

Proto - Industrialization in Tokugawa Japan

Martin J. Murphy

The land seemed, for the most part, to be in very small allotments, and to furnish only one of the occupations of each household - the fisherman's net, the turner's lathe, and a little shopkeeping, all alternating with the farmer's toil¹

Sir Rutherford Alcock, 1860

Much has been written about the stage of economic development Japan reached by the end of the Tokugawa Period. There is near universal agreement that it entered a stage of early capitalism. Most have come to refer to this stage as proto-industrialization. In this model applied to Japan, early capitalism occurred before the Meiji Restoration, which did not necessarily mark a demarcation between feudal and capitalism. The process occurred centuries earlier and was dependent upon handicraft/cottage industries, trade and petty capitalism as a precursor to factory system production. It created forms of capitalist management and vibrant domestic markets. In Japan proto-industrialization created the favorable conditions for the actual development of capitalism once ports were open and feudal institutions crumbled.

The often-cited definition of proto-industrialization is “the development of rural regions in which a large part of the population lived entirely or to a considerable extent from industrial mass production for inter-regional and international markets” (Kriedte, Medick and Schlumbohm [*hereafter*, KMS], p. 6). Franklin Mendels coined the term in 1969 to support his study of the development of capitalist institutions in Europe, specifically the textile industry in Flanders. The above-cited trio of German scholars collaborated to put together the current standard work in the field. They expanded on Mendels' conceptual model in narrower and more definitive terms. However, there is yet to form universal agreement on this strict

¹ The Capital of the Tycoon (New York, 1868), I, 387, quoted in Smith, 1969.

definition in European circles - nor among scholars of Japan. This paper will examine the case of Japan in the context of protoindustrialization. I will argue for the applicability of a looser definition as useful tool for understanding the Tokugawa period.

The goals of this essay are modest. First, it surveys the features of Tokugawa feudalism and the institutions of pre-capitalist development. Second, it presents a working model of protoindustrialization. Further, it provides a solid picture of the fact of rural industrialization in Japan. It will show how the Japanese model diverges from the strict European model, especially in the area of demographics. And finally it will present David Howell's 1995 case study of the pre-industrialization capitalist developments in the Hokkaido fisheries in Tokugawa Japan.

Feudalism in Tokugawa Japan: Social Relations

As Japan moved to a pre-industrial society, it was characterized by a transformation of labor and capital. This transformation weakened the traditional social bonds of feudal obligation and rural hierarchy. Labor became more of an impersonal market exchange.

At the beginning of the Tokugawa Period (1600–1868) the basic features of the feudal order in pre-modern Japan were established by Toyotomi Hideyoshi (1536-1598) and carried on by Tokugawa Ieyasu (1542-1616). The state relied on a system of landholding as a foundation of political stability. Hideyoshi ordered a land survey and the division of the land into fiefdoms. This was the means on which the *bakufu* regime could oversee tax collection. The *kokudaka* levy was based on the yield of rice harvest from a village's rice paddies. One *koku* equaled about five bushels, enough rice to feed one person for one year. This rice tribute became the main relation of the rural peasantry to the political center. In the four-tier feudal hierarchy, the samurai class became the collectors and administrators.

The villages were set up in *gonin gumi* ("groups of five families") which comprised the lowest-level organizational unit of the *bakufu* regime. It was a system of communal policing and responsibility. Each was responsible to the group for tax obligation, punishment of members for misdeeds, keeping population registers and even non-administrative tasks such as disseminating agricultural techniques.

The core village members were generally equal in terms of status and holdings. They were registered in the original survey legally as *honbyakusho* or "principal farmers". They were those registered at the time of the survey, as opposed to the *hyakusho* ordinary farmers. Their lives were communal, dedicated primarily to farming, mostly rice, but also other grains, and sweet potatoes in upland areas. Small landholdings were farmed as family units, and larger holdings by

tenant farmers. The fundamental structure of village life was orientated around the landholders and their nuclear family of unmarried children. "This group usually did not constitute the whole population of the holding, but it was always distinct within the larger group, its rights in the land infinitely stronger, its ceremonial position superior" (Smith, 1959: 5–6).

In the early Tokugawa Period rice production, the primary economic activity, took place in the context of the relation of the *honbyakusho* to tenant farmers and other servants. Within the peasant class there was a strata of complex status relations. Around the above-mentioned family nucleus was a second group of direct relatives, and a third group of non-relatives *nevertheless* registered as family members. Within this third group were two broad categories, most within this category were *fudai* servants who were hereditary and passed down from generation to generation. The other category was servants with various appellations, which for the sake of convenience Thomas Smith calls *nago* servants. They lived separate from the landowner, were often married with families, and farmed separate plots of land registered under the landowner's name. Generally they could be characterized as indentured servants.

