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The Development of Funding and Investment Mechanism
in Taiwanese High-Tech MNCs:
The Disastrous Impact on the Competitiveness of
Japanese Consumer-Electronics Giants

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The Development of Funding and Investment Mechanism in Taiwanese High-Tech MNCs: The Disastrous Impact on the Competitiveness of Japanese Consumer-Electronics Giants

The main purpose of this paper is to analyze the funding and investment mechanism of Taiwanese high-tech multinational corporations (MNCs) and clarify the whole development process of global financial capitalism in Taiwanese high-tech sector. Especially, I try to illustrate the power transformation process between Japanese consumer-electronics giants and Taiwanese high-tech MNCs from the funding and investment point of view. More specifically, how did Taiwanese high-tech MNCs invest a huge amount of money in the equipment of investment and R&D to expand productivity and upgrade the level of technology, drove Japanese competitors out of the global market? This is the main question of my paper. I propose that various factors: entrepreneurship, the relationship between innovation and financial capital, financial capitalism, resource dependence relations during their social network, the difference between Japanese and Taiwanese financial and management system affect the power transformation process between Japanese high-tech industry and Taiwanese counterparts. The goal of this paper is to examine how the relationships between the development of financial system in Taiwan and technological innovation of high-tech MNCs, inter and intra-corporate funding network in Taiwan had an extraordinary impact on diminishing international competitiveness of Japanese consumer-electronics giants, Taiwanese high-tech MNCs grabbed the opportunity of revolutionary development in the global capitalist economy.

Keywords: Taiwanese high-tech MNCs, funding and investment mechanism, financial capitalism, technological innovation, economic globalization

1. Introduction

In this study, from the perspective of funding and investment mechanisms, I try to explore the relationship between Taiwanese high-tech MNCs and financial capitalism, specifically, how

Taiwanese high-tech MNCs through the mechanism of funding and investment¹ increased production capacity captured the timing of technological development and market growth, finally, grabbed global market share from Japanese counterparts. The main purpose of this study through the diversified point of view includes; Joseph A. Schumpeter(1983)'s "entrepreneurship", Carlota, Perez (2002)'s "the relationship between technological innovation and financial capital", "financial capitalism theory in political economy", Brian Uzzi's social capital and social network theory of resource mobilization network, try to understand how Taiwanese high-tech MNCs' mechanism of funding and fund usage caused a lot of damage in Japanese electronics giants that has been famous for "technology-centric strategy (Yunogami, 2005; Tabata and Cheng, 2009)". Finally, based on the comparative analysis between Japanese financial capitalism and Taiwanese counterparts, further, explore the role of financial capital in the development of Taiwanese high-tech industries and the difference between Taiwanese financial capitalism and Japanese counterpart in the whole development process of East Asian high-tech MNCs. Specifically, the following question is my main issue to explore: how did Taiwanese high-tech MNCs through overseas financial markets, the domestic stock market, banks, venture capital, asset-secured financing, intra and inter-organizational network: raise R&D investment or equipment funds, and establish an efficient network mechanism of funding?

With the development of the Asian financial and stock market, Taiwanese high-tech MNCs started to raise a large amount of money in the financial and stock market and poured them into R&D and equipment investment. In contrast, the Japanese electronics giants faced serious financing difficulties, and they have been unable to promote R&D and equipment investment successfully until now. The first half of the 1990s, in the absence of the electronics industry in Taiwan and South Korea, Japanese electronics manufacturers have dominated the global market. However, because of the political stability and consumer market development in Taiwan and South Korea, high-tech industries in these countries expanded their scale of operations substantially. In recent years, high-tech MNCs in China also began to absorb a large amount of investment from Japan, Korea, and Taiwan to start competing with other Asian countries in the global electronics market. After World War II, fortunately

¹ Taiwanese high-tech MNCs' cross-national funding and investment mechanisms include as follows; financial capital development in Taiwan, cross-national funding of Taiwanese firms, joint ventures, capital expenditures, investment in equipment, research and development, capital accumulation, capital reproduction and entrepreneurship decision-making mode of operation.

