Case 12 Shitagau Noguchi and Yoshisuke Aikawa: Emergence of New Konzerns and Foray into the Continent



Abstract This chapter discusses the Emergence of New Konzerns and Foray into the Asian Continent. It introduces two innovators; Shitagau Noguchi, leader of Nicchitsu (Japan Nitrogenous Fertilizer) and Yoshisuke Aikawa, the chief of the Nissan konzern.

New Konzerns

In the 1920s, a period of prolonged recession in Japan, the four major zaibatsu—Mitsui, Mitsubishi, Sumitomo, and Yasuda—once again restored their dominance for the first time since the Meiji period. In the 1930s, however, a different group of companies, collectively known as "new konzerns," began to thrive. A konzern is a form of monopolistic organization whereby a single holding company aims to control different industrial sectors through shared ownership in multiple subsidiary companies.

The five that are often listed as new konzerns are: (1) Nissan (Nihon Sangyo) konzern led by Yoshisuke Aikawa; (2) Nicchitsu (Japan Nitrogenous Fertilizer) konzern led by Shitagau Noguchi; (3) Mori konzern led by Nobuteru Mori; (4) Nisso (Nippon Soda) konzern led by Tomonori Nakano; and (5) Riken (Rikagaku Kenkyusho) konzern led by Masatoshi Ōkochi. Of these, the core company of the Mori konzern was Showa Fertilizer, which merged with Nippon Denko in 1939 (Showa 14) to form Showa Denko.

¹For details of the newly emerging konzerns, see Udagawa, M. (1984). Shinko Zaibatsu (*New zaibatsu*) Tokyo: Nikkei Publishing Inc.; Saito, K. (1987). Shinko kontserun riken no kenkyu: Ōkochi Masatoshi to rikensangyodan (*Studies of RIKEN, an emerging konzern: Masatoshi Ōkochi and RIKEN industrial group*). Tokyo: Jichosha; Ōshio, T. (1989). Nitchitsu kontserun no kenkyu (*Studies of Nitchitsu konzern*). Tokyo: Nihon Keizai Hyouronsha; Shimotani, M. (1993). Nihon no keiretsu to kigyo grupu: Sono rekishi to riron (*Japanese keiretsu and corporate groups: Their history and theory*). Tokyo: Yuhikaku Publishing Co., Ltd.; and Asajima, S., & Ōshio, T. (1997). Showa Denko Seiritsushi no kenkyu (*Studies of the history of the establishment of Showa Denko*). Tokyo: Nihon Keizai Hyouronsha.

Among the new konzerns, Nissan and Nicchitsu stood out in terms of the scale of their operations. An article, "Nissan Konzern's Trends" [Nissan konzern's no Doko] in the February 11, 1935 issue of the Japanese magazine "Diamond" states: "As a newly emerging konzern, Nihon Sangyo (Nissan), which is riding the wave of the extraordinary economic situation, currently has 17 direct subsidiaries, with a nominal capital of 266 million yen and a paid-in capital of 198 million yen. Of the latter, Nissan's investment amounts to 144 million yen, accounting for 72.8% of the total paid-in capital."

The direct subsidiaries of Nissan konzern listed in the article were: (1) Nihon Mining, (2) Nihon Tanko, (3) Yamada Tanko, (4) Nissan Gomu, (5) Hitachi Seisakusho [Hitachi Works], (6) Hitachi Denryoku, (7) Osaka Tekkosho, (8) Nissan Jidosha [Nissan Motor], (9) Kyodo Gyogyo, (10) Nihon Godo Kosen, (11) Nihon Shokuryo Kogyo, (12) Nihon Hogei, (13) Chuo Doboku, (14) Nissan Kisen, (15) Teikoku Dozai Kogyo, (16) Nanbei Suisan, and (17) Godo Tochi.

Meanwhile, an article, "Anatomy of Nicchitsu Konzern" [Nicchitsu Konzern no Kaibo] in the July 1, 1938 issue of "Diamond" states that "Nicchitsu is the second largest konzern after Mangyo [Manchuria Heavy Industries Development Co., reorganized from Nihon Sangyo]. The number of companies under its control is 13 directly controlled and 18 indirectly controlled, with a total capitalization of over 600 million yen and total assets of 830 million yen."

