The Development of the Pottery Industry

The Case of the Tokoname Ceramic Industry

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There is no denying that modern economic growth in the advanced industrial countries was promoted by the appearance and development of large-enterprise organizations. In all the industrialized countries that experienced the Industrial Revolution, large-enterprise organizations came to occupy key positions in the economy and to have a strong influence both politically and socially.

That having been said, it does not follow from a historical perspective that, in the process of modern industrialization, the small and medium-sized enterprises in each of those countries all declined at a uniform rate. For it has been made clear that, for example, in Japan, which is said to have experienced the Industrial Revolution from the end of the nineteenth century through to the early years of the twentieth century,¹ the indigenous industry sector, which comprised small and medium-sized enterprises engaged in the production or distribution of goods and services that had their origins far back in the Edo Period (1603–1867), grew and expanded up to at least the time of World

War I.\(^2\) Even after that war, while undergoing a variety of changes, it made a significant contribution to the development of the Japanese economy.\(^3\) In short, Japan's economic growth before World War II, high even by international standards, had not been supported only by high growth within modern large enterprises but also by the steady development of indigenous industries.\(^4\)

Now, what has often been suggested in the past as the base upon which such native industries were built is the existence in Japan of an abundant low-wage labor force. Even in quantitative economic history studies the commonly held perception has been that Japan's native industry sector before World War I had expanded because the capital/labor relative price was low as compared with Europe and the United States and because there existed an unlimited supply of labor.\(^5\) And that perception is not a mistake as an observation on the macro level. But what we must take cognizance of here is the fact that the various types of trades that belong to the indigenous industry sector and the small and medium-sized enterprises that make up those trades were constantly exposed to fierce competition, and they did not grow uniformly or universally.

What is especially to be noted is what happened in the case of producing districts, which can be described as groups that drew near to one another geographically and that were made up of mutually related enterprises and trade associations that bound the enterprises together, with all of them belonging to a particular field of indigenous industry. The weaving industry and the pottery industry—often given as typical examples of Japan's indigenous industries before the war—all formed


\(^5\) Masaki Nakabayashi, *Kindai shihon shugi no soshiki: Seishigyō no hatten ni okeru torihiki no tōchi to seisan no kōzō* [Organization in modern capitalism: The governance of trade and the system of production in the development of the silk reeling industry] (Tokyo: University of Tokyo Press, 2003), p. 3.
producing districts where they gained competitiveness on the regional level, then extended the markets for the goods produced in that region to the rest of the country and to overseas outlets, and in this way contributed to the vitality of that region’s economy and even that of the country as a whole. As we see, however, in detailed research on the cotton weaving industry for example, the growth of those producing districts was achieved through fierce competition with other producing districts, and we find cases in which producing districts that were strong during the Edo Period then headed towards decline after the Meiji Restoration of 1867 and saw their economic position drop considerably. In short, in the small and medium-sized enterprises belonging to the indigenous industry sector as well as in the individual producing districts formed by geographical clustering of those enterprises, researchers have found processes of dynamic growth and decline.

What, then, are the factors that determine the growth and decline of a producing district formed on a regional level? And what features characterized the small and medium-sized enterprises in producing districts that, having gone through the Industrial Revolution, succeeded in gaining competitiveness as an industry in the midst of an age in which modern large enterprises were achieving economies of scale? The only way to answer such questions is to study one particular producing district and build up a clear picture based on accumulated data.

With this in mind, this present study takes up the case of the ceramic industry that developed in the Tokoname region (in Chita-gun in Aichi Prefecture) up to the years before World War II, and it analyzes the growth processes of the producing district and the small and medium-sized enterprises that formed it. Tokoname, it should be noted, is the local-government name of Chita-gun, and the Tokoname ceramic industry refers to the pottery and earthenware pipe industry that developed in all the regions of Chita-gun. Our first step in the sections that follow will be to examine the trends in production totals for ceramic


industry products (pottery and earthenware pipes) in Tokoname while comparing them with nationwide trends, thereby to ascertain the position that the ceramic industry in this region occupied within the country as a whole. Next, through an analysis of such things as the product markets, enterprise scales, and technological levels of the Tokoname ceramics industry, we clarify the growth processes of the small and medium-sized enterprises that developed in the producing district. After we look at a variety of activities by the trade associations that were established and operated by those small and medium-sized enterprises, we shall reflect upon the factors that enabled the Tokoname ceramic industry to gain competitiveness as an industry on a nationwide level. One last point to note is that the period covered by our analysis will be from 1867 to approximately 1937, and we shall divide this period into three time blocks—what we shall call "the first half of the Meiji Period" (1867–1889), "the second half of the Meiji Period" (1890–1913), and "the interwar years" (1914–1937)—as we study the special features of the Tokoname ceramic industry in each time block.

