

# Strategies of Japanese Corporations Facing Global Competition: The Cases of Sony and Toray

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MANY people in Japan today are having serious doubts about the future of the big Japanese companies that for so long maintained a virtual oligopoly in the domestic market. In their view, the majority of these companies are going to have little chance to compete internationally in the face of global competition growing stronger each year. For example, the Long-Term Credit Bank of Japan (LTCB)<sup>1</sup> was notified in September 1999 by the Financial Reconstruction Commission that the commission had selected New LTCB Partners (Partners), an investment group formed by Ripplewood Holdings and other investors, as the preferred candidate for the acquisition of the LTCB. And at the 33rd Tokyo Motor Show in the autumn of 1999, the most talked-about topic was neither Toyota's latest hybrid car nor Honda's urban style vehicle, but Mr. Carlos Ghosn, the new chief operating officer of Nissan, who had been brought in from Renault. A lot of Japanese were shocked to see the LTCB coming under the control of a U.S. financial institution and Nissan brought under the umbrella of a French motor company. Immediately they started talking about a "second defeat."

The expression "second defeat" implies the failure of Japanese companies to hold out against global competition. The November 1999 issue of *Bungei shunju*, one of Japan's most widely read monthlies, carried a feature story called "Reorganization of Japan: Only These Companies Can Survive." The article maintains that in the manufacturing sector, only the following companies can survive global competition under existing circumstances:<sup>2</sup>

Iron and steel: Nippon Steel.

Shipbuilding: None.

Automobiles: Toyota and Honda.

Synthetic fibers: Toray and Teijin.

Chemicals: Sumitomo Chemical and Shin-Etsu Chemical.

Machinery: Uncertain<sup>3</sup>

Electrical appliances: Sony and Matsushita.

Only nine firms appear on that list. Generally speaking, those companies achieve international competitiveness in two ways: supplying products globally and/or executing global operations. The Sony approach epitomizes the former, by providing a continuous supply of innovative products to the global market.<sup>4</sup> Toray, on the other hand, is typical of companies that prioritize the latter, concentrating on procurement, production, and marketing in the most appropriate locations throughout the world. In this paper I will examine Sony and Toray, two of the nine companies included in the above list, using them as case studies to illuminate the important

factors that enable Japanese companies to overcome global competition.

The following two sections of this paper focus on Sony and Toray, respectively. On the basis of these case studies, the concluding section summarizes the factors that have helped these firms and suggests the dangers that Japanese companies must watch for in this era of global competition.

### **The Case of Sony: Global Products**

In this section we will examine fifty years of Sony's history, highlighting the influence of global competition. A basic chronology of the company through 1996 appears in **Table 1**.<sup>5</sup>

**Table 1: Chronology of Sony until 1996**

<u>Year</u>	<u>Month</u>	<u>Facts</u>
1946	May	Established by the name of Tokyo Tsushin Kogyo ( Totsuko ) .
1950	July	Launches "G-Type", Japan's first magnetic tape recorder.
1953	Oct.	Concludes transistor license agreement with Western Electric.
1955	Aug.	Launches "TR-55", Japan's first transistor radio.
1958	Jan.	Changes the company name to Sony.
1960	Feb.	Founds Sony Corporation of America.
1960	May	Launches world's first transistor television.
1961	June	Issues ADR ( American Depository Receipts ) in U.S.
1963	July	Launches world's first transistor, compact size, VCR.
1968	Mar.	Founds CBS/Sony Records ( later Sony Music Entertainment ) with CBS.
1968	Oct.	Launches "Trinitron" color TV.
1971	Oct.	Launches 3/4 inch, U-matic VCR.
1972	Aug.	Commences operation at color TV assembly plant in California.
1975	May	Launches home-use 1/2-inch "Betamax" VCR.
1979	July	Launches first personal headphone stereo "Walkman".
1979	Aug.	Founds Sony Prudential Life Insurance ( later Sony Life Insurance ) with The Prudential Life Insurance.
1982	Oct.	Launches world's first CD player.
1982	Nov.	Launches "Betacam", a single-unit, 1/2 inch, broadcast use camera.
1985	Jan.	Launches single-unit, 8mm video camera.
1987	Mar.	Launches DAT ( digital audio tape ) deck.
1989	Apr.	Launches High-resolution, High-Band system, 8mm video series.
1989	June	Launches "CCD-TR55", lightweight, compact-size, single-unit 8mm video.
1989	Nov.	Acquires Columbia Pictures ( later Sony Pictures Entertainment ) .
1990	Dec.	Launches "HD Trinitron", 36-inch, color HDTV for home-use.

