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Sustainability Management Under Sumitomo: The CEOs’ Decision-making Process Regarding Smoke Pollution at the Besshi Copper Mine in Japan

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1. Teigo Iba: a pioneer of management aimed at Creating Shared Value (CSV)

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Abstract:
Modern companies excessively prioritize short-term profit-making and this causes a range of social and environmental problems. To correct this, companies need to adopt a new approach in order to integrate the creation of environmental, social and economic values by tackling global problems, especially those described in the United Nations’ Sustainable Development Goals (SDGs), such as climate change. Japan used to have business leaders who understood and implemented this type of approach. We shall review the management styles of Teigo Iba and Masaya Suzuki, Sumitomo’s CEOs in the pre-war period. These men rejected short-termism, solved smoke pollution problems, and restored the natural environment. Their philosophy and actions were in advance of the SDG era. In this article, we will focus on Teigo Iba.
Introduction

In Japan, two major pollution incidents occurred as a result of developing copper mines. These two incidents were called “Besshi in the west and Ashio in the east”. “Ashio in the east” refers to the Ashio copper mine, which Ichibee Furukawa started to manage from 1877. The Ashio Mining pollution incident became a serious social problem which shocked Japanese society in the Meiji period (1868-1912).

The Ashio Mining pollution incident occurred at the Ashio copper mine located near the Watarase-gawa River in Tochigi Prefecture and Gunma Prefecture during the 19th to 20th century. Furukawa introduced Western-style smelting methodology, but this methodology released sulfur into the atmosphere during the smelting process. The sulfur released combined with oxygen to make sulfur dioxide, and this caused major damage to the forest in the mountains and to crops (Kamioka (1971), 10-11).

On the other hand, “Besshi in the west” refers to the Besshi copper mine located in Niihama, in Ehime Prefecture. The mine was consistently managed by Sumitomo between 1690-1973. In 1884 Sumitomo established a Western-style furnace in Niihama and the smoke damage from sulfurous acid gas generated from the smelting process of copper expanded rapidly.

Teigo Iba, then the second president and CEO of the Sumitomo Zaibatsu (industrial conglomerate), assumed the post of general manager of the Besshi copper mine and took the lead in solving the smoke problem which was occurring. Iba faced various criticisms and pressures from inside and outside of the company, but with a long-term vision he fundamentally tried to solve the mining pollution problem through the relocation of its smelter and large-scale foresting.

Today, with more than 100 years having passed since the pollution problem at the Besshi copper mine, modern society is suffering from global problems such as climate change and the depletion of resources caused by excessive economic activities obsessed with a profit-oriented business philosophy. Both public and private sectors are working on various initiatives in an attempt to achieve sustained economic growth while addressing climate change.

The economic mechanism dominating global society does not incorporate the means of controlling a profit-oriented business philosophy based on the theory of capital. To correct the sense of values of modern companies which excessively prioritize profit-making, a new approach needs to be adopted to integrate the creation of both social values and economic values for complicated global problems such as climate change, the loss of biodiversity and the degradation of the ecosystem.

This problem D. H. Meadows raised by saying “The burden to the earth and nature humans are giving will
exceed the limits that they can absorb unless humans change the way of economic activity” has not yet been solved; rather, it is currently further deteriorating. (Meadows, 178-183)

This situation has not changed from when Iba faced a mining pollution problem 100 years ago. In this global society many environmental and social problems are left unsolved. To turn this situation around, it is necessary for a new relationship between business and society to be constructed.

Iba passed away before seeing a complete solution to the mining pollution problem, but we can learn a lot from his business views and how they focus on the relationship with society. His remark “We persistently esteem reality, but we must not be captured by reality. Always pursuing our ideal, we must think beyond reality” (Suehiro (2000),103) teaches us Iba’s consistent attitude. He did not stick to short-term profit but tried to optimize the relationship between business and society with a long-term view.

We who live today’s world must work on constructing a sustainable society which is backed by a sense of ethics aiming at protecting the global environment and at the optimization of a civil society.