This subordinate form of registration presumably confirmed limited rights in the land, but did not make him the holder recognized by the lord and legally responsible for taxes. Since, therefore, *nago* nominally bore no share of the tax burden laid on the village, even though they might pay taxes in the holder's name, they were not considered members of the village in several important respects. They had no share in common land and water rights; they could not hold village office or take part in the selection of village officials or even join in the village assembly in discussing the formal business of the community; they were normally not even members of the five-family groups in to which the village was divided for administrative purposes. Insofar as they took part in the village, they did so through the holder to whom they were subordinate. (Smith, 1959:9–10)

These various servants were tied to the land by incorporation into the farm family. Some servants, especially the *fudai*, who were hereditary and passed on from generation to generation, were treated as family members. They were given a degree of relative free reign over their affairs, and through generations of association built up economic dependence on the relationship with the landowner. They depended on them not only for use of the land but also tools, animals, fodder and water. Rights to communal resources of the village were limited to landowners only, so the *nago* had access only in the name of his "*oyakata*", a kind of patron master. Smith provides an example of the mutual, albeit one-sided dependence of the relationship in the use of communal water. It was first given to the *oyakata*, and once his rice crop had been planted in his flooded paddy could water be released to lower fields so

that the *nago* could transplant his into the fields. It “synchroniz[ed] the work of the two and encouraging the exchange of labor for tools and animals” (Smith, 1959:24). On the other hand, in times of drought or crop failure it was customary for the *oyakata* to extend aid to the *nago* from his own stores (Smith, 1959: 27).

The important point is, this economic relationship was social in nature. Also it was built on a pyramid structure of status. It was *not* the impersonal economic relationship that we find conventional market capitalism. It was based on dependency, which was hardly one-sided considering how much the *oyakata* relied on the servants for farm labor.

Expansion of the Tokugawa Economy

Relative peace and stability characterized the Tokugawa Period. Edo became the central hub for the *bakufu* regime, and the policy of *sankin-kotai*, alternative year attendance in the capital transformed society. Large delegations of *daimyo* and domainal retinues opened up transportation along highways. Lines of communication were established to and from the domains and Edo, and around Japan. The samurai class was ordered from the countryside and forced to quarter in castle towns, which sprang up across the land. Population rose dramatically. By 1700 there were approximately 200 castle towns with populations of 5,000 or more marking a definite trend toward urbanization (Smith, 1973:129). Tax rice was marketed in the growing urban centers for the domainal rulers and the samurai class. In the first part of the seventeenth century the economy was marked by the control by *daimyo*, who granted monopolies to merchants and artisans catering to society castle towns. Osaka became the national market center, as all rice was shipped through storehouses to be distributed throughout the land. And a currency was established based on the standard measure of rice, the *koku*. It is in this context that within this feudal order, institutions of early capitalism were emerging. The next section turns to developing a working model of this protoindustrialization.

Protoindustrialization Model

Interest in the Industrial Revolution started in the nineteenth century by a flurry of scholarship among Europeans to understand what had happened. While most focused on the factory revolution, some also looked at the traditional small-scale cottage and handicraft industries. Karl Marx was one of the first to note their importance. “He assigned a position of epoch-making importance to the expansion of rural industrial commodity production within the formative period of development of capitalist relations of production and capitalism as a social formation” (Kriedte, et.al., pp. 1-2). A century later in the 1960’s scholars defined proto-

industrialization as an economy where the rural population depended wholly or to a great extent on industrial mass production for domestic or international markets. These were the seeds for a later transformation into industrial capitalism; “pre-modern growth followed by industrialization”; . . . to the best of my knowledge, the second term of the sequence did not occur anywhere in the world without the first during the nineteenth century” (Smith, 1973: p. 128).

In agrarian rural society, the rationale of economy was maximizing *gross produce* from the land, not monetary profit. The rural villages were *not* part cycle of production, consumption and recycling of the profits back through the village. The peasantry was more concerned with maintaining subsistence, and the social structure within the community to continue agricultural production (KMS 39). Farming, however, was subject to the vagaries of nature and the seasons. The life of the peasantry was affected by the agrarian cycle: good crops, failed crops and the weather. They were also subjected to population and manorial pressures that could raise rents or taxes. Even with the evolution to markets the peasantry was confined by feudal structures and not able to produce a monetary surplus. In years of high yields the price was low, and in years of poor harvests the prices were high. In the latter case, rural farmers were often forced to go into debt to buy grain and in the worst cases lose their titles to land (KMS, pp. 44–45).