**Table 1: continued**

<u>Year</u>	<u>Month</u>	<u>Facts</u>
1991	Oct.	Launches "Kirara Basso" Series with "Super Trinitron" picture tube.
1992	Nov.	Launches MiniDisc system.
1993	Oct.	Launches "Digital Betacam" system, broadcast-use, component digital VCR.
1993	Nov.	Founds Sony Computer Entertainment.
1996	May	50th anniversary of Sony Corporation.

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Sources: Kikkawa and Nonaka (1995), Sony Corporation (1996), and Sony Corporation (1999).

Sony was established in 1946 under the name Tokyo Tsushin Kogyo (Tokyo Telecommunications Engineering Corporation), or Totsuko for short, with about twenty employees. In 1958 Totsuko changed its name to Sony. It took only about twenty years for Totsuko—Sony—to grow into one of the most widely known Japanese companies in the world.

Elsewhere Izumi Nonaka and the author have noted four characteristics of the process of growth of the company from Totsuko's founding until the rapid-growth period of the Japanese economy.<sup>6</sup> Those characteristics are

- (1) Competitive advantage gained by finding new markets and differentiating products;
- (2) Early entry into foreign markets;
- (3) Establishment of its own brand name and distribution channels;
- (4) Risk-taking investment to distinguish it from rivals.

Concerning the first characteristic, it is noteworthy that the company prospectus issued on 7 May 1946 upon the founding of Totsuko included the following statement:

We shall be as selective as possible in our products and will welcome technological challenges. We shall focus on technologically sophisticated products that are highly useful in society, regardless of the quantity involved. Moreover, we shall not establish any clear demarcation between electronics and mechanics, but shall create our own unique products uniting the two fields, demonstrating a determination unmatched by other companies.

We intend to keep our business operations small, go forward in technology, and grow in areas where large enterprises cannot enter because of their size.<sup>7</sup>

Totsuko was quick to find new markets for Japan's first magnetic tape recorder, which the company launched in 1950, in school classrooms. Then when the company succeeded in developing a completely new use for transistors—in transistor radios—this was the height of innovation. At that time in the United States, where the transistor was invented, transistors were regarded as having only limited uses in, for example, hearing aids. On the heels of Japan's first tape recorder and transistor radio, Sony launched the world's first transistor television and compact transistor VCR.

As for early entry into foreign markets, the company's first important milestone was the conclusion of a transistor licensing agreement with the large American company Western Electric in 1953, only seven years after Totsuko's founding. Subsequently, Sony founded the Sony Corporation

of America in 1960 and in 1961 became the first Japanese company to issue ADR, American Depository Receipts. Moreover, the company launched CBS/Sony Records, later Sony Music Entertainment, with CBS in 1968 and began operating a color television assembly plant in California in 1972. This was the first Japanese plant in the consumer electronics industry to open in the United States.

Concerning the third characteristic, establishing its own brand name and channels of distribution, there is an interesting story that is retold in Sony's official company history.<sup>8</sup>

In 1955, Ibuka and Morita<sup>9</sup> registered SONY as the official trademark of Tokyo Tsushin Kogyo with the intention of establishing the name as an internationally recognized brand. One month later, Morita was informed by the American company Bulova Inc. that they would order 100,000 transistor radios on the condition that they could sell the radios under Bulova's brand name, not the SONY name. Morita refused, saying that his company would only sell its products under its own brand name. He replied to Bulova, "How many people had heard of your company fifty years ago? My company is just starting out, but fifty years from now it will be just as famous as yours."

Morita's words became reality. The main reason that Tokyo Tsushin Kogyo, alias Totsuko, decided to use the name Sony instead was to create an easily recognizable brand and establish its name throughout the world. Sony also placed priority on setting up its own channels of distribution, especially within Japan.