THE TOKONAME CERAMIC INDUSTRY'S NATIONWIDE POSITION

Table 1 gives the total output of pottery production for both Chita-gun and the entire nation, at ten-yearly intervals from 1887 to 1937. The first thing we can see clearly is that in the second half of the Meiji Period the production totals for Chita-gun continued to increase, and the region's output rose to over 4% of the whole country's totals. While no clear trends can be pinpointed for the first two decades of the Meiji Period because data for consecutive years could not be obtained, we do have a document that indicates that in 1879 Chita-gun's production output was 11,000 yen. I think, therefore, that we can assume that pottery production totals were increasing throughout the Meiji Period.

When we look at later trends, we see that, although Chita-gun's

Table 1. Pottery Production Totals (Unit: 1,000 yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Chita-gun’s (a)</th>
<th>Nation’s (b)</th>
<th>% of Nation’s (a)/(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1887</td>
<td>48</td>
<td>1,884</td>
<td>2.5%</td>
</tr>
<tr>
<td>1897</td>
<td>197</td>
<td>5,163</td>
<td>3.8%</td>
</tr>
<tr>
<td>1907</td>
<td>539</td>
<td>12,941</td>
<td>4.2%</td>
</tr>
<tr>
<td>1917</td>
<td>470</td>
<td>29,338</td>
<td>1.6%</td>
</tr>
<tr>
<td>1927</td>
<td>2,160</td>
<td>74,363</td>
<td>2.9%</td>
</tr>
<tr>
<td>1937</td>
<td>5,100</td>
<td>115,191</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Sources: Publications providing statistics for the above years published by Aichi Prefecture (Aichi-ken tōkeisho), the Ministry of Agriculture and Commerce (Nōshōmu tōkeihyō), and the Ministry of Commerce and Industry (Shōkōshō tōkeihyō).

production output fell temporarily during World War I and its percentage of the nationwide total dropped dramatically, later its output grew, and in 1937 it was back above the 4% mark in its percentage of the nationwide total. It is possible that Chita-gun’s fall in production output and in its percentage of the nationwide total during World War I was influenced by the fact that the source of data on Chita-gun, the Aichi-ken tōkeisho [Aichi Prefecture statistics], had begun in 1915 to list the production totals for earthenware pipes as a separate new item, whereas till then earthenware pipes had been included within the pottery production totals.

As we shall see in the next paragraph, the Tokoname region was producing earthenware pipes for the whole country, and these pipes represented a high percentage of its pottery production output. Another factor that could have caused Tokoname’s pottery production totals to fall relative to the rest of the country was the fact that during World War I other producing districts were increasing their production outputs by concentrating on pottery items for export. The number of pottery producing units (i.e., individuals, households, or companies) in Chita-gun might shed some light on the question, too. In 1894, the first year for which such data is available, there were 89 units producing pottery; this was 239 in 1904, then up to 342 in 1914, then stagnant with 337 in 1924 and 304 in 1934, thus making it clear that, during the interwar years,
Table 2. Earthenware Pipe Production Totals (Unit: ¥1,000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Chita-gun’s (a)</th>
<th>Nation’s (b)</th>
<th>% of Nation’s (a)/(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1916</td>
<td>268</td>
<td>1,128</td>
<td>23.8%</td>
</tr>
<tr>
<td>1921</td>
<td>1,351</td>
<td>3,920</td>
<td>34.5%</td>
</tr>
<tr>
<td>1926</td>
<td>1,455</td>
<td>3,553</td>
<td>41.0%</td>
</tr>
<tr>
<td>1931</td>
<td>2,347</td>
<td>3,814</td>
<td>61.5%</td>
</tr>
<tr>
<td>1936</td>
<td>2,684</td>
<td>4,964</td>
<td>54.1%</td>
</tr>
</tbody>
</table>

Sources: Publications providing statistics for the above years published by Aichi Prefecture (Aichi-ken tōkeisho), the Ministry of Agriculture and Commerce (Nōshōmu tōkeihyō), and the Ministry of Commerce and Industry (Shōkōshō tōkeihyō).

Increases in Tokoname region pottery production output was achieved through increases in production output per unit rather than through an increase in the number of units.9

Next we can move on to look at production totals for earthenware pipes. Table 2 presents us with production total figures for Chita-gun and the whole country, beginning with 1916, the first year for which the figures for the whole country can be established, and then at five-year intervals. We can see how Chita-gun’s earthenware pipe production totals increased in leaps and bounds during the interwar years, and that its percentage of the nation’s production total exceeded 50% in the 1930s. During the interwar years, therefore, the Tokoname region had grown to be the largest earthenware-producing district in the country. If we look at the number of units producing earthenware pipes, in 1916 the figure stood at 333, in 1921 it was 107, in 1926 it was 141, in 1931 it was 121, and in 1936 it was up again to 219, so the numbers went up and down in rollercoaster fashion.10 This may have reflected the fact that the earthenware

manufacturers in Tokoname had the capability to switch from one product to another in response to economic conditions; if, for example, sales of earthenware pipes were down, many of the manufacturers had the equipment to switch to making other pottery items like flowerpots or bottles for shōchū (clear distilled liquor).11

