Cartel's Function of Balancing the Conflicting Interests of Members in Prewar Japan : "Togyo Rengokai" in the Modern Sugar Manufacturing Industry

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Contents

I. Preface

Hashimoto & Takeda (1985) and Kikkawa (1991) pointed out that Japanese cartels had three functions as follows :

1) restraining competition
2) balancing the conflicting interests of members
3) complementing resource

The function 2) has not been put much weight in as the result that some studies on the prewar cartels have focused on the function 1) and others have focused on 3) exclusively.

This paper will attach much weight to the function of balancing the conflicting interests of members of cartels and make it appear that the function 2) had abundant importance in prewar Japan through the case study of "Toren"[1)] in the modern sugar manufacturing industry which means centrifugal sugar industry in colonial Taiwan.

After "Toren" started as "Taiwan Togyo Rengokai" by five centrifugal sugar companies such as the Taiwan, Meiji, Ensuiko, Toyo, and Niitaka Company[2)] in 1910 in order to reinforce the bargaining power on sailing raw sugar to white sugar companies, every centrifugal sugar company became a member of the cartels in the second half of 1910s. "Toren" was carried on to the end of prewar Japan and had a great deal of relations with development of the modern sugar manufacturing industry, because "Toren" made it possible that members competed with each other on one hand and seek out cooperation on the other.

History of "Toren" can be divided into two periods as shown in Table 1. During the first half of 1910–28, the above mentioned function 1) was limited as a result of repeated conflict and failure on striking hands on the bargaining of "Santo Shobun"[3)] that depended on the bargaining of "Genryoto Baibai"[4)]. In complete contrast, the bargaining was very successful with no exceptions during the second half of 1929–41 thanks to self-sufficiency of sugar within empire Japan. On the other hand, the bargaining of "Taiwan Santo Yuso"[5)] was succeeded at all time without any exceptions as shown in Table 1.

This paper will pay much attention to the first half, because during the period function 2) as well as 3) was gone on in spite that function 1) was come

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1) From now on, I will abbreviate "Togyo Rengokai" to"Toren".

2) From now on,"sugar manufacturing company" will be abbreviated to "Company".

3) "Santo Shobun" means deciding each company's distribution ratio between raw sugar for white sugar and direct consumption one.

4) "Genryoto Baibai" means deciding each raw sugar manufacturing company's distribution ratio selling to white sugar manufacturing company.

5) "Taiwan Santo Yuso" means bargaining with shipping companies on freight of shipping from Taiwan to Japan.

Table 1 Situation of three main agreements aproved by "Toren"

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Source : Toren (1910-14), Toren (1923-39), Toren (1929-36), Toren (1931-36), Toren (1930-41), Toren (1919-42).

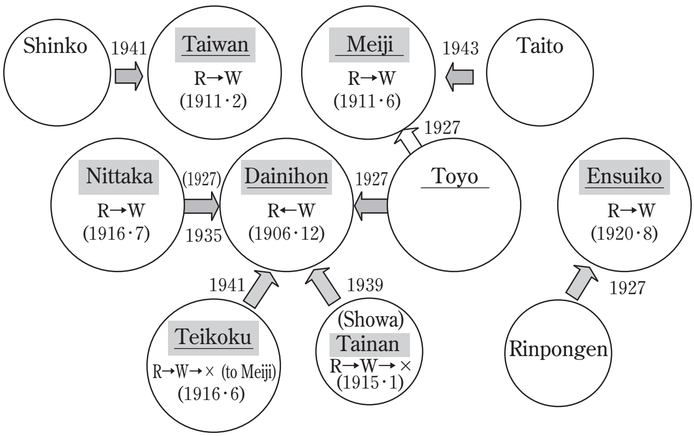
in scarcely. And I will clear out why "Toren" was not dissolved in spite of repeated conflict among members in the context of function of balancing the conflicting interests of them.

II. The conflict of interests 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 the Dainihon Company advanced to raw sugar industry immediately in December, 1906. The Dainihon company became a key player in the raw sugar trade negotiation. However, the privileged position of the Dainihon Company was notably challenged when the Kobe Refined Sugar Company merged with the Taiwan Company (February,

Figure 1 Structural Outline of Conflict in the Modern Sugar manufacturing Industry and M&A



Note : Hatching of the company name : simultaneously manufacturing raw sugar and white sugar; underlining the company name : plantation white sugar ; arrowhead : M&A relation ; R : raw sugar ; W : white sugar
Source : Taiwan Sotokufu (1913–40).

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 Ensuiko (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,[6)] which increased in importance as a direct consumption sugar. Additionally, the Ensuiko Company began to produce plantation white sugar in 1909, and the Taiwan, Meiji, and Toyo Company 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

Regarding Figure 1, companies were divided into two groups : (1) the 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.