Turning to the fourth characteristic, one of the risk-taking investments Totsuko made to distinguish it from its rivals was payment of a large sum to Western Electric for a transistor licensing agreement. Later Sony invested heavily in the development of the Trinitron line of color television sets.

The same four characteristics can also be seen at work in the process of Sony's growth after the oil crises of the 1970s. The remainder of this section surveys the period since the mid-1970s, drawing mainly on information contained in *Sony Corporation*, 1996 and *Sony Corporation*, 1999.

To begin with, Sony has been supplying a steady stream of innovative products to the global market. Following the completely new personal headphone stereo Walkman in 1979, it produced in 1982 the world's first compact disk (CD) player and Betacam, a single-unit, half-inch, broadcast-use camera; in 1985, a single-unit, 8-millimeter video camera; in 1987, a DAT digital audio tape deck; in 1989 a high-resolution, high-band system, 8-millimeter video series and the CCD-TR55, a lightweight, compact-size, single-unit 8-millimeter video camera; the HD Trinitron, 36-inch, color high-definition television for home use appeared in 1990; the "Kirara Basso" series with Super Trinitron picture tube in 1991; the MiniDisc system in 1992; and Sony's Digital Betacam system, broadcast-use, component digital VCR came on the market in 1993. Most of these products have become hit commodities worldwide and have influenced the de facto emergence of global standards. Sony's international competitiveness today is sustained by these global products.

It is important to point out here that Sony's leadership in establishing global standards was the result of a hard lesson learned from its defeat in the battle of formats for home-use VCRs during

the latter half of the 1970s and early 1980s. Sony introduced its home-use half-inch Betamax VCR in 1975, but just one year later a shock wave hit the company. Sony's corporate history describes what happened as follows:<sup>10</sup>

In September 1976, JVC [Japan Victor Corp.] formally announced the VHS-format VCR and its intention to compete head-on against Betamax. With this announcement, the VCR format battle began. The JVC product boasted two hours of recording time, twice that of Betamax . . .

Sony took a closer look at the VHS format and everyone was aghast. The technology and know-how that Sony had willingly revealed when it proposed unifying the U and Beta<sup>11</sup> formats had been incorporated into the VHS format. Although Sony had freely given the two companies<sup>12</sup> access to its basic, patented technology, it was impossible for Sony to hide its shock and surprise.<sup>13</sup>

The VHS camp was skillful in attracting new members. It worked actively to supply its products to European and U.S. consumer electronics manufacturers on an OEM (original equipment manufacturing) basis and made some advances in the software business. The Beta camp, which previously had led in product development and had launched its products first, was losing ground day by day.

The fatal event for the Sony Beta camp was Matsushita's decision to join the VHS camp. Insofar as the home-use VCR was one of Sony's core commodities in the 1970s, the defeat in the format battle dealt a serious blow to the company. For Sony, since then Matsushita has been a constant competitor in a tight race.

However, "in the course of competing with the VHS format, Sony learned a lot. In particular, Sony learned how to promote unification of standards, something which has remained with the company ever since."<sup>14</sup> Learning from these experiences, since the end of the 1970s Sony has succeeded in unifying standards on a worldwide scale by improving management of technological information, concluding strategic alignments with Western companies, and forging ahead in the software business. As a typical example, when Sony launched a CD player it unified its standard with Phillips of the Netherlands, and was assisted by CBS/Sony Records, Sony's subsidiary in the software business.

Second, after the oil crises, Sony continued as before developing its overseas activities, which were very successful. Many of the global products noted above were digitized, benefiting from the company's research and development of digitization. Howard Steele, a top manager of Sony Broadcasting Ltd. in Europe, played an important role in the research and development.<sup>15</sup> Outstanding software production forms the core capability of the Sony Group today,<sup>16</sup> and the strength of the company has been much enhanced by the rapid growth of CBS/Sony Records (later Sony Music Entertainment) since the 1970s and the acquisition of Columbia Pictures (later Sony Pictures Entertainment) in 1989. Drawing on its long-term experience with overseas finance, in 1979 Sony founded Sony Prudential Life Insurance (later Sony Life Insurance) with Prudential Life Insurance. Sony gained much valuable know-how as a result of legal and political activities in the U.S. surrounding the Betamax court case and its efforts to have the unitary state tax lifted.<sup>17</sup> And as

a consequence of what the company calls its global localization policy, “In fiscal year 1995, Sony achieved a 47 percent overseas production rate on a consolidated basis.”<sup>18</sup>