Development of Cottage Industries

Life in Medieval Europe reflected some of the same characteristics described above concerning Japanese peasantry's ties to the land. The product of the land became the index of wealth and status. During the off-seasons peasants tied to the village filled the time working on handicrafts for village was part of life. Primarily women and children carried on these activities, including making everyday implements, clothing and wares. During planting and harvest seasons there was a high demand for labor, and in the intervals there was unemployment. This seasonal cycle of unemployment and underemployment was one precondition which led to the development of pre-capitalist structures. That is, the making of handicrafts was turned into a cottage industry which “improved the time pattern of rural employment, not so much increasing the productivity of labor as increasing the productivity of workers” (Mendels, p. 242).

With peasant participation year-round in agriculture and by-employment, per capita output increased. The development of market centers for rural industrial production became a factor in maintaining subsistence. Once confined to the village, gradually cottage industry products made their way to other regions and nascent trade networks appeared. The peasantry continued to be tied to the land and a life of subsistence in the lower strata of the social

order. However, a group of entrepreneurial middlemen emerged and became involved in the circulation of goods.

Over time, capital accumulated in this entrepreneurial urban merchant class. With increased capital came the opportunity for investment in more industry. In Europe new investments took place primarily in looms and spinning wheels for the production and trade in textiles. For the rural peasantry this type of machinery was simple and cheap. These rural industrial activities were more likely to take place in the mountainous regions because of the difficult growing conditions and short seasons. Over time, with an increase in demand, merchants who had accumulated capital invested in their own machinery. They set up operations outside of the mountainous areas to avoid seasonal restrictions, such as frozen rivers in winter and slow water flow in dry seasons that affected use of waterpower. Additionally they were set up there to lower the cost of transport in raw materials. (Mendels, 246). Other industries grew around pockets of specialized skills of workers in particular rural areas. This development marked a new phase of capitalist development, specialization and urbanization.

Some regions turned exclusively to industrial production and others to producing food to feed the industrial centers. Thus emerged a mutually dependent relationship between agrarian and more densely populated industrial regions. The agricultural regions responded with greater productivity to reflect the growth in the urban and quasi-urban centers.

Population

Population growth is seen as characteristic and a by-product of this economic expansion. Two main reasons are sighted: one was younger marrying age that led to a surplus of births relative to deaths. In the classical model of demographics in the Middle Ages of Europe, population was socially controlled. It was kept in check in accordance with the amount of resources. Governmental and domainal control kept the marriage age high to reduce fertility. Marriage age was used as a regulator to balance the population. "In this way, the population as a whole was kept back from the Malthusian abyss" (KMS, p. 76). Feudal agrarian economics also acted as a mechanism holding back sustained population growth. Periods of expansion were smothered. "[E]ventually the rising number of people, rising grain prices, on the one hand; [and] increasing feudal rents and falling marginal returns on the other hand, 'cut short' each phase of population expansion, as well as 'each period of economic growth before the point at which they became self-sustained and progressive'" (KMS, p. 77).

However, protoindustrialization released this connection to the land and the socially imposed constraints. In Mendels' European model, demographics are seen as a conditioning

variable exerting an influence on protoindustrialization and the emergence of rural industry. He made the following general conclusions based on a dynamic of mutual interactions. First, the income derived from cottage industries allowed peasants to multiply without having to increase the amount of farmland to feed the additional population. He went on to note it appears that further increases in manufacturing in some regions took place *in response to* population growth. Protoindustrialization tended to take place in those regions with the fastest demographic growth (Mendels, p. 252–53). Mendels presents a dynamic between the two that grew out of a disconnection of land and labor.

The peasantry participating in rural industry was now dependent on regional or overseas markets for their survival. The labor force itself became an engine for demand. As competition increased, and while the factories were still labor intensive, only an increase in population could guarantee continued expansion and profits. In fact, in the mercantile state it became a strategic necessity to stimulate population growth. Medick quotes Malthus in this regard:

The precise measure of the population in a country . . . will not indeed be the quantity of food . . . but the quantity of employment. The habitual practice of task work, and the frequent employment of women and children, will affect population like a rise in the real wages of labor . . . on the other hand the paying of every sort of labor by the day, the absence of employment for women and children, and the practice among laborers of not working more than three or four days in the week either from inveterate indolence or any other cause will affect population like a low price of labor. (quoted in KMS, p. 79)

In an important contribution to the debate on protoindustrialization, Osamu Saito, in a 1983 seminal article, pointed out fundamental differences in the Japanese model. His essay called into question the validity of the application of the European model. Much of his critique centered on demographics. While he recognized the general pattern of protoindustrialization, Saito argued that connections to the European model predicated on this dynamic of population and pre-industrial growth was not applicable. First, there was no fall in the age of women at marriage. Saito cites many other researchers who indicate that the mean age of first marriage was already low compared to European countries (Saito, p. 35).