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6) Plantation white sugar was of a similar quality to white sugar and utilized the centrifugal sugar manufacturing method. Therefore, 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).

(2) Reorganization of the three levels

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

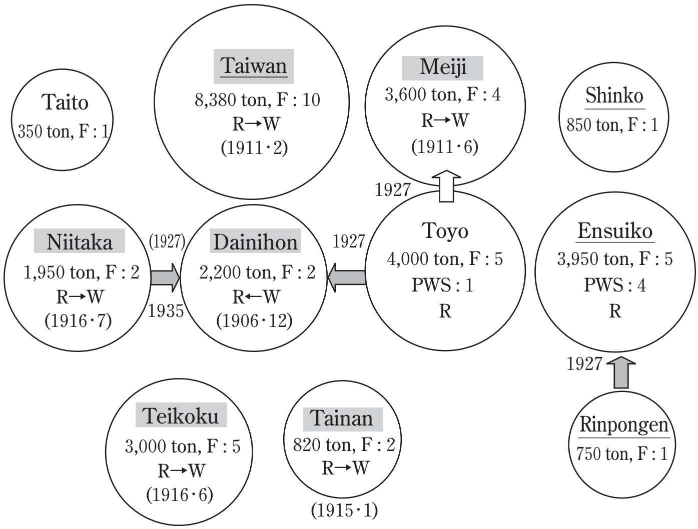
1) The first transformation occurred in the 1910s. Small-scale companies that used outdated facilities to manufacture only syrup-based sugar were the target of M&A by companies that possessed large-scale facilities for the new type of sugar production.
2) The second reorganization period was marked by fluctuations in the financial crisis. In particular, the Tainan Company was sold to the Showa Company. Additionally, Dainihon merged with Toyo — except for two factories that were sold to the Meiji Company — and had effective control over the Niitaka 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 Showa and Teikoku 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 the 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 the Taiwan Company under the umbrella is expressed in Figure 2.

The centrifugal sugar manufacturing capacity for the Dainihon Company did not fill 1/4 of the Taiwan Company, which demonstrated the advantage

Figure 2 Production Systems after the First Reorganization (1918)



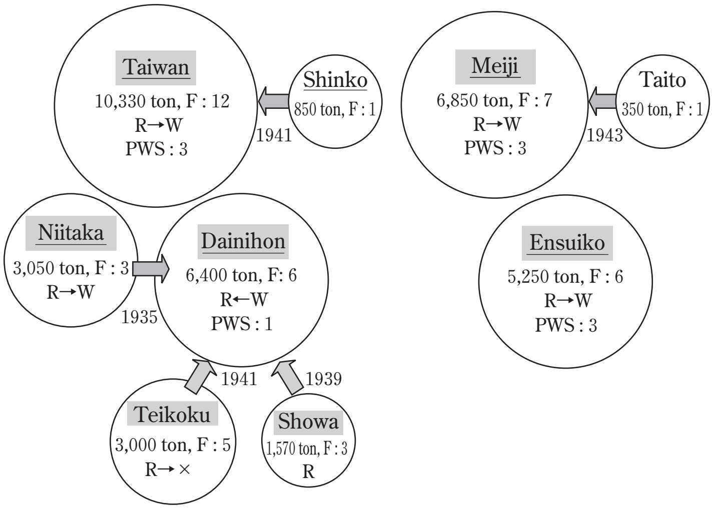
Note : F : volume of centrifugal sugar ; PWS : volume of plantation white sugar
Source : Taiwan Sotokufu (1918) pp. 40–51.

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 the Toyo Company and the Ensuiko Company. However, it was a premature step for plantation white sugar. The Ensuiko Company, which was dealt with first in Taiwan, and the 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 the 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

Figure 3 Production Systems after the Second Reorganization (1928)



Source : Taiwan Sotokufu (1927) pp. 6–9.

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 2. 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.