Third, Sony's brand name spread much more rapidly than Morita predicted in his comment to Bulova in 1955. In a 1990 Landor Associates survey covering Japanese, American, and European companies, SONY ranked second in terms of overall brand name power. The companies ranked in the top ten in the survey were (1) Coca-Cola/Coke, (2) Sony, (3) Mercedes-Benz, (4) Kodak, (5) Disney, (6) Nestlé, (7) Toyota, (8) McDonald's, (9) IBM, and (10) Pepsi Cola.<sup>19</sup>

Fourth, Sony made huge, long-term investments for research and development after the oil crises of the 1970s. When Harvey L. Schein, a U.S. national, was appointed president of Sony Corporation of America in the mid-70s, he was emphatic in asserting the need to generate short-term profits. Objecting to this argument, Morita (as the representative of Sony, the parent company) countered that, “Just chasing short-term profit is like to destroying our nest egg.”<sup>20</sup> As this episode illustrates, Sony attached great importance to long-term investments. And indeed, its long-term investments in research and development have paid off very well by generating a parade of global products, one after another.

### **The Case of Toray: Global Operations**

Turning to Toray Industries, Inc., this section will review the seventy-year history of that company from the perspective of global competition. **Table 2** gives a chronology of Toray up to 1998.

**Table 2: Chronology of Toray until 1998**

<u>Year</u>	<u>Month</u>	<u>Facts</u>
1926	Apr.	Established as a subsidiary of Mitsui & Co.
1927	Aug.	Begins producing rayon filament.
1946	Mar.	Cancels sole agent contract with Mitsui & Co.
1949	Feb.	Begins producing nylon filament.
1951	June	Concludes nylon technology licensing agreement with Du Pont.
1955	Feb.	Concludes polyester fiber technology licensing agreement with ICI.
1958	Mar.	Begins producing polyester fiber.
1959	Oct.	Begins producing polyester film.
1963	Mar.	Founds Thai Toray Textile Mills.
1964	Mar.	Begins producing acrylic fiber.
1964	May	Listed on stock exchanges in London and Luxembourg.
1964	June	Founds Toyo Products ( later Du Pont-Toray ) with Du Pont.
1970	Apr.	Issues ADR in U.S.
1970	July	Toray's man-made suede ( later named "Ecsaine" ) debuts in Paris.
1971	Feb.	Invests money in TAL ( Textile Alliance Ltd. ) of Hong Kong.

**Table 2: continued**

<u>Year</u>	<u>Month</u>	<u>Facts</u>
1975	Feb.	Establishes Labor-Management Recession Countermeasures Committee.
1975	May	Ends producing rayon staple.
1975	June	Completes construction of the Ishikawa Plant.
1986	Apr.	Establishes Toray's Corporate Philosophy, Corporate Missions, and Toray Motto.
1987	Feb.	Markets "Reebarg," pioneering Shingosen ( new synthetic fibers ) .
1991	Apr.	Formulates long-term corporate vision "AP-G2000."
1997	Apr.	Formulates long-term corporate vision "New AP-G2000."

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Sources: Toray Industry, Inc.(1997), Du Pont-Toray Co. Ltd. (1998), Toray Industry, Inc.(1999a), and Toray Industry, Inc. (1999b).

Toray (at that time Toyo Rayon Company) was established in 1926 as a subsidiary of Mitsui Bussan (Mitsui & Co., Ltd). With technical help from Oscar Kohorn & Co. of Germany, Toray began to produce rayon fiber in 1927. Just after World War II, Toray canceled its sole agent contract with Mitsui & Co.