Second, in contrast to the European model, the development of rural industry was the *result* - not the cause of population growth. In the seventeenth century rural population for the most part had reached its maximum. That is, farm plots could no longer be divided to pass down to descendants. From the Genroku Period (1688-1704) onward to the first half of the nineteenth century, when Japan went through its greatest preindustrial expansion, the population of towns was generally stagnant or declined (Smith, 1973: p. 129).

A decade earlier, Smith supported the Saito's argument of, what one could call, a 'Japanese variant'. He noted exceptions caused by the particular nature of feudalism in Japan. He stated that most of the population increase took place in the 1700's. It was the policy of the shogun to move the samurai class to the castle towns. Merchants and artisans gathered there, and the practice of crafts and trade outside the castle towns was restricted. Regulations were enacted to in order to keep the peasantry occupied exclusively with farming, and to regulate taxation in towns. As noted, this policy of political centralization and Tokugawa imposed peace, yet had the ultimate effect of economic decentralization as it created the conditions for the economic expansion that was to follow.

Despite efforts to regulate industry of towns to maintain the agrarian feudal order, trade and industry spread into the surrounding countryside. They eventually competed with those in the urban areas. Smith postulates that this was the source of the decline in population. The drain from the towns was countered by the growth of small towns throughout the countryside. His thesis is population stagnation - and deflation of towns was *a function* of growth (p. 130, 139).

The result of all these factors was the creation of demand for new products and services not based on barter or obligation. In the protoindustrialization structures networks of local, regional, national and international trade developed. At this point in the evolution of this economic model, these new markets and regions of production generated demand. "Needs were aroused which had hitherto simply gone unsatisfied, or had been satisfied in other ways. Peasant production-unit could become a relevant factor, generating demand, when it specialized in producing either agrarian or industrial goods" (Kriedte, et.al., 142). Petty capitalist economics were instituted and the seeds for capitalism sowed.

Expansion of Rural Industrial Output in Rural Choshu: Smith (1973)

In the context of this historical-economic model background we focus again on Tokugawa economic growth. One fundamental character of pre-industrial development in Europe is obvious in the case of Japan. There is ample anecdotal and archival evidence of an industrious rural sector. In his 1969 article "Farm Family By-employments in Preindustrial Japan", Thomas C. Smith provides a case study of the Kaminoseki County in Western Japan. From the statistical data, we are able to get a clear picture of the extent of non-agricultural output in rural areas during the Tokugawa period. I include Smith's findings to reinforce the amount of industry that was taking place in rural areas. It is hoped that the raw data clearly demonstrates the extent to which the shackles that tied the peasantry to agriculture had been

TABLE 1 FARM AND NONFARM FAMILIES

<i>Place</i>	<i>Farm families (percent)</i>	<i>Nonfarm families (percent)</i>
Ohano	96	4
Kamitafuse	96	4
Ono	93	7
Usagi	93	7
Ihonosho	91	9
Shimotafuse	82	18
Hano	73	27
Ogo	86	14
Ogun	92	8
Okuni	81	19
Saga	88	12
Hirao	45	55
Sone	84	16
Befu	67	33
Murotsu	44	56
Kaminoseki County	82	18

Source: Smith, 1973: p. 692. (*author's emphasis*)

TABLE 2 AGRICULTURAL AND NONAGRICULTURAL INCOME

<i>Place</i>	<i>Agricultural Income (percent)</i>	<i>Nonagricultural Income (percent)</i>
Ohano	77	23
Kamitafuse	74	26
Ono	66	34
Usagi	57	43
Ihonosho	57	43
Shimotafuse	51	49
Hano	46	54
Ogo	46	54
Ogun	44	56
Okuni	41	59
Saga	39	61
Hirao	28	72
Sone	23	77
Befu	19	81
Murotsu	17	83
Kaminoseki County	45	55

Source: Smith, 1973: p. 693. (*author's emphasis*)

released by rural industrialization.

In 1840, the Choshu Han authorities conducted a survey to gather information in a number of statistical categories to assess population and economic activities. Smith admits the possibility of omissions and biases. He also notes corrections, approximations and technical explanations are footnoted in an appendix. "From the corrected figures it is possible to calculate the output and income by sector, although the results should be regarded as no more than approximations" (Smith, 1969: 690).

