Abstract

The modern sugar manufacturing industry has a layered opposition structure based on the complex interconnection of three levels of various production structures. First, I will examine this three-tiered reorganization in detail and emphasize that a key player in the second and third reorganization levels was the Dainihon Company. I will analyze the reorganization process of the centrifugal sugar industry in Taiwan, focusing on Dainihon’s M&A strategy. In particular, I will consider how Dainihon could show “the latecomer’s effect” to surpass the first mover, Taiwan Company, despite the fact that Dainihon advanced as a latecomer in Taiwan, while being the pioneer of the mainland white sugar industry. How did the entrepreneurship demonstrated by Raita Fujiyama, who could contract the recovery from the failure caused by the bribery case of “Nitto Jiken,” bring the latecomer’s effect to the Dainihon Company? Above all, will the “creative adaptation” connected with the effect attract attention?

I. The conflict of interest and the reorganization in the modern sugar manufacturing industry

(1) The composition of layered conflict

I will review what changed the three-tiered reorganization due to M&A to confirm the composition of the modern sugar manufacturing industry, focusing on the perspective of the opposition structure as shown in Figure 1. The years under the company name in Figure 1 mark the times during which the company started running simultaneously from white sugar to raw sugar or from raw sugar to white sugar, and this Dainihon Company advanced to the Taiwan raw sugar industry immediately in December 1906. The company became a key player in the raw sugar trade negotiation. However, the privileged position of the Dainihon Company was notably challenged when Kobe Refined Sugar Company merged with the Taiwan Company (February 1911) and the Yokohama Refined Sugar Company merged with the Meiji Company (June 1911).

The change to simultaneously manufacturing white sugar by raw sugar companies, including Tainan (January 1915), Teikoku (June 1916), Niitaka (July 1916), and Ensuiiko (August 1920), but excluding the Toyo Company continued thereafter. The Toyo Company did not advance to white sugar production, but in 1917, it began producing plantation white sugar,2 which increased in importance as a direct consumption sugar. Additionally, the Ensuiiko Company began to produce plantation white sugar in 1909, and the Taiwan, Meiji, and Toyo Companies also advanced to producing plantation white sugar.

As evidenced by the facts noted above, the modern sugar manufacturing industry possessed a layered conflict structure whereby three levels of differences were intertwined in a complex manner. More specifically, the industry shared a three-tiered conflict structure as follows:

1) Whether or not a sugar manufacturing company produced raw sugar and white sugar simultaneously
2) Whether or not it manufactured plantation white sugar as the “loaner” of white sugar
3) Whether or not it also manufactured non-centrifugal sugar such as brown sugar lumps

1 From this point, “sugar manufacturing company” will be abbreviated to “company.”
2 Plantation white sugar was of a similar quality to white sugar and utilized the centrifugal sugar manufacturing method. Therefore, sugar manufacturing companies quickly advanced to producing white sugar, and in 1927, 10 out of 46 factories had plantation white sugar facilities (Higuchi [1959] pp.5, 104).
Regarding Figure 1, companies were divided into two groups: (1) Dainihon Company, whose main industry was white sugar, and (2) the other companies that primarily produced raw sugar. This complex conflict structure within the sugar manufacturing industry was the result of three different levels of manufacturing systems, as mentioned above, as well as the scale of the new type of sugar production facilities.

(2) Reorganization of the three levels

Based on this conflict structure, the three-tiered modern sugar manufacturing industry reorganization occurred as follows:

1) The first transformation occurred in the 1910s. Small-scale companies that used outdated facilities to manufacture only syrup-based sugar were the target of M&A by companies that possessed large-scale facilities for the new type of sugar production.

2) The second reorganization period was marked by fluctuations in the financial crisis. In particular, Tainan Company was sold to Showa Company. Additionally, Dainihon merged with Toyo—except for two factories that were sold to the Meiji Company—and had effective control over the Nittaka Company.

3) The four-company system was established under the controlled economy in the war footing period, and above all, it was the M&A strategy of the Dainihon Company, which resulted in the merging of Teikoku and Showa that attracts specific attention. Thus, the existing system of four established companies was one in which Dainihon overcame its position as a later starter in the centrifugal sugar industry in Taiwan, caught up with Taiwan Company, the pioneer of the same industry, and grew to become the first mover.
Figures 2 to 4 demonstrate the three-tiered reorganization result. While similar to Figure 1, the simultaneous production of white sugar and plantation white sugar was not accomplished in each step. Additionally, the difference in size of the circles marks the relative manufacturing capacity of each company.

As demonstrated by Figure 2, which displays the composition after the first industry reorganization, the Taiwan Company excelled in a manufacturing capacity, and was followed in size by Toyo, Ensuiko, Meiji, and Teikoku. This industry reorganization generally influences the differences of such a plant capacity, and one result of replacing seven factories by Taiwan Company under the umbrella is expressed in Figure 2.

The centrifugal sugar manufacturing capacity for this Dainihon Company did not fill 1/4 of Taiwan Company, which demonstrated the advantage of the first mover. Further, to have been above-mentioned, simultaneous running of raw and white sugar completed in the early step except for five companies such as Toyo Company and Ensuiko Company. However, it was a premature step for plantation white sugar. Ensuiko Company, which was dealt with first in Taiwan, and Toyo Company were engaged in producing plantation white sugar in 1918.

Thus, as demonstrated in Figure 3, which shows the result of the second reorganization, the positions of Taiwan and Meiji did not change, but the status of Dainihon, which replaced Toyo Company under its umbrella (1927), improved remarkably. The result was that Ensuiko and Tainan ran simultaneous production of raw and white sugar in 1921, and the simultaneous production systems of all seven companies, except for Taito and Shinko, were ready.