What made Toray into one of the most successful companies in Japan was its move into production of nylon filament. That began in 1951, when Toray and the American firm E.I. Du Pont de Nemours & Co. made an agreement to incorporate Du Pont nylon technology. Toray's business expanded rapidly, allowing the company to achieve a competitive advantage over its eternal rival, Teijin.

In 1958, Toray began polyester production using technology imported from Imperial Chemical Industries, Ltd, of the United Kingdom. In 1964, using its own technology, it started manufacturing an acrylic fiber called Toraylon. Now able to produce nylon, polyester, and acrylic, these three core fibers became the pillars of Toray's synthetic fiber business. The company discontinued production of rayon yarn in 1963 and rayon staple in 1975.

In 1963, Toray set up Thai Toray Mills (TTTM) jointly with Tomen Corp. and Gisen Co., Ltd. As *Toray Industries, Inc.*, 1999 states, "TTTM has been one of the central companies conducting Toray's business in Thailand. It was the first overseas project undertaken by Toray's International Operations department, and the first foreign endeavor by Toray engineers that included everything from design to construction."<sup>21</sup>

Starting in the 1960s with the pioneering efforts that made it one of the first Japanese manufacturers to establish production bases in Southeast Asia,<sup>22</sup> Toray has built a long history of commitment to globalization. In 1964, the company was listed on both the London and Luxembourg stock exchanges. In the same year,<sup>23</sup> Toyo Products (later Du Pont-Toray) was founded as a joint venture between Toray and Du Pont for producing and marketing spandex fiber. Toray issued ADR in 1970 and invested money in Textile Alliance Ltd. (TAL) of Hong Kong in 1971.

For Toray, the period from the first oil crisis of 1973 to the Plaza Accord of 1985 was its

“time of troubles.”<sup>24</sup> The whole synthetic fiber industry in Japan faced severe difficulties after the oil crisis, two of the chief causes being the maturation of the domestic market and the loss of international competitiveness. In addition to trade restrictions on synthetic fibers imposed by the U.S. government, wage increases and a sharp appreciation of the yen made dents in the industry's exports. Toray's ordinary balance went into the red in the latter half of fiscal 1974 and the whole of fiscal 1975. The sales component ratio of synthetic fibers for Toray decreased from 84 percent in 1972 to 63 percent in 1985,<sup>25</sup> despite the success of a synthetic suede called Ecsaine and Toray's completion of its new Ishikawa plant, fully equipped with leading-edge, automated facilities.

It was not easy but, labor and management cooperated to overcome their difficulties. In 1975, for example, Toray instituted a Labor Management Recession Countermeasures Committee. In the first half of the 1980s, Toray introduced a new method of cost management into its affiliated companies in Southeast Asia. The company history describes the new method as follows:

All cost elements were analyzed and classified into those that could and those that could not be controlled in the plants. The head office would assume responsibility for costs that could not be controlled in the plants, including depreciation expenses, cost of raw materials, and exchange losses. For costs that could be controlled in the plants, however, such as unit consumption of raw materials, utilities, and labor, improvement goals were set. They were to be achieved through local self-improvement efforts.<sup>26</sup>

This approach relying on “self improvement efforts” reduced production costs considerably in the plants of Toray's affiliated companies in Southeast Asia.

In 1986, Toray established a corporate philosophy, worked out a statement of corporate mission, announced a corporate motto, and developed a “new foundation campaign” to bring in some new vitality. In the company's estimation, the fiber business had splendid promise as a growth industry in the global market. Toray began to market “shingosen,” or new synthetics, in 1987 and applied its cost reduction methods for 'self improvement' to domestic plants.<sup>27</sup> From the mid-1980s on, Toray's business improved and its international competitiveness has continued to grow stronger each year.

In 1991 Toray formulated a long-term corporate vision, called “AP-G2000,” (Action Program for the Three Gs, 2000) and made a new version in 1997.<sup>28</sup> The “three Gs”—Growth and Group management together with Globalization—form the basis of the company's long-term vision. Toray explains its approach to globalization in the 1990s in the following way:<sup>29</sup>

As Toray's international perspective continues to grow, the core principles that have sustained the company's globalization remain vital to its efforts to develop global operations: first, Toray seeks to establish production facilities in regions that offer advantages in terms of managerial resources; second, the company aims to develop in ways that will improve its ability to respond quickly and appropriately to changes in world markets; and third, Toray strives to promote international cooperation and global harmony in all its activities.

