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# DECLINE AND CURRENT SITUATION OF PANASONIC, A JAPANESE ELECTRONICS COMPANY

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Abstract — Panasonic, one of Japanese biggest electronics company reached its height of glory in the end of 20<sup>th</sup> century. However after that, it has been in bad condition long time. In this paper, some reasons of failure were found. And I forecast future figure of this company.

# Key Terms — Japanese Electronic manufacturer, management crisis, Panasonic

Panasonic is one of the largest Japanese electronics producers. In addition to electronics, it offers non-electronic products and services such as home renovation services. Panasonic was the world's fourth-largest television manufacturer by 2012 market share.

Now Panasonic has two sustainable smart towns now. They have photo voltaic system and a battery in the houses. It aims at the power-saving and environment considering town that supplies energy by itself. It can reduce 70% carbon dioxide emission compared to 1990. [2] However, it does not draw people's attention.

Panasonic celebrates its 100th anniversary in 2018. President Kazuhiro Tsuga, who was committed to resurrect Panasonic from a serious business crisis by the failure of liquid crystal and plasma television, and entrusted with revival from the bottom, launched a policy that even IoT time comes, it does not return to B to C. [2]

Panasonic's consolidated sales for the 2016 fiscal year were down by 2%, operating profit increased by 9%, net income increased by 8%. Sales of white goods and home appliances were in a good condition, and the television business which continued the deficit turned into black for the first time in 8 years. At first glance the performance seems to be good, but the profit in this period was created by restructuring, that is, corporate downsizing, and it was not obtained by creating new value. Both sales and profits

were expanding in 2017 and 18 with a strong economy. [2]

After Lehman shock, Panasonic declines. Sales of plasma televisions and LCD televisions, which took a big investment, stopped, and so did white goods household appliances. For Panasonic it is more serious to lose "target" than to fail in television business.

Panasonic did not spend capital for development historically. Sony lead development competition, and small scale Sharp, Sanyo Electric Co., Ltd. and JVC also tried to do things that other companies did not do and they launched new products one after another.

Panasonic, which had a large company size, gazed at their movements, and when it convinced of hits, it started mass-production at large plants and sold products with the strongest sales network. Then Hitachi and Toshiba followed it. It was the basic pattern of the Japanese electrical industry.

In the video recorder, Panasonic made Sony's "beta" compete with JVC's "VHS". After careful examining of both, Panasonic chose VHS that was inferior in picture quality but lighter in body and had longer recording time. With the participation of Panasonic, the trend gradually turned to VHS, it became the world standard of video, and Panasonic earned enormous profits.

When TV switched from CRT to liquid crystal, it watched at Sharp's opening up the market with "Aquos" and threw in "VIERA" series, then became a leading flat screen elevision maker with Sharp and Sony in a short time.

However, after the flat-screen TV, Sony and Sharp could not produce innovative products. Sony and Sharp, who became top companies, no longer challenged new fields. On that time, catch-up style Panasonic was in a trouble. Hitachi and Toshiba belonging to the electricity family and telecommunication family managed to survive with the assistance from TEPCO and NTT, but Panasonic not belonging to either faced a crisis.

At the same time, the Internet pressed global electronics manufacturers to make a big change in strategy. However, huge Panasonic could not respond to this change, and it kept making TVs and videos that did not connect to the net as ever, and it became left behind.

In 2000, Kunio Nakamura who became president looked for new business. And that was plasma display, and invested huge money on it. In liquid crystal, Sharp and Samsung Electronics in South Korea preceded, however, there was not a predecessor in the plasma yet.

Although the liquid crystal was high definition, it was considered as difficult to enlarge the size of 40 inches or more due to technical restrictions. Plasma was suitable for large size, but power consumption was high and manufacturing cost was high. However, Panasonic chose plasma, and built a new factory in 2005. [2]

At that time, among Japanese electric machinery makers, usual marketing is to launch new products in Japan, then if they had a success, they expanded sales channel overseas. However he thought that Panasonic could not win global competition, and thought about releasing products all over the world market at once. Therefore, it increased the production of plasma, and new factories were built in 2007 and 2009. By 2009, Panasonic invested \$40 billion, and achieved a large supply capacity of 280,000 pieces per month.