Table 2 The Pulse Duty Factor in Centrifugal Sugar manufacturing Capability and Production Output

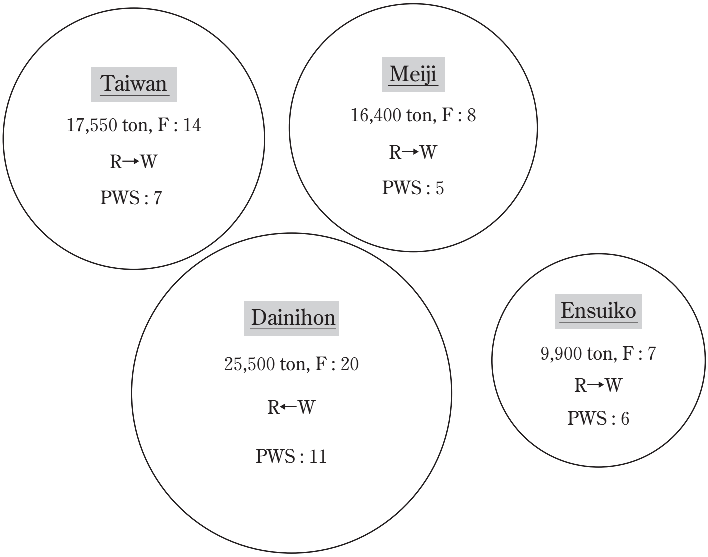
Company	manufacturing capability (ton)				production output (thousand picul)			
	1927・3	(%)	1928・3	(%)	1926–27	(%)	1927–28	(%)
Taiwan	8,780	23.6	10,330	27.7	1,802	26.9	2,378	25.0
Meiji	5,100	13.7	6,850	18.4	867	12.9	1,880	19.7
Dainihon	3,200	8.6	6,400	17.2	613	9.1	1,796	18.8
Ensuiko	5,250	14.1	4,050	10.9	874	13.0	1,209	12.7
Shinko	850	2.3	850	2.3	87	1.3	101	1.1
Niitaka	3,050	8.2	3,050	8.2	530	7.9	670	7.0
Teikoku	3,000	8.1	3,000	8.1	883	13.2	1,146	12.0
Showa	—	—	1,570	4.2	—	—	214	2.2
Tainan	1,570	4.2	—	—	113	1.7	—	—
Taito	350	0.9	350	0.9	47	0.7	30	0.3
Shinchiku	500	1.3	500	1.3	24	0.4	40	0.4
Sharoku	300	0.8	300	0.8	40	0.6	65	0.7
Toyo	4,950	13.3	—	—	818	12.2	—	—
Koshun	350	0.9	—	—	12	0.2	—	—
Sum	37,250	100.0	37,250	100.0	6,710	100.0	9,529	100.0
pulse duty factor of top four	22,330	59.9	27,630	74.2	4,156	61.9	7,263	76.2

Source : Taiwan Sotokufu (1926) pp. 6–9 ; (1927) pp. 6–9 ; (1930) p. 84.

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 the Showa Company in 1939 and the 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 the Taiwan Company in 1941 and by the merging of Taito with Meiji in 1943.

Figure 4 Production Systems after the Third Reorganization (1943)



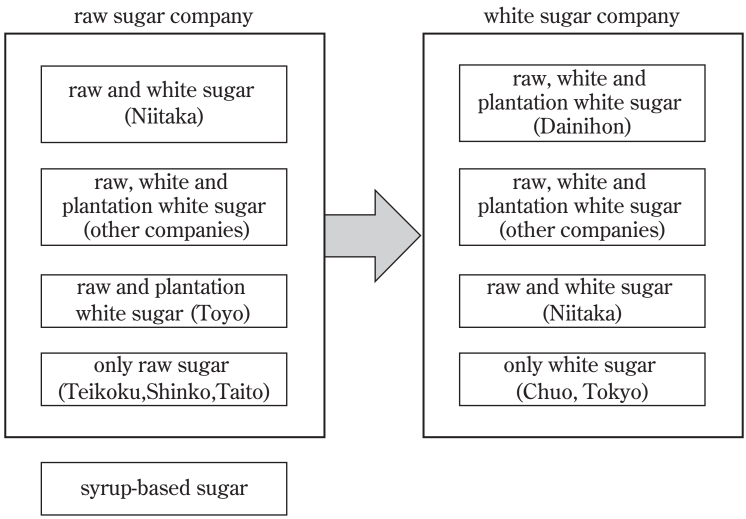
Note : Because it was considered a merger until 1943 based on the data of the step in March1941, and in April 1941, it was included for the factory that was dormant since then.
Source : Taiwan Sotokufu (1940) pp. 6–9.

III. Cartel's function of restraining competition and balancing the conflicting interests of members

The bargaining process of "SSK"[7] for price stabilization was the most important in order to make certain whether the function of restraining competition came in or not. Balancing the conflicting interests of members was indispensable to bring "SSK" into existence, because the modern sugar manufacturing industry possessed layered conflict structure as mentioned above.

7) From now on, I will abbreviate "Santo Shobun Kyotei" to "SSK".

