companies, for example, can make quick decisions about investment or restructuring of businesses by way of top-down decision making. In contrast, even though top management makes decisions about restructuring businesses, it is not easy to implement them without the cooperation of management and the operating departments because of rigid corporate structure (Figure 5).

In order to solve these problems, not only should the direction of management be set at management level, but also staffers are needed to undertake the role of implementing company-wide reform including both headquarters and operating business sectors. For a company to become profitable, headquarters should carry out the following six issues (Table 2).

1 Introduction of Common Measures of Evaluation and Set-Up of Rules for Restructuring and Withdrawal

It is fundamental to grasp the content of business in each in-house company correctly and to establish the procedure to provide the necessary information about issues to the board members in headquarters to make judgments. Headquarters is required not only to classify materials provided by business operating departments or companies, but also to provide its own opinion.

There should be a procedure to restructure business operating departments or in-house companies. When an in-house company whose performance deteriorates cannot restructure itself, headquarters implements a restructuring project by dispatching staff. However, if it is difficult even for headquarters to restructure a company, it is desirable to withdraw from that business smoothly in accordance with the rules. Making this function work effectively requires common measures that can be applied to all of the businesses.

2 Strengthening of Technology Development by Headquarters

It is desirable for business operating departments or in-house companies to be engaged in technology development if it is an extension of an existing one. However, in an environment where rapid technological innovation

Figure 5. Division between Management and Operating Departments in Japan

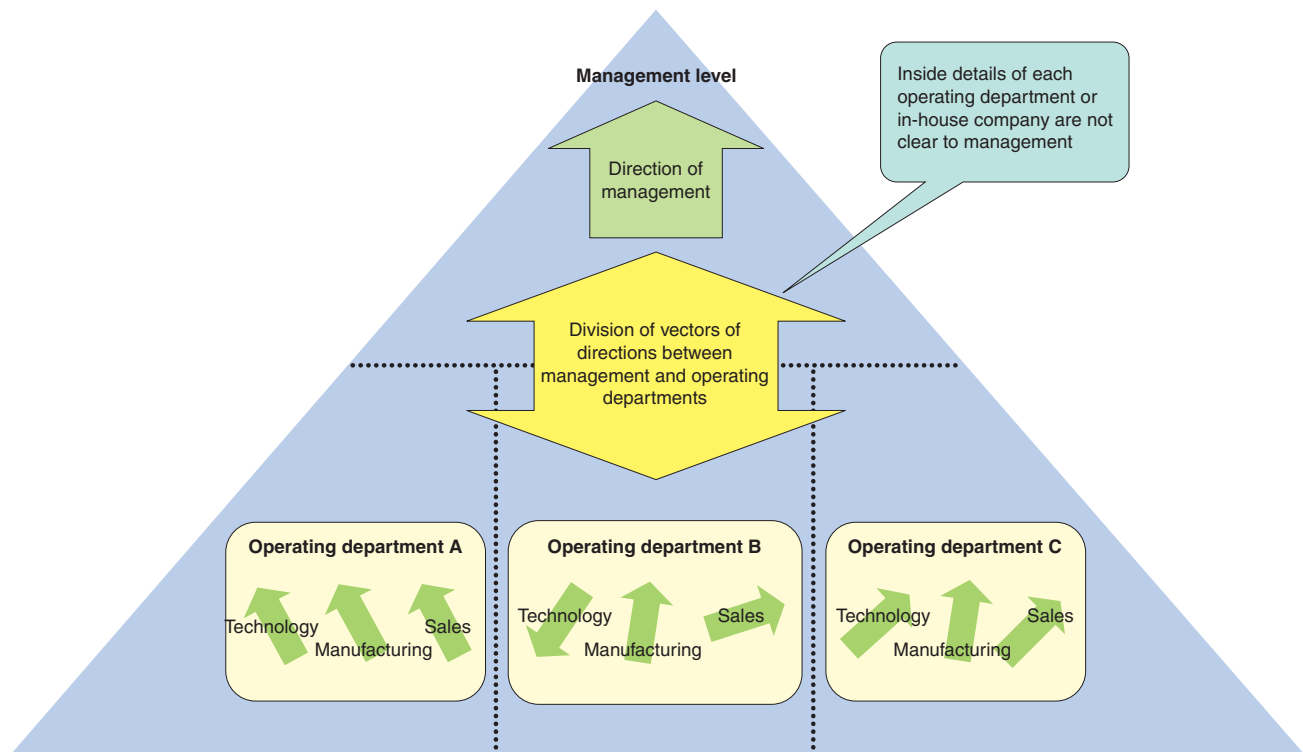


Table 2. Issues and Measures by the Management Section (Headquarters)