Figures from Table 1 indicate a strongly agricultural country. The last figure shows that overall in Kaminoseki County, 82 percent of households were classified as farm families. 18 percent were classified in nineteen occupational categories.

Table 2 (following page) shows that despite being an overwhelmingly agricultural region, Kaminoseki received more than half of its income (55%) from non-agricultural endeavors.

TABLE 3 IMPLIED PRODUCTIVITY OF FARM AND NONFARM FAMILIES

<i>Place</i>	<i>Nonfarm Families (percent) (1)</i>	<i>Nonagricultural Income (percent) (2)</i>	<i>Implied Productivity of Nonfarm Families ÷ Agricultural Productivity of Farm families (3)</i>
Ohano	4	23	6.67
Kamitafuse	4	26	7.83
Ono	7	34	6.73
Usagi	7	43	10.64
Ihonosho	9	43	7.29
Shimotafuse	18	49	4.46
Hano	27	54	3.12
Ogo	14	54	6.98
Ogun	8	56	14.58
Okuni	19	59	5.93
Saga	12	61	10.99
Hirao	55	72	2.07
Sone	16	77	17.34
Befu	33	81	8.29
Murotsu	56	83	3.82
Kaminoseki County	18	55	5.56

Note: (Nonagricultural income ÷ nonfarm families) ÷ (agricultural income ÷ farm families).

Source: Smith, 1973: p. 693.

In Table 3, Smith supposes each occupation, farming and non-agricultural rural industry, *only* produce in their respective economic sector. If that were the case he calculates the difference in productivity. The factor ranges from 2 to 7 times larger for nonagricultural output. Smith points out three factors that might explain the discrepancy of the picture these figures provide. First, is the possibility of underreporting of farm income. He rejects this possibility as unfounded and having no grounds for anyone falsifying such data (ibid., p. 694). Second, the relative productivity of non-farm and farm production. It is certain that non-farm productivity was much higher, but cannot be as high the 5.56 times for the entire county (column 3) . “Such comparisons suggest an average productivity ratio, on a man-day basis, of about 1.5 to 1, or on an annual basis - if it is assumed that non-farm families worked 300 days a year and farm families 182 - of 2.47 to 1” (ibid., p. 695). This is a figure more in line with studies done concerning European and American studies of productivity in similar stages of economic

TABLE 4 FARM FAMILIES AND NONAGRICULTURAL INCOME

<i>Place</i>	<i>Percentage of Nonagricultural Income Produced by Nonfarm Families (assuming productivity of nonfarm families = productivity of farm families \times 2.47 \times nonfarm families</i>	<i>Percentage of Nonagricultural Income Produced by Farm Families</i>	<i>Percentage of Farm Family Income from Nonagricultural Production</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>
Ohano	37	63	16
Kamitafuse	32	68	20
Ono	37	63	25
Usagi	23	77	36
Ihonosho	34	66	34
Shimotafuse	55	45	30
Hano	79	21	19
Ogo	35	65	43
Ogun	17	83	52
Okuni	42	58	45
Saga	22	78	54
Hirao*	58	42	52
Sone	14	86	74
Befu	30	70	74
Murotsu	65	35	63

*In Hirao, nfYna figured as indicated above using 2.47 multiplier, exceeded Yna, undoubtedly owing to the very high agricultural productivity of farm families. Therefore 1.00 was used as the multiplier instead of 2.47 in this district.

- *Symbols:* fF = farm families, nF = nonfarm families, Yna = all nonagricultural income, fYa = agricultural income of farm families, nfYna = income of nonfarm families (= fYa \div fF \times 2.47 \times nF).

- *Computations:* Column (1): nfYna \div Yna, Column (2): 100- column (1), Column (3): fYna \div (fYa + fYna)

Source: Smith, 1973: p. 696.

progress (ibid., see note no. 19, p. 695). Finally, what this data demonstrates is that farm families members were working in other occupations as by-employment.

Finally, Table 4, column 2 provides an estimate of the income farm families derived from non-agricultural pursuits, and column 3 from agriculture. Clearly, farm families received a large percentage of their income from non-agricultural employments.

From the same Choshu survey, Smith provides an anecdotal account from one village:

Every able-bodied person works at salt-making and other employments insofar as farming permits . . . In free time from farming, men make rope and rush mats and other articles by hand; and women work in the fields from the third to the eighth month and during the rest of the year devote themselves exclusively to weaving cotton cloth, not even taking out time to cut firewood and gather grass for compost. (p. 697)

In sum, these figures and anecdotal accounts such the one quoted above show the extent to which farm family participated and relied on secondary occupations.