Likewise, Figure 3 outlines the movement concerning plantation white sugar. In 1918, only four plantation white sugar factories (managed by two different companies) existed, and this increased to ten factories (managed
by four different companies) by 1928. Out of three plantation white sugar factories owned by Toyo, two factories were sold to Meiji, and Dainihon obtained one factory through the merger. As a result, in 1928 four primary sugar manufacturing companies were able to simultaneously manufacture raw and white sugar and plantation and white sugar.

It was during this second industry reorganization period that the system of the four primary sugar companies, Taiwan, Meiji, Dainihon, and Ensuiko, was steadily formed. This fact is confirmed in Table 1. The pulse duty factor of the four primary sugar manufacturing companies allowed their centrifugal sugar manufacturing capabilities to increase rapidly from 59.9% in 1926 to 74.2% in 1928, and the pulse duty factor in centrifugal sugar production output increased rapidly from 61.9% in 1926–27 to 76.2% in 1927–28. Thus, it is possible to confirm that the four big sugar company manufacturing system was steadily built during the second industry reorganization period.

Finally, based on Figure 4, it is the growth of Dainihon that attracted the most attention. In 1935, Dainihon merged with Niitaka with whom they had grasped a management right since 1927 and developed big mergers with Showa Company in 1939 and Teikoku Company in 1941 with rapid success. Dainihon had finally surpassed the Taiwan Company, which was the first mover in the modern sugar manufacturing industry. Additionally, Figure 4 demonstrates that a literal four-company system was established by the merging of Shinko with Taiwan Company in 1941 and by the merging of Taito with Meiji in 1943.
Table 1  The Pulse Duty Factor in Centrifugal Sugar Manufacturing Capability and Production Output

<table>
<thead>
<tr>
<th>Company</th>
<th>Manufacturing Capability (ton)</th>
<th>Production Output (thousand picul)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1927・3 (%)</td>
<td>1928・3 (%)</td>
</tr>
<tr>
<td>Taiwan</td>
<td>8,780 23.6</td>
<td>10,330 27.7</td>
</tr>
<tr>
<td>Meiji</td>
<td>5,100 13.7</td>
<td>6,850 18.4</td>
</tr>
<tr>
<td>Dainihon</td>
<td>3,200 8.6</td>
<td>6,400 17.2</td>
</tr>
<tr>
<td>Ensuido</td>
<td>5,250 14.1</td>
<td>4,050 10.9</td>
</tr>
<tr>
<td>Shinko</td>
<td>850 2.3</td>
<td>850 2.3</td>
</tr>
<tr>
<td>Niitaka</td>
<td>3,050 8.2</td>
<td>3,050 8.2</td>
</tr>
<tr>
<td>Teikoku</td>
<td>3,000 8.1</td>
<td>3,000 8.1</td>
</tr>
<tr>
<td>Showa</td>
<td>- -</td>
<td>1,570 4.2</td>
</tr>
<tr>
<td>Tainan</td>
<td>1,570 4.2</td>
<td>- -</td>
</tr>
<tr>
<td>Taito</td>
<td>350 0.9</td>
<td>350 0.9</td>
</tr>
<tr>
<td>Shinchiku</td>
<td>500 1.3</td>
<td>500 1.3</td>
</tr>
<tr>
<td>Sharoku</td>
<td>300 0.8</td>
<td>300 0.8</td>
</tr>
<tr>
<td>Toyo</td>
<td>4,950 13.3</td>
<td>- -</td>
</tr>
<tr>
<td>Koshun</td>
<td>350 0.9</td>
<td>- -</td>
</tr>
<tr>
<td>Sum</td>
<td>37,250 100.0</td>
<td>37,250 100.0</td>
</tr>
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</table>

Pulse Duty Factor of Top Four

<table>
<thead>
<tr>
<th>Company</th>
<th>Manufacturing Capability (ton)</th>
<th>Production Output (thousand picul)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1927・3 (%)</td>
<td>1928・3 (%)</td>
</tr>
<tr>
<td>Taiwan</td>
<td>17,550 ton, F: 14</td>
<td>-</td>
</tr>
<tr>
<td>Meiji</td>
<td>16,400 ton, F: 8</td>
<td>-</td>
</tr>
<tr>
<td>Dainihon</td>
<td>25,500 ton, F: 20</td>
<td>-</td>
</tr>
<tr>
<td>Ensuido</td>
<td>9,900 ton, F: 7</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Taiwan Sotokufu, Taiwan Togyo Tokei No.15, pp.6–9; No.16, pp.6–9; No.19, p.84.

Figure 4 Production Systems after the Third Reorganization (1943)

Taiwan 17,550 ton, F: 14
Meiji 16,400 ton, F: 8
Dainihon 25,500 ton, F: 20
Ensuido 9,900 ton, F: 7

Note: Because it was considered a merger until 1943 based on the data of the step in March 1941, and in April 1941, it was included for the factory that was dormant since then.

Source: Taiwan Sotokufu, Taiwan Togyo Tokei No.29, pp.6–9.
Figure 5 demonstrates the market share of centrifugal sugar output for the top four companies: as is evident, Dainihon took the position of the first mover in 1939. In addition to the sale of the mainland white sugar industry, Dainihon established a huge production base of twenty factories for a new type of centrifugal sugar production, including eleven factories that produced plantation white sugar. Figure 5 demonstrates that Dainihon became the core leader of the four-company system, which was contracted via the industry reorganization of three levels.

