

PUBLIC COTTON SPINNING COMPANIES AND THEIR
MANAGERIAL CHARACTERISTICS, 1870-1890*
—A COMPARATIVE STUDY OF FOUR COUNTRIES—

SHIN'ICHI YONEKAWA

The purpose of this paper is to compare the management of cotton spinning public limited companies in the U.K., the U.S., India, and Japan. Attention is focussed on the transfer and transformation of the institution of the public limited company. Compared with technology transfer, which has so far attracted a number of economic historians, little attention has been paid to the institutional transfer, but it is the author's view that this transfer is a fascinating topic for research. The initial emergence of an economic institution in a country is always based on the organizer's motivations and ideas, which have been produced in, and reflect, the business climate of that country. Although the institutional form may be imported to a less advanced country, as far as economic usefulness (utility) is concerned, the ethos that produced that form is absent. Accordingly the imported institution is transformed to adapt to the business climate of the new country, with the result that while the form may be similar in both countries there is a considerable difference in the mode of management.

The emergence of the public limited company marked the dawn of managerial capitalism, and, as is widely known, cotton spinning was the first area of industry in the major countries where the public limited company firmly took root. Furthermore, the greatest boom in the floatation of public cotton spinning companies occurred almost simultaneously in four countries in the 1870s and 1880s. In Great Britain it arose in the Oldham district in 1873-5. The U.S. equivalent of Oldham was Fall River, Mass., where the boom came one year earlier than in the Oldham district. A phenomenal cotton-mill construction mania raged in Bombay simultaneously with that of Fall River. In Japan the major boom in floatations occurred in 1887-9, around fifteen years later than in the other three countries although they were dispersed over the country. Of these four cases the Oldham boom was by far the largest in terms of the number of companies, although more than half of them were so-called 'turn-over' firms. Quite interestingly the three other booms in Fall River, Bombay and Japan each produced around fifteen to twenty firms accompanied by mill construction. These companies were mainly engaged in producing yarns of medium or low counts, and the cloth made from them was sold in the markets of Asia.¹ Comparative

* My analysis of the floatation booms themselves is to be published in *Business History Review* this year. I am most grateful for Dr. A. D. Farnie of the University of Manchester for his comments on this paper.

¹ A considerable amount of clothes had been exported from the United States to Manchuria; around the turn of the century, the main manufacturer of these exported items was the South. However, a quite large volume of cloth made in Massachusetts state was exported to Asian countries in the middle of the last centuries. F.M. Peck and H.H. Earl, *Fall River and its Industries*, 1877, p. 92; H.R. Burrill and R.F. Crist, *Report on Trade Conditions in China*, Washington, 1906, p. 103ff.; W.A.G. Clark, *Cotton Goods in Japan and Their Competition on the Manchurian Market*, U.S. Department of Commerce, Special Agents Series

studies require that the subject of study should show similarities with regard to the time, the industry, and the business form to be compared. It is clear from the facts stated above that a group of these public cotton spinning companies and their management offer a highly significant case study of institutional transfer and transformation. English cotton spinning companies are observed in the first section, in which attention is paid to the transformation of management philosophy between two different types of institution: co-operative societies and public companies.²

I

In Great Britain nearly all of the ten largest spinning firms in 1884 were family businesses which had originated during the first half of the nineteenth century.³ However, this does not necessarily mean that the companies originally founded as public limited companies played only a small part in late-nineteenth century Britain. On the contrary, the public limited companies, many of whom frequently referred to as the Oldham limiteds,⁴ commanded a strategic role in the British cotton industry, because 'our private spinners have not been equal to the emergence of foreign competition. With their old mills, they would have stood a poor chance of holding their own.'⁵

The first floatation boom came a few years after the Companies Act was enacted in 1856.⁶ There is no positive evidence that those concerned with the cotton industry played

No. 86, 1914, p. 227ff.; M.T. Copeland, *The Cotton Manufacturing Industry of the United States*, 1923, pp. 223-5.

² Needless to say, a considerable number of companies with limited liability had been founded by loyal charters or special acts by the enactment of the first companies act in 1856. As it is described below, however, the predecessors of public limited companies in Lancashire were not these large companies located in London.