In addition to the core company, Japan Nitrogenous Fertilizer, the article listed the following 13 subsidiaries as direct affiliates of Nicchitsu konzern: (1) Chosen Chisso, (2) Choshinko [Changjin River] Suiden, (3) Chosen Coal Industries, (4) Nicchitsu Shoken, (5) Nicchitsu Kogyo, (6) Tanpo [Danpung] Tetsudo, (7) Chosen Kogyo Kaihatsu, (8) Shinko [Sinheung] Tetsudo, (9) Chosen Biru, (10) Nicchitsu Kayaku, (11) Chochitsu Kayaku, (12) Chosen Suisan Kogyo, and (13) Chosen Maito. The indirect subsidiary companies included Asahi Bemberg Silk Yarn, later becoming Asahi Kasei.

These emerging konzerns behaved differently from the established zaibatsu in that they raised funds through the stock market, developed businesses centered on the heavy chemical industry, and consisted mainly of operating companies with no trading companies or banks. Nissan konzern aggressively expanded into Manchuria (northeastern China) and Nicchitsu konzern into the Korean Peninsula. Although their overseas assets were almost completely wiped out with Japan's defeat in World War II, many blue-chip companies that drove Japan's postwar economic growth emerged from their direct and indirect subsidiaries. In this case study, we will focus on Shitagau Noguchi who created Nicchitsu konzern, and Yoshisuke Aikawa who built the Nissan konzern.

Brief Biography of Shitagau Noguchi

Shitagau Noguchi was born in Kanazawa in 1873 (Meiji 6). After graduating from the Department of Electrical Engineering at the Imperial University (today's the University of Tokyo), he joined Koriyama Lighting Company in Fukushima Prefecture as a chief engineer. He then worked at the Japanese branch of the German electrical manufacturer Siemens, and at Azumi Electric in Nagano Prefecture before founding Sogi Electric in Kagoshima Prefecture in 1906 and becoming its president.

The establishment of Sogi Electric marked Shitagau's start as an entrepreneur. At that time, hydroelectric power generation was still mainly based on waterways, not dams. This created surplus electricity during summer, which in mainland Japan starts with the rainy season in June and ends with the typhoon season around August-September. As air conditioners were not yet common at the time, electricity demand typically peaked during winter due to demand for heating.

To solve the power surplus problem, Yasuzaemon Matsunaga (discussed earlier in Case 9) adopted a system combining hydroelectric and thermal power generation. Shitagau devised a different solution, the so-called electro-chemical method, using surplus energy to material of the chemical industry. This utilization of surplus energy was an excellent business model in Japan at the time. Noguchi began with carbide manufacturing, then expanded his business by introducing foreign technologies such as the manufacturing of lime nitrogen and ammonium sulfate, as well as Bemberg (artificial) silk. Upon his entry into the carbide business, Noguchi established Nihon Carbide Shokai that merged with Sogi Electric in 1908 and was renamed Japan Nitrogenous Fertilizer Company. That same year, he started manufacturing carbide.

Noguchi's decision to build a carbide plant in Minamata, Kumamoto Prefecture, was the result of a village-wide campaign to attract the plant. The original candidate site was Komenotsu, the northernmost village in Kagoshima Prefecture. But Minamata campaigners enthusiastically presented favorable conditions, promising: "If Minamata is considered more remote than Komenotsu, we will donate the electric lines and poles to bridge the gap. We will renovate the port to a level superior to that of Komenotsu. We will keep the land price for the factory no more expensive than the average price, and if it rises in price, the village will pay the difference." This factory was the predecessor of the Minamata factory of Chisso Corporation. After World War II, the factory became the site of globally notorious industrial pollution, afflicting many local residents with Minamata Disease—a sad twist of fate considering that the locals had originally welcomed the plant.