**Special Features of the Tokoname Ceramic Industry**

*The Markets*

With regard to the outlets for Tokoname pottery products in the first half of the Meiji Period, we have a document that indicates they were "kannai" and "Tōkyō/Ōsaka."12 The term "kannai" (lit., within the jurisdiction) as used in the document is understood to mean "within Chita-gun." So this indicates that, apart from what was sold locally, the rest of Tokoname's products were being shipped to the large cities. We also know that, beginning with orders for earthenware pipes to be used in the laying of the San'yō railway line in 1874,13 Tokoname potters were receiving orders for earthenware pipes from Railway Bureau offices all over the country.14 Though there were various uses for earthenware pipes besides in the building of railways (such as for irrigation and drainage purposes), there can be no doubt that the changes in the business environment accompanying modernization—in this case the increasing distances rail lines were covering—presented a huge market for Tokoname earthenware pipes in the first half of the Meiji Period.15

From a number of available primary sources we know that in the second half of the Meiji Period Tokoname pottery continued to be shipped to other parts of the country, mainly to the large cities (Tokyo in particular). By this time the earthenware pipes would more often than

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12. This is the chart of Chita-gun specialties cited in note 8 above.


14. "Tetsudōkyoku yōken (1885) [Railway Bureau matters (1885)], in *History of Aichi Prefecture*, p. 821

not be loaded on ships in Chita-gun's Tokoname Port or Taketoyo Port and shipped to Tokyo and other destinations. Tokoname products also began to be exported overseas; in 1903, of the 295,000–yen production total, goods to the value of 31,000 yen were being exported. The main destinations for the exports in 1903 were China and the United States of America, which took in Tokoname products to the value of 11,000 yen and 9,000 yen, respectively.

Exports of Tokoname products continued to flow in the interwar years as well. In 1922, for example, Tokoname's production total came to 5,701,000 yen, of which exports to the United States, Australia, China and so on accounted for 336,000 yen, while in 1929 such exports accounted for 635,000 yen out of a total production value of 5,602,000 yen. This means that in Tokoname, from the second half of the Meiji Period right through the interwar years, more or less 10% of the products made in the producing district were being exported. While we can see that the export market held a certain importance for the growth of the Tokoname ceramic industry, it was still very small in scale in comparison with that industry's domestic market.

Types of Products

We know that things like earthenware pipes, earthenware pots, roof tiles, and earthenware sake bottles were being produced in Tokoname in the first half of the Meiji Period. We cannot, however, specify on the basis


of any documentation the production totals for each type of product. It becomes possible to make such a specification only for products made in the second half of the Meiji Period and later. Thus, for example, we know that in 1894 the production total for items in the earthenware pipe category was 50,000 yen, for the roof tile category 30,000 yen, and for other categories 49,000 yen, for a total of 129,000 yen.\(^{21}\) If we look at 1903 next, the total for the earthenware pipe category was 159,000 yen, for flowerpots, teapots, small braziers, and the other things that fell into the delicate handicraft category, 70,000 yen, and for roof tiles and other items it was 89,000 yen.\(^{22}\) When the numerical values for all the categories produced during this year are added up, however, we get a combined total of 318,000 yen, a figure that causes some uneasiness since it does not correspond to the figure of 295,000 yen that one comes up with from the statistics given in *Aichi-ken tōkeisho*. The figures we have for 1912 are 797,000-yen worth of earthenware pipes, 13,000-yen worth of roof tiles, and 71,000-yen worth of delicate handicrafts, for a rounded out total of 882,000 yen.\(^{23}\) It is obviously clear that, for Tokoname in the second half of the Meiji Period, earthenware pipes were the principal product of the producing district.

What is also noteworthy is that, in the second half of the Meiji Period, a variety of new products were being developed by potters in the producing district for export purposes (such as tobacco caddies, toys, lacquered goods, and telephone-wire tubes), so the potters were striving for diversification in the types of products they made. And in the closing years of the Meiji Period trial production of floor and wall tiles was beginning in all the factories.\(^{24}\)

For some idea of the types of products made in the interwar years, we have Table 3, which shows the composition of products in 1929. It

\(^{21}\) TCSEC, *A Hundred Years of the Pottery Industry*, p. 19.

\(^{22}\) “Nagoya Region Specialty Handicrafts,” p. 495.