Point to strengthen	Issues	Concrete measures
(1) Concentration of strongest business fields	It is impossible to restructure businesses because of strong resistance of operating departments.	Company-wide common measures should be introduced and rules should be set up for restructuring or withdrawal of businesses which cannot meet those measures.
(2) Creation of a new source of profits	Business operating departments tend to think of a new source of profits as the extension of existing businesses.	The function of the development of technology by headquarters should be expanded.
(3) A system to cope with the needs of users	It is difficult to gather information about the needs of users through existing sales channels.	Headquarters should maintain its own marketing function.
(4) Speed-up decision-making by management	A vector of business targets and a vector of business activities at business fronts are in conflicting directions.	It is necessary to set up KPI which is a key to realize business targets and to provide support to improve it.
(5) Use of an acquisition strategy	It is impossible to work out measures after corporate acquisition.	It is necessary to establish a system to share know-how with people who have experience carrying out corporate mergers.
(6) Establishing an intellectual property strategy	Each business operating department has its own patent strategy so that it is impossible to use collective strength as a whole.	Headquarters should take responsibility for intellectual property issues when external negotiation and expertise are needed.

Note: KPI stands for key performance indicators.

becomes the norm, it is desirable for headquarters to research competing technology trends, which in-house companies cannot undertake research and could become a menace in the future, and to develop corresponding functions for alternative technologies.

If it is inefficient to conduct in-house development, headquarters should take the initiative with business operating departments to seek an alliance with other companies.

3 Headquarters Should Have Its Own Marketing Function

In the “white area,” which exists between headquarters and in-house companies, and which neither have yet entered, it is desirable for headquarters to cultivate business opportunities because it can understand in-house companies from all directions. A problem of a corporate division system or an in-house company system is that

as departments or in-house companies tend to lock in their own business area, there are many cases where they delay getting into business in critical and newly emerging areas. It is an important function for headquarters to discover these kinds of business opportunities.

4 Priorities about Policies and the Provision of Support for Improvement

It is also important to calculate KPI (key performance indicators) which show what each department should emphasize in business activities and to make adjustments of the targeted indicator between the management and departments. There are many cases where even though each department makes individual judgments and carries out improvement activities of KPI, these activities cannot produce any fruitful results because they are not necessarily in accord with company reform as a whole.

A support group is formed and, if necessary, dispatched to companies to teach manufacturing technology and management methods necessary to improve KPI set by management and departments. Because management methods for a company that diversifies into different businesses are different according to each business, sharing the positive aspects of management methods is expected to yield good results.

5 System to Share Know-How of Staffers Engaged in Corporate Acquisition

It is desirable for headquarters to participate in the stage of planning concerned with corporate acquisition and responses after merger. In particular, it is necessary for headquarters to possess the know-how of staffers who have the skills of due diligence and price evaluation in the process of corporate acquisition and to establish a system to share new skills whenever new deals are made.

It is also desirable for headquarters to be ready to help to work out business strategies when business areas expected after acquisition are different from those of existing departments or in-house companies.

6 Working-Out of Intellectual Property Strategies

As a means to protect the earnings of Japanese companies that are faced with rapid catch-up by foreign companies, intellectual property strategies are becoming increasingly important. In the future, intellectual property will become more important not only as a means of protection of earnings but also as a means for cross-licensing and so on to effectively utilize the intellectual property of counterparts.

It is desirable for headquarters to take responsibility for patent strategy because company-wide strategies and expertise are needed when negotiations are made with other companies.

We trust that this report is of help to members of the electronics industry and that the Japanese industries recover from difficult situations and generate profits even at the stage of maturity. We hope for the restoration of the Japanese manufacturing industry.

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