Japanese industry did not encounter the domestic political crisis, inherited the accumulation of experience and knowledge in pre-war industrial development, and in 1950's to 1960's established the development of mechanisms in domestic core industries (heavy industry, automotive industry, chemical materials industry, household appliances, and semiconductor industries, etc.) successfully. In this period, MITI² (Ministry of International Trade and Industry) in Japanese government supported and encouraged the development of domestic industries through the system of financial capital established before World War II; the close relationships between Japanese conglomerates and banks and fund financing mechanism in the intra-organizational network had been very rich sources of funding which was available to the domestic electronics manufacturers. 1980's to the early 1990s was the peak of industrial development in Japan, in this period, Japan's economic development and business development model have been received attention from European and American countries, Japanese-style capitalist development mechanism swept across the world, brought a very serious threat to Europe and the United States. But in the early 1990s, a burst of the economic bubble brought serious damage to the entire Japanese economy, in a state of prolonged recession, the Japanese government and public lost their confidence in economic development gradually. As a result, the Japanese government has been unable to resist the pressure of the U.S. government, started to follow the U.S. neo-liberal economic doctrine, ignored the importance of industrial policy and lost the unique Japanese-style capitalist development mechanism and financing advantage.

The mechanism of financing and investment in Taiwanese high-tech MNCs has a close relationship with domestic financial mechanism in Taiwan, furthermore, the development of financial capitalism in Taiwan is totally different from the development model in Japan (Japanese model inherited prewar traditional "financial imperialism"; the close relationship and logic of operation between domestic banks and business groups), domestic stock market and corporate overseas financing mechanisms, venture capital have played an important role, and the domestic stock market and overseas financing mechanisms and venture capital followed the footsteps of Taiwan's high-tech MNCs' development, in the 1980s to the 1990s, they began to flourish.

It is worth mentioning that in the companies that raise funds from the global bond market through the issue of ADR (American Depositary Receipts), GDR (global depository receipts), ECB

² MITI was renamed METI (Ministry of Economy, Trade and Industry) in 2001.

(Euro-Convertible Bond), there are a significant proportion of Taiwanese high-tech companies (Chen, 2005:43-47). With the rise of Taiwanese high-tech industries, these kinds of firms through the global bond market got huge funds, seized a business opportunity, and invested these funds in manufacturing equipment, R&D activity and purchase of technology, established a unique mechanism of financial capitalism in Taiwanese high-tech MNCs.

In this study, I conducted 22 depth interviews (from 2010 to 2012) for Taiwanese executives and engineers in integrated circuit manufacturers, TFT-LCD (Thin Film Transistor Liquid Crystal Display) manufacturers, TFT-LCD component manufacturers, notebook and tablet PC manufacturers, OEM vendors and EMS (Electronic Manufacturing Services) manufacturers. At the same time, I collected and analyzed related academic literature and data documents in order to understand the situation of funding and investment strategy in Taiwanese high-tech sector. In collecting data and information on the realm of Japan, I conducted 25 depth interviews for Japanese executives, government officials and engineers in East Asian high-tech market research firm, IC manufacturers, TFT-LCD manufacturers, TFT-LCD component manufacturers, start-up company, division of high-tech business in trading company, high-tech industry consultant, institute for monetary and economic studies in Bank of Japan and METI in order to understand the relationship between the sluggish business that Japanese electronics manufacturers confronted and their strategy of funding and investment.

