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DECLINE OF A JAPANESE HIGH-TECH ENTERPRISE AND THE REASON

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Abstract **– NEC is a Japanese multinational provider of IT service and products. It provides IT and network solutions to business enterprises, communications services providers and to government agencies, and was the biggest PC vendor in Japan since 1980s. It was one of prosperous company in Japan at a time in the past. However, now it is a mere shadow of what it used to be.**

Key Terms **– Japanese Electronic manufacturer, management crisis, NEC**

NEC's sales that was over $54 billion in 2000 has been continued to decrease almost monotonically. Right before "IT bubble collapse" in 2000, its aggregate value of listed stock was more than $34 billion. It was the 15th among listed companies in Japan. However, in August, 2016, the value dropped to $6.8 billion. It is only 20% of that in 2000. [1]

In January 2011, NEC decided to sell PC business to a joint company with LENOVO (China) that had brought enormous profit to this company. Nevertheless, net loss was $1.1 billion in 2012. Adding to that, it stopped new development of smart phones, and sold internet connection business "Biglobe". In the result, the sales that was $54 billion decreased by half in 2016. The first quarterly settlement of NEC in 2016 was disastrous. Sales decreased 11.7% in year – over – year basis, sales profit : $-299 million, net profit : $-201. [2]

The investment by Japan's Telegraph and Telephone Public Corporation (JTTPC) reached to $40 billion at the middle of 1990s that was the peak time. Domestic communication device makers could survive just by sharing it. Especially NEC, which was called as the eldest brother of "telecommunication family" had overwhelming market share by transmission equipment as a producing department of JTTPC.

There were no rivals to JTTPC that monopolized domestic communication business. When it needed money for investment, only it had to do was to increase telephone rate. The fee of long distance call in Japan was almost 10 times expensive as that in the U.S., but people only had to use it.

In telecom industry in Japan, liberalization started at 1985. JTTPC was privatized and severe price competition with new rivals started. When mobile phones became popular, a new rival, SOFTBANK appeared, and competition became especially intense. Adding to that, Mobile Virtual Network Operators came in, and NTT cannot be an overwhelming champion anymore. Investment of NTT group that was as much as $40 billion previously decreased to $18 billion. It was natural consequence of privatization. In 2018, it announced that it will be $11.6 billion. [2]

If NEC loses business not only terminals but also telecommunication equipment, it loses main business. NEC has already expected that this situation would arrive. So successive NEC corporate managers has taken measures to it. It expanded its business to semiconductors, personal computers, displays, and they boosted up NEC to IT company that is representative of Japan.

From 1985 to 1991, NEC was the No.1 company of semiconductors in the world. Hitachi, Ltd. Mitsubishi electric corporation, and TOSHIBA also increased production, and Japanese semiconductors occupied 50% of world sale. We can attribute the leap of NEC to support of Ministry of International Trade and

Industry (MITI) and JTTPC. Super LSI project was the contract research from MITI, and part of development cost of DRAM was paid by JTTPC.

We can say that it is a model of public – private partnership in idyllic time when technology races were done by country level. It was effective, but because of it, profitability control was neglected because of dependence on the help from government. It caused moral hazard that "they could spend as much as they wanted."

Then, in 1985, countercharge of the U.S. started. Semiconductor Industry Association (SIA) of the U.S. took the case to Office of the United States Trade Representative (USTR) by suspicion of violation of Super 301 of the Trade Act. After one year severe negotiation, "Japan – the U.S. chip agreement" was signed, the U.S. made Japan promise antidumping export and import expansion of American – manufactured semiconductors. [3]

Because Japan depended on security on the U.S., it had to accept the difficult proposition. Japanese semiconductor makers had achieved the price down by enhancing extraction rate. However, the effort was considered as dumping, then they lost the aim to fight. Many of Japanese engineers transferred to makers of Taiwan and South Korea.

In 1996, Japan –the U.S. chip agreement became invalid, then TCMS (Taiwan) and Samsung Electronics started chasing Japan. Japanese makers that lost power by Japan –the U.S. chip agreement did not have remaining energy of countercharge.

There is a book "Essence of failure" that was written by Ikujiro Nonaka. It researched the factors of loss of Japan in WW2. By the book, one of the reasons is the absence of contingency plan. With an idea that "Army of God" must not lose, it hated to prepare for defeat. It resembles the idea of proponents of nuclear power station that an accident of nuclear power station must not be, so to prepare for it means admitting imperfection of technology. [4]

Just as Japanese troops, Japanese semiconductor makers also considered the situation in which the U.S. fights back or competitiveness of Taiwan and South Korea exceeds that of Japan as "it must not be." And even though Japan was already surpassed by them, it clung to trifle titles such as "No. 1 on high performance semiconductors" or "No.1 on super high performance semiconductors", and did not accept inferiority.

Along with semiconductors, NTT raised PC business. The domestic market share in 1991 was more than 50%. The shares of Fujitsu and TOSHIBA were less than 20%. It was an outstanding victory. However, the dominance ended in 10 years. In 1992, Compaq computer (Hewlett – Packard Co.)entered Japanese market. It acquired market share in the U.S., then came to Japanese market with the products that were half price of NEC. [1]

It was impossible of NEC to intercept U.S. companies with operation systems of Microsoft and CPU of Intel.

In defeats in semiconductors and PC businesses, there were factors that one enterprise could not resist such as Japan –the U.S. chip agreement. However, corporate managers have to accept and deal with external factors and yet grow companies. In the world, there are large numbers of example that companies survived in rapidly changing IT industry. A leading communication device company, NOKIA is a good example. It sold mobile phone business that was No.1 in the world to Microsoft in 2014. It delayed to shift to smart phones from conventional mobile phones, and it was considered as a loser. Once it was concerned to bankrupt.

However, it bought Alcatel – Lucent, France – the U.S. joint leading communication infrastructure company with $20 billion, and came up to No.1 in this market. Communication infrastructure market in the world was undertaken by NOKIA, Erricsson, and Huawei, so there are almost no space for Japanese communication device makers. These big 3 sight Japanese market. An executive of NOKIA said that NEC produced only for NTT, so not good at producing goods for foreign carriers. Support is also poor, so Japanese enterprises that operate overseas will use products of these big 3.

At a time in the past, NOKIA was a conglomerate that produced many kind of

goods from electric wires to TVs. It was in danger of bankruptcy at the beginning of 1990s because of the dissolution of Soviet Union that was the biggest destination for export. On that time, NOKIA survived by collecting all the management resources and use it for mobile phone. We can say that NOKIA survived twice by management. Dutch leading electronic manufacturer, Philips had management crisis in 1990s, retreated from semiconductor and TV business at the beginning of 21st century.

But Philips was not finished. It bought medical device companies with the money it got by selling digital equipment business. Now it achieved much higher profit rate as "medical Philips" than the time when it was an electronic manufacturer. As consumer products, it earns profit by lucrative business such as electric toothbrushes.

30 years has passed since liberalization of telecom industry started. However, nobody in NEC could have brought up new business that replace communication device. It was spoiled as "Telephone and Telecommunication family" and formed weak business structure.

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