Figure 5 Market Share in Centrifugal Sugar Output


II. The conversion of business strategy marks a significant leap forward
(1) The latecomer’s effect and creative adaptation

As is clear from the above information, Dainihon was the key player from the second reorganization period to the third reorganization period. Therefore, in the second half of this presentation I will analyze the reorganization process of the sugar industry in Taiwan, focusing on the Dainihon’s M&A strategy to offer further historical review of the business from the level of each business’ management. In particular, I will consider how Dainihon could demonstrate the latecomer’s effect in order to surpass a top company despite the fact that Dainihon was a latecomer to Taiwan, while being the pioneer company of the mainland white sugar industry. Of particular interest is how the entrepreneurship of Raita Fujiyama, who contracted the recovery from the failure caused by the bribery case of “Nitto Jiken,” was able to connect the creative adaptation with the latecomer’s effect.
The latecomer’s effect and creative adaptation are used here as a framework. The latecomer’s effect is to develop by threatening to pass the advanced firms by means of internalizing the latecomer’s advantage and conquering the latecomer’s disadvantage. Internalizing the latecomer’s advantage is to utilize the advantage fully and fix this as a system of one’s own company. Entrepreneurship in this paper is the one which pays attention to responding flexibly to the change in business environment. In particular, the change in business environment transforms into positive business opportunities and overcomes negative constraints, and this type of innovation consists of three levels of entrepreneurship as follows:

1) utilizing business opportunities
2) conquering constraints
3) converting constraints into business opportunities

Converting constraints into business opportunities is worthy of the term creative adaptation. This is a consequence of the highest level of innovation, which creates the new system for the years to come, in addition to conquering constraints.

(2) The seeking for sugar manufacturing industry development and new constraints

Dainihon accomplished recovery from failure within only ten years of being under favor of the “golden era of sugar.” Raita Fujiyama first set out to enrich the centrifugal sugar business by securing raw sugar for mainland white sugar production. Dainihon had already made great advancements in centrifugal sugar manufacturing in December 1906 and constructed a second factory in July 1910, but its manufacturing capability of 2,200 tons was not sufficient to cast raw sugar for the white sugar factory inland. However, many sugar factories already existed in Taiwan and there was little room to expand raw material gathering areas. Consequently, the only way for Dainihon to raise the self-sufficiency rate of the raw sugar was to purchase raw sugar from anywhere except Taiwan.

Therefore, Fujiyama set his eyes on the sugar manufacturing industry in Chosen and used sugar beet as the raw material, which was different from the use of sugarcane in Taiwan or Java. While the merger with Chosen was executed in 1919, it was in August 1921 that sugar production began, and this marked the first step in Dainihon’s advancement. Additionally, the sugar manufacturing industry in Java was producing remarkable amounts of sugarcane, and much raw sugar was produced there as well. The merger with Naigai in July 1923 saw Dainihon embark on the Javanese sugar manufacturing industry, but it was in June 1927, when an expansion project including facility improvement was completed, that sugar production started in the factory. By using Chosen and Java as new sources of supplies, Dainihon conquered constraints and overcame raw sugar insufficiencies in order to produce mainland white sugar.

Unanticipated constraints appeared just as Dainihon was about to begin simultaneous development of centrifugal and white sugar. In September 1923, only one month after the merger with Naigai, the Great Kanto Earthquake burned down a head office building and collapsed a Tokyo factory. The damage was relatively small in terms of large-scale repair, but the reconstruction expenditures for the Tokyo factory marked a significant blow to Dainihon. Upon the merger with Toyo in 1927, this became one of the reasons for selling two Nansei and Ujurin factories to Meiji. In April 1925, Dainihon reinforced the productive capacity of the first factory to 3,200 tons and steadily strengthened the foundation of centrifugal sugar production in Taiwan.

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Refer to Kubo [2003] and Kubo [2005b] on the latecomer’s effect.
(3) The strategy conversion into centrifugal sugar

As a new factory was completed in June 1926, Dainihon conquered the constraints left by the great earthquake and reached the year of its major turning point. This was because Dainihon began centrifugal sugar production in Java and effective management of Niitaka, and Raita Fujiyama became President of the company. In July of that year, Dainihon merged with Toyo and expanded its capital to 51,416,600 yen. The merger with Toyo, which produced raw sugar at a capacity above that of Dainihon, was a major turning point as it made it possible to expand both supply of raw sugarcane material and centrifugal sugar manufacturing capacity. In fact, Figure 5 demonstrates that Dainihon production rates showed big developments in 1928 and shortened its distance from the Taiwan Company.

Thus, a detailed review of the happenings in 1927 follows. The 1927 financial crisis brought changes in business environment to Niitaka and Toyo. Why was Niitaka under the umbrella of Dainihon management? The main factor was management aggravation on the part of Niitaka. After the war, the resulting depression resulted in a lack of prosperous business and a sudden 199,226 yen loss in the latter half of 1926. The rapid succession of the sugar manufacturing industry was affected by the financial crisis. Under these economic conditions, the Okura family, which was a large Niitaka stockholder, made the decision to sell their shares to Dainihon. Because of the Takashima family, one of the only remaining large stockholders, the merger with Niitaka took place in 1935; however, Dainihon took control of the actual management rights.

A good opportunity that came by chance to Dainihon due to the financial crisis was the merger with Toyo, which possessed double of Dainihon's centrifugal sugar productive capacity. The modern sugar manufacturing industry reached the phase that Suzuki Shoten collapsed owing to a large number of loans taken from Bank of Taiwan, which fell into a management crisis due to the financial crisis. Therefore, Toyo, whose management rights were owned by Suzuki Shoten, was sold to Dainihon. The opportunity for Dainihon to merge with Toyo, which held vast raw material gathering areas and six factories in Taiwan in addition to Chosen and Naigai, provided the procurement of new raw sugar in Chosen and Java.

As President Raita Fujiyama said, “We embarked on the merger with Toyo Company this time to move our main business to centrifugal sugar manufacturing in Taiwan and to establish the continuous production system to white sugar from raw sugar as the new policy.” Thus, the shift of the main business changed toward the mutual complementary development of white sugar on the mainland and centrifugal sugar in Taiwan.