Result: The Transformation of the Peasantry and Labor

An important point to note, is the similarity to the European protoindustrialization model. Japan is the earliest non-European, non-American state to enter the ranks of industrial states. Smith's statement regarding Japanese by-employments and industrialization seem to re-enforce the model: "By-employments, one may suppose, tend to ready preindustrial people for modern economic roles since they represent an incipient shift from agriculture to other occupations, spread skills useful to industrialization among the most backward and numerous part of the population, and stimulate ambition and geographic mobility" (Smith, 1969: 687).

As noted earlier, farm labor existed in many forms, especially *fudai* hereditary labor. Without land and stuck in their status group, they had nowhere to go as long as there was no other work available to them. And from the standpoint of the landowner contractual labor for which they were responsible to their workers *for only short periods* of time was also a desirable situation. By the year 1700 there was a labor shortage because trade and industry outpaced the growth of the population (Smith, 1959: 111). Other types of servants also saw their terms of employment shortened. "[L]abor was slowly being lifted out of its context of the social group and recognized as having value independent of social relations" (Smith, 1959: 116). Wage labor likely started in the industrial sectors because its output had a monetary figure affixed to it, and the calculation of investment and resulting output was easy to figure. When wage labor appeared, inevitably it quickly spread from one sector of the economy to another. This opened

up the labor market to day wage labor and migrant workers who traveled for season work (ibid., 118–9).

Despite its efforts, the shogunate tried to keep the peasantry on the land without success. Confucian scholars railed against the changes in the economy that was based on money. And further against the social change which had the samurai living in the urban areas like “travelers living at an inn” (Maruyama, 119) and kow-towing to the townsmen and merchants (ibid., 124) . There is no doubt that economic expansion was tearing at the feudal fabric of life.

The Hokkaido Fishery (Howell: 1995)

Having established the background of Tokugawa feudalism, and proto-industrialization as an explanatory tool for the transition to capitalism, the final section turns to changes in Tokugawa economic landscape. Much recent scholarship of Japan has used the conceptual model to good effect. Karen Wigen’s 1995 study of the papermaking region of Shinano demonstrated that it was the center of a protoindustrialization complex of industry and transportation. She showed evidence of evolution of capitalist production. Similarly, Conrad Totman narrates the development of the lumber industry in the Edo Period. He followed the interaction of the entrepreneurs and the suppliers of the wood (Totman, 1989, 1995). What follows is an application to the case of the evolution of the Hokkaido fisheries.

David Howell’s 1995 work, *Capitalism from Within*, follows the growth of the fishery in Hokkaido from the early days of the Tokugawa Period. Howell points to several reasons why this is a good case supporting the protoindustrialization paradigm. First, this is a clear case of rural industry for trade to distant markets. Second, unlike the cotton and silk textile manufacturing industries, fertilizer production is an example of a domestic industry unaffected by trade with the West after 1854. Finally, the features of 19th century protoindustrialization in the fishery contributed to the emergence of capitalist institutions (Howell, 1995: pp.9–10). What makes the case of Hokkaido - and indeed the phenomenon of protoindustrialization itself - notable is that it took place without the presence of a political order committed to supporting capitalist institutions.

In the feudal period, the Matsumae domain occupied a corner of the Oshima Peninsula in the southwest part of the island, the Wajinchi². They also controlled the affairs of the territories beyond its border, the Ezochi. Because of the harsh climatic northern latitude of Hokkaido

² I will stick to the conventions of scholarship of pre-Meiji Hokkaido that refers to the ethnically Japanese from the mainland as Wajin; and their territory the Wajinchi, distinct from Ezochi.

and the short growing season, it was unable to conduct agricultural production to justify itself within the feudal structures based on the *kokudaka* assessment system. The domain was an anomaly in the Tokugawa state; it existed as an intermediary between the Japanese state and the native Ainu (Howell, 1994: p. 79). They established a Wajinchi-Ezochi border sometime in the seventeenth century, and issued an edict calling for the border posts to be vigilantly guarded as part of the *sakoku* order. It also became part of the Matsumae *raison d'être*, that they could control - and profit from - the border. In practice it was porous and merchants paying a license to the domain were allowed across to conduct trade with the Ainu (Walker 2001: p. 44).