Noguchi steadily introduced foreign technologies and began manufacturing lime nitrogen, ammonium sulfate, and artificial silk. In 1923 he built an ammonium

²Nakamura, S. (1978). Noguchi Shitagau: Kyodai denryokukagaku konbinato no kensetsu (*Shitagau Noguchi: The construction of large-scale electric and chemical complexes*). In H. Morikawa, S. Nakamura, K. Maeda, K. Sugiyama, & K. Ishikawa (Eds.), Nihon no kigyoka (3) showa-hen (*Japanese entrepreneurs 3: The Showa edition*) (p. 49). Tokyo: Yuhikaku Publishing Co., Ltd.

sulfate plant in Nobeoka, Miyazaki Prefecture. Importantly, Noguchi introduced the latest Haber-Bosch process from Germany and succeeded in manufacturing synthetic ammonium sulfate in Japan ahead of Mitsui, Mitsubishi, and Sumitomo. Historian Seishi Nakamura comments:

The Haber-Bosch process was made available to Japanese nationals in Taisho 6 [in 1917 during World War I] under the Wartime Law on Industrial Property, and in Taisho 10 the license was sold to the Toyo Nitrogen Association, jointly formed by Mitsui, Mitsubishi, Sumitomo, and others. However, the association, representing the interests of established zaibatsu, was interested in commercial profit, but was averse to risk and unwilling to engage in industrial manufacture.

Noguchi's bold entry into synthetic [ammonium sulfate] manufacturing during the post-WWI recession contrasted sharply with the reluctant stance of the established zaibatsu that were hesitant about the synthetic ammonium sulfate industry. Noguchi's actions can be termed those of a groundbreaking entrepreneur. Furthermore, the shift to synthetic manufacturing enabled a significant reduction in cost, including the cost of raw materials, compared with existing conversion methods. From the end of the Taisho era to the beginning of the Showa era, Nicchitsu was able to compete with foreign manufacturers of ammonium sulfate and maintain a steady performance even under extremely difficult conditions, such as the dumping of foreign-made ammonium sulfate and the collapse of market prices to 60 yen per ton. ³

Seishi Nakamura also describes Shitagau Noguchi's foray into the artificial silk industry:

Full of progressive spirit, Noguchi subsequently made a foray into the Bemberg synthetic silk manufacturing. As a result of his success in synthesizing ammonia, he chose Bemberg synthetic silk as it made extensive use of ammonia. Noguchi acquired the Bemberg patent in Showa 3 (1928), established Nippon Bemberg Silk Thread Company the following year, and built a silk factory next to the ammonia factory in Nobeoka that he completed in April of Showa 6. . . . In Showa 8, Asahi Silk Weaving, Nihon Bemberg Silk Thread, and an ammonia factory in Nobeoka (Nobeoka Ammonia Silk Yarn Company) merged to form a large artificial silk company called Asahi Bemberg Silk Thread Company.⁴

Asahi Bemberg Silk Thread Company would eventually become today's Asahi Kasei.

Noteworthy among Noguchi's innovative entrepreneurial activities was his move into the Korean Peninsula, a Japanese colony since annexation by Japan in 1910 (Meiji 43). Noguchi developed hydroelectric power and built an electrochemical complex there. The Korean peninsula has a mountain range along its eastern side, and to the west a relatively gentle slope down to the Yellow Sea. Several large rivers flow on that slope. In dam-style hydropower generation, which became technically feasible around that time, power generation capacity is determined by both the amount of water and the steepness of the waterfall. The western slope was suitable for the available water, while the eastern slope was ideal for the fall. This dilemma

³*Ibid.*, p. 56.

⁴ Asahi Silk Weaving is a company established by Shitagau Noguchi with Matazo Kita in 1922. As of 1933, Kita was no longer involved in the business management of Asahi Silk Weaving. *Ibid.*, p. 59.

was difficult, but Noguchi resolved it by creating tunnels under the eastern mountain range. A dam was constructed on the western slope to secure a sufficient volume of water, then the water was transported by the tunnels to the eastern side, where it was used for electricity generation, taking advantage of the fall.

Noguchi also built large-scale dams on the Pujon River (in Japanese: Fusenko), Changjin River (Choshinko), and the Hochon River (Kyosenko), all tributaries of the Yalu River (Oryokuko) located on the border of Korea and Manchuria (northeastern China) and flowing westward. Then he generated electricity on the eastern slope and developed a large electrochemical complex in Hungnam (present-day Hamhung) on the east coast.