Figure 5 Structural outline of "Genryoto Baibai Kosho"



I will review structural outline of the bargaining on "GBK"[8], focusing on layered conflict structure of the modern sugar manufacturing industry as shown in Figure 5. On one hand, raw sugar companies were divided into four groups. More specifically, the Niitaka Company manufactured raw and white sugar, the Toyo Company manufactured raw and plantation white sugar, the Teikoku, Shinko, and Taito Company manufactured only raw sugar, and other companies manufactured raw, white and plantation white sugar.

Conflicting positions among raw sugar manufacturing companies were much different above all on retail price of raw sugar during its price uptrend period. As a matter of course, centrifugal sugar companies which didn't produce white sugar simultaneously had strong will to sell their sugar for direct consumption rather than for raw sugar. Because the price of sugar for direct consumption was higher than one for raw sugar through raw sugar negotiation. In addition, as plantation white sugar for direct consumption appeared

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8) From now on, "Genryo Baibai Keiyaku" will be abbreviated to "GBK".

Table 3　Volume of Sugar imported from Java by Mitsui Bussan
(from July, 1918 to June, 1919)　(picul)

	raw sugar	sugar for direct consumption	total	share (%)
Dainihon	868,860		868,860	38.2
Taiwan	572,212		572,212	25.2
Ensuiko	32,882	49,441	82,323	3.6
Teikoku	88,913		88,913	3.9
Minamimanshu	49,411	130,937	180,348	7.9
city sugar merchants	139,933	339,075	479,008	21.1
toatal	1,752,211	519,453	2,271,664	100.0

Source : Mistui Bussan (1919) p. 42.

in 1910s and increased its demand rapidly in 1930s, business environment has changed. That is, plantation white sugar negotiation had a decisive influence on “SSK”.

On the other, white sugar companies which refined raw sugar were divided into four groups. To be more precise, the Dainihon Company manufactured raw, white and plantation white sugar, the Niitaka Company manufactured raw and white sugar, the Chuo and Tokyo refined company manufactured only white sugar, and other companies except Dainihon manufactured raw, white and plantation white sugar. Above all things the Dainihon Company excelled in a refining capacity as the pioneer company of the mainland white sugar industry and had a conflicting interest with other companies which also manufactured raw, white and plantation white sugar.

I will take stock of such conflict structure among white sugar companies as shown in Table 3 and Table 4. Table 3 shows that the Dainihon and Taiwan Company purchased a lot of Javanese sugar for raw sugar and the Ensuiko,Minamimanshu Company, and city sugar merchants from which many other raw sugar companies purchased imported much sugar for direct consumption from Java. The Javanese sugar made layered conflict structure in the modern sugar manufacturing industry into much more complicated.

As demonstrated by Table 4, which displays the pulse duty factor of refined raw sugar in 1924, the factor of the Dainihon, Meiji, Ensuiko, and

Table 4 Pulse Duty Factor of refined raw Sugar by white Sugar Factories (1924)

		pulse duty factor of refined raw sugar					share (%)
		made in Taiwan		made in foreign countries		total (thousand piculs)	
		(thousand piculs)	(%)	(thousand piculs)	(%)		
Dainihon	Osaka factory	31,730	42.2	43,450	57.8	75,180	9.9
	Dairi factory	39,385	28.0	101,429	72.0	140,814	18.5
	total	71,115	**32.9**	144,879	67.1	215,994	**28.3**
Meiji	Kawasaki factory	22,243	42.0	30,669	58.0	52,912	6.9
	Kobe factory	29,208	44.5	36,405	55.5	65,613	8.6
	Tobata factory	21,520	32.6	44,588	67.4	66,108	8.7
	total	72,971	**39.5**	111,662	60.5	184,633	**24.2**
Taiwan	Kobe factory	71,464	57.3	53,151	42.7	124,615	16.4
	Araki factory	22,556	51.6	21,187	48.4	43,743	5.7
	total	94,020	55.8	74,338	**44.2**	168,358	**22.1**
Ensuiko	Osaka factory	22,197	**25.0**	66,633	75.0	88,830	**11.7**
Niitaka	Osaka factory	10,333	62.9	6,102	**37.1**	16,435	**2.2**
Taisho	Tokyo factory	24,262	35.2	44,620	64.8	68,882	9.0
	Nagoya factory	3,550	18.7	15,422	81.3	18,972	2.5
	total	27,812	**31.7**	60,042	68.3	87,854	**11.5**
total		298,448	**39.2**	463,656	60.8	762,104	**100.0**

Source: Taiwan Sotokufu (1925) p. 128.

Taisho Company refined company was more than 60% by raw sugar made in foreign countries, especially in Java. In the meantime, the Taiwan and Niitaka Company refined raw sugar made in Taiwan by major part. It follows that Javanese sugar was one of the most complicated factor for the modern sugar manufacturing industry.