The early history of the Matsumae Domain on Ezo was characterized by sets of mutual dependencies. The domain provided licenses for merchants from Honshu to conduct fishing operations. These merchants provided capital to fishermen, or 'putting out', to family fishing operations, and for contract fishing operations. The fishing industry was responding to a demand for fish to be used in rice paddies in central Honshu. Tax collection on trade was the main source of revenue to the domain. In 1716 the Matsumae was granted full *daimyo* status, but because of its remoteness its *sankin-kotai* obligation was set at once every three to five years instead of the usual two. Still, this exerted a severe economic strain on domain finances. The Matsumae fell in to debt to the merchants, who in turn were indebted to the domain authorities for their right to conduct commercial activities. By the mid-eighteenth century the traders were permitted to move to more sophisticated trade to increase volume responding to the demand for fertilizer on the main island, where about half of the rice paddies there used fertilizer supplied from Ezochi (Siddle, p. 36). At the same time this satisfied the Matsumae's need for higher revenues.

A third leg of the triangle of mutual dependency existed between the merchants and the native Ainu living in the Ezochi. The traditional life of the Ainu was based on subsistent hunting, fishing and trapping. Over time they became dependent on selling their labor in order to get rice and other trade goods. They sought work in fishing camps set up along the coast of Ezochi by merchants at the behest of Matsumae officials. The Ainu leaders became reliant on displaying wealth in the symbolic value associated with trade goods such as grain, sake, clothing and lacquerware containers and utensils (Walker, 2001: p. 110). They were then forced to provide labor for commercial fishing operations in return. At the same time the merchants relied more and more on the Ainu as a source of labor. The Ainu's relation to the *Wajin* was changed from a mere object of mutual trade to obtain goods, to one where their cheap labor was an economic good itself. This would lead to a centuries of exploitation (Siddle, p. 37).

Within this context of Tokugawa feudalism and the nature of the Matsumae Domain, relations with Ainu, and emerging trade and demand for fertilizer the first pre-capitalist institutions appeared in the Hokkaido fishery. It is important to note that in this period the Hokkaido fishery was not a capitalist institution because of the position of labor. The Ainu were not free to establish an independent labor contract. They were paid in kind with rice and sake after the haul - if paid at all. Howell asserts the key element of capitalism is the situation of labor's ability to freely contract. "The contract fisheries, then, were not capitalist enterprises because their existence depended upon their privileged position within the domain, as symbolized by their monopoly over Ainu labor" (Howell, 1995: 46-47). At the same time the merchants suppressed a free market because it was easier for them to rely on the licenses for trade to central Honshu. Paradoxically, they were "capitalists' who needed feudalism to survive" (ibid., p. 49).

Transformation of Labor and the Use of Innovation and Capital

Later in the Tokugawa Period the elements of feudalism that prevented capitalist enterprise from emerging were pushed aside. Three factors played a direct role in this transformation of labor: the influx of *Wajin* labor, the pound trap, which represented a technological innovation and the rise of independent fishing operations.

Gradually *Wajin* labor entered the fishery workforce as Ainu populations declined due to diseases imported by the opening of trade and the contact with outside Ezochi (Walker, 2001: pp. 177–203). Many came because of the dire conditions in the northern Tohoku region, especially during the Temmei Famine of 1782-87 and Tempō Famine of 1832–36. "Ironically, Matsumae's lack of agriculture helped it through the scarcity because of its trade networks assured it sufficient income to secure food from areas not badly affected by the famine" (Howell, 1995: p. 58).

Along with imported rice they were able to survive on wild vegetables, and abundant fish. Like labor in other sectors of the agrarian economy, the fishery was seasonal-based on the run of fish which lasted no more than five months a year. In the off - season the *Wajin* fishermen engaged in preparations for the fishing season - mending equipment and such, as well as harvesting kelp, catching river species of fish and raising vegetables. The Matsumae strictly controlled the laborers working in Ezo, controlling how long they were allowed to stay in the territory and requiring that they returned to the *Wajinchi* after the fishing season. Most of them were contracted to merchants licensed by the authorities.

By the mid-nineteenth century when the *Bakuhau* temporarily took control of the affairs of Ezo, independent fishers were allowed to operate outside the monopoly. These upstarts also set

up permanent settlements in the Ezochi, some staying because they did not have enough money to return to the Wajinchi. It is in this period that contractual labor became common. Workers were hired by agents and transported to the fishery or hired when they arrived on their own, mostly from Tohoku. This is a key transition because no longer was labor tied to one fisher, nor able to be exploited as in the case of the Ainu. Now it was free to contract for a better wage and conditions. No longer were workers obliged to work under the licensed operations that sometimes bordered on servitude. Labor was bided for as it is in market conditions.