Iba is said to be a pioneer of Corporate Social Responsibility (CSR) in Japan. We can see many common elements between Iba’s management philosophy, which meant trying to balance business activities while conserving the natural environment, and modern society’s expectation that people should have decent lives in a sustainable environment. In this article, we will look back on Iba's philosophy and business activities in order to reconsider its meaning for us the modern era.

1. Younger days

In 1847 Teigo Iba was born in Omi-Hachiman City, Shiga Prefecture. Iba learned Sinology and swordplay from the time of his infancy and became a guard protecting the Kyoto Imperial Palace under the Meiji government. His duties included guarding the Kyoto Imperial Palace and Kyoto city. It was a dangerous mission. He was risking his life as there was the possibility of a counterattack by the remaining forces of the Tokugawa Shogunate.

In 1871 the Ministry of Justice was established by government reform. In 1873, Iba, who was promoted to the position of a judge, was assigned to the newly established Hakodate court and worked in that office until 1876. Before he was assigned to the Hakodate court, Iba learned civil law and criminal law from Professor Boissonade of the University of Paris, who had been invited from France and was serving as a legal adviser for the Japanese government (Kamiyama (1960), 101).

In 1877, Iba was appointed as a judge in the Osaka High court. When he was assigned to Osaka, Takamori Saigo, who took up arms in revolt against the Meiji Government, was defeated in the Seinan War (the last civil

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1 In 1880, Tokyo School of Law, which is now Hosei University, was established by Dr. Gustave Emile Boissonade of the University of Paris and his students.
war in Japan)² and died. After the Seinan War, the spirit to create a new country and the freehearted atmosphere which had been vibrant right after the Meiji restoration were beginning to be lost by the government.

Iba, who respected liberty, always tried not to disturb the liberty of others, and he did not like his own liberty being disturbed by others either. It was unbearable for a man like him to work in the shrinking atmosphere rampant in the Japanese government. In 1879, the then 32-year-old Iba resigned from his position as judge and returned to his hometown in Shiga Prefecture.

2. Joining Sumitomo

(1) Saihei Hirose

After resigning as a judge, Iba called on Saihei Hirose (1828 - 1914). Hirose was Iba’s uncle and he was then the president of Sumitomo.

Here let’s look back at the Sumitomo family and its involvement with the copper refining business. The history of Sumitomo goes back to Masatomo Sumitomo (1585 - 1652), who ran a pharmacy in Kyoto in the 17th century. A document he wrote on business wisdom, titled “Monjuin-shigakisho”, detailed the importance of esteeming honesty, carefulness, and sureness.

Masatomo Sumitomo thought that the purpose of business is not just profit-making but to polish the character of the person engaged in the business. To practice business based on morality has been the business philosophy inherited by the Sumitomo conglomerate.

The Sumitomo family received approval to develop the Besshi copper mine³ from the Shogunate in 1691 and entered the copper mining business. Since then, Sumitomo has contributed to Japan’s modernization for over 283 years until 1973 (Showa-era year 48).

The Besshi copper mine was supposed to be requisitioned by the newly established government following the Meiji restoration. However, Hirose explained Sumitomo’s firm commitment to develop the Besshi copper mine and the difficulty of mine management and argued that it served the national interest for Sumitomo to continue to manage the Besshi copper mine. Hirose's persuasion worked, and the Meiji government approved the continuation of

² The large-scale anti-government rebellion caused by Takamori Saigo and members of his shizoku (families or persons with samurai ancestors) in Kagoshima Prefecture in 1877.
³ A copper mine located in the foot of a mountain area in Niihama City, Ehime Prefecture.
Sumitomo’s right to manage the Besshi copper mine in 1868.

(2) The decision to join Sumitomo

Hirose recommended Iba join Sumitomo when he resigned as a judge. Hirose explained the businesses of Sumitomo and the trends of industry, and emphasized the significance of contributing to the nation through business. Iba gave in to Hirose’s persistent persuasion and determined to join Sumitomo. The biggest reason why Iba decided to join Sumitomo was Sumitomo’s corporate philosophy, which emphasized that Sumitomo’s profit (self-interest) and the profit to society (altruistic profit) needed to be integrated. (In Japanese this philosophy is called “Jiri-Rita-Koshi-Ichijo”).