It was the merger with Toyo which had a decisively important meaning for Dainihon, but that does not mean that all factories were smoothly returned under the umbrella. Dainihon sold the Nansei and Ujurin factories to Meiji, whose raw material gathering area neighbored the two factories. Why did Dainihon make the decision to sell two factories which had plantation white sugar facilities and a manufacturing capacity of 1,750 tons?

Toyo had 6,000,000 yen in bonds due to the bankruptcy of Suzuki Shoten, so Dainihon tried to repay this loss to Suzuki Shoten by means of money received from the sales of both factories and the Toyo reserve funds. In short, a healthy management foundation formed the impetus for Dainihon to merge with Toyo.

Raita Fujiyama made the key decision not to replace Toyo under the umbrella and made the decision to sell these two factories in order to make the company recover from its moribund condition. He utilized a lesson from

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5 At that time, Dainihon's centrifugal sugar manufacturing capacity was 3,200 tons and Toyo's was 4,950 tons (Taiwan Sotokufu, Taiwan Togyo Tokei No.15, pp.8–9).
6 Nishihara [1934] p.185.
the former failure of practicing steady management by putting the accounting capital to use in order to not depend on the loan as much as possible. To this end, President Fujiyama made the following statement: “I think at ordinary times that our company is not safe if the fixed capital at factory isn’t due to our own funds.”

Likewise, another case of ascertaining trends in the market slowly and carefully without being fooled by the boom was seen on the occasion of the merger with Toyo. Regarding this, President Fujiyama stated that he had hoped to merge with other companies for many years but that carefulness was needed regarding the execution.

It was the monumental year of 1927 in which he utilized these lessons learned from the failures of the past, and changed the direction of his business strategy from the mainland white sugar industry to the Taiwanese centrifugal sugar industry. The merger with Toyo was the historical turning point of business strategy because the foundation was established for Dainihon to become the first mover in the Taiwanese centrifugal sugar industry.

With regard to aggressively pursuing the role of first mover with the successive M&A strategy during the time of President Aiichiro, the merger with Toyo company marked not only the phase to conquer constraints but also the chance to convert constraints into business opportunities by means of creating a new system to expand the production basis through M&A. Essentially, this was the time when creative adaptation was practiced by Raita Fujiyama.

III. The great leap by M&A strategy
(1) The passing of the baton from Raita to Aiichiro

Two more obstacles were waiting for Dainihon, which made a new start by merging with Toyo. The first constraint was impending business conditions by cutting through accumulated or reserve fund. In addition, the excise revision in 1927 caused the tariff on centrifugal sugar for direct consumption, which has an inferior quality to white sugar, to become relatively low. As a result, mainland white sugar output was depressed. This placed a second constraint on Dainihon, which thought that raw sugar was more important than white sugar for direct consumption.

Figure 6 demonstrates that the particular business situation for Dainihon after the merger was sluggish. Term profits depressed in the latter half of 1928 and improved in some small measures, but were stagnated for a time until the latter half of the year in 1930. As President Fujiyama stated, “After merger of Toyo Company, it took so much trouble for about two years”; thus, the merger was accompanied by great bankruptcy.

How did Dainihon conquer such constraints? It repaid a part of its debt with fixed capital in August 1930 and released the call on shares in October to make operating funds satisfactory and business performance smooth.

Due in part to difficult economic times, the release of call on shares had a big impact on the market and the stock price tumbled. Based on this status, President Fujiyama delivered a long statement to stockholders to win their trust.

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7 Dainihon Seito, “Fujiyama Shacho no Enzetsu (Dai Rokujuyon Kai Kabunushi Sokai nioite)” p.3.
8 Dainihon Seito, “Fujiyama Shacho no Enzetsu (Dai Rokujuyon Kai Kabunushi Sokai nioite)” p.2.
9 Specifically, the consumption tax on centrifugal sugar for direct consumption was lowered from 7 yen to 5 yen (per hundred kin) in 1927 (Taiwan Sotokufu, Taiwan Togyo Tokei No.29, pp.78–79,194–195).
10 Mainland white sugar output (thousand picul) was 8,666 in 1928, and due to excise revision decreased to 5,207 in 1932 (Taiwan Sotokufu, Taiwan Togyo Tokei No.29, pp.157–158). Refer to Figure 9 in Kubo [2005d] in detail.
understanding, and completed all transfers in April 1931. Dainihon, which overcame a financial crisis, began to change again to expand its productive capacity.

Dainihon extended both profit for the term and centrifugal sugar production favorably (Fig. 1, Fig. 2) by means of conquering the first constraint and made significant advancements. In April 1934 Raita Fujiyama retired from the Presidency he had maintained for 25 years and passed the baton to his eldest son Aiichiro. At the subsequent stockholder’s meeting, President Fujiyama took pride in completing his management basis without any anxiety: “I would like to clearly state that there is no danger in our company thanks to the strong foundation. Please rest assured even if I retire.”

In particular, Dainihon’s stock holdings increased substantially from 12,000 stocks to 59,140 stocks in June.

Were any objections raised regarding this alternation?

It was Raita’s installation of his son as President that revived Dainihon from the verge of death. It would have been difficult, therefore, to raise an objection to the nomination, but preparation for the worst was completed. Raita Fujiyama began as a salaried manager holding no stock, but he increased his stocks steadily with Aiichiro in mind.

In particular, Dainihon’s stock holdings increased substantially from 12,000 stocks to 59,140 stocks in June.

Note: f: the first half of each year; s: the second half of each year

1934 immediately after the passing of the baton to Aiichiro. Including the 666 stocks in Aiichiro’s name, Dainihon held 59,806 stocks and made up 5.82% of all the stocks as a big stockholder. After that, Fujiyama family-related stocks increased substantially to 107,836 stocks and made up 8.70% in June 1937. Thus, Raita backed up Aiichiro as a large stockholder as well as an executive advisor of the company.