2. Theoretical Frameworks

In this study, at first, I review and discuss related research result about power transformation process between the technological core and peripheral countries in the global high-tech industry to present and explain the power transition relationship between Taiwanese firms and Japanese counterparts in the global integrated circuit and TFT-LCD industry. Taiwan's high-tech MNCs' competitive advantage includes several important factors, such as the role of institutional trust in inter-firm networks, cross-national and inter-organizational social networks to introduce global technological personnel, the mechanism of vertical division of labor beyond organization boundary, strong entrepreneurship of technological personnel, disruptive innovation. I suppose that the mechanism of funding and investment in Taiwanese high-tech MNCs also plays a very important

role, because, in the high-tech industry, integrated circuit, TFT-LCD and solar electronics industry require huge capital to expand production capacity. Asustek Computer, Acer computers and HTC (smartphone manufacturer), other brand manufacturers in Taiwan requires an enormous amount of money to pour into research and development activity in order to cultivate the innovative ability and continue to try to emerge application products: killer application that creates the boom of the mainstream market. As for OEM and ODM manufacturers (Wistron, etc.) and EMS (electronic manufacturing services, for example, Hon Hai Electronics Group) which are responsible for global brand electronics companies in Taiwan must pour vast amount of money into research and development activity which enables them to reduce production costs in order to win customers (global brand electronics manufacturers). Therefore, we suppose that the strategy of funding and investment is unignorable competitiveness of Taiwanese high-tech MNCs. Especially in the financial turmoil, the firm's ability to fund operations is important competitiveness of firms (China.Com.cn, 2009/07/28).

Following, I discuss Schumpeter's notion of the relationship among entrepreneurship, innovation and financial capital, Carlota Perez's "techno-economic paradigm" and financial capital, the financial capital of political economy, resource mobilization network of interpersonal and social networks, and decision-making mechanism in Taiwanese and Japanese organization. Finally, according to Hilferding (2005) 's financial capitalism theory analyze the development of financial capitalism and negative problem in Japan, try to compare with the development of financial capitalism in Taiwanese high-tech industry.

2.1 Globalization, Power Transformation between Technological Core and Peripheral Countries

Nearly recent thirty years, a considerable shift forces generated in the global high-tech industry, fierce competition between major advanced industrial countries and less advanced countries occurred in the integrated circuit market, and later same situation was repeated in the TFT-LCD industry, notebook computer, solar cell industry as well as the smartphone market.

After the mid-1980s, Japanese electronics giants introduced key technologies from RCA, Motorola through consistent product quality and low-cost advantages began to gain power in DRAM (dynamic random access memory) market. This is the first transformation process between

technology advanced countries: the United States and technology less advanced country: Japan in global ICT (the information and communication technology) industry. But in the 1990s, the second transition of the power relationship between technology core country and peripheral country in the ITC industry market took place. South Korean consortium (Chaebol) enterprises originally introduced technology from the United States and Japan, grabbed market share from the Japanese consumer electronics giant, and established themselves as the new leader of the DRAM industry. After the rise of South Korean electronics industry, IC foundry business industry has prospered in Taiwan's Hsinchu Science-Based Industrial Park. The production capacity of the integrated circuit industry in Japan has been completely overtaken by South Korea and Taiwan enterprises, they had to shift the main product from the mass production type DRAM and standard product into a system-on-chip (SOC), flash memory (Flash Memory) and other non-mass production type, non-standard customized products (Itami Noriyuki, 1995). Thus, in the field of DRAM which has played a central role in the memory market, Japanese consumer electronics giants have lost their competitiveness.

For about 60 years of development after World War II, the development of Taiwanese electronics industry has become quite diverse, previous studies provided that the advantage of Taiwanese high-tech MNCs was OEM (Original Equipment Manufacturing), ODM (Original Design Manufacturing), however, in these past few years, Taiwanese electronics manufacturers started to produce innovative products, have stood out as influential brand firms in notebook computer, smartphone and other fields.