However, his hydroelectric development on the Korean peninsula led to a feud with Mitsubishi. Seishi Nakamura explains the background:

As for hydroelectric development in Korea, Mitsubishi had already applied for permission for water rights for the Pujeon and the Changjin Rivers. However, the Governor-General's Office⁵ also recognized Noguchi, then an enthusiastic budding entrepreneur, and granted water rights of the Pujon River to Noguchi and those of the Changjin River to Mitsubishi. ⁶

The water rights of the Changjin River had been approved for Mitsubishi, and Noguchi had no control over them. But, despite having water rights, Mitsubishi showed no sign of starting development, and as they missed deadlines the project was extended through annual renewal procedures. The Governor-General's Office was calling for rapid power development throughout Korea, and Governor-General Kazushige Ugaki repeatedly urged Mitsubishi to start development and pressed the company to return the water rights if it had no intention to do so. Ultimately Mitsubishi was unable to decide and had to return the water rights. Noguchi took advantage of this opportunity and immediately applied to Ugaki for the transfer of the Changjin River water rights.

However, even after obtaining the water rights, financing posed another hurdle. Since its founding, Nicchitsu had consistently benefited from Mitsubishi's financial support . . . The Changjin River project would be equivalent to swiping Mitsubishi's work, so the company could not expect financial assistance. In fact, at the Nicchitsu board of directors' meeting, the plan was met with fierce opposition from Mitsubishi-linked executives. Noguchi, however, did not give up. The question was whether to opt for continued assistance from Mitsubishi or to press ahead with the Changjin River development. He finally decided to cut ties with Mitsubishi, his longtime backer, repay debts owed to Mitsubishi, and move forward with the Changjin River project. To replace Mitsubishi, the Industrial Bank of Japan was enlisted, as well as the Bank of Chosen and the Chosen Colonial Bank, through the arrangement of Governor-General Ugaki. ⁷

In 1944 (Showa 19), the year before the end of World War II, Noguchi's work on the Yalu River led to the completion of the Suiho (Korean: Supung; Chinese: Shuifeng) Dam and Suiho Power Plant, which at the time had world-class 700,000 kW generating capacity.

Noguchi's speedy decisions to introduce new technologies, including nitrogen, ammonia, and artificial silk manufacturing from Germany and elsewhere, stood out

⁵Governor-General of Korea was an organization established by the government of Japan to control Korea, which was colonized after the annexation.

⁶Op. cit., Nakamura, S. (1978), p. 64.

⁷*Ibid.*, pp. 70–71.

and placed Nicchitsu well ahead of other companies. Noguchi also pursued merits of scale by building a large industrial complex on the Korean peninsula; its size exceeded even those on the Japanese mainland. In addition, he pursued economy of scope by developing an electrochemical industry from surplus electricity. These activities embodied economies of speed, scale, and scope, deemed the source of competitive success. Noguchi's entrepreneurial activities culminated in the establishment of Japan Nitrogenous Fertilizer Co. Along with Nissan konzern, Nicchitsu konzern became one of the leaders among emerging konzerns.

Noguchi died in 1944, just before the end of World War II. Nicchitsu lost its factories and power plants on the Korean peninsula following Japan's defeat. The company returned to Minamata and restarted in 1950 as New Japan Nitrogenous Fertilizer Co. In 1965, the company changed its name to Chisso Corporation.

Brief Biography of Yoshisuke Aikawa

Yoshisuke Aikawa, the chief of the Nissan konzern, was born in Yamaguchi Prefecture in 1880. Although he graduated from the prestigious Department of Mechanical Engineering at Tokyo Imperial University (now the University of Tokyo), he enlisted as a factory worker at Shibaura Seisakusho (predecessor of Toshiba). While his former classmates were earning around 45 yen a month as engineers in government offices and large companies, Aikawa started his career with a daily wage of 48 sen (100 sen = 1 yen). Historian Masaru Udagawa attributes this start to the following words of U.S. businessman Andrew Carnegie, which Aikawa encountered during his school days: "Boss your boss just as soon as you can; try it on early. There is nothing he will like so well if he is the right kind of boss; if he is not, he is not the man for you to remain with—leave him whenever you can, even at a present sacrifice, and find one capable of discerning genius" (Andrew Carnegie, The Empire of Business, 1913). Deeply impressed, Aikawa decided that he needed to gain hands-on experience on the factory floor. §

During his 2 years as a factory worker at Shibaura Seisakusho, Aikawa worked in sections handling finishing, machinery, manufacturing, sheet metal, assembly, and casting processes. "He was able to experience a variety of sections in such a short period of time because Shibaura Seisakusho gave him special considerations after his identity was exposed in the latter half of his first year there." "Identity" here refers to family connections. Aikawa's maternal great-uncle was (Japanese statesman) Kaoru Inoue, and the Aikawa family had close ties to the Mitsui, Kuhara, Furukawa, and Fujita families.