As a response to the second restraint, President Aiichiro made the decision to primarily focus on full-scale production of plantation white sugar. Dainihon also obtained a factory with the equipment to produce plantation white sugar from Toyo, but stayed at the level that permitted it to inherit existing facilities and did not make genuine efforts to produce the plantation white sugar. Despite the fact that Dainihon shifted the major emphasis of its business to the sugar manufacturing industry in Taiwan, it in fact focused on raw sugar rather than centrifugal sugar production.

The turning point to move into high-gear production of plantation white sugar began with the sugar manufacturing at the second factory in Kobi in December 1935. The tariff on white and plantation white sugar was also reduced by the excise revision in 1932 and plantation white sugar production inevitably placed pressure on white sugar production. Due in part to removing itself from tight management conditions (Fig. 6); it became an urgent problem for Dainihon to begin producing plantation white sugar in the future. At the December 1937 stockholders’ meeting, President Fujiyama stated his decision to produce plantation white sugar at the second factory in Kobi as follows:

“The time has come when we should take account of the future of plantation white sugar seriously”.

The business strategy of emphasizing the full-scale production of plantation white sugar seemed inconsistent with the existing mainland white sugar production. However, Dainihon was able to overcome this contradiction. Although plantation white sugar production increases resulted in a decrease in mainland white sugar sales, this allowed the company to produce both plantation white sugar and white sugar simultaneously, and to export the excess white sugar to foreign markets such as the Chinese market. Thus, the best strategy was to begin full-scale plantation white sugar production together with other centrifugal sugars in order to conquer the second constraint. From that point, the number of factories equipped with plantation white sugar facilities increased owing to the successive M&A strategy.

(2) The leap to first mover

Due to the M&A strategy started in 1927 during the Raita era, Dainihon entered a new phase in Aiichiro’s times. In June 1935 Dainihon merged with Toyo, whose actual management rights had been taken over since 1927. As a result of productivity improvements in both sugarcane purchasing and centrifugal sugar manufacturing, Dainihon at last surpassed Taiwan Company in 1935 (Fig. 5). It was in 1935 that President Aiichiro embarked on the major upward movement of Dainihon.

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16 The consumption tax of white and plantation white sugar more than No. 22 was reduced from 8.35 yen to 7.75 yen respectively by the excise revision in January 1932 (Taiwan Sotokufu, Taiwan Togyo Tokei No.29, p.195).
17 From this point on, President Fujiyama marks a reference to Aiichiro Fujiyama.
19 From the merger with the Teikoku Company in 1941, Dainihon obtained five plantation sugar factories and came to have eleven sugar factories in total—the biggest facilities in the modern sugar manufacturing industry (Taiwan Sotokufu, Taiwan Togyo Tokei No.24, p. 8).
The wartime system changed the environment which surrounded the modern sugar manufacturing industry. The primary example is the start of a controlled economy which accompanied the Taiwan sugar industry statement (Taiwan Togyorei) proclaimed in October 1939. Because sugar prices were suppressed by low price policies under the controlled economy, and because production costs increased remarkably, each company was driven into difficult business situations. Dainihon confronted yet another large constraint common to the entire industry. To secure profits threatened by repressed prices, saving costs became the primary focus. It became indispensable to move forward and pursue a new merger. At a special meeting of shareholders, President Fujiyama reported the merge with Teikoku and pointed out that management rationalization was inevitable for cost saving.

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Capital Fund (ten thousands yen)</th>
<th>Process of Capital Expansion</th>
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<tbody>
<tr>
<td>1895</td>
<td>12</td>
<td>30</td>
<td>Foundation of the Nihon sugar refing company</td>
</tr>
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<td>1896</td>
<td>6</td>
<td>60</td>
<td>Capital expansion</td>
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<td>1904</td>
<td>10</td>
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<td>Capital expansion</td>
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<td>1906</td>
<td>11</td>
<td>1,200</td>
<td>Capital expansion, change of the company name</td>
</tr>
<tr>
<td>1916</td>
<td>6</td>
<td>1,800</td>
<td>Capital expansion</td>
</tr>
<tr>
<td>1918</td>
<td>10</td>
<td>2,050</td>
<td>Capital expansion by merger with the Chosen Company</td>
</tr>
<tr>
<td>1923</td>
<td>1</td>
<td>2,725</td>
<td>Capital expansion by merger with the Naigai Company</td>
</tr>
<tr>
<td>1927</td>
<td>7</td>
<td>5,142</td>
<td>Capital expansion by merger with the Toyo Company</td>
</tr>
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<td>1935</td>
<td>1</td>
<td>6,197</td>
<td>Capital expansion by merger with the Niitaka Company</td>
</tr>
<tr>
<td>1939</td>
<td>9</td>
<td>7,442</td>
<td>Capital expansion by merger with the Showa Company</td>
</tr>
<tr>
<td>1940</td>
<td>11</td>
<td>9,617</td>
<td>Capital expansion by merger with the Teikoku Company</td>
</tr>
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</table>


Dainihon was a key player in the third reorganization of the modern sugar manufacturing industry influenced by the controlled economy. Table 2 demonstrates that the company merged with Showa in 1939 and Teikoku in 1940. Dainihon obtained the biggest sugar manufacturing capacity because of the merger with Showa and cemented its status through the merger with Teikoku. Above all, the merge with Showa was particularly significant, for it enabled Dainihon to become the first mover in the modern sugar manufacturing industry (Fig. 5).