\(^{24}\) Kyokuzan Nakazawa, *Tokoname tōgyō shi nyūmon* [Introduction to the history of the Tokoname pottery industry] (Tokoname, Aichi: Gomaidō, 1966), p. 32. Note that the term “factory” was an official term applied to a production unit that employed five or more employees.
Table 3. Chita-gun's Pottery Production Totals for 1929, by Type of Product (Unit: 1,000 yen)

<table>
<thead>
<tr>
<th>Type of Product</th>
<th>Production Total</th>
<th>% of Whole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthenware pipes</td>
<td>2,595</td>
<td>46.3%</td>
</tr>
<tr>
<td>Braziers</td>
<td>250</td>
<td>4.5%</td>
</tr>
<tr>
<td>Shōchū bottles</td>
<td>180</td>
<td>3.2%</td>
</tr>
<tr>
<td>Earthenware pots</td>
<td>881</td>
<td>15.7%</td>
</tr>
<tr>
<td>Delicate handicraft</td>
<td>498</td>
<td>8.9%</td>
</tr>
<tr>
<td>Building ceramics</td>
<td>555</td>
<td>9.9%</td>
</tr>
<tr>
<td>Kiln utensils</td>
<td>8</td>
<td>0.1%</td>
</tr>
<tr>
<td>Export pottery</td>
<td>635</td>
<td>11.3%</td>
</tr>
<tr>
<td>Totals</td>
<td>5,602</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note: "Delicate handicraft" refers to flowerpots, tea-serving equipment, small braziers, etc.


shows clearly that in the Tokoname region earthenware pipe production continued to far outstrip that of earthenware pots, braziers, and other products and to represent nearly half of the region's total production. The production output for delicate handicraft items like flowerpots and teapots was much smaller in comparison, amounting to less than 500,000 yen. It might be noted that the products classified as export ceramics in Table 3 included such items as flower vases, incense burners, and ashtrays. In addition, we know that in the late 1920s the production of such things as Rockingham Ware (English-style teapots) and terra-cotta (for use in buildings built in the English style) were begun. This means that, while traditional items like earthenware pipes, braziers, pots, and roof tiles were the main items being produced in Tokoname, the development of new products stimulated by urbanization and a Western lifestyle and culture was also being carried out in the district.

Types and Sizes of Businesses

We know that ceramic products in Tokoname were being manufactured by 20 businesses in 1881. Two of these manufacturing units were employing ten or more workers, one with 22 workers and a production output for the year of 4,300 yen and the other with 15 workers and an output of 3,100 yen. Four of the manufacturers employed between 5 and 9 workers, 2 had fewer than 5, and 12 employed no workers at all. These 12 businesses (involving about 15 people) were co-owners of a single kiln, and their businesses took the form of common kiln production as a secondary job besides farming. During the Edo Period almost all of the ceramic industry in Tokoname was a secondary job for farmers, and the system generally used was that of common kiln, according to which, when firing of the kiln was to take place each potter brought their biscuit pieces and placed them in the kiln, and the proceeds from sales would be divided in proportion to the number of biscuit pieces each potter had contributed to the batch. It is conceivable that such a system still remained to a considerable extent in Tokoname in the first half of the Meiji Period.

The common kiln system declined, however, in the second half of the Meiji Period, as more and more people, especially those who made things like earthenware pipes and shōchū bottles turned away from common kilns and built their own kilns. As a result, of the 98 kilns that are known to have existed in Tokoname in 1911 (near the end of the Meiji Period), only 23 were common kilns, 58 were owned by individuals, and two joint-stock corporations owned two each. Also, in the second half of the Meiji Period there were fewer cases of ceramic production being carried on as a secondary job by farmers: of the 269 pottery businesses in Tokoname in 1903, 195, or more than two-thirds, were engaged full-time in pottery making, and of the 74 remaining units assumed to be engaged in the business part-time, 28 were not manufacturing the pottery but selling it. This means that a large change in the form of

27. "An Investigation into the Output of Four Products" (cited in note 20 above).
businesses in the Tokoname ceramic industry had taken place from the first half to the second half of the Meiji Period.

Let us next look at the sizes of the pottery manufacturing units in the second half of the Meiji Period, taking as clues the number of workers. Since statistics are available in regard to factories employing 5 or more workers for the year 1909, if we look at the figures for the number of workers in pottery factories in Chita-gun in that year, we find there were 6 factories with 10 or more workers, and 24 with from 5 to 9 workers. In view of the fact that there were 414 pottery manufacturing units in Tokoname during the same year, it is obvious that the overwhelming majority of potters must have been very small businesses. The largest of the factories was Ina Pottery Factory, owned by Hatsunojō Ina, and this one employed no more than 17 people. A survey conducted by Aichi Prefecture authorities in 1894 informs us that Ina Pottery Factory in that year had 19 workers, 13 of them men and 6 of them women, and that all of them were commuting employees who lived in nearby areas.