However, the price of flat-screen TVs fell by 30% per year which was far faster than Nakamura's expectation. By the time the new factory was in operation, 40-inch LCD TV's price was below \$3000. [1] On that time, technological innovation of liquid crystal advanced, and it became possible to produce large size, and it exceeded the plasma in all aspects. On the other hand, it was difficult to reduce cost of Plasma and it did not become the main product of flat screen TV.

The Japanese electronics industry is overly competitive. There are people who consider the cause of the failure of the major Japanese electronics company in the television business as the rise of Asian makers, but it is not correct. In Japanese market, flat-panel TVs made in Korea and Taiwan were not sold enough to be a threat to Japanese manufacturers. Around 2012, when the management of Sharp and Panasonic deteriorated due to large investment of liquid crystal and plasma, the share of Korean and Taiwanese TVs in Japanese market did not reach 5%. [1] There were two reasons why prices of flatscreen televisions fell at such a fast rate as 30% per year even though price breakers did not invade from outside. One was that Sharp and Panasonic which had made huge factories all over Japan had surplus production capacity. The other was that mass sales stores made makers price war.

Toshiba and Hitachi fought to the price competition that Sharp and Panasonic set up. Although they knew that it would lead an extreme decrease in profits, Toshiba and Hitachi, which had been aided by TEPCO and NTT, did not withdraw from the television and PC business even though they made a deficit. Independent companies such as Panasonic, Sharp and Sony which did not receive help fought back further pouring interests gained in overseas markets.

In this way, severe price competition continued in flat - screen televisions in which huge research and development costs and capital investment were spent. That was self-destruction. Other household appliances were almost in the same situation. Mass sales stores forced makers to do constant discount, and makers could not make profits.

Manufacturers made hard efforts to reduce costs. However, with the advent of the Internet, when TVs and video recorders became obsolete, it did not become a solution.

When Panasonic was working on the acquisition of Sanyo Electric, iPhones became a big hit in the world that was released in 2007. The mainstream of the electronics market changed from TVs to the smart phones. Panasonic missed this trend..

The founder of Panasonic had a management philosophy. That was to make good ones cheaply and in large quantities. By the time when Japan was poor, this management philosophy was widely accepted by Japanese companies. However, now in Japan, wages have already become high and the main manufacturers have shifted to emerging countries. Especially after the Lehman shock the business model that makers produce goods in Japan and exports abroad did not function well. And Japan could not get out of the deflationary spiral forever if it kept making it in large quantities and cheaply. Moreover, consumer preference shifted from "mass consumption" to "environmental consideration". All of these changes meant that Panasonic's management philosophy went out of style.

Ironically, Sanyo Electric, acquired by Panasonic, had got out of this old philosophy earlier. Starting with secondary battery "Eneloop" released by SANYO in November 2005, with the vision of "Think GAIA" -Return the beautiful earth to the future children-, Sanyo Electric developed new products. Then Sanyo Electric, which stood on the consumer's eyes, steadily produced hit products. The next hit after Eneloop was a washing machine that washed laundry with ozone. Secondary batteries that can be recharged many times have now become a key indispensable component to smart phones and electric vehicles.

Meanwhile, Panasonic was left behind in even a secondary battery because disposable batteries business kept producing profit even though it was small. [2] In the past, Panasonic created a business model that to sell radios with small price and to earn profit by selling batteries repeatedly. It is the same model as a shaver that earns profit with a replacement blade and a printer with ink.

Batteries that sell cheaply and in large quantities were the products that symbolized that old philosophy. However, the hit of the Eneloop clearly states that this philosophy represented by disposable batteries has become obsolete. Making things indefinitely means consuming resources and producing large quantities of waste endlessly. If the more abundant human beings, the more burdensome the environment, the sustained development cannot be achieved. On considering a sustainable society, we have to say that this philosophy is outdated.

Panasonic needed to acquire Sanyo Electric in order to transform itself into an "environment company". However, since Panasonic had strong pride that they are the headquarters and Sanyo is a branch office, it could not abandon their philosophy and adopt "Think GAIA". Therefore, Panasonic intended to erase the trace of Sanyo Electric. SANYO's hit products like the home bakeries that baked breads with rice flour and rice cooker that could cook delicious rice would have continued to sell, but they stopped production.