Figure 7 demonstrates how Dainihon’s manufacturing capacity and output expanded through a series of M&A strategies. Capacity increases were accompanied by each merger with Toyo, Niitaka, and Showa in 1927, 1935, and 1939 respectively. Individual factories also increased their own capacity in 1911, 1925, and 1940, but it is obvious that the merger had a large effect on manufacturing capacity. As Figure 7 also demonstrates, increases in sugar manufacturing output were also influenced by other factors. For example, in 1927, the output continuously decreased in spite of the increase in manufacturing capacity that was a result of the merger with Toyo. In 1932 and 1933, output fluctuated on a large scale regardless of capacity. Such trends cannot be explained only by manufacturing capacity. Fluctuations in availability of raw material sugarcane also greatly affected the sugar manufacturing output.

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Figure 7 Centrifugal Sugar Manufacturing Capacity and Output of the Dainihon Company

Note: Regarding sugar manufacturing output, notation of the year adjusts to the year in the second half out of the sugar manufacturing work which extended to the following year, e.g., 1910–11 is writing with 1911.

Source: Taiwan Sotokufu, *Taiwan Togyo Tokei*, annual version.

Two major factors which had an influence on sugarcane harvest quantity are production adjustment by the sugar industry union (Togyo Rengo Kai) and the existence of competition crops, e.g., rice. The production adjustment agreement put forward by the sugar industry union was manifested through the control of sugarcane harvest quantities and had a big influence on Dainihon’s sugar manufacturing output. The output change in 1933–34 (Fig. 3) is a result of the fact that the production adjustment agreement was implemented for both years; therefore the sugarcane harvest quantity in 1932 became a surplus. The rice–sugarcane conflict (Beito Sokoku) also affected sugarcane harvests, and a decrease in output in 1918–20 (Fig. 7) was caused by peasants abandoning sugarcane harvest for rice cultivation as the price of rice soared. Raw material gathering influenced the crop of raw material sugarcane, which was as important as the manufacturing capacity of each factory. Dainihon used its M&A strategy to effectively expand both raw material gathering and manufacturing capacity.

Figure 8 confirms the expansion of raw material gathering areas. It should be noted that by a series of mergers since 1927 raw material gathering areas have expanded in incremental steps and the neighboring areas were aggregated into one. For example, the first Kobi factory was able to procure raw materials from the raw material gathering area of the neighboring Toroku factory by aggregating the first and the second Kobi factory, Toyo’s

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Toroku and Kitaminato factory and Niitaka's Kagi factory as a result of the merger with both companies. The magnitude of the M&A effect is immeasurable in regards to raw material procurement because it was important to shorten transportation time to the factory as much as possible in order to improve sugar manufacturing efficiency.

**Figure 8 Dainihon's Expansion Process for Raw Material Gathering Areas**

[Map of Dainihon's expansion process showing raw material gathering areas and the timeline of mergers with other companies.]

Source: Taiwan Sotokufu, *Taiwan Togyo Tokei No.15, No.19, No.24, No.28, No.29, “Taiwan Togyo Zu.”* 14
(3) Two sides of M&A strategy

Aiichiro succeeded in developing Dainihon into the first mover in the modern sugar manufacturing industry. His most critical action was the success of his M&A strategy to steadily expand manufacturing capacity and raw material gathering areas by recognizing the two industry reorganizations as business opportunities and not as restraints. However, the M&A strategy also had its problems. In order to tie the mergers to development, it was important to improve these negative implications. What follows is further insight into the conquest process.

Managing diverse raw material gathering areas at the same time became important in order to overcome obstacles. It should be noted that competition between rice and sugarcane cultivation became the most consistent and serious problem because most of the expanding raw material gathering areas were located in northern and mid-Taiwan. Thus, to overcome the constraints placed on production from the rice-sugarcane conflict, the offer of cash incentives for individual areas solved the problem. Since Dainihon was a latecomer to Taiwan and could not find optimal southern areas to grow sugarcane\(^{23}\), conquering the rice-sugarcane conflict to influence the development of the company became the main focus. As Dainihon differed from the Taiwan Company by procuring 30% of its raw material sugarcane from self-employed peasants (the average for 1916–39)\(^{24}\), it became indispensable to offer peasants various cash incentives to grow sugarcane rather than rice in the raw material gathering areas.

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**Note:** ◎ Cash incentives for sugarcane growing in paddy fields; ○ More favorable terms of paddy fields on purchase prices, premiums, and incentives; △ More favorable terms of paddy fields on advance of raw material growing fund, dark hatching: rice-price-linked system on sugarcane purchase price, light hatching: rice-price-linked system except

Source: Taiwan Togyo Kenkyukai [1928–42].

Table 3 demonstrates the encouragement of sugarcane growing in paddy fields for each factory under the Dainihon umbrella (from 1934 to immediately before the merger with Toyo). Most factories, including Getsubi

\(^{23}\) In short, Dainihon Company was able to place its first production sugarcane production base only in mid-Taiwan because the optimal southern area was saturated.

\(^{24}\) Thus, Dainihon Company could not help depending on the acquisition from general raw material gathering area in 90% (Refer to Table 7 in Kubo [2006a]).
and Ujitsu, had raw material gathering areas, which are accounted for by the large paddy fields. Thus, the rice-sugarcane conflict was a major problem, and confronting this problem was an inevitable situation for many of the factories Dainihon obtained through mergers. However, all purchased factories had already devised countermeasures to the rice-sugarcane conflict and the M&A strategy was also utilized here to accede and develop it. Incidentally, sugarcane cultivation agreements were systematized by the 1939 Taiwan sugar industry statement25 in an environment where the rice-price-linked system on sugarcane purchase price grew popular since 1942.