Even after World War I the brunt of Tokoname’s ceramics industry was borne by small and medium-sized businesses. According to statistics taken shortly after the war for 1919, the number of factories with 10 or more workers was 6—the same as it was ten years earlier. Again the largest of the factories was Hatsunojō Ina’s factory, just as it was in 1909, but the factory had expanded in the meantime and the number of its workers now stood at 70. A detailed survey of the workers at Ina’s factory taken in 1919 has come down to us; from it we learn that almost all the workers were natives of Aichi Prefecture, and that none of them were accommodated in dormitories or lodgings but were all commuting from their own residences.

Hatsunojō Ina’s factory business continued developing through the introduction of American-made machinery by his eldest son, Chōtarō

Ina, and others. In 1924, successful in receiving financial backing from Kazuchika Ōkura, a person who promoted the modernization of Japan’s ceramic industry, the Ina family went on to establish Ina Pottery Manufacturing Co., Ltd. [Ina Seitō K.K.] with a capitalization of 750,000 yen. This company included both the old original factory and a new factory put up in Tokoname in order to carry on the manufacture of floor and wall tiles, terra-cotta, earthenware pipes, and other items.

We have figures for the number of workers employed by the two Ina Pottery Manufacturing Co. factories in 1937, or the end of the interwar years. In Factory One, which was devoted to manufacturing earthenware pipes, there were 195 workers; in Factory Two, where they mainly produced floor and wall tiles, it was 109. Out of all the factories connected with the ceramic industry in Tokoname in 1937, Factory One was the largest in terms of worker numbers, and Factory Two was the second largest. This means that the factories owned by the Ina family continued to be the largest in Tokoname during the interwar years, just as the Ina factories had been the largest in the decades before that.

Still, modern corporate businesses that, like the Ina family, had introduced Western technology and developed to a good size were something extremely exceptional in Tokoname. If, for example, we were to look at worker numbers in 1933 at factories that were engaged in making earthenware pipes—Tokoname’s principal product—we would find that the 178 such factories broke down as follows:

- 100 or more workers: 1
- 30 to 99 workers: 1
- 5 to 29 workers: 43
- 1 to 4 workers: 133

35. For more on Kazuchika Ōkura, see Kazuhiro Ōmori, “Kaigai gijutsu no dōnyū to jōhō kōdō” [The introduction of overseas technology and diffusion of information on such technology], in Jōhō to keiei kakushin [Information and business innovation], ed. Satoshi Sasaki and Nobuyuki Fujii (Tokyo: Dōbunkan, 1997).

36 “Ina Seitō Kabushiki Kaisha kīgyō mokuromisho/kyōgyō yosansho (1924)” [A prospectus and a financial plan relating to the inauguration of Ina Pottery Manufacturing Co., Ltd. (1924)], in History of Aichi Prefecture, pp. 839–42.


In other words, the sizes of businesses in the Tokoname ceramic industry had, overall, made the transition from the second half of the Meiji Period to the period of interwar years without much change, remaining within the small and medium-sized business range.

Technological Levels

In the area of the Tokoname ceramic industry’s technological levels, changes in fuel and power deserve attention. Let us consider the matter of fuel first. The 20 businesses of whose existence in 1881, in the first half of the Meiji Period, we have documentary evidence, were all baking their goods by using pieces of firewood. Most of such firewood was, ever since the Edo Period, carried by boat from other parts of Aichi Prefecture and from Mie Prefecture.

Once into the second half of the Meiji Period, potters began switching from firewood to coal. The stimulus for the gradual switch were trial bakings by the Tokoname Pottery Manufacturers and Merchants Local Trade Association (more about it later), which had built a coal kiln that was used in the trials. The only problem was, a coal kiln was very expensive to build, so what preceded it in popularity around the producing district was what was called a “compromise kiln” that used a combination of firewood and coal. This “compromise kiln” was an adaptation of the traditional climbing (also called ascending, or inclined, or bank) kiln that used coal as part of the fuel for baking pottery items; it was developed by Hatsunojō Ina in 1905, and small and medium-sized enterprises started introducing it because it was cheaper to build than a coal kiln. Of the 98 kilns in Tokoname in 1911, 24 were of the firewood-burning variety, 58 were these “compromise kilns,” and 16 were coal-burning kilns.

Now, despite the initial reluctance to introduce the coal kiln, after World War I many factories turned to coal kilns. Most probably the reason that medium-sized potters embarked one after another upon the introduction of coal kilns was that, through their use of the “compromise

kilns,” they came to realize the advantages of using coal for fuel. The figures we have for the types of kilns in existence in Tokoname in 1929 show that all of the 226 kilns used for making earthenware pipes were coal kilns, and that of the 160 kilns being used for pottery, more than 60 percent were coal kilns. Most of the coal was being brought in from Kyūshū, with the remainder coming from Hokkaidō and other parts of Japan. It is believed that the overwhelming switch from firewood to coal during the interwar years contributed greatly to improving the stability and raising the productivity of businesses in the producing district.