In 1920s, cartel's function of restraining competition was limited as a result of repeated conflict and failure on striking hands on "SSK", the function of balancing the conflicting interests of members added weight conversely. That is, the latter function came to exercise not in the phase of bargaining on "GBK" leading to "SSK" but in the phase of bargaining on "SSK" in spite of repeated conflict and failure. It was the result that importance of plantation white sugar for direct consumption increased and only "GBK" could not stabilize sugar market price.

In the phase of falling price all members of "Toren" shared mutual interests to enact "SSK", by contrast in the phase of rising in price each interest conflicted to end in failure. Well then, why was the bargaining on "SSK" very successful with no exceptions during the second half in complete contrast as shown in Table 1 ? Two reasons were above all important. One reason was the self-sufficiency of sugar within empire Japan in 1929, and another was foundation of "SKK"[9] in December, 1928.

All members of "Toren" shared mutual interests to avoid falling price because of excess supply since 1929 as shown in Table 5. Owing to foundation of "SKK", stabilization of white sugar effected well to "GBK" and "SKK" was also realized in consequence. Reorganization of distribution by "SKK" in 1928 succeeded in clearing away the pressure of Javanese sugar as opposed to the first half when the sugar was the part of the reason for much more complicated conflict structure in the modern sugar manufacturing industry.

Under the layered conflict structure, to have been above-mentioned, establishment of "Toren"'s function of restraining competition was very limited except production adjustment in 1933 and 1934 as a result of excess production in 1932 as shown in Table 5 and those two years' agreements "Seisan

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9) From now on, I will abbreviate "Sato Kyokyu Kumiai" to"SKK".

Table 5 Supply Demand Situation of Sugar in Japan (thousand piculs)

	sugar production (①)	sugar production in Taiwan (②)	share (② / ①, %)	consumption (③)	① − ③
1920	4,893	3,720	76.0	7,504	△ 2,611
1921	5,830	4,212	72.2	11,483	△ 5,653
1922	7,229	5,878	81.3	11,956	△ 4,727
1923	7,225	5,923	82.0	11,257	△ 4,032
1924	9,219	7,537	81.8	11,920	△ 2,701
1925	9,622	7,992	83.1	12,844	△ 3,222
1926	10,093	8,332	82.6	12,650	△ 2,557
1927	8,682	6,852	78.9	14,433	△ 5,751
1928	11,783	9,669	82.1	14,375	△ 2,592
1929	15,193	13,155	86.6	14,870	323
1930	15,517	13,508	87.1	14,296	1,221
1931	15,582	13,288	85.3	14,259	1,323
1932	19,258	16,484	85.6	15,401	3,857
1933	13,411	10,562	78.8	15,043	△ 1,632
1934	13,480	10,784	80.0	15,458	△ 1,978
1935	19,546	16,094	82.3	17,694	1,852
1936	18,331	15,028	82.0	18,567	△ 236
1937	20,049	16,789	83.7	18,482	1,567
1938	20,242	16,503	81.5	19,505	737
1939	27,856	23,646	84.9	20,986	6,870

Source : Taiwan Sotokufu (1940) pp. 178–179, 182.

Chosei Kyotei" (relabeled "SSK") was extremely anomalistic. For the meanwhile, function of balancing the conflicting interests of members was operated all the time to come in "GBK" as the prerequisite for "SSK".

In contrast to the function of restraining competition, the most consecutive function of "Toren" was complementing resource one such as presenting petitions of consumption duty and custom duty to inland government, presenting petitions of sugar advancement policy to colonial government in Taiwan, "SYK"[10], and gathering intelligence activity.

"Toren" succeeded in presenting petitions on consumption duty and custom duty to inland government three times, but the function of balancing the conflicting interests of members was necessary on the tariff reform of 1927 before accomplishment of self-sufficient in 1929. For centering on the import of Javanese sugar a three-tiered conflict structure, i.e. as evidenced by the facts noted above, casted a long shadow on presenting petitions of the tariff reform of 1927.

On the other hand, "SYK" did not only strengthen "Toren"'s bargaining power against shipping companies through single-minded bargaining but bring sugar manufacturing companies profits such as refund money from sipping companies. That is, "SYK" as function of complementing resource played a great deal of roles to cooperate conflicting members of "Toren" on a daily basis as well as presenting petitions on consumption duty and custom duty. Such function of complementing resource was a key point to prolong their existence to the end without deactivating as is the case with function of balancing the conflicting interests of members.