⁸See Udagawa, M. (2017). Nissan no sogyosha Aikawa Yoshisuke (*Nissan founder Yoshisuke Aikawa*) (pp. 26–27). Tokyo: Yoshikawa Kobunkan.

⁹*Ibid*, p. 27.

Yoshisuke, gaining experience with a variety of work at Shibaura Seisakusho, traveled to the United States in 1905.

Upon his arrival in New York, with an introduction from Kaoru Inoue, Aikawa looked for employment through the local Mitsui & Co. branch office. Aikawa wanted to work at a factory where he could learn the techniques of steel pipe manufacturing and malleable cast iron manufacturing. He believed that the development and improvement of manufacturing technologies for steel pipes and malleable cast iron, foundational materials, were essential for the growth of Japan's machine industry. At the time, however, all steel pipe manufacturing companies in the U.S. kept techniques strictly confidential, so he looked for a malleable iron manufacturer. In January 1906 he was hired as an apprentice at Gould-Coupler's main plant in the suburbs of Buffalo with a salary of \$5 per week, and went to work at the plant while renting a room at the manager's house. ¹⁰

Yoshisuke returned to Japan in 1907 and immediately began preparations to establish a company for manufacturing malleable cast iron. Three years later, he founded Tobata Casting Company. About the company, Masaru Udagawa wrote:

In June of Meiji 43 [1910] Aikawa established Tobata Casting Co. in Tobata, Kyushu, with funds and other forms of assistance from the Fujita (Tokyo), Kaijima, Kuhara, and Mitsui families, arranged through Kaoru Inoue. This was the start of his career as a business manager. [...] Tobata Casting, partly because it was the country's first producer of blackheart malleable cast iron, achieved financial independence at the outbreak of World War I and afterwards grew rapidly. ¹¹

The contributing factor in Tobata Casting's improved performance was its prompt introduction of electric furnaces, starting in 1921 (Taisho 10). Even in Europe and the United States, these furnaces were not yet widely used. Consequently, Tobata Casting's international competitiveness grew as the company improved quality and lowered costs at the same time. Tobata's products became "the first among Japan's steel-related products to [successfully] enter the U.S. and European markets." ¹²

After putting Tobata Casting on track, Yoshisuke became involved in the management of businesses owned by his relatives. In 1922 Aikawa established Kyoritsu Kigyo, which he described as a "konzern-like supreme organization for shareholding and management," ¹³ to oversee these additional businesses. Although Kyoritsu Kigyo lacked funds and never became fully functional, Aikawa learned some important lessons that later helped him in the formation of Nissan konzern. As Masaru Udagawa explains:

The management of a konzern centered around Kyoritsu Kigyo did not achieve its intended purpose. However, through the management of Kyoritsu, Aikawa learned [...] two business models that enabled him to form the Nissan group. One of them is that while the

¹⁰*Ibid.*, p. 29.

¹¹Udagawa, M. (1979). Nissan kontserun no tenkai: Shinzoku grupu no keiei katudo no shutaisei (*The development of the Nissan konzern: A compilation of the management activity of the family group*). In op. cit., K. Nakagawa, H. Morikawa, & T. Yui (Eds.), *The enlarged edition of basic knowledge of modern Japanese business history* (p. 205).

¹²Op. cit., Udagawa, M. (2017), p. 36.

