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# The business strategies and the ways of organization to divide success or failure of the Japanese semiconductor company

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Japanese semiconductor industry has really shocked and many Japanese semiconductor companies decreased the profit and revenue from 2000. In the beginning of 1990, Japanese semiconductor industry was very strong. Especially, at DRAM and logic LSI market. But, from around 2000, Asia Pacific semiconductor industry becomes bigger and bigger. For example, Samsung has sold DRAM at United States. Because Japan currency was strong and other Asian country currencies were not strong. As a result, some Asia Pacific companies were able to take advantage from the cost point of view. In addition, major semiconductor company of US started to use OEM maker for product manufacturing from 2000. Asia Pacific semiconductor market became bigger and the biggest market share product is ASSP for wireless product. ASSP means Application Specific Standard Purpose. For example, phone has a baseband LSI for calling each other and country has a telecommunication standard generally. So, if a company can provide a product with the standard, we can launch it with one SoC. It's ASSP. It's not customized by customer's requirement. On the other hands, Intel made a new business model and it was called "the platform strategy" by Chuma(2010). Intel has made CPU chip for high end purpose. It is hard to adopt it by other customer. Because the interface architecture is becoming so complicated. But, Intel provide the environment the

peripheral system for easy-to-adoption. As a result, Intel CPU was adopted all over the world. Japan semiconductor companies couldn't take action against such new business model. Finally, Japan semiconductor industry became a weak from 2000.

When we see the latest financial result of Japanese semiconductor companies, some companies still remain a profit such as Toshiba and Sony. But, almost other companies are disrupted. So, I decided to analyze the really reason why Japanese semiconductor industry became worse by selecting the sample companies. Those are Sony, Toshiba, Fujitsu and NEC.

As of successful company, I selected Sony and Toshiba. Those companies have a same tendency of organization structure and business model. Those companies are not focusing on special semiconductor product. They divided a risk by targeting some different products at the same time. Sony has System LSI, Laser semiconductor and CMOS image sensor and Toshiba has Discrete, System LSI and NAND flash memory. They are increasing the profit by focusing on multi products. But, Fujitsu and NEC are different. They are focusing on the specified product and they focused on System LSI product such as Microcontroller, ASIC and ASSP. Even though they had a strong position at 1990, they lost the position from 2000 due to some issues. This is one perspective of success or failure.

Semiconductor industry is a quite difference against other industries. Because capital investment is much bigger and bigger by increasing process shrinking. On the other hands, if a company invest new semiconductor internal fab, it is hard to get a constant profit due to silicon cycle. For getting a success, even if the company can't get a short tem profit, they have to patient. It's a big problem. For example, NEC divided semiconductor business as NEC electronics at 2002. But, the business was not good. So, they are focusing on System LSI business. Because they can't waste a capital investment more due to the business condition. As a result, NEC electronics was disrupted.

From the organization point of view, Sony and Toshiba have a same trend. They selected to use "company system". The system is to split the section like a different company. The company system leader can get a authority. The authority means to decide how they invest the money. The system worked very well. On the other hands, Fujitsu and Sony have also same trend. They did not divide the authority from the president. The president does not understand the semiconductor business very well. As a result, the semiconductor business became a bad and divide the semiconductor business as a different company.

In conclusion, the successful companies have a same trend. The business model is to do not focus on the specified product and they have some profitable products at the same time. If a product faced a disruption, they are trying to change from it to new one. And also, the

organization structure is to be used company system and the system is to split the authority from top management to section leader. The type of approach is essence of the success.