In 1880, Iba assumed the post of general manager at the Osaka head office with exceptionally good treatment. Behind Hirose’s selection of Iba for this position, there was Hirose’s strong expectations concerning Iba’s rich experience and ability. Working for Hirose, Iba learned the details of Sumitomo’s business until 1894 when he was assigned to the Besshi copper mine as general manager. While he was under Hirose, Iba was involved with the establishment and the management of various companies and schools including Osaka Boseki (established in 1882 and currently Toyobo Co., Ltd.), Osaka Shosen Company (established in 1884 and currently Shosen Mitsui), and Osaka Commerce School (established in 1880 and currently Osaka City University).

Iba stated his company management policy as follows: “The situation surrounding a company changes at every moment. The president sincerely thinks about the sound development of the company and plans an adequate management policy, and we must do our best to prevent the business strategy from failing on the way. This will lead to benefits both for the company and its stockholders” (Kamiyama (1960), 126).

In addition, when Osaka Shosen, a merchant ship company which Sumitomo helped to establish, had business problems and fell into financial difficulties, Iba argued against the idea of a withdrawal from the management of the company by making the following remark: “If the business performance of our group company is not going well, we should make more efforts to help them turn around their business. Strengthening a mutual relationship when a business is going well and cutting the relation when a business is not going well is a bad idea. We have no right to talk about a stock company with this kind of thinking. If the top management is not managing the company properly, then we should replace them with a more appropriate executive and change the management. This is one of the advantages that the stock-company system has” (Kamiyama (1960), 127).

On the other hand, Iba was also fully aware of the importance of the shareholder as stakeholder and make the following remarks: “The top management of a company must always understand how the minority shareholders feel. So, we always need to make efforts to pay a dividend to minority shareholders unless this makes a significant impact on the foundations of the company” (Nishikawa (1990), 233). Iba’s words get right to the point of a stock
company as a main constituent in realizing public interest.

In Japan the Financial Services Agency announced, the principles of responsible investors (the Japanese Stewardship Code) in February 2014. The Stewardship Code is a norm introduced to stipulate principles that institutional investors in the United Kingdom are expected to follow. The Stewardship Code is based on the idea that institutional investors have the responsibility of linking the long-term sustained growth of the investee companies to the development of the entire economy. Therefore, they should play an active role in realizing this purpose.

The responsibility of institutional investors is to maximize the investment return of the consignor who entrusted the investment (known as fiduciary duty: the duty of a fiduciary to act in the best interests of the beneficiary). However, in recent years, investors have tended to sacrifice the long-term growth of the investee companies and pursue a short-term profit. This trend is called short-termism and is considered obstructive to the healthy growth of a company and the sustainability of the entire society. In the United Kingdom, to correct short-termism by institutional investors, the Stewardship Code was introduced in 2010.

Iba’s idea, which expressed business responsibility as a shareholder, clearly describes the ideal state of institutional investors which the Stewardship Code aims for. His idea shows that supporting the growth of a company with a long-term view is responsible behavior as a fiduciary of management.

3. The modernization of the Besshi copper mine and the occurrence of smoke pollution

(1) The introduction of modern mining technology

Saihei Hirose who served as the general manager of the Besshi copper mine came to know the existence of modern mining technology from a French mining engineer. The Besshi copper mine had been ruined after many years of mining activities. Hirose came to think that he had no other option but to utilize modern technology to restore the copper mine business, which was a key industry for Sumitomo (Takehara [1992], 67).

A scientific investigation of the entire Besshi copper mine was conducted by a French engineer from 1873 (Meiji-era year 6) and a prospectus for the Besshi copper mine was published. Based on the proposals in the prospectus, as a first business plan in 1876 Hirose aimed for: (1) Development of the inclined shaft extending toward the east; (2) Construction of a motor road between Besshi and Niihama; (3) Construction of a Western blast furnace; and (4) Development of a hydrometallurgical process for copper

The hydrometallurgical process is a technique for collecting the copper settled in a water solution. The water emitted from the copper mine would include a small amount of copper and sulfuric acid and this contaminated mining water would bring damage to crops downstream and to human health. If the hydrometallurgical process was introduced, an anti-pollution effect was hoped for with harmful pollutants produced in the copper mining
process removed from the contaminated water. As shown in chart 1, when the newly established furnace started to operate with the introduction of Western-style smelting, a substantial reduction of production costs and an improvement of labor productivity were realized.