Next let us study the situation in regard to power. Not surprisingly, in the first half of the Meiji Period we find no factories that have introduced motors; yet in the second half of the Meiji Period, we still find none even as late as 1909. It is only towards the very beginning of the “interwar years,” in 1914, that we find some factories using motors. In that year, of the 130 pottery manufacturing factories, 9 were in possession of motors. In the whole of the Meiji Period, therefore, there is no sign of serious moves toward the use of motor power.

Our source for information on the move to motorization in Tokoname factories during the interwar years is the 1929 survey we have seen already. According to this source, the use of electric motors had spread among most of the different factories making different items, so that, for example, 73 electric motors were in use in the 69 earthenware pipe factories, 50 electric motors were in use in the 48 shōchū bottle factories, and 232 electric motors had been introduced into the 250 pottery factories located in Tokoname. The Tokoname ceramics industry underwent such great changes in the interwar years that it could truly be called a power revolution. The electricity to run the motors was provided, by the way, by Aichi Railway Co., Ltd. [Aichi Tetsudō K.K.], which had begun operating in 1909. We also know that four steam engines were introduced in the region to move large machinery; these

four were together capable of producing 680 horsepower, with the three most powerful (capable of 630 horsepower altogether) being owned by Ina Pottery Manufacturing Co. The same company also owned three diesel engines. In other words, even from the point of view of power, Ina Pottery Manufacturing was certainly the most advanced modern enterprise.

**THE ACTIVITIES OF TRADE ASSOCIATIONS**

The activities of trade associations contributed intimately to the growth of indigenous industries in Japan prior to World War II. The Japanese government enacted a variety of laws aimed at promoting indigenous industries, and pushed ahead with better organization of producing districts. First of all, in 1885 the central government sent written notices to all prefectures of “Local Trade Association Standards” that each provincial governor was to use as norms whenever any local trade association was established. The enactment of these standards was aimed at preventing, by means of local trade associations, the ruination of indigenous manufacturing industries resulting from large-scale production of slipshod goods by people in a given trade. On the basis of the central government’s standards, Tokoname Village Potters’ Local Trade Association was established in 1886, and the association enacted bylaws whose purpose (among other things) was the prevention of the sale of inferior products.

Now, when a local trade association formed on the basis of the central government’s standards had been established by the agreement of at least two-thirds of the people in that trade in a particular administrative area, membership in that trade association became obligatory on all the people engaged in that trade in that area. The problem is, mindful of the general principle of freedom of entry into a business, government legislators had not permitted the enactment by local trade associations


of any regulations on sanctions against those who did not meet their obligation, and so people were free to join or quit the trade association. As a result, it is widely accepted that local trade associations were not very effective at this time in promoting the welfare of producing districts through such things as the prevention of indiscriminate production of inferior goods by small and medium-sized businesses. And in fact this was true of Tokoname's potters' association, too; in the first half of the Meiji Period it was unable to carry out any activities that effectively contributed to the development of the producing district.48

In the second half of the Meiji Period, however, an awareness grew among the manufacturers and merchants in the trade of the serious impediment the flood of slipshod goods was to an expansion of domestic and external markets, and calls for changes to the government's easygoing attitude towards regulation grew louder. Demands that the government specifically enact a local trade association law based on some system of compulsory membership were heard from around the whole country. In response to these demands, the government promulgated in 1897 the "Jūyō Yushutsuhin Dōgyō Kumiai Hō" [Important Export Commodities Local Trade Associations Law], thereby legislating for the whole country a local trade association system covering export goods. Three years later, in 1900, this law was repealed and replaced by legislation that extended the application of the law to goods for the domestic market as well, through enactment of the "Jūyō Bussan Dōgyō Kumiai Hō" [Important Commodities Local Trade Associations Law].

A local trade association formed in accordance with this new law was an organization established either by the agreement of at least two-thirds of the people in that trade in one particular administrative area or by the order of the Minister of Agriculture and Commerce, and it could compel everyone—whether manufacturer or merchant—engaged in that trade within that administrative area to join the association, through regulations determining penalty fines against those who did not join. The new law also made it possible, through regulations it set down regarding the establishment of inspectors, for the association to carry out inspection of products in order to prevent the manufacture and sale of inferior articles. The law did not, however, permit associations to conduct cooperative business or engage in cartel action. Following the

48. TCSEC, A Hundred Years of the Pottery Industry (cited in note 9), p. 36.
enforcement of the law, local trade association numbers shot upwards in a steady trend: there were 148 in 1901, 834 in 1911, and 1,032 in 1921.

Those engaged in the pottery trade in Tokoname established, in accordance with the Important Commodities Local Trade Associations Law, what they named the Tokoname Pottery Manufacturers and Merchants Local Trade Association, for which they obtained official approval in 1900.49 From its inception, the association involved itself enthusiastically in the activities of inspecting manufactured goods and the development of, and research on, coal kilns. Its inspectors went around from factory to factory, looking especially at the quality of earthenware pipes. They stamped, with India ink or with paint, each pipe with symbols indicating whether the pipe passed, or did not pass, inspection, in this way providing potential customers with clear information about the condition of the product.