As is clear from the above, the successive M&A strategy brought about the expansion of raw material gathering areas and centrifugal sugar manufacturing capacity and propelled Dainihon to the primary corporation in the Taiwanese sugar manufacturing industry. In order to enjoy this position to the fullest, it was necessary for Dainihon to exercise ingenuity in its relations with general sugarcane peasants concerning raw material procurement. Dainihon recognized the rice-sugarcane conflict as the number one priority and conquered the obstacles by offering various incentive plans to farmers. Lastly there was a continuous conquest process to the rice-sugarcane conflict in the environment where the merger effect expanded the production of both raw material sugarcane and centrifugal sugar.

IV. Conclusions

From the perspective of the three levels of entrepreneurship, I will examine whether Raita and Aiichiro, who managed the Dainihon Company, were key players in the innovation. First, regarding the utilization of business opportunities, the following three phases can be noted. The first phase took place when Raita regarded the sugar industry gold period as a business opportunity to hasten debt repayment and finished servicing of the debt without undertaking surplus future investment. The second phase took place when Dainihon took advantage of the financial crisis to acquire substantial Niitaka management rights and merged with Toyo in the second reorganization period. The third phase took place when Dainihon rose to become the first mover in the sugar manufacturing industry by means of merging with Showa and Teikoku in spite of the regulation economy that took place during that reorganization period. Despite the fact that industrial reorganization itself could also have become an obstacle, Dainihon succeeded in utilizing business opportunities to merge with sugar manufacturing companies that fell into management crises during environmental changes. In the case of the second phase in particular, I will describe that the practice of creative adaptation was inherent to success during this period.

During times of financial crisis and controlled economy, why did Dainihon seize business opportunities to perform M&A strategies instead of succumbing to obstacles? The change of business environments functioned as obstacles for the sugar manufacturing companies which were subsequently merged with Dainihon, but were viewed as business opportunities for Dainihon. Thus, the strong management basis which utilized economy changes as business opportunities was the reason for coming out of the reorganization period as the main industry player. Such a solid management foundation made it possible to complete debt liquidation in the early stages and to establish a financial constitution which did not depend on excessive debt loan. Additionally, the emerging sugar consumption market and tariff reforms enabled the link of mainland white sugar and Taiwanese centrifugal sugar (i.e., raw sugar produced for mainland white sugar was manufactured in Taiwan) and the

25 Refer to Kubo [2007c] on Taiwan sugar industry statement.
opportune time to shift business strategies to the centrifugal sugar industry arose. The primary factor that allowed Raita Fujiyama to become a key player in leading the industrial reorganization was that he closely examined the timing of the merger.

Regarding the second level of conquering constraints, three primary obstacles existed when Raita Fujiyama began the reconstruction of Dainihon. Specifically, the three obstacles involved a large amount of debt service payments, white sugar production surpluses by a dull consumption market, and Taiwan’s resistance to advancement. To conquer this triple handicap, Dainihon pioneered new foreign markets, such as the Chinese market, and reconstructed its main business. As a result, in spite of preparing for no dividends for ten years, Dainihon realized dividends in only two years and cleared all debts in ten years. Cultivation of the foreign market made it possible for the company to simultaneously conquer the first and the second primary constraints.

Conversely, the response to the third primary constraint was not as easy because Dainihon had to overcome the problem of scanty raw materials. Therefore, Raita implemented the raw sugar increased production plan to advance the sugar manufacturing industry in Chosen and Java in addition to expanding the manufacturing capacity in Taiwan. However, revision of the consumption tax and quality improvement of Taiwanese centrifugal sugar, including plantation white sugar, increased its mainland market share and brought further criticisms to the white sugar industry. Dainihon reached a turning point of strategic deployment in order to conquer this new constraint. That is, in 1927 Dainihon shifted its business strategy to centrifugal sugar in Taiwan from mainland white sugar. The strategy of placing greater emphasis on centrifugal sugar became decisive as a result of the rapid expansion of plantation white sugar, and thus the third primary constraint was overcome.

The merger with Toyo placed further constraints on Dainihon to clear debts to Suzuki Shoten, and this existed in addition to the reconstruction of the Tokyo factory that was burned in the Great Kanto Earthquake. Nevertheless, Dainihon conquered this constraint by using realistic decision-making to sell two factories to Meiji and carried out the conversion of its business strategy on a healthy basis of zero debt. Also, despite the fact that Dainihon was temporarily hard-pressed for capital after the merger with Toyo, President Raita convinced stockholders to call on shares and led the conversion to success.

As for the final constraint, Dainihon was constantly confronted with the obstacles of the rice-sugarcane conflict because the majority of their raw material gathering areas were located in the middle and northern parts of the island. Thus, it was important to give peasants incentive to voluntarily grow sugarcane rather than rice. Introduction of the rice-price-linked system and various cash incentives marked important policies that eased the effects felt by the rice-sugarcane conflict, as Dainihon depended on purchasing raw materials from peasants living in these areas.

Next, the merger with Toyo shifted Dainihon’s business strategy that corresponded to converting constraints into business opportunities for a third entrepreneurship. Dainihon’s M&A strategy of increasing centrifugal sugar manufacturing capacity without constructing new factories was realized and allowed the limitations placed on the company by being a latecomer to be overcome. Dainihon succeeded in converting this obstacle into a business opportunity by building up the foundation of the M&A strategy in addition to conquering the emergence of centrifugal sugar. The use of the M&A strategy with Toyo, Niitaka, Showa and Teikoku was established 1927. The latecomer’s disadvantage was also conquered by this strategy and the result was Dainihon’s position as the first mover in the sugar manufacturing industry.