**Chart 1: Cost reduction as a result of the improvement of smelting methodology**

<table>
<thead>
<tr>
<th></th>
<th>Old-fashioned refinement</th>
<th>Western style refinement</th>
<th>Reduction(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charcoal consumption(kg)</td>
<td>5,831</td>
<td>2,501</td>
<td>57.1%</td>
</tr>
<tr>
<td>Burned ore(kg)</td>
<td>13,331</td>
<td>10,373</td>
<td>22.2%</td>
</tr>
<tr>
<td>Manpower(person)</td>
<td>30</td>
<td>12</td>
<td>60.0%</td>
</tr>
<tr>
<td>Operating time(hours)</td>
<td>88</td>
<td>40</td>
<td>54.5%</td>
</tr>
</tbody>
</table>

Source: Takeda, 28 (revised by the author).

**Chart 2** shows changes in the output of copper from the main copper mine during the Meiji period.

Until 1884, when the Ashio copper mine took over the lead, the Besshi copper mine was the largest copper producer in the country.

**Chart 2: Copper output in major copper mines in Japan**

<table>
<thead>
<tr>
<th>Copper Mine</th>
<th>Besshi</th>
<th>Yokohama</th>
<th>Ashio</th>
<th>Kanakun</th>
<th>Akkuma</th>
<th>Oyaya</th>
<th>Total Copper Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Copper Output</td>
<td>Share</td>
<td>Copper Output</td>
<td>Share</td>
<td>Copper Output</td>
<td>Share</td>
<td>Copper Output</td>
</tr>
<tr>
<td>1863</td>
<td>421.3</td>
<td>26.5%</td>
<td>49.9</td>
<td>3.1%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1870</td>
<td>474.0</td>
<td>29.2%</td>
<td>52.4</td>
<td>3.3%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1874</td>
<td>490.8</td>
<td>28.1%</td>
<td>51.3</td>
<td>3.2%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1875</td>
<td>556.0</td>
<td>31.1%</td>
<td>109.8</td>
<td>6.3%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1876</td>
<td>511.8</td>
<td>31.1%</td>
<td>125.9</td>
<td>7.8%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1877</td>
<td>480.8</td>
<td>27.4%</td>
<td>107.4</td>
<td>6.0%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1878</td>
<td>1,029.0</td>
<td>44.2%</td>
<td>11.4</td>
<td>0.5%</td>
<td>0.0</td>
<td>0.0%</td>
<td>0.0</td>
</tr>
<tr>
<td>1879</td>
<td>966.0</td>
<td>41.3%</td>
<td>13.0</td>
<td>0.6%</td>
<td>90.6</td>
<td>5.3%</td>
<td>172.2</td>
</tr>
<tr>
<td>1880</td>
<td>1,044.4</td>
<td>42.9%</td>
<td>52.2</td>
<td>2.0%</td>
<td>92.2</td>
<td>5.4%</td>
<td>172.8</td>
</tr>
<tr>
<td>1881</td>
<td>744.5</td>
<td>28.6%</td>
<td>54.6</td>
<td>2.1%</td>
<td>175.5</td>
<td>8.8%</td>
<td>190.8</td>
</tr>
<tr>
<td>1882</td>
<td>1,178.4</td>
<td>34.5%</td>
<td>99.7</td>
<td>3.5%</td>
<td>295.5</td>
<td>9.8%</td>
<td>441.9</td>
</tr>
<tr>
<td>1883</td>
<td>1,024.8</td>
<td>23.8%</td>
<td>73.9</td>
<td>2.6%</td>
<td>654.8</td>
<td>15.2%</td>
<td>1,026.4</td>
</tr>
<tr>
<td>1884</td>
<td>1,035.6</td>
<td>21.8%</td>
<td>101.1</td>
<td>3.1%</td>
<td>2,905.5</td>
<td>37.5%</td>
<td>1,084.2</td>
</tr>
<tr>
<td>1885</td>
<td>1,567.2</td>
<td>17.4%</td>
<td>90.1</td>
<td>2.6%</td>
<td>4,131.6</td>
<td>45.7%</td>
<td>1,031.4</td>
</tr>
<tr>
<td>1886</td>
<td>1,407.0</td>
<td>17.5%</td>
<td>344.6</td>
<td>4.2%</td>
<td>3,631.2</td>
<td>45.2%</td>
<td>814.5</td>
</tr>
<tr>
<td>1887</td>
<td>1,498.4</td>
<td>16.1%</td>
<td>22.2</td>
<td>4.6%</td>
<td>2,091.9</td>
<td>29.6%</td>
<td>522.7</td>
</tr>
<tr>
<td>1888</td>
<td>1,588.3</td>
<td>22.3%</td>
<td>30.0</td>
<td>4.5%</td>
<td>2,464.2</td>
<td>35.5%</td>
<td>651.0</td>
</tr>
<tr>
<td>1889</td>
<td>1,641.6</td>
<td>17.6%</td>
<td>478.4</td>
<td>5.1%</td>
<td>4,135.0</td>
<td>44.2%</td>
<td>602.8</td>
</tr>
<tr>
<td>1890</td>
<td>1,835.3</td>
<td>16.8%</td>
<td>600.0</td>
<td>6.1%</td>
<td>5,844.0</td>
<td>49.7%</td>
<td>827.4</td>
</tr>
</tbody>
</table>