As part of its research and development activities the association in 1901 received a subsidy from Aichi Prefecture that it used to build a coal kiln for testing purposes. It used this coal kiln in a series of baking tests, and in 1902 it demonstrated that the coal kiln reduced fuel costs to half of what the old firewood-burning kilns cost. The results of the association’s testing would lead progressive factories to begin switching to coal kilns, but the large amount of capital needed for building a coal kiln still remained a problem. As a result, when Hatsunojō Ina developed the “compromise kiln” that used both firewood and coal, it was this type of kiln that first became widely used in the Tokoname producing district. So the association’s development of a coal kiln and its testing operations had served to awaken in its members an interest in inventiveness and improvement with regard to the baking process and had stimulated them to proceed in the direction of switching to coal as a fuel.

In addition the association did tests regarding raw clays and glazes, carried out research on high-grade pastes, sent observers to other producing districts, encouraged its members to submit some of their work to exhibitions or fairs where prizes were awarded—in other words, by involving itself in a number of different activities that would be too difficult for individual small or medium-sized businesses to undertake

49. My discussion of this association is based on an article of mine, “Meiji kōki ni okeru tōjigīgyō no hatten to dōgyō kumiai no katsudō” [The development of the pottery industry in the second half of the Meiji Period and the activities of local trade associations], Keieishigaku [Japan Business History Review] 30 no. 2 (1995).
on their own, it did what it could to promote the Tokoname region. So the association can be assessed as a success, in that it made a large contribution to the development of the Tokoname ceramic industry in the second half of the Meiji Period.

Let us now turn our attention once more to developments in the government's policy to organize those in the industry. The policy to organize small and medium-sized enterprises on the basis of the Important Commodities Local Trade Associations Law was forced into a significant change in the middle of the 1920s, when recession was chronic and it became increasingly obvious that small and medium manufacturing industries in general were in serious trouble, and at the same time strong demands were being made for the government to strengthen the international competitiveness of such industries, which formed the backbone of export production, in order to improve the country's international balance of payments. So in 1925 the government passed the Important Export Commodities Manufacturer Associations Law, by which the government adopted a policy for further advancing the organizing of those businesses engaged in the manufacturing of export commodities in producing districts. In the concrete, manufacturer associations formed in accordance with the new law not only were able to carry out inspections, they were also able to engage in a variety of activities not allowed to local trade associations under the earlier law, such as cooperative business, the formation of cartels, or similar methods to exercise control over the production and sale of products. Also, recognizing the fact that sometimes the growth of small and medium manufacturing industries conflicted with the interests of wholesalers and others in the distribution sector, the government saw to it that manufacturer associations were classified among trade groups consisting only of small and medium-sized manufacturers of commodities connected with exports, and it excluded in principle the membership of distributors in these manufacturer associations. Finally, in 1931, the name of the law was revised to "Manufacturer Associations Law," and its provisions were extended to include small and medium-sized manufacturers in general.

When the Important Export Commodities Manufacturer Associations Law was enacted in 1925, people in the Tokoname region were quick to respond, and in 1926 the Tokoname Pottery Manufacturers' Association
was established. This was made up of people manufacturing small braziers, flowerpots, and other items in the delicate handicraft category; besides carrying on the inspection operations of the local trade association, it also carried out a variety of cooperative business operations. What those cooperative business operations meant in the concrete was, first of all, that the association operated a clay factory in which it purified china clay in an effort to supply its members with raw materials at a low price. The association aimed at lowering the cost of the clays and sand that were the raw materials for china clay through joint purchasing of the materials. The clay factory received grants from both the central government and the prefectural government.

Another cooperative business operation was the designation of certain wholesalers with whom the potters had previous dealings as approved merchants and the joint sale of products through them. This served to strengthen the negotiating power of small and medium-sized manufacturers vis-à-vis the wholesalers when it came to determining the prices of products. In the second half of the 1920s and early 1930s there were many years in which sales in the association’s joint sales sector exceeded 1,000,000 yen.

The association also poured efforts into the protection and promotion of new-product development on the part of its members, through its determinations of “patent rights.” By the latter was meant that, when a member of the association made a certain discovery or new design, in accordance with its provisions the association recognized that member’s rights and for a determinate length of time it would provide protection in regard to the manufacture and sale of that product. For the record, the Tokoname Pottery Manufacturers’ Association recognized 268 “patent rights” during the period from 1926 to 1942.

In addition to such cooperative business activities as these, the association began imposing a limitation on the production of products like floor and wall tiles—in other words, enforcing a production cutback—when the recession started deepening in 1931. This was done in order to gain some stability for small and medium-sized businesses by curbing the drop in prices that would result from overproduction. To make such a cutback work, the association first needed to determine the

50. For more on this association, see TCSEC, A Hundred Years of the Pottery Industry, pp. 74–84.
percentage of total production each member would be entitled to. After a meticulous survey of past production results and factory conditions, the association decided on production quotas that would be agreeable to each member, and then put into effect the limitation on production.