¹³Op. cit., Udagawa, M. (1979), p. 205.

management of a konzern with a holding company at its top is an effective governance structure for a group of companies, if the holding company itself does not have the ability to raise capital it will not be able to fully exercise its supervisory and managerial roles over its subsidiaries, not to mention diversify its operations into growth industries. Therefore, Aikawa learned that to successfully manage a konzern centered on the heavy chemical industry requiring a large amount of capital, it is essential to move away from a closed holding company based on specific families and relatives and shift to a public holding company that can raise funds directly on the stock market. Another thing he learned was the potential of corporate restructuring through mergers and acquisitions, Kyoritsu had investigated 40 to 50 companies as acquisition targets. Most of these companies had declined due to managerial moral hazard. Aikawa believed that a public holding company system would be an effective means of developing a corporate revitalization business. Regardless of the available funds on hand, a public holding company absorbs and acquires the target company by exchanging its own shares for those of the merged company. Aikawa came to realize that by sending out managers with a sense of fiduciary duty to shareholders, he could pave the way for the revitalization of the acquired company (Tetsuji Okazaki, "History of Holding Companies"14).15

Yoshisuke used his experience at Kyoritsu to form Nissan konzern. The first step in this process was in 1927 (Showa 2) when he took over the management of Kuhara Mining, then on the verge of bankruptcy: Aikawa, who had secured a lender and averted the bankruptcy of Kuhara Mining,

decided to use his experience at Kyoritsu, planning to fundamentally reorganize the entire Kuhara group and establish a management structure consisting of the head office organization and the business division. Based on this plan, in December of Showa 3 [1928], Kuhara Mining was reorganized as a holding company and renamed Nihon Sangyo (hereafter Nissan). Nissan then went public. Another goal of the reorganization was to open the way for the holding company itself to go public, absorbing funds from the general public to raise capital. ¹⁶

The Kuhara zaibatsu was now transformed into the Nissan konzern, growing dramatically with its affiliated companies during the economic upturn triggered by the reimposition of the gold export ban in 1931. Masaru Udagawa explains the mechanism:

In Showa 8 [1933], Nissan acquired a huge amount of money by offering to the market, with a premium, some of the shares of Nihon Mining and Hitachi that were previously held only by group companies. The public offering of subsidiary company shares helped Nissan decrease the costs associated with controlling these companies, and the premium earnings came to constitute an important financial resource for Nissan. From then on, the income from the stock premium would account for a significant portion of the company's earnings each fiscal year. And with the new funds and increased dividends from subsidiaries, starting in Showa 9. Nissan made major inroads into diversified businesses.¹⁷

¹⁴Okazaki, T. (1999). Mochikabugaisha no rekishi: Zaibatsu to kigyotochi (*The history of holding companies: Zaibatsu and corporate governance*). Tokyo: Chikumashobo Ltd.

¹⁵Op. cit., Udagawa, M. (2017), pp. 66-67.

¹⁶Op. cit., Udagawa, M. (1979), p. 205.

¹⁷ *Ibid.*, p. 206. The expression "premium" in the quote refers to the surplus when a shares are issued above par value. Note that par value stocks were abolished in 2001 when the Commercial Code was revised.

Nissan's rapid growth, achieved through its konzern operations and the share issuances at a premium, quickly made it the third-largest company group in Japan, after Mitsui and Mitsubishi.

Yoshisuke, obtaining funds through the premium share issuance of subsidiary companies, used the money to support full-scale entry into the automobile sector, a goal that he had been pursuing for some time. In 1931 he had already purchased a stake in DAT Motors and taken control of the company; in 1933 he established the Automobile Department at Tobata Casting, renamed Automobile Manufacturing Co. before being renamed again in 1934 as Nissan Motor Co.

Yoshisuke's plan was to localize automobile production in Japan. It would begin with "the expansion of the auto parts business and the mass production of the compact car Datsun," aiming eventually to "establish an automobile industry in 'Manchukuo." In 1935, the Nissan Motor Yokohama Plant, equipped with a conveyor belt system, was completed as a mass production site for the Datsun.

"In November 1937 (Showa 12), Nihon Sangyo, the core company of Nissan konzern, Japan's third largest business group, suddenly announced that it would relocate to a site affiliated with the South Manchurian Railway (Manchuria Railway) in the capital of Manchuria (Xinjing), change its name to Manchuria Heavy Industries Co. (Mangyo), and become the executing agency for the country's 'Five-Year Manchurian Industrial Development Plan.' Then, in December of the following year, with the abolition of extraterritoriality in Manchukuo, Mangyo became a Manchukuo corporation, and its capital base doubled to 440 million yen. The increase was funded by the Manchukuo government, and the company became aligned with Japan's national policy." ¹⁹

Why did Yoshisuke decide to relocate Nissan konzern to Manchuria, a move that stunned the Japanese public? Certainly the tightening of the government's control over the economy and the stagnation of the stock market had a negative effect on the domestic business environment. The incentives offered by the Japanese and Manchukuo governments for companies to expand their operations into Manchuria likely also played a role. However, Yoshisuke's decision was fundamentally based on the dream he had for the new land of Manchuria. This is evidenced in Nissan's localization plan for automobile production that treated Manchukuo as its target location.