Source: Takeda, 31(revised by the author).

With a series of modernization policies for the Besshi copper mine led by Hirose, Sumitomo laid the foundation for new business growth. In 1891, Hirose revised the Sumitomo family’s existing precept and announced a new management philosophy (Takehara [1992], 70).

It included the following three key points:

(1) Sumitomo esteems trust in business.

(2) Sumitomo does not chase “Furi” (quick profits) even if it faces changes in the business environment or
changes in revenue or profit.

(3) Sumitomo will ensure the sustainable growth of the Besshi copper mine, which is Sumitomo’s core business.

It was trust from society that Sumitomo cherished most. Sumitomo thought that trust was not gained by the large or small sum of the assets the company had, but rather it depended on the philosophy of the organization and the character and behavior of its employees. In other words, we must not forget that trust in business is an intangible asset and that the tangible assets of wealth are the result of the accumulation of intangible assets. It appears that the reason why Iba joined Sumitomo after he left the government was that he was fascinated by the management philosophy which Hirose declared. Even though the job was offered by his uncle, Hirose, Iba would not have joined Sumitomo if the company’s corporate philosophy had not eschewed from chasing quick profits and doing business solely for private interest. Sumitomo’s corporate philosophy, which Hirose established, and Iba’s ability to conceptualize management, enabled various problems involving the Besshi copper mine to be solved.

(2) Occurrence of smoke pollution

The modernization of the Besshi copper mine advanced by Sumitomo did not meet with understanding from the local residents. The construction of a Western-style furnace in Niihama was carried out without listening to the inhabitants of local towns and villages (Kamioka (1971), 265). When the mine railroad between Besshi and Niihama opened in 1893 and the smelting business expanded, the damage to crops by the sulfur dioxide generated from the smelting process of the copper spread. Chart 3 shows the concern over smoke pollution and the trend of the supervisory authorities.