Ⅳ. Competition and cooperation of four established companies

It was very difficult to cooperate within "Toren" as shown in the fact that the Dainihon Company set up itself in opposition to the Meiji Company and "Toren" itself faced a crisis of breakup in a phase of bargaining "SSK" in 1927. However "Toren" seek out cooperation all the way along in concurrence with competition. Well then, why were competition and cooperation compatible in the modern sugar manufacturing industry ?

First of all, I will review the competition side of the industry and put strategies of four established companies in order as follows :

1) The Taiwan Company realized strategy to attach weight to manufacture centrifugal sugar utilizing first mover advantage in colonial Taiwan and caught up with the Ensuiko Company in plantation white sugar expeditiously.
2) The Dainihon Company shifted in strategy from refined sugar in inland to centrifugal sugar involving plantation white sugar in Taiwan and

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10) From now on, "Santo Yuso Kyotei" will be abbreviated to "SYK".

conquered the constraints of latecomer in raw sugar manufacturing and recovered from failure by means of a battery of M&A strategies.

3) The Meiji Company aimed for synergistic development between centrifugal and white sugar manufacturing by diversification strategy and caught up with the Ensuiko and Taiwan Company in plantation white sugar.

4) The Ensuiko Company placed much value on plantation white sugar rather than white sugar from alpha to omega and managed well every production site all over Taiwan involving eastern area "Karenko" to recover from big failure in 1927.

I will examine the meaning of "Toren" for four established companies with my eye set on each strategy as mentioned above. It was the process of bargaining on "GBK" in which conflict between Dainihon which had bargaining power as first mover of white sugar and other three companies as latecomer. For in spite that the Dainihon Company hoped for cheaper raw sugar price as a main buyer, other companies expected higher price as buyer rather than seller. In addition, the Taiwan, Meiji, and Ensuiko Company hoped for dealing with strongly as sugar for direct consumption rather than raw sugar the Dainihon Company bought as cheap as possible. Above all the Ensuiko Company asked for more distribution for plantation white sugar as a pioneer instead of raw sugar.

Such a conflict structure resulted from the different strategies and position in market of four established companies continued until the first half of 1920s and it was bargaining of "SSK" in 1915 where the first breakoff exposed. The reason why the "SSK" in 1922 was not approved was also resulted from conflict between the Dainihon Company attaching weight to white sugar manufacturing and the Ensuiko Company giving weight to plantation white sugar manufacturing. And the conflict assumed serious proportions in 1930s when consumption of plantation white sugar increased at a great rate.

I will review another serious conflict situation between the Dainihon Company and the Meiji Company after the "SSK" in 1927 was approved. Two changes surrounding two companies were part of the reason why they were opposed to each other. One change was the positioning of the Meiji Company as a counterbalance to the Dainihon Company in white sugar manufacturing. In 1923 the white sugar manufacturing capacity for the Meiji Company did not fill 1/2 of the Dainihon Company which demonstrated the advantage of the first mover as shown in Table 6. However in 1930 the Meiji Company exceeded the Dainihon Company at last as shown in Table 7 and the Meiji Company became a counterbalance to the Dainihon Company in white sugar manufacturing.

Table 7 also demonstrates two changes. One change is the centrifugal sugar manufacturing capacity and volume for the Meiji and Dainihon Company caught up with the Taiwan Company which demonstrated the advantage of the first mover as shown in Table 6. Another change is the plantation white sugar manufacturing capacity and volume for the Taiwan and Meiji Company caught up with the Ensuiko Company which demonstrated the advantage of the first mover as shown in Table 6.

The second change relevant to the conflict between the Dainihon and Meiji Company was such reorganization of sugar distribution led by raw sugar companies as sugar merchants became impoverished in 1910s to 1920s. The stage had come when the Dainihon and Meiji Company having strong bearing on "GBK" determined the feasibility of "SSK" and their battle became much more serious with tightening competition of marketing since the

Table 6 Manufacturing Capacity and Production Volume of four established Companies (1923)

	centrifugal sugar			plantation white sugar	white sugar		
	capacity (ton)	factories	volume (thousand piculs)	factories	capacity (ton)	factories	volume (thousand piculs)
Taiwan	9,080	11	133,203	1	100	1	2
Dainihon	2,200	2	61,478	0	770	3	212
Meiji	5,100	5	89,245	1	300	2	4
Ensuiko	4,500	6	68,057	4	100	1	2

Source : Taiwan Sotokufu (1923) pp. 16, 18, 51, 110–111.