Another organization was established and approved in 1931; this was the Aichi Earthenware Pipe Manufacturers’ Association, whose membership consisted mainly of people involved in the making of earthenware pipes, the principal product of the Tokoname area.51 From its inception, this association put a great deal of effort into product inspection operations and into the implementation of production limitation. In 1932 it carried out credit financing, receiving deposits of money from its members and providing loans, and in this way it made a certain contribution to improving the cash-flows of small and medium-sized businesses. In addition, from 1935 on it carried out joint sales of earthenware pipes with a view to modulating production numbers and maintaining price levels. It also worked hard to improve product quality by such activities as sponsoring annual exhibitions of members’ products and conducting tests for pressure-resistance.

In this way, therefore, small and medium-sized businesses in the Tokoname region banded together in two manufacturers’ associations and promoted the development of their producing district by evolving their own organizational activities.

Conclusion

The Tokoname ceramic industry, with its roots as a producing district going back as far as the sixteenth century and with small and medium-sized businesses forming its backbone, can be called an example of one classical type of indigenous industry existing in Japan prior to World War II. Through a historical study of the Tokoname ceramic industry, we have seen how indigenous small and medium-sized businesses underwent great changes as the business environment enveloping a traditional producing district changed in the process of modernization.

Among the changes in business environment to be noted here are

51. For more on this association, see ibid., pp. 85–87, and also Fukuichi Hamashima, Yōran [Survey] (Tokoname: Aichi Tōkan Kōgyō Kumiai [Aichi Earthenware Pipe Manufacturers' Association], 1940).
such things as the appearance of railways, the emergence of modern buildings in the wake of urbanization, and the development of the coal industry. Tokoname's potters responded to such changes in the business environment by using advances in the production of earthenware pipes as the springboard for developing new commodities (for example, ceramics used in building construction) and for expanding the market. Also, in the process they moved ahead with a switch in fuel from firewood to coal in an effort to reduce production costs. Another thing that cannot be overlooked is that, once into the interwar years, many potteries introduced the use of electric motors and pushed forward with modernization of their production processes. Within half a century Tokoname had undergone a huge change in appearance from what it looked like in the first half of the Meiji Period, when producers who were half-farmers-half-artisans were baking their products in common kilns.

Still, what has to be noted at the same time is that most of those shouldering the burden of such reform in the Tokoname ceramic industry continued to be the small and medium-sized businesses. The explanation for this is believed to be that, from a business point of view it could not be considered a reasonable decision to specialize in a particular product and invest a large sum of money on equipment to make that product, in view of the fact that the markets for goods produced in Tokoname were not necessarily large and most of the products were easily affected by fluctuations in business conditions. As we saw earlier, many of Tokoname's earthenware pipe manufacturers were capable of switching to the production of flowerpots and other items when they saw the direction the market was taking.

Nevertheless, there had to be business disadvantages in remaining small or medium-sized, even in the area of the ceramic industry. The costs involved in market research or the development of products and technology are not easily borne by individual small and medium-sized businesses. Also, the opportunistic actions of people aiming at making a temporary profit by producing inferior-quality items or imitations cannot be controlled by an individual enterprise. In addition, it seems that, under the old distribution arrangements, the really small producers sometimes were disadvantaged in negotiations over prices when it came to purchasing raw materials or selling their products. Finally, we might
add that, for small and medium-sized businesses, the costs that occurred when they took upon themselves every single one of the many production processes were enormous.

It was the local trade association and the manufacturers' association that played an important role in alleviating such disadvantages and strengthening the foundations of small and medium-sized businesses. Tokoname's trade associations promoted the growth of the producing district through a variety of cooperative business operations that began with inspection of manufactured goods and the running of a clay factory. We can cite as one of the factors that enabled the Tokoname ceramic industry to achieve steady progress the organized activities of small and medium-sized businesses around a core of trade associations.

The question arises: Why were such lively activities on the part of trade associations seen in Tokoname? The answer to that question is a task for future research, but one thing that stands out is the fact that, in Tokoname's case, we have a producing district formed by manufacturers and merchants who were engaged in the production and sale of earthenware pipes and other commodities that were pretty much the same, and whose businesses were of comparatively similar size. In other words, in Tokoname, a producing district that was formed by small and medium-sized businesses of a comparatively similar nature, conflicts of interest among people in the same trade did not surface very often. Government assistance in the form of subsidies and the like may have been another factor that energized the activities of Tokoname's associations. At any rate, elucidating the mechanisms that encouraged the activities of trade associations in producing districts—while paying attention to the roles played by the government and entrepreneurs—remains an important task awaiting the scrutiny of business historians.