Chart 3: Report of negotiations with farmer victims damaged by smoke pollution

<table>
<thead>
<tr>
<th>Year</th>
<th>Move</th>
</tr>
</thead>
<tbody>
<tr>
<td>1894</td>
<td>The damaged farmers negotiated with the owner of the mining over the compensation for damage and the detoxification. The damaged farmers petitioned the Osaka mine inspection office and Ehime prefecture for their relief.</td>
</tr>
<tr>
<td>1895</td>
<td>The wheat cropping was severely damaged. The damaged farmers demanded strict negotiations with the general manager of the Besshi copper mine and collided with the police force. The representative of local landowners involved met with Kichisaemon Sumitomo in Osaka. The establishment of the joint investigating committee on the smoke pollution was agreed, but it was not realized as the general managers of Besshi copper mine opposed.</td>
</tr>
<tr>
<td>1896</td>
<td>The rice cropping was severely damaged. Village mayors and the representative of local landowners in Besshi areas petitioned the Ehime prefecture for their relief. The Osaka mine inspection office and the agricultural experimental station in the Ministry of Agriculture and Commerce conducted investigation and acknowledged the smoke pollution and damage.</td>
</tr>
<tr>
<td>1897</td>
<td>The government confirmed that the smoke pollution damaged the public interest of the farmers in the related areas. The Osaka mine inspection office ordered Sumitomo the following corrective actions. The move of refinery to Shisaka-jima (island) Ban on smelting copper ore in Niihama The remodeling of chimney</td>
</tr>
<tr>
<td>1898</td>
<td>The rice cropping was severely damaged. Village mayors and the representative of local landowners in Besshi areas petitioned the Ehime prefecture for their relief. The Osaka mine inspection office and the agricultural experimental station in the Ministry of Agriculture and Commerce conducted investigation and acknowledged the smoke pollution and damage. The Ehime prefectural assembly resolved and proposed “Proposal of the investigation about the damage from the smoke from the Besshi mine Niihama furnace” to the Minister for Home Affairs.</td>
</tr>
</tbody>
</table>

Source: Kamioka (1971), 266 (Revised by the author).
So far, the smelting work of copper in the Besshi copper mine had been conducted in the Takahashi smelter in mountain areas. In 1889, the Soubiraki smelter in Niihama began full-scale operation and the center of smelting moved from the Besshi mountains area to the coastal region in Niihama. As the smelting quantity increased, damage from smoke pollution caused by sulfur dioxide emitted from the smelter rapidly expanded, bringing large-scale damage to the fields and forests in the mountains.

In 1893, a representative of the farmers brought the matter of smoke pollution to the attention of the prefectural office. The Niihama village office then requested the Sumitomo branch in Niihama to look into the cause of the pollution. The Sumitomo branch reported that the cause of the damage was not from smoke pollution but from insects, and the prefectural office accepted this Sumitomo report and publicly announced it. This gave rise to strong opposition from the farmers (Suehiro (2000), 73). In 1894, the Sumitomo Osaka head office decided on a new executive appointment which meant transferring Iba from the position of general manager of the Osaka head office to general manager of the Besshi copper mine. Iba moved to Besshi himself and confronted the various problems around the Besshi copper mine.

Chart 4: The copper output of the Besshi-Niihama refinery

Source: Suehiro (2000), 73 (Revised by the author).

Iba needed to solve the following three problems:

(1) The damage from smoke in Besshi mountain areas caused by the sulfur dioxide generated from smelting.

(2) The environmental destruction caused by deforestation of mountain forests for fuel and mine timber.

(3) The damage from smoke pollution caused by the sulfur dioxide emitted from the copper refinery in the Niihama
At the Besshi copper mine the output of copper increased rapidly with the introduction of Western-style technology, but the demand for timber for generating energy for smelting also increased rapidly. At the Besshi copper mine, forest management based on a long-term plan was not implemented. Therefore, haphazard deforestation prevailed in the wake of an increase in the demand for firewood, charcoal and mine timber.

From the viewpoint of environmental protection, it was desirable to abolish smelting in the Besshi mountain areas and to promote afforestation, but this meant that the smelting process was to be concentrated on the Soubiraki smelter in Niihama. As any emission reduction of sulfur dioxide was not yet realized, even if the environmental pollutants in the Besshi mountain areas were to be moved to the Niihama area, it was clear that the damage from smoke pollution in the area of Niihama would increase.