The keywords in those statements are “global operations.” Global operations can be defined

as the “organic integration of the domestic and overseas operations of the Toray Group to ensure that procurement, production, and marketing are carried out in the most appropriate locations.”

**Table 3** shows the growth in Toray's overseas business after 1985, the year of the Plaza Accord, which sent the yen shooting upward. The sales component ratio of overseas affiliated companies within the whole Toray Group jumped from 9 percent in fiscal 1990 to 22 percent in fiscal 1997.<sup>30</sup> As of the end of March 1999, Toray maintained a presence in 17 countries through an international network of 77 bases, 26 of which are in Southeast Asia. Thus, Toray's global operations have been effective, enabling the international competitiveness the company enjoys today.

**Table 3: Recent Overseas Business Development of Toray (1985-1999 )**

<u>Year</u>	<u>Month</u>		<u>Facts</u>
1985	June	U.S.	Acquisition of TREA Co., Ltd.
1985	Oct.	France	Introduction of equipment for PAN carbon fiber production at Société des Fibres de Carbone S.A.(SOFICAR)
1988	June	Japan	Formation of International Division.
1988	Oct.	U.S.	Introduction of biaxial orientation equipment for polypropylene film production at TREA.
1989	Feb.	U.S.	Change of TREA company name to Toray Plastics (America), Inc. (TPA).
1989	Mar.	U.K.	Acquisition of the Samuel Courtauld line of polyester filament woven fabrics from Courtaulds plc.; establishment of Toray Textiles Europe Ltd. (TTEL)
1989	June	Malaysia	Establishment of Pensanko Precision Sdn. Berhad.
1990	July	Malaysia	Establishment of Toray Plastics (Malaysia) Sdn. Berhad (TPM).
1991	Jan.	U.S.	Introduction of biaxial orientation equipment for polyester film production at TPA.
1991	Apr.	Thailand	Establishment of Toray Fibers (Thailand) Ltd. (TFL)
1992	Mar.	Indonesia	Increase of polyester filament yarn production at P.T. Indonesia Toray Synthetics (ITS).
1992	Apr.	Malaysia	Introduction of equipment for ABS resin production at TPM.
1992	May	U.S.	Establishment of Toray Composites (America), Inc. (TCA)
1992	June	France	Introduction of new production line at SOFICAR.
1992	Nov.	Thailand	Introduction of polyester filament yarn production at TFL.
1993	Apr.	U.K.	Introduction of new plant for polyester filament lightweight fabric production at TTEL, work completed 1995.
1993	Apr.	U.S.	Introduction of new biaxial orientation production line for polypropylene film at TPA.
1993	Dec.	Thailand	Increase of nylon filament yarn production at Toray Nylon Thai Co., Ltd.
1994	Jan.	Malaysia	Doubling of ABS resin production at TPM.
1994	Mar.	U.S.	Introduction of new biaxial orientation production line for polyester film at TPA.
1994	Apr.	Indonesia	Increase of nylon filament yarn production at ITS.
1994	May	U.S.	Introduction of facilities for carbon fiber prepreg production at TCA.
1994	Sep.	China	Establishment of Toray Sakai Printing & Dyeing (Nantong) Co., Ltd. (TSD)