³ Shin'ichi Yonekawa, "The Growth of Cotton Spinning Firms: A Comparative Study," in A. Ōkōchi and S. Yonekawa, eds., *The Textile Industry and Its Business Climate*, 1982, pp. 4-5.

⁴ For a general description of the Oldham limiteds, see the following: T. Ellison, *The Cotton Trade of Great Britain*, 1886, pp. 133-40; T. Vogelstein, *Organisationsformen der Eisenindustrie und Textilindustrie in England und Amerika*, 1910, pp. 114ff.; J.H. Clapham, *An Economic History of Modern Britain*, Vol. 2, pp. 140-4; J.B. Jeffreys, "Trends in Business Organization in Great Britain since 1856," Ph.D. Thesis, University of London, 1938, pp. 84-96; R. Smith, "A History of the Lancashire Cotton Industry between the Years 1873 and 1896," Ph.D. Thesis, University of Birmingham, 1954; D.A. Farnie, *The English Cotton Industry, 1850-1896*, Unpublished M.A. Thesis, University of Manchester, 1953; F. Jones, "The Cotton Spinning Industry in the Oldham District from 1896 to 1914," M.A. Econ. Thesis, University of Manchester, 1959; D.A. Farnie, *The English Cotton Industry and the World Market, 1815-1896*, 1979, pp. 244-76; R. Smith, "An Oldham Limited Liability Company, 1875-1896," *Business History*, Vol. 4, 1967. Regarding company histories, see *Royton Spinning Co. Ltd., 1871-1951*, 1951, and *The Shiloh Story, 1874-1974*, 1974.

⁵ *The Oldham Chronicle*, 11 October 1977, 8vii. Mill-construction spinning firms at that time were usually such public limited companies as the Oldham limiteds. The birth of companies of this type was conducive to the phenomenal increase in the spindleage in Lancashire. Although these spinning companies would not be counted among the largest companies of today's standard, they could still be considered large-scale at that time. D.A. Farnie's view that the limiteds had not remoulded the economy of Lancashire upon the pattern of Oldham up to 1890s may be right. Its influence, however, became dominant by the First World War. D.A. Farnie, op. cit., 1979, p. 228.

⁶ *Co-operator*, 15 March 1867, pp. 309-10; J. Watts, *The Facts on the Cotton Famine*, 1866, pp. 341-2. D.A. Farnie, op. cit., 1979, pp. 217-9, and p. 226, Table 13.

a major role in the enactment of the act.⁷ Indeed, private manufacturers in Manchester cried out against it, fearing that it would cause speculation and produce stiff competition against them.⁸ Whatever the case, what is certain, as has been clearly described by D. A. Farnie, is that the most enthusiastic organizers of the cotton spinning companies were those associated with the co-operative movement.⁹ What has not been explored is why these men became involved in founding public companies within their co-operative movement. This needs a logical historical explanation.

Despite, or rather because of, a rapid increase in population, orderly commercial distribution networks had not yet been constructed in the Lancashire of the 1840s. It was therefore an inspired innovation for people in Rochdale acquainted with each other to organize a distributive co-operative society.¹⁰ In addition to the interest on 'share capital' supplied by members, each member was entitled to receive a 'dividend' in proportion to his purchases.¹¹ Members also enjoyed mutual comradeship. It was maintained that the management of the society should be open and democratic, in contrast to that of commercial banks and private firms, which was closed and aristocratic. Following initial success the number of members rapidly increased. The Rochdale Equitable Co-operative Society and its success was such that a local bank at Rochdale had to be closed.¹²

Observing the phenomenal success of the Rochdale co-operative society, a magnitude of co-operative distributive societies sprang up in Lancashire and Yorkshire like mushrooms after a rainfall.¹³ In the course of time what became a major problem for these societies was not the shortage, but the surplus, of deposited capital. This problem was common to a number of co-operative distributive societies in Lancashire.¹⁴ The Industrial and

⁷ However, pay attention to the following speech in the House of Commons: "I have in my possession letters from persons of that (working) class who are desirous to establish, for example, a cotton-mill by means of a company with 1 shares." *Hansard*, Vol. CXXI, 1 February 1856, p. 127. On the day of laying the corner-stone of the Sun Mill a letter from R. Stanley, a M.P. was read. He "laboured to get introduced the Limited Liability Act." W. Marcroft. *Sun Mill Company Limited: Its Commercial and Social History*, 1877, p. 40. "The most earnest and persistent advocate of legalising the principle involved in the conception could scarcely anticipate the remarkable popular development it has had—extraordinary result to which it had led and leading in South East Lancashire, and more particularly at Oldham," *The Oldham Standard*, 10 June 1875, 8iii.