Table 7 Manufacturing Capacity and Production Volume of four established Companies (1930)

	centrifugal sugar			plantation white sugar		white sugar		
	capacity (ton)	factories	volume (thousand piculs)	capacity (ton)	factories	capacity (ton)	factories	volume (thousand piculs)
Taiwan	11,330	13	376,670	44,325	3	430	3	149,256
Dainihon	6,900 (9,950)	6 (9)	251,281 (327,529)	14,019	1	910 (990)	4 (5)	255,003
Meiji	7,950	7	262,323	28,083	3	1,050	4	250,617
Ensuiko	5,250	6	177,834	66,901	3	400	2	104,145

Source : Taiwan Sotokufu (1930) pp. 6, 8, 86, 133, 142.

Meiji Company built the self-sales organization of "Meiji Shoten" as well as the marketing division of "Shomubu" built by the Dainihon Company.

In the meantime why did four established companies carry on cooperating by way of "Toren" in spite of such conflicts and competition with each other ? Even in 1920s when "SSK" could not approve consistently, the reason why the "SSK" in 1927 was approved was that each centrifugal company acknowledged coordinating every kind of manufactured sugar in a comprehensive manner was indispensable to stabilize the sugar price in dead season. The fact that "Toren" brought the function of balancing the conflicting interests of members to fruition in 1927 when the Dainohon and Meiji Company fell over with each other involving marketing and had their hands tied to drop out "Toren" showed that every member company found out "Toren" was only main body to stabilize the sugar price in the phase when plantation white sugar raised its head and each interest was much more complicated.

Another reason why four established companies seek for cooperation by means of "Toren" was to counteract the influence of Javanese sugar which was a confusing factor in the modern sugar manufacturing industry. In those days when custom duties of raw sugar imported from Java to export refined sugar were paid back, white sugar companies were secured of as much as raw sugar possible from Java in an early date and sugar manufacturing companies and sugar merchants bought a lot of Javanese sugar on speculation to resell in Japan as shown in Table 3. In consequence Javanese sugar came to confuse the sugar price in Japanese market.

At the same time Javanese sugar casted a long shadow on the Taiwanese sugar price as white sugar companies used Javanese sugar for inland as well as exporting until self-sufficiency could be achieved. Sugar manufacturing companies used low-cost Javanese sugar for raw sugar and sold their own raw sugar for direct consumption priced high. Consequentially inland had a market glut by sugar for direct consumption and the price fell into the same one of Javanese sugar as acting on the white sugar price.

However four established companies shared mutual interests to avoid falling in price and seek for balancing the conflicting interests of members by achievement of "SSK" when raw sugar was oversupplied, in spite that they competed to import raw sugar from Java for profit-making. After all four established companies expected profit speculated from Javanese sugar confined to the phase of price stability.

V. "Toren" and development of the modern sugar manufacturing industry

I will examine the original regulating function of the Taiwan Company from which chairmen of "Toren" were elected for a long time on the occasion of summing up the "Toren"'s function of balancing the conflicting interests. Because Naomichi Takechi, who was a chairman of "Toren" as well as a president of the Taiwan Company, played a mediation role between the Dainihon and Meiji Company on the occasion of complicated conflicts in 1927 and 1934.

When both the Dainihon and Meiji Company didn't comply with the agreement in 1927 as mentioned above, both companies made up their mind to withdraw from "Toren" and chairman Takechi gave voice to take the responsibility on himself and resign. The announce his intention to resign meant taking a decision of last resort as a consequence that chairman Takechi never made a plea for his own company's interest and seek for industry-wide interest all the time. In consequence chairman Takechi saved the serious situation of "Toren".

Also in the case of the "SSK" in 1934 when the Meiji, Dainihon, Taito, and Nanyokohatsu Company were complicatedly conflicted, the conflict was resolved by the agency of chairman Takechi and the agreement was approved at the end of the fiscal year. Two cases as mentioned above demonstrates that regulating function of the Taiwan Company played an important role in order that "Toren" could balance the conflicting interests of members. So I understand the regulating function of the Taiwan Company was one of the important function of balancing the conflicting interests of members.