Taiwanese high-tech MNCs has shown considerable diversification in the development process and the advantages of manufacturing capacity and stable funding and investment strategy, gradually replaced Japanese counterparts throughout the East Asian manufacturing industry. For example, the Japanese electronics manufacturers suffered from after-effects of the bubble burst, they began to control capital expenditures and could not continue to pour huge money into the equipment investment in the integrated circuit industry. However, Taiwanese electronics companies through considerable flexibility in funding raised funds quickly to enhance the scale of production (Tani,2002:213-215). In terms of Taiwanese LCD industry's rapid development process, I analyzed a series of studies (Tabata, 2006:2008) in the past. From the 1970s to the 1980s, Japanese consumer electronics giants introduced experimental technology of TFT-LCD from European and American firms and changed it into commercial mass production technology (Nakata, 2007 a: 2007b). But after 2000, due to the rapid development of South Korean and Taiwanese TFT-LCD manufacturer,

Japanese consumer electronics giants were forced to evacuate from large-size TFT-LCD industry, they transferred the core of the business to small and medium-sized TFT-LCD products. In 1998, Taiwanese TFT-LCD manufacturers took advantage of cross-national power conflict relationship between Japanese and South Korean, introduced Japanese TFT-LCD manufacturing technology successfully, in the learning and adjustment process of Japanese technology and cooperation with Japanese manufacturers, established Taiwanese manufacturing strategy.

Taiwanese manufacturers introduced Japanese tacit technological knowledge, and transformed them into standardized technological knowledge, through the engineers' flow beyond organization's boundary, TFT-LCD standardized manufacturing technology diffused and penetrated quickly in domestic TFT-LCD industry, this characteristics of high-tech companies in Taiwan and their development model accelerated the dramatic development of TFT-LCD industry in Taiwan (Tabata, 2012). Abundant funding capacity also supported the learning mechanism of Taiwanese TFT-LCD industry (Akabane, 2008). Since 2000, the investment pace of Japanese consumer electronics giants became slow, they just only could make an equipment investment once every three years to four years. In contrast, during the same period, Taiwanese TFT-LCD industry could make an equipment investment once a year to three years (Tabata and Cheng, 2009).

Not only integrated circuits and TFT-LCD industry, but Japanese electronics manufacturers also have lost their advantage in the notebook computer, the solar energy industry, and the smartphone industry. In these industrial fields, Taiwanese, South Korean and mainland China's related manufacturers have gradually replaced Japanese counterparts and become mainstream manufacturers. In 2009, Taiwanese solar cell industry's production value reached about \$3.50 billion, behind only China, Germany and Japan, ranked fourth in the world (MOEA Industrial Development Bureau, 10/27/2010). Production value of the notebook industry in Taiwan reached around 70% in the global market, the proportion of OEM orders from well-known computer manufacturers in Taiwan was 95%, and in 2003, Acer (the number one computer manufacturer in Taiwan) achieved a dominant share of the European market (Zhu, 2009), Asustek Computer also established its brand recognition in the global tablet PC and netbook computer market, began to penetrate in Japanese market. In the global ITC market, Japanese consumer electronics giants lost their competitiveness, however, Taiwanese manufacturers through an efficient way of learning technology and smooth expansion of production scale, brand development and market-oriented funding and investment mechanism, enhanced their

global competitiveness.

2.2 Financial Capitalism, Funding and Investment Mechanism in high-tech Sectors

As above mentioned, in addition to a very efficient technological learning mechanism, Taiwanese manufacturers' funding and investment strategy provided a rich source of funding for notebook PC OEM manufacturers, IC foundry, TFT-LCD industry, as well as the solar cell industry to maintain good timing of capital expenditure for the market demand. In the global market of tablet PC, notebook computer and smartphone, Taiwanese manufacturers poured huge funds into R&D, and constantly tried to develop new applications.

The development and innovation in the high-tech industry requires huge funds, an abundant fund is the main driving force to promote the development of the high-tech industry. However, the relationship between technological innovation and financial capital is rarely discussed in our academia, there is lack of communication between scholars of financial capital and financial economics and research scholars of technological innovation (Perez, 2002: xviii-xix). Perez pointed out that Schumpeter divided innovation into "new product" or a "new combination feature" of commercial endorsement and "invention". In terms of "new product", if a new product or combination of features were supported by consumers and got public recognition, manufacturers could achieve economic success. In terms of "invention", it belongs to the field of science and technology. Even though new product or combination of features through the scientific innovation process achieved a tremendous breakthrough, it does not necessarily mean that this new product could meet consumers' need. Therefore, entrepreneurs and professional managers must constantly invest huge money into experimental product or combination of features, turn them into commercial products, their funding and investment strategy seriously bring a crucial impact on the direction of technological change (Perez, 2009:2-3).