However, as the Sino-Japanese War grew into a full-scale conflict, with Japan struggling in the battlefield, Yoshisuke's plan ended as "an unfulfilled dream." Japan's defeat in World War II resulted in the loss of all Nissan assets in Manchuria, and the postwar breakup of the zaibatsu led to the dissolution of the Nissan konzern itself.

After the war, Yoshisuke retired from the frontline of business, but at the request of the government, became president of Teikoku Oil and chairman of Japan Petroleum Resources Development, two state-sponsored companies. In 1953 he became a

¹⁸See op. cit., Udagawa, M. (2017), p. 41.

¹⁹*Ibid.*, p. 100.

member of the House of Councilors, and in 1956 formed Japan SME Political Federation to focus on promoting small and medium-sized businesses. Yoshisuke Aikawa died in 1967.

"Yoshisuke Aikawa, Founder of Nissan" by Masaru Udagawa

Masaru Udagawa has written an excellent biography of Aikawa, "Nissan founder Yoshisuke Aikawa" [Nissan no Sogyosha Aikawa Yoshisuke] (Yoshikawa Kobunkan, 2017), quoted in the previous section. I contributed a review of the biography to the Weekly Economist²⁰ and share its contents here.

"Yoshisuke Aikawa, Founder of Nissan" by Masaru Udagawa (Yoshikawa Kobunkan, 2017), is a critical biography. It is a compilation of research findings by Udagawa, a leading researcher on Nissan konzern and Nissan Motor. To avoid duplication with his earlier published works, Utagawa describes in detail Aikawa's activities as a social entrepreneur after World War II. His social endeavors have not been given much attention in the past and Utagawa offers an in-depth look at the innovative nature of Aikawa's activities.

Aikawa's actions as a social entrepreneur can be seen in three areas: 1) power source development, 2) road development, and 3) support for small- and medium-sized businesses. Power source development led to the establishment of Electric Power Development Company (J-Power), and road development led to the establishment of the Japan Highway Public Corporation. Eventually, Aikawa's interests focused on providing support for SMEs, and in 1956, he formed a new political party, SME Political League (Chusho-kigyo Seiji Renmei/Chuseiren). Aikawa, the first president of Chuseiren, maintained that self-interested behavior and the resulting excessive competition was "endemic to SMEs," and called for "collective action" to eradicate them. The 1957 passage of the Small and Medium-Sized Business Association Law was the fruit of his efforts.

Utagawa organizes Aikawa's business operations using Schumpeter's five categories of innovation: First, the production of malleable iron products corresponds to Schumpeter's "production of new products and new quality products"; Second, the introduction of an electric furnace for malleable cast iron production and the introduction of a conveyor belt system for automobile production correspond to Schumpeter's "introduction of new production methods"; Third, the cultivation of the European and U.S. markets for malleable iron products (especially iron pipe fittings) corresponds to "development of new markets"; Fourth, the exploitation of underground mineral resources in the "Five-Year Manchurian Industrial Development Plan" corresponds to "a new source of raw material supply"; and Fifth, the creation of a public stock company and the establishment of a cross-sectional corporate group structure (konzern) and the introduction of a venture capitalist system correspond to Schumpeter's "establishment of a new industry and management organization."

Aikawa's life can be likened to four hiking trails, full of ups and downs with uncharted paths: (1) the establishment of Tobata Casting and Nihon Sangyo, (2) the formation of Nissan konzern, (3) the management of Mangyo konzern (Manchuria Heavy Industries

²⁰Kikkawa, T. (2017). Shohyo Udagawa Masaru-cho Nissan no sogyosha Aikawa Yoshisuke (*Book review: Nissan founder Yoshisuke Aikawa by Masaru Udagawa*). Shukan ekonomisuto (*The Weekly Economist*), 18 July.

Development Co.), and (4) activities as a social entrepreneur. In each of these trails, Aikawa's footprints were conspicuous for their innovative nature.