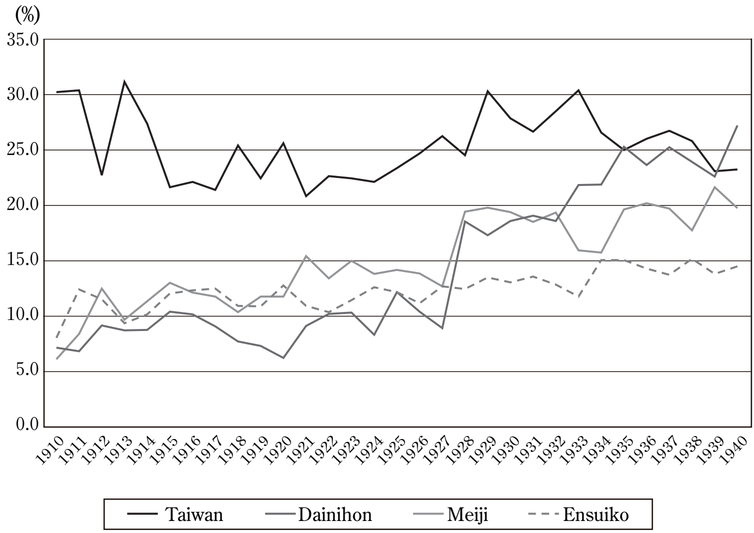
Finally I will examine two contributions by "Toren" to development of the modern sugar manufacturing industry. One contribution was to restrain competition which depended on one of balancing the conflicting interests of members. In the modern sugar manufacturing industry possessed a layered conflict structure, as evidenced by the facts noted above, function of restraining competition was difficult to bring out except the limited phase when sugar market in Japan was excess supplied and sugar price was in danger of falling. It was noteworthy that "Toren" succeeded in the function as soon as not in a measured fashion.

Another contribution was giving an impulse to inter-enterprise competition through its cartel's function. Among others valuable contribution was that together with on-going function of complementing resource the very function of balancing the conflicting interests of members prolonged "Toren"'s existence on one side and created basis or business environment for profit-making competition on the other side.

Consequentially I will review inter-enterprise competition of four established companies as shown in Figure 6. As demonstrated by Figure 6, until 1927 the Taiwan Company excelled in centrifugal sugar production share and three latecomers such as the Ensuiko, Meiji, and Dainihon Company fell over one another on the other hand. Figure 6 also demonstrates that the Dainihon and Meiji Company caught up with the Taiwan Company during the second reorganization period, and all together the Taiwan and Dainihon Company competed head to head at white heat.

Such a heated competition by four established companies was nearly connected with productivity expansion of each company. Table 8 demonstrates

Figure 6 Centrifugal Sugar Production Share of four established Companies



Source : Taiwan Sotokufu (1928) pp. 82–89, (1931) pp. 84–86, (1933) pp. 86–91, (1936) pp. 84–89, (1940) pp. 84–89.

that manufacturing capacity of four established companies increased in 1911, 1912, 1921, 1926, 1927 and 1939 when three-tiered modern sugar manufacturing industry reorganization occurred as mentioned above.

As evidenced by two contributions as mentioned above, competition and cooperation coexisted in the modern sugar manufacturing industry and cooperation on the keynote of competition was precisely reality of the industry. It was very important that the joint action of conflicting companies in “To-ren” enabled coexistence with competition because cartel's function of “To-ren” was giving an impulse rather than a check to inter-enterprise competition. This case study can be also true of the assignment of Kikkawa (1991) that some cartels had economic rationalistic function in prewar Japan.

Table 8 Manufacturing Capacity of four established Companies

	Taiwan	Dainihon	Meiji	Ensuiko
1910	3,490	1,200	810	1,550
1911	6,430	1,200	810	2,750
1912	7,580	2,200	1,910	3,450
1913	7,580	2,200	2,910	3,450
1914	7,880	2,200	2,910	3,450
1915	7,800	2,200	3,660	3,950
1916	7,800	2,200	3,660	3,950
1917	8,380	2,200	3,600	3,950
1918	8,380	2,200	3,600	3,950
1919	8,380	2,200	3,600	3,950
1920	8,380	2,200	3,600	3,950
1921	9,080	2,200	5,100	4,500
1922	9,080	2,200	5,100	4,500
1923	9,080	2,200	5,100	4,500
1924	8,780	2,200	5,100	4,500
1925	8,780	3,200	5,100	4,500
1926	8,780	3,200	5,100	5,250
1927	11,330	6,400	6,850	5,250
1928	11,330	6,400	6,850	5,250
1929	11,330	6,400	7,950	5,250
1930	11,330	6,900	7,950	5,250
1931	11,330	6,900	7,950	5,250
1932	11,330	6,900	7,950	5,250
1933	11,330	6,900	7,950	5,250
1934	11,330	8,100	7,950	5,250
1935	11,330	9,950	7,950	6,450
1936	11,330	9,950	7,950	6,450
1937	11,330	9,950	8,950	6,450
1938	11,330	9,950	8,950	6,450
1939	16,650	18,300	15,500	9,900
1940	16,650	18,900	15,500	9,900

Source : Taiwan Sotokufu (1920) pp. 18–19, (1921–40) 'Shinshiki Seitojo Ichiranhyo'.

[Postscript] This paper was originally prepared for the presentation at the 16th Annual Conference of the European Business History Association 2012 in Paris, August 30-Semtember 1, 2012 and I touched up to be a full-paper this time.

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