Iba decided on the complete relocation of the Soubiraki smelter to solve this problem. The candidate site was Shisaka-jima, an uninhabited island located 20 km off the coast of Niihama. In 1895, Iba prepared the relocation of the refinery by secretly purchasing Shisaka-jima island in his name. Iba was thinking that the termination of the Soubiraki smelter in Niihama could not be avoided in order to solve the smoke pollution problem. There were only two alternative options: reinforcing the Takahashi smelter in the Besshi mountain area or a complete relocation to Shisaka-jima island. Thinking of forest damage, reinforcing the Takahashi smelter in the Besshi mountain area was impossible. To solve the smoke-problem and to restore the natural environment in the coastal zone.

Chart 5: Changes in the copper output and fuel consumption at the Besshi copper mine

<table>
<thead>
<tr>
<th>Year</th>
<th>Copper output</th>
<th>Coal &amp; Coke consumption</th>
<th>Charcoal consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>1,000</td>
<td>2,000</td>
<td>300</td>
</tr>
<tr>
<td>1881</td>
<td>2,000</td>
<td>3,000</td>
<td>400</td>
</tr>
<tr>
<td>1882</td>
<td>3,000</td>
<td>4,000</td>
<td>500</td>
</tr>
<tr>
<td>1883</td>
<td>4,000</td>
<td>5,000</td>
<td>600</td>
</tr>
<tr>
<td>1884</td>
<td>5,000</td>
<td>6,000</td>
<td>700</td>
</tr>
<tr>
<td>1885</td>
<td>6,000</td>
<td>7,000</td>
<td>800</td>
</tr>
</tbody>
</table>

Note: The following data is not available: charcoal (1898-1900), coal and coke (1886-1890;1896-1900).
Source: Suehiro (2000), 81 (Revised by the author).
Besshi mountains, the relocation of the refinery to Shisaka-jima island was the only alternative.

Construction for relocation of the refinery to Shisaka-jima island begun in 1897 (Meiji-era year 30). In 1899, during this construction period, the Takahashi smelter suffered devastating damage caused by a mudslide from a typhoon and each facility at the Besshi copper mine was forced to be moved to Niihama. In 1905, operations on Shisaka-jima island began. Iba had great expectations for the Shisaka-jima smelter. Everyone believed that the relocation of the smelter would solve the smoke problem, but it failed to live up to peoples’ expectations. The sulfur dioxide emitted from the smelter on Shisaka-jima island did not diffuse on the sea. Depending on the weather status, it brought smoke damage to even wider regions than during the Soubiraki smelter times. The situation was totally unexpected for all the parties involved.

Iba could not fundamentally solve the smoke pollution while he was alive. Masaya Suzuki, who succeeded Iba to become the third president of Sumitomo, made a sincere effort for the relief of victims of the smoke damage and promoted technical improvements aimed at solving the smoke pollution. It was in 1939 that the smoke-pollution problem was completely solved. Thirty four years had passed since the smelter was relocated to Shisaka-jima island.

(2) Environmental protection activities at the Besshi copper mine

In addition, to restore the mountains at Besshi which had been made bare, Iba implemented large-scale reforestation. To stop further deforestation, Iba decided to switch the source of fuel from charcoal to coal. Iba fully understood that forestry was indispensable for the infrastructure of the mining business, and it was an industry which played an important role in the preservation of the country through the management of river systems and the development of agriculture, forestry and fisheries.

Iba separated the “mountain section” from the civil engineering department to have them work solely on the forestry and logging business. Sumitomo began a deliberate forestry business by inviting experts to assist. (Sumitomo Forestry Company, Ltd. (1999), 110-111). In 1894, an average of 60,000 trees were planted annually at the Besshi copper mine. Iba planned to increase the numbers of trees planted to two million annually and this went ahead.

Right after Iba began full-scale reforestation activities, a large flood hit the Besshi copper mine in August 1899\(^4\). Heavy rain from a typhoon was the direct cause of this but it was clear that the indiscriminate deforestation in the mountains expanded the damage. It is said that Masaya Suzuki (later to become the third president of Sumitomo), who succeeded Iba to assume the post of general manager of the Besshi copper mine, strongly promoted

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\(^4\) The fatalities from the Besshi major flood damage exceeded 500.
reforestation activities as a lesson learned from the flood damage.