How did the Taiwanese high-tech industry seize the trend of global technological revolution, and introduced a big amount of funds from banks, other financial institutions, domestic and foreign investors? Perez also pointed out that the main place where the technological revolution occurred has been Europe and the United States (Perez, 2002:10), Japan, Taiwan, and South Korea and other Asian countries just only have played the role of followers. Taiwan enterprises through what kind of strategy

or development mechanism, successfully followed the footsteps of the technological revolution, seized the opportunity of introducing funds in technological investment? The following chapter describes these issues and problems from a comparative perspective between Taiwan and Japan.

3. Varieties of Asian Financial Capitalism: Comparative Study between Taiwan and Japan

With the global trend of economic development, political and economic academic circles have discussed the phenomenon of convergence theory (Wilensky, 1975; Wang, 2010). However, in the global competitive process of the electronics industry, Japan, Korea, and Taiwan, and other Asian companies have chosen a different path, it seems that each country's firms have chosen a divergent direction. Just like economic sociologists criticized the neo-classical economists, each country's economic activities embedded in local social and cultural context, a different economic system brought divergent effects on the economic activities in each country (Block, 1999). Therefore, the development of capitalism in each country presented a quite diverse trend (Hall and Soskice, 2001), though Taiwanese and Japanese companies are operating same industry or business, they might also choose a different strategy and development trajectory.

In the operation of financial capitalism of the high-tech industry, Taiwan and Japan each subject to different historical backgrounds and path-dependent effects, accumulated different experiences and system specifications. For example, compared to the Japan and South Korea's financial capital mechanism, previous studies in Japan (Tani, 2002; Saito and Liu, 2002:19-58, 309-319) gave a higher evaluation for the advantages of the financial capital mechanism. They pointed out that in the history of the financial capital development process in Taiwan, banks were very strict credit for loans, thus private companies were forced to raise funds from the stock market. Private companies in Taiwan were not easy to rely on bank loans, they must seize the opportunity of good timing of investment to carry out a higher proportion of own funds.

In the relationship between financial mechanism and enterprises, Hilferding (2005) explored the linkage between industrial capital (corporate capital) and financial capital mechanism. He pointed out that the ultimate stage of development of capitalism was the concentration of capital. The concentration of capital and the linkage between corporate organizations are the main characteristics of capitalism, the relationship of bank capital in enterprises plays a central role. Enterprises rely on

credit providers, therefore, the bank capital brought considerable impact on the expansion of the business scale of firms. In terms of the funding mechanism, the relationship between companies and banks is quite close in Japan, the linkage between industrial (corporate) and financial capital bring crucial impact on the strategy of Japanese firms' strategy (Nakata, Hosoi and Iwanami, 1997; Kikuchi, 2006).

Taiwanese electronics MNCs through government funding support, ADR (American Depositary Receipts), GDR (global depository receipts), ECB (Euro-Convertible Bond) and other overseas bonds, domestic stock market, venture capital, and bank financing raise capital, it is quite diversified financing channels, compared to the situation in Japan, linkage between high-tech enterprises and banks is no obvious in Taiwan. Moreover, in the U.S. business community, the agency problem (conflict relationship between managers and shareholders) is very serious, but in Taiwan's business community, this is rarely a big problem. Zheng Bo Xun (1995)'s study shows that organizational behavior in high-tech enterprise and entrepreneurs are affected by patriarchal "blood relationship society" in the Chinese community. As I discuss later, in terms of funding and investment strategy, the owner's top-down management plays a central role in Taiwanese company. As mentioned above, due to the recession impact, Japanese consumer electronics giants were less and less active in TFT-LCD plant investment. In contrast, regardless of the risk, Taiwanese TFT-LCD manufacturers actively promote large-scale investment plans to set up factories. The power relationship of Taiwanese business organization (owner, manager, and bank) also brings considerable impact on the decision making of investment in Taiwanese high-tech sector.