Of the four trails, Aikawa succeeded in (1) and (2) but failed to achieve significant results in (3) and (4). Utagawa, however, attributes this failure to being "too far ahead of his time and too visionary" (p. 223). For example, the integrated development method adopted by Aikawa in Mangyo was carried over to the development of China's northeastern region after World War II.

Masaru Udagawa's discussion showing the innovative nature of Aikawa's entrepreneurship by relating it to Schumpeter's theory of innovation is fascinating. However, it should be noted that Aikawa's overall accomplishment was closer to "creation of a new equilibrium" than "destruction of an equilibrium." The production of malleable iron products, the introduction of electric furnaces and conveyor belts, the cultivation of European and U.S. markets, the creation of public stock companies, the establishment of konzerns, and the introduction of the venture capital system were not, in themselves, breakthrough innovations. Thus, Aikawa was an incremental innovator.

As an incremental innovator, Shitagau Noguchi was similar. The industrial-scale manufacturing of lime nitrogen, ammonium sulfate, and artificial silk was the outcome of his introduction into Japan of foreign technologies. Similarly, the large-scale hydroelectric development on the Korean peninsula was not the "world's first" attempt. Noguchi, too, was an incremental innovator. This in no way diminishes the innovative nature of Aikawa's and Noguchi's entrepreneurship. They were noteworthy innovators both in terms of scale of their operations and audacity in taking on new challenges.

Expansion into the Asian Continent

In Case 12, we focused on Shitagau Noguchi, the creator of Nicchitsu konzern, and on Yoshisuke Aikawa, the creator of the Nissan konzern. New konzerns such as Nicchitsu and Nissan were unsuccessful in the long run. During the war and after 1937 (Showa 12), many new konzerns faced difficulty due to sluggish stock markets, inability to obtain materials, and competition with established zaibatsu, forcing them to either dismantle or reorganize. The loss of large-scale investments made by Nicchitsu on the Korean Peninsula and by Nissan in Manchuria due to Japan's defeat in WWII also hastened their downfall.²¹

²¹As pointed out by Udagawa, Masaru and Sue, Kunio, the hegemony of the "Four Zaibatsu," namely Mitsui, Mitsubishi, Sumitomo, and Yasuda, also stemmed from the relationship with the new konzerns. See *op. cit.*, Udagawa, M. (1984). (*New Zaibatsu*) (p. 9).; Sue, K. (2000). Manshujihen sono boppatsugen'in wo saguru: Senkyuhyakunijunendai ni okeru zaibatsushihon no henseigae to jukagakukogyoka (*To search of the cause of the outbreak of the Manchurian Incident: The reorganization of financial conglomerate capital and heavy chemical industrialization in the 1920s) Nihondaigaku keizaigakubu keizaikagaku kenkyujo-kiyo (<i>The Journal of Research Institute of Economic Science*, No. 29), p. 300.

Nevertheless, their daring foray into the Asian continent should be recognized as a manifestation of innovative entrepreneurship. Major risk was inherent in such moves, but the emergence of these entrepreneurs who made large-scale investments despite the risk symbolized the dynamism of the Japanese economy, which continued to achieve long-term growth nearly until the final decades of the twentieth century.

As Japan's sphere of influence expanded to the Asian continent in the period leading to World War II, the activities of Japanese entrepreneurs extended to the continent. Noguchi of Japan Nitrogenous Fertilizer built one of the world's largest dam-type hydroelectric power plants in the northern part of the Korean Peninsula, creating a major electrochemical complex. Aikawa of Nihon Sangyo gradually shifted his focus from Japan to Manchuria (northeastern China) and devoted himself to developing Manchuria.

Furthermore, Sazo Idemitsu, the oil merchant to be discussed in Case 13, expanded his branch network not only in the Japanese-controlled territories of Korea, Taiwan, and Manchuria, but also throughout China. The assets that Noguchi, Aikawa, and Idemitsu had built up on the Asian continent were lost with Japan's defeat in the war. While Noguchi died at the end of the war and Aikawa withdrew from corporate management, Idemitsu remained on the frontline, quickly regaining his footing in the devastating aftermath of Japan's defeat. Idemitsu advocated the policy of "no layoffs," and transformed Idemitsu Kosan into the "hero of native oil companies."

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