Therefore, I will examine the above-mentioned three-level entrepreneurship in relation to the latecomer’s effect. Four conditions of the latecomer’s advantage are as follows:
1) free ride effect in R&D and infrastructure
2) avoidance of uncertainty
3) change of technology and consumer needs
4) inertia of first comer

Conversely, three conditions are noted for the first comer’s advantage:
5) technical leadership
6) anticipation of rare resources
7) switching costs

In this section, I will examine the seven points as they relate to the latecomer’s advantage (1–4) and the latecomer’s disadvantage (5–7). Regarding the latecomer’s advantage, Condition (1) is based on the fact that the entire industry was blessed with the previous R&D of the Taiwan Company and the fact that benefits were received through the sugar industry promotion plan enacted by the Taiwan governor. Condition (2) is based on the full-scale advance of Dainihon. However, regarding the penetration of improved centrifugal sugar in the mainland consumption market, Condition (3) did not always apply because Dainihon’s primary business was mainland white sugar. Condition (4) can be applied when limiting first comer to Taiwan Company whose character having to do with “the quasi-national policy company” prevented the expansion of profit-seeking activity.

When examining the latecomer’s disadvantage, Condition (5) did not apply to Dainihon because the Taiwan Company was unable to achieve strategies which maintained technical leadership. Condition (6) deals with rare resources, or the raw material gathering areas, and is applied from the point of view that the pioneer Taiwan Company secured the southern area, which was the most favorable to grow sugarcane. Regarding switching costs during the shift to Taiwanese centrifugal sugar from mainland white sugar, Condition (7) did not always apply because the conversion ran simultaneously with white sugar and enabled Dainihon to merge with existing corporations without paying capital expenditures for new factory construction. With regard to the disadvantages of the raw material gathering area, the influence of the demerit was not always sufficiently large to expand its gathering areas through a series of M&A strategies.

Consequently, I will examine the M&A strategy from the viewpoint of the latecomer’s effect. The advantage of Condition (3) also applied to this period since the merger with Toyo, and therefore, Dainihon could benefit from latecomer’s advantages. Alternatively, due to successive mergers, Dainihon expanded its vast raw material gathering areas which resulted in its ability to produce larger sugarcane crops than the Taiwan Company, and therefore all the latecomer’s disadvantages, including Condition (6) can be excluded. After all, Dainihon’s M&A strategy was none other than to have conquered almost all latecomer disadvantages.

27 The inertia of the first mover of (4) did not always apply if Meiji was added to the first mover. President Hanji Soma of the company developed the aggressive diversification strategy called “Big Meiji”. However, since the top Taiwan Company was the very first mover to deal with the latecomer’s effect of Dainihon, the inertia of the first mover can also be confirmed. Refer to Kubo [1998 • 1999] on diversification of Meiji.
28 A series of behaviors of Taiwan Company, which can be called the steady celestial principle, as well as the behavior that resulted in R&D spending a great deal on development of the whole industry can be understood as the result of the character having to do with “the quasi-national policy company” of the company. Refer to Kubo [1997] (part 1 and conclusions) in detail.
29 The disadvantage of Condition (6) is applied based on the following reason. That is, Dainihon Company had to confront the rice-sugarcane conflict because most of the raw material gathering areas won by a series of mergers were located in mid- or northern Taiwan. However, because sugarcane was able to be grown in areas other than southern Taiwan, the influence of Condition (6) was thought to be small.
Finally, I will consider whether or not Raita and Aiichiro Fujiyama’s entrepreneurship that brought the latecomer’s effect to Dainihon was an innovation deserving of the name of creative adaptation. Figure 9 illustrates the process which brings the latecomer’s effect to the company in connection with the three levels of entrepreneurship and creative adaptation. Dainihon could not help the fact that it began its road to recovery under the dual constraints of bankruptcy and the latecomer’s disadvantage. Without conquering these dual constraints, the benefits offered by the latecomer’s effect would not have materialized. Thus, the process of the company’s recovery and advancement was directly related to overcoming the latecomer’s disadvantages.

As mentioned above, Dainihon succeeded in internalizing the latecomer’s advantages. From another
perspective, with sole regard to the latecomer’s disadvantage wherein the first mover secures raw material gathering areas most suitable for growing sugarcane, the company won through a series of M&A strategies beginning with Toyo. The rice-sugarcane conflict was also conquered by the business due to flexibility learned from experiences since the beginning of its advancement in Taiwan. Additionally, the long succession of the three levels of entrepreneurship developed in various situations was also important to realizing the latecomer’s effect.

I conclude that creative adaptation was the innovation that propelled Dainihon to merge with Toyo in 1927 because the merger enabled Dainihon to shift its business strategy from the mainland white sugar industry to the Taiwanese centrifugal sugar industry and built the foundation of a series of M&A strategies that continued in the Aiichiro era. In order to realize this creative adaptation, it was indispensable for Dainihon to internalize the latecomer’s advantage and conquer various constraints. Conversely, overcoming the latecomer’s disadvantage and utilizing business opportunities became possible with creative adaptation and the conquering of constraints connected to overcoming the latecomer’s disadvantage. Such facts demonstrate that aggregation of mutually-related entrepreneurship revolves around creative adaptation.

Although much of Dainihon’s entrepreneurship was centered on creative adaptation, lessons learned from failures that resulted in near-bankruptcy also played an important role to support individual decision-making from the ground up. Without these lessons learned from failure, creative adaptation and the latecomer’s effect could not have occurred. It was nothing but converting the constraints of failure into business opportunities that allowed Dainihon to take advantage of lessons for strategic decision-making in this critical phase. The incremental entrepreneurship passed from parent to child made it possible for these lessons from failure to be passed from Raita to Aiichiro. Above all, Raita Fujiyama was an obvious entrepreneur because he created a new system to enrich the production base and saved Dainihon from serious crisis.

In summary, the collaboration and mutual entrepreneurship of both Raita and Aiichiro led Dainihon to realize the latecomer’s effect.

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30 At the President’s retirement celebration party in April 1934, Reijiro Wakatsuki stated that the recovery of Dainihon was the result of the effort and goodwill on the part of Raita Fujiyama (Nishihara [1939] pp.340–344).
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