Technological innovation was another key transformation of the fishery. At the outset of the Hokkaido fishery relied on gill nets. They worked in small operations, two or three men handled the operation in one small boat. However in the mid-nineteenth century, the so-called pound trap was introduced. It represented a technological innovation transforming the fishery. It was big and unwieldy, even a small trap required a crew of at least fifteen to twenty men. It could land more in one haul than some small gill netting operations could in an entire season. "One late-Meiji writer estimated that a good pound-trap fishery was roughly equivalent to a substantial agricultural holding of about 250 *koku* of rice" (Howell, 1995: p. 68). The result of the new technology was that the fishery became more capital intensive. Second, it opened the way for independent fishers to challenge the monopoly the contracted operators (*ibid.*, p. 74).

Along with labor and new technology to use that labor more efficiently, the changing fishery depended on capital. In order to fund operations till the pay-off at the end of the season, it was necessary for the independent fishers to collect the necessary funds for food and equipment. If they were not able to fund their own operations, they would borrow capital from merchants. This was another way to break the dependence on the licensed operators. The merchants lent money at the beginning of the season in return for a share of the haul, or a lien on the catch, at a price below market level. Howell quotes a visitor to Matusmae in the 1780s

Whatever the fishers catch immediately goes to the merchants, who buy and sell among themselves to set a market price . . . The merchants receive twenty percent interest from fishers, who put up their houses, storehouses, and, and other things to get loans, but after taking another twenty percent of the return on sales, they end up with profits of nearly fifty percent. In this way merchants from outside make themselves rich in just a short while (Howell, 1995: p. 77).

Howell concludes that indigenous capitalism emerged in the Hokkaido fishery by the end of the Tokugawa period. The conditions Howell describes in great detail are much more complex to be included in the scope of this essay. The net effect was that the changes gradually

subverted the feudal structures that controlled Ezo: the border and the fish licensing system. It was a system that “anticipated” the reforms that would come in the Meiji period, and “assured the supremacy of capitalist production” (ibid., p. 88). However, Howell is cautious on proclaiming a direct cause and effect of protoindustrialization leading to capitalist institutions. On the other hand, it cannot be denied as other scholars have noted, it did create fertile ground for their emergence.

In conclusion, if proto-industrialization was not the direct cause of capitalism in Japan, it was a symptom of stress in the structure of feudal polity. This correlation is perhaps about as much as we can ask of the concept of protoindustrialization as an explanatory tool. After all, the push for structural transformation was not a foregone conclusion; the rent-seeking tendency of feudalism was much more the ‘natural’ state of affairs. (Howell, 1995: p. 91)

What Howell demands from the model is the looser interpretation of Jurgen Schlumbohm (KMS, p.10), who saw protoindustrialization as occurring in regional microcosms in areas such as Hokkaido (and other areas in Japan). This model is opposed to his co-authors Kriedte and Medick - and Mendels as well, who saw it as a distinct stage between feudalism and capitalism. In the case of Hokkaido, Howell sees the model as explaining “a series of interrelated developments” which served to “undermine feudalism and replace it with something new - capitalism” (1995: p. 92).

It beyond the scope of this essay to comment directly to the strong European variant. The deterministic aspects will probably never be worked out to the satisfaction of all critics of the *industrialization before industrialization* theory. I think it is enough to say that the phenomenon discussed in this paper can surely be demonstrated in regional terms within the system as a whole. It is seen in such cases as Hokkaido fisheries, Smith’s study of Choshu Han, and other noted studies not covered in detail. Protoindustrialization is a valuable theoretical framework in which view the nature of the transformation of feudal structures, and the interaction of labor, capital, and the rise of markets. It provides lens with which to see the dynamics disintegration of feudalism that accompanied other political, social and ideological factors.

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Proto - Industrialization in Tokugawa Japan

Martin J. Murphy

This research examines the process of early capitalism in Japanese history. Generally it is thought that capitalism developed in the years leading to the Meiji Restoration. Like European models of early capitalist development in handicraft and cottage industries, Japan went through a similar process. Development of rural trade and small-scale capitalism sowed the seeds that broke feudal bonds and resulted in the mass factory system that made modern capitalist Japan.

徳川時代のプロト工業化

この研究は日本の歴史の早期資本主義の過程を分析します。一般にそれは明治維新に至るまで発展しています。ヨーロッパモデルのような早期資本主義は、手工芸や家内工業などから発展しています。日本も同じような過程を通っています。

(マーフィー・マーティン 札幌学院大学人文学部講師 アジア研究専攻)