**Table 3: continued**

<u>Year</u>	<u>Month</u>		<u>Facts</u>
1994	Dec.	Indonesia	Establishment of P.T. Petnesia Resindo (PNR).
1995	Mar.	U.K.	Establishment of Toray Komatsu Printing (E.U.) Ltd. (TKP)
1995	June	Korea	Establishment of STECO, Ltd. (STECO)
1995	Sep.	China	Establishment of Toray Sakai Weaving (Nantong)Co., Ltd. (TSW)
1995	Oct.	Hong Kong	Establishment of Toray Sanko Precision (Hong Kong) Ltd. (RKH)
1995	Nov.	China	Establishment of Toray Sanko Precision (Zhongshan) Ltd. (RKZ)
1995	Nov.	China	Establishment of Toray Fibers (Nantong) Co., Ltd. (TFNL).
1995	Dec.	Indonesia	Increase of polyester staple fiber production at ITS.
1996	Jan.	Indonesia	Introduction of PET resin production at PNR.
1996	Mar.	Korea	Establishment of KTP.
1996	May	France	Establishment of Toray Plastics Europe S.A. (TPEU) and manufacturing PET films 30,000t/year.
1996	Aug.	Malaysia	Start of increase in ABS resin production.
1996	Sep.	China	Introduction of dyeing equipment for polyester filament fabric production at TSD.
1996	Dec.	U.K.	Introduction of equipment for polyester filament fabric printing at TKP.
1997	Jan.	Korea	Introduction of TAB mounting equipment at STECO.
1997	Feb.	U.S.	Introduction of polyolefin foam production at TPA.
1997	Apr.	U.S.	Increase of industrial-use polyester film production at TPA.
1997	Apr.	China	Introduction of polyester filament woven-fabric production and marketing at TSW.
1997	May	China	Introduction of precision molding and assembling components production at RKZ.
1997	May	U.S.	Establishment of Toray Carbon Fibers America, Inc. (CFA).
1997	Sep.	Czech Rep.	Establishment of Toray Textiles Central Europe s.r.o. (TTCE) (manufacturing and marketing polyester filament fabric).
1998	Jan.	Korea	Introduction of polyacetal resins production and marketing at KTP.
1998	Feb.	U.S.	Increase of a metalizing machine for films for packaging materials at TPA.
1998	Feb.	Thailand	Increase of engineering plastic compounds production at TNT.
1998	Feb.	Thailand	Introduction of polyester filament yarns for industrial applications and processing fabrics production
1998	Apr.	U.S.	Increase of polypropylene films production at TPA.
1998	June	U.S.	Establishment of Toray Ultrasuede (America), Inc.(TUA)
1998	July	Italy	Increase of man-made suede production at ALCANTARA.
1998	Aug.	Malaysia	Construction of a new plant for PET films at PFR.
1998	Aug.	China	Double of polyester filament fabric dyeing and weaving production at TSD and TSW.
1998	Sep.	China	Introduction of polyester filament yarns and polyester chips at TFNL.
1999	Jan.	Thailand	Increase of polyester filament production.
1999	Apr.	U.S.	Introduction of caron fiber production and marketing at CFA.

**Table 3: continued**

<u>Year</u>	<u>Month</u>		<u>Facts</u>
1999	May	Malaysia	Construction of a new plant for PET films at PFR.
1999	June	France	Increase of PETfilms at TPEU.
1999	July	Czech Rep.	Introduction of polyester filament fabric weaving and dyeing production at TTCE.

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Source: Toray Industry, Inc. (1999c).

## **Conclusion**

We have examined the cases of Sony and Toray from the viewpoint of global competition. In conclusion, we will discuss the characteristics shared by the two firms and consider the factors that are important to Japanese companies as they strive to increase their competitive advantage in world markets.

At a time when global competition is intensifying, Sony and Toray, using different strategies, remain internationally competitive. Sony has continued to supply innovative products to the global market. On the other hand, Toray has ensured that procurement, production, and marketing are carried out in the most appropriate locations in the world. In a word, the former adopted the global-products strategy while the latter decided on the global-operations strategy.

Despite their different approaches, both Sony and Toray have successfully met the challenges of global competition. If we ask how, we can point to at least three factors that, in both cases, have contributed to their success.

The first is the knowledge gained from sustained business activities overseas carried out over the long term. Understanding its importance, Sony studied the software business, management know-how to tackle financial and legal problems, and approaches to constructing strategic alignments with Western companies. Toray learned how to organize worldwide networks for procurement, production, and marketing. Sony's strategy of global products and Toray's approach through global operations have both benefited from the increased knowledge gained from their overseas activities.

The second factor is learning from hard experience. As a result of its defeat in the VCR format battle, Sony was able to see the importance of de facto standards and studied the way to achieve them. In battling to overcome the depression of trade in synthetic fibers, Toray developed its own methods to reduce production costs. To some extent, therefore, the success of Sony's global products and Toray's global operations is a result of difficult experiences the two companies went through.