4. Funding and Investment Mechanism in the high-tech sector: Comparative Study between Taiwan and Japan

Akabane (2010) held up Taiwanese TFT-LCD leading manufacturer, AU Optronics (AUO) for example, analyzed TFT-LCD industry's funding strategy in Taiwan. Akabane pointed out that from 1999 to 2010, bank loans (syndicated loans) played a very important role as a long-term funding mechanism in equipment investment. Financing through bank loans are concentrated in that period of 2000 and 2004, in the former period, AUO invested third generation and fourth generation TFT-LCD production technology, and in the latter period, started to invest the fifth generation TFT-LCD

production technology. However, the financing model of AUO is quite diverse, not just bank loans, corporate bonds, and convertible bonds are also important to funding. For example, in the introduction of a capital fund from 1996 to 2001, AUO adopted cash capital financing, but in the early 2000s, converted the corporate bond into securities. After the mid-2000s, AUO issued ADR and other overseas bonds, after the latter half of the 2000s, started to raise capital funds through bonus shares and employee stock option.

AUO's fund-raising mechanism is open and diversified in its structure, totally different from the closed structure of Japanese consumer electronics giants' financing mechanisms (mainly through the domestic capital markets, particular banks, and close inter-organizational corporate relationships). For example, AUO has made considerable efforts to get rid of local Taiwanese firm's closed structure and achieve the compliance (international transparency of corporate governance) in order to get a huge international stock market fund. Since mid-December 2001, AUO executives and finance department started to prepare to list in the U.S. stock market, and AUO's ADR team held 124 times small investment seminar and 13 times large-scale investment seminar in order to attract more international investors (Chen,2004:113-116).

High-tech industries in Taiwan, especially emerging high-tech companies which are non-traditional Taiwanese family business background; for example, start-up companies established by Taiwanese engineers came back from the United States are not influenced by the closed structure of family business network, quite positively cooperate with foreign companies to establish network relationships (Jou and Chen, 2000). Taiwanese high-tech companies expanded open financing network to introduce a substantial amount of money in the overseas bond market. In the process of introducing foreign capital, it is necessary to promote the transparency of the company's operations and financial information in order to secure the recognition of international investors. Totally different from Japanese firms' information closed structure, Taiwanese high-tech companies, disclosed their operational and financial information in order to gain the trust of international investors. The senior analyst in a Japanese branch office of the American high-tech industry market research firm, HIS iSuppli, pointed out that Taiwanese high-tech firms' information disclosure has contributed to the development of Taiwanese high-tech MNCs's cross-national, diverse, open and

flexible funding mechanism. (interview code: M-J1)³.

Another factor is the “boss (owner combined with a business manager)” business model is different from Japanese professional managers (employed by the owner). Boss invests his own private money into his or her company business, and he or she is more likely to promote large-scale investment projects without thinking about the risk in order to get high returns. Japanese senior analyst in Tokyo bureaus of Deutsche Bank observed that the background of economic history in Japan brought a negative impact on the willingness to invest in the Japanese consumer electronics giant. In the 1980s to the late 1980s, Japanese firms enjoyed the business boom in the bubble economy. Japanese consumer electronics giants unhesitatingly raised funds in the capital market to expand the scale of operation. However, after the collapse of the bubble economy in 1991, due to the long recession, Japanese consumer electronics giants suffered from a heavy debt load, after 2000, lost their enthusiasm to invest continuously. Just at this time, due to the support of government, South Korea and Taiwan TFT-LCD industry continued to promote large investments in order to catch up with TFT-LCD industry production scale in Japan. (interview code: A1)

I realized the big difference in funding and investment mechanism between Taiwanese and Japanese high-tech firms through depth interviews in Taiwan and Japan. To start with the conclusion, Japanese consumer electronics giants are restricted by domestic closed social embeddedness of financial capitalism (close network relationship between large enterprise groups and main banks, intra-enterprise group financing system, mutual shareholding relationship). Moreover, Japanese firms are too much stick to the traditional “technology centrism in funding and investment strategy”, unable to catch up with fast-changing market dynamics in the high-tech industry, caused the desperate dilemma such as “Although conducted considerable investment in R&D, however, could not raise revenue” (Seki, 2012).