Now, I will forecast the future of Panasonic. Current Panasonic's most promising business is automotive battery. US electric vehicle manufacturer Tesla Motors opened "Giga Factory", a new battery factory in Nevada, USA, in July 2016. Gigafactory is the world's largest battery factory and will reach full production by 2020, the number of lithium-ion batteries produced in one year will exceed the total number of batteries produced worldwide in 2013. Panasonic is planning to pay \$2 billion of 5 billion dollars construction fee. [2]

Each State of the United States is changing its policy towards giving a large amount of subsidies to ZEV (zero emission vehicles) which do not emit any exhaust gas, and there is a movement that it reduces or abolishes subsidies for HV (Hybrid Vehicle) [1].

Among environmentally-conscious celebrities such as Hollywood actors, it was a status to get on Toyota's HV 'Prius', but now Tesla took this place. If Tesla's Model 3 is cheaper than Prius with subsidy payment, Prius may lose a lot of market share in the North American market that brings a lot of profit to Toyota.

For Panasonic, collaboration with Tesla is a huge business opportunity. If it can supply Tesla's battery, which is the de facto standard of EV, it will be a business of \$ several billion annually. However, Panasonic's technological capabilities are not prominent in the lithium ion battery market.

Korean forces such as LG Electronics and Samsung Electronics are chasing Panasonic, and Chinese and Taiwanese manufacturers will enter the market.

Similar to former semiconductors and liquid crystals, leakage of human resources has also begun in the field of in-vehicle batteries. It is said that already more than 10 battery techni-

cians have moved to South Korea from former SANYO.

Samsung SDI, the world's largest lithium-ion battery maker, decided to merge its group's electronic parts material maker to strengthen the development of in-vehicle batteries. Samsung SDI has also supplied batteries to the electric vehicle "BMW i3" released recently by BMW and announced plans to increase sales to about \$28 billion by 2020. It is three times as much as that of 2013 [3].

Samsung SDI will be a strong rival of Panasonic aiming for \$20 billion on in-vehicle battery business, if there are excellent former Sanyo engineers in this company. Tesla's CEO, Elon Musk says that he is not considering companies other than Panasonic as suppliers for model 3 batteries, but it is the usual way for procurement to buy goods from multiple suppliers. It is not easy for Panasonic to keep monopoly long time.

It is the usual way to purchase parts from multiple suppliers and make them compete. It is not easy for Panasonic's to keep monopoly long time.

If a company becomes a parts supplier from a finished product maker, it will reduce business volatility by shifting from unstable BtoC to BtoB. However, it is only when it supplies essential parts to multiple finished goods manufacturers. If it relies on a specific finished goods maker, buyer will have the right of price decision.

Sharp's liquid crystal business which relied on Apple is the typical case. It built a huge factory by forecasting Apple's demand, but when the selling of Apple products slowed down, the amount of orders was naturally reduced. Sharp's profit and loss totally depended on apple.

The relationship between Panasonic and Tesla is likely to be similar with this. Whether Panasonic can be "Intel" that monopolizes key components, or it can be "Sharp" that was swayed by finished goods maker depends on its strategy.

President Tsuga of Panasonic continues to focus on restructuring. In 2014, Panasonic sold all the shares of Panasonic Healthcare to KKR, a US investment company, for \$1.6 billion. At the same time Panasonic Logistics Co., Ltd., a logistics subsidiary, and Tokyo branch building were also sold. It withdrew from the plasma television business, smart phone business, and circuit board business for mobile phones, and asked Israeli companies to invest in the semiconductor factory [2].

Tsuga rationalized Panasonic at a high speed. It was natural that it got profits because it reduced such amount of big fixed cost. The important thing is whether it can switch from restructuring mode to growth mode.

Today, when AV equipment has become commoditized, we cannot see what kind of company Panasonic, which was a television and video company, is about to reborn. Giant companies around the world are moving fiercely looking for a new industrial order in the Internet age. With Panasonic as the lead, Japanese electrical industry is not yet drawing a path to the future.

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