In his later years, Iba used to talk about the foresting business at Besshi by saying “what can be called the ‘true business’ for Sumitomo is the foresting business. Other businesses do not have to continue” (Nishikawa (1990), 111). Iba aimed at serving the interests of the entire society beyond the scale of a commercial company. Iba's management philosophy coincides in many parts with SDGs.

5. A management philosophy intending sustainability

(1) Management gaining sympathy from society

Based on its corporate philosophy (termed “Jiri-Rita-Koshi-Ichijo” in Japanese), Sumitomo promoted business in a manner that benefited Sumitomo, the nation, and society. Under this corporate philosophy, while correctly considering profit seeking for the company, Iba insisted that the means to make a profit must be conducted in a morally responsible way.

The human desire to pursue wealth driven by selfishness must be controlled by a sense of morality and an altruistic mindset. Management based on moral responsibility means that management should abandon short-term profit and give higher priority to morality when business brings unfavorable consequences to society, even in the case of a highly profitable business. Through such management, a company can win trust from society. It may be difficult for the sustainability of corporate management to be realized without the trust of society. Adam Smith said in his books *The Theory of Moral Sentiments* (1759) and *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776) that with regard to any selfish acts (economic activity) it is the “impartial spectator” who feels sympathy and can realize public interest.

Chart 6: Adam Smith’s business ethics

Source: The author.
In other words, Smith said that people’s selfish acts (economic activity) should not be interfered with unless “impartial spectators” feel sympathy for interference, and this is how unexpected maximum public benefits will be generated, being led by an invisible hand. Smith requested that those who do business ask the “impartial spectators” inside their heart if they feel sympathy about business acts.

It was in the Meiji period when companies emerged as the main business players in Japan. For companies, the “impartial spectator” is civil society. Needless to say, a company cannot exist without sympathy from society. Humans are selfish and managers have a mission to pursue profit and lead their organization to prosperity. However, excessive profit seeking is likely to result in losing society’s trust and to endanger even the continuation of the organization.

Of course, Iba was neither a person who pursued only ideals without thinking of profit nor someone who sacrificed ideals for profit. We can perceive from his words the difficulty of deciding what should be done and what should not be done in the realization of Sumitomo’s spirit of “Jiri-Rita-Koshi-Ichijo”, that is, the manner in which Sumitomo’s profit (self-interest) and profit in society (altruistic profit) need to be integrated.

(2) The social responsibility of managers

Iba stated “The most important work for a manager is to have the best successor and to choose the best time to hand his work over to his successor”. Masaya Suzuki, who was an official of the Ministry of the Interior, accepted Iba’s invitation to join Sumitomo in 1896. Inheriting Iba’s philosophy, Suzuki worked on a fundamental solution to the Besshi copper mine smoke-pollution problem.

It can be said that the management ethics or the characteristics of the company are none other than a reflection of the character of the top management. Iba entrusted Suzuki, whom he appointed as his successor with full power over Sumitomo’s business, and he never interfered in Suzuki’s management. It can be said that Iba is an executive without peer who retired at the right time in Japan’s enterprise history.

Modern society faces many problems. Globalization and innovation have accelerated economic growth, but serious environmental and social problems have emerged. To address global environmental problems and the exhaustion of natural resources, the construction of a sustainable society supported by an advanced social and economic sense of ethics is indispensable. Facing these circumstances, management concepts such as corporate governance, CSR, and CSV are drawing broad attention, and animated discussion is reviewing the relation between companies and society.

Sumitomo’s business philosophy, aimed at benefiting the whole of society, and the actions it took for a fundamental solution to the smoke-pollution problem in the Besshi copper mine, share common conceptual elements with CSR and CSV, ideas which modern companies are being asked to adopt and integrate into their
corporate management. It can be said that Iba's philosophy and actions, as introduced in this section, were ahead of his time in that he tried to realize a sustainable society in which economic value and social value were created in a harmonized way.

Chart 7: The management philosophy of Teigo Iba

Source: The author.

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Reference


Iba, Teigo. 1904. *Shoso to Rosei "Jistugyo-no-Nihon Vol.7 No.4"*.  