In contrast, Taiwanese high tech firms through cross-national open structured social embeddedness mechanisms (established domestic inter-organizational financing network and global bond market network) adopted the “market-oriented and global inter-organizational relationship oriented funding and investment mechanism” adjust the interaction process with foreign brand

³ Each quotation from an interviewee in this paper was given a code to mark the source of information. The first letter of the code refers to the main product grouping of the company interviewee belongs to. The following letters stand for the country of the interviewee. The Arabic numbers refer to the serial number of the interviewee.

manufacturers(OEM and technology transfer contracts), at the same time, respond to the market change, promote R&D and equipment investment.

Asustek technical director pointed out that in the development of Tablet PC, ASUSTek boss works closely with the business sector, and after learned dynamic market demand, decides to invest in developing new products. R & D team in ASUSTek is enormous scale unit while promoting dozens of projects, the boss decides to adopt a few projects in line with market timing. After received go sign from the boss, engineers design its mold and outsource molding operation to vendors outside ASUSTek. After molding operation was completed, outsource the whole manufacturing process of the new product to domestic EMS vendors. In the promotion of development and investment, the boss has sole discretion. In accordance with changing market demand, he or she quickly decides to invest in the development of a new product. Asustek outsource molding operation and manufacturing process of the new product to outside vendors, especially Taiwanese EMS manufacturer through overseas production facilities and cross-national logistics achieved the compatibility of low cost and high-quality. (interview code number: TP-T2)

In contrast, a supervisor in economic investigation division in Bank of Japan mentioned that the Japanese consumer electronics giants received many benefits from the close relationship with main banks and the booming economy in the 1980s, they did not prepare risk management. The Japanese government also experienced over 60 years of the golden age in the Japanese electronics industry after the world war II , totally could not imagine the powerful catch up of emerging Asian countries. Now they recognized the importance of the problem, started to support and assist financial capabilities of Japanese electronics companies, and try to change the direction of financial flows, for example, they encourage to transferring personal assets from bank deposits into the stock market in Japan (interview code number: B-J1).

But most important at all, Japanese consumer electronics giants downplay the need to respond to market demand and grab timing of investment. A senior analyst in iSuppli also mentioned that the relationships between Japanese consumer electronics brand manufacturers and foreign customers, foreign component suppliers, the subcontractor is extremely rigid, they are difficult to adjust the interaction foreign companies to respond the rapid changing high-tech industry's international market dynamics (interview code number: M-J1).

5. Conclusion

As mentioned earlier, Hilferding pointed out that “The most typical feature of modern capitalism is a centralized process (Hilferding, 2005: Preface Chapter 1), the strong tie between bank capital and industrial capital are forming financial capital. Due to the Japanese particular historical background such as the strong influence of imperialism in World War II, financial capitalism in Japan followed the logic of capitalism development by Hilferding, the close relationship between bank capital and industrial capital supported the economic development in post-war Japan. Coupled with a positive factor such as the bubble economy, banking sector and industry sector in Japan maintained a stable cooperation relationship.

In contrast, Taiwanese high-tech MNCs took off in the 1980s, although there are dealings with bank capital, but did not form strong ties with bank; the development of Taiwanese high-tech MNCs’ financial capitalism is not such as Japan’s “closed centralized process”, but “open diverse process” featuring the decentralized and diverse funding network. High-tech industries often face an intense change of market demand, therefore Taiwanese companies adopt open diverse and decentralized funding and investment mechanism to avoid a serious cash crunch. Financial capitalism in Taiwanese high tech MNCs gave us an important implication that contrary to the notion of Hilferding, “the most typical feature of modern capitalism is not the centralized process, but the decentralized and fragmented process”.

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