The third factor is stimuli to innovation from rival domestic companies. For Sony, the competition with Matsushita is always intense. M. E. Porter observes that, "In parts of Sony, for example, a popular slogan is BMW which means 'beat Matsushita whatever'."<sup>30</sup> For Toray, Teijin is the eternal rival. Teijin features in its corporate homepage the title, "Expanding Teijin's Global

Operations,” under which it writes, Teijin “will continue to take decisive steps to promote global expansion of its operations.”<sup>31</sup> Direct competition with rival domestic companies has acted as an active prod to innovate and has trained both Sony and Toray to be internationally competitive.

The above three factors suggest what the dangers are for Japanese companies facing global competition. If a company focuses only on domestic business, even if it keeps sailing before the wind or enjoys a runaway victory, it will still be very difficult to overcome global competition.

## Notes

<sup>1</sup> The LTCB went bankrupt in October 1998.

<sup>2</sup> *Bungei shunju*, (November 1999), pp. 94-106.

<sup>3</sup> According to the article in *Bungei shunju*, the Japanese machine industry as a whole is competitive, but the average size of individual firms is too small for them to hold their own against global competition.

<sup>4</sup> The overwhelming majority of Japanese would nominate Sony as Japan's most successful company in the world market.

<sup>5</sup> The chronology is based mainly on *Sony Corporation* (1996), which covers the fifty years 1946-1996.

<sup>6</sup> See Kikkawa and Nonaka (1995), pp. 186-189. These four characteristics also describe the process of growth in Honda during the same period.

<sup>7</sup> See *Sony Corporation* (1999).

<sup>8</sup> See *Sony Corporation* (1996), p. 356.

<sup>9</sup> Masaru Ibuka and Akio Morita. Both men were in the top management of Totsuko at that time.

<sup>10</sup> See *Sony Corporation* (1996), pp. 180-182.

<sup>11</sup> U is U-matic VCR and Beta is Betamax.

<sup>12</sup> JVC and Matsushita.

<sup>13</sup> “Even though the technology of Sony’s Beta format and JVC’s VHS format was similar, their cassette sizes were different. The two were not compatible.” *Sony Corporation* (1996), p. 181.

<sup>14</sup> *Sony Corporation* (1996), p. 183.

<sup>15</sup> See *Sony Corporation* (1996), p. 199.

<sup>16</sup> For example, PlayStation, a 32-bit game machine launched by Sony Computer Entertainment in 1994 enjoyed explosive sales worldwide.

<sup>17</sup> The concept of Time-Shift, the right to watch recorded television programs without an extra charge, was established as a result of Sony’s winning the Betamax case of 1984. That victory was very important for the whole VCR industry. Sony also succeeded in having the unitary state tax, which made all related corporations outside the state subject to taxation, rescinded until 1991. On these points, see *Sony Corporation* (1996), pp. 321-330.

<sup>18</sup> *Sony Corporation* (1996), p. 314.

<sup>19</sup> See *Sony Corporation* (1996), p. 361.

- 20 On this episode, see *Ibid.*, p. 305.
- 21 *Toray Industries, Inc.* (1999a), pp. 111-112.
- 22 On this point, see Yoshihara (1995), pp. 211-212.
- 23 See Du Pont-Toray Co. Ltd. (1998), pp. 9-22.
- 24 See *Toray Industries, Inc.*(1999b), p. 105.
- 25 Relative to the decrease in sales of synthetic fibers, Toray's plastic business increased proportionately. On this point, see *Toray Industries, Inc.* (1999b), p. 112.
- 26 *Toray Industries, Inc.* (1999a), p. 151.
- 27 On this point, see *ibid.*, pp. 192-193 and *Toray Industries, Inc.* (1999b), p. 206-208.
- 28 On "AP-G2000," see *Toray Industries, Inc.*(1997), pp. 802-803.
- 29 These points describing Toray's global operations are taken from *Toray Industries, Inc.*(1999c).
- 30 On this point, see *Toray Industries, Inc.* (1999b), p. 232.
- 31 Porter (1990), pp.412-413.
- 32 See *Teijin Limited* (1999).

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