⁸ J.B. Jeffreys, op. cit., pp. 17ff. It contains a great deal of interesting evidence relevant to the discussion of the problem of limited liability problem in the period in question.

⁹ D.A. Farnie, op. cit., 1979, pp. 217-20.

¹⁰ G.J. Holyoake, *The History of Co-operation in Rochdale*. 1872; S. Pollard, "Nineteenth Century Co-operation from Community Building to Shopkeeping," in A. Briggs and J. Saville, ed., *Essays in Labour History*, 1960, 1977; A.E. Musson, "Ideology of Early Co-operation in Lancashire and Cheshire," *Trans. of Lancashire and Cheshire Antiquarian Society*, Vol. 68, 1958.

¹¹ This was not surprising, because the interest paid was higher than that paid by commercial banks, and furthermore the "dividend," that is, rebate on total purchases, was around 10 percent. Since the 1840s many people in Lancashire had become quite well-off, and a sizable "labour aristocracy" had developed. The phenomenal success of co-operative societies attracted not only working people but also petit bourgeois who saw in the society an opportunity of amassing snug little fortunes for themselves. People such as this flocked to the co-operative society.

¹² G.J. Holyoake, *The History of the Rochdale Pioneers*, 1893, pp. 30-31. While local banks paid 2.5 percent on deposits, the co-operative societies could pay 5 percent interest on their share capital. *The Oldham Chronicle*, 21 July 1877, 7iii.

¹³ "Bird's-Eye View of Sales in Each Country, 1862-1880," *Co-operative Wholesale Society, Annual for 1881*, pp. 82-93.

¹⁴ "Working men can conduct stores; but the now most difficult matter before the Co-operators of Lancashire is, how and where to invest their surplus funds." *Co-operator*, 1 February 1867, p. 265, "Co-operators

Provident Act of 1852 limited a member's maximum share to £100, this maximum being raised to £200 when the act was revised in 1862.¹⁵ Rapid accumulation of capital meant success for the movement, because it was caused by the providence of members trying to provide themselves with a ladder to the middle class. On the other hand, the very principle of their existence meant they could not develop to other towns.¹⁶

Measures against the oversupply of funds took two directions; one was the placing of a limitation on the supply of funds, the other the securing of new outlets for surplus funds. In the former case the interest rate might be lowered or the number of members limited, although there tended to be strong opposition from members on the grounds that such measures were contrary to the co-operative principle.¹⁷ Rather more often, though, the maximum share of each member was cut.¹⁸ In their attempt to secure new outlets for funds, leaders of the societies followed a policy of diversification,¹⁹ which resulted in, among other things, their setting their hands to productive activities.²⁰ The productive co-operative societies thus created, however, encountered a barrier under the Industrial and Provident acts. This resulted largely from the fact that the available capital was withdrawable, and accordingly not adaptable to fixed investment. Another problem was that the societies had to supply members with finished goods, so that they could not engage in the produc-

have too much money, and don't know what to do with it." *Co-operative News*, 24 February 1877, p. 90. "At the commencement the difficulty was to get the capital. Now that it was got, they were puzzled what to do with it." *Co-operative News*, 16 May 1885, p. 431. *The London Times*, 19 December 1862, p. 6iv-v; G.J. Holyoake, *The Jubilee History of the Leeds Industrial Co-operative Society*, 1897, p. 78; W. Millington, *Runcorn and Widnes Industrial Co-operative Society Ltd., Jubilee History of the Society, 1862-1912*, 1912, p. 115; J.H. Priestley, *The History of the Ripponden Co-operative Society Limited*, 1932, p. 75.

¹⁵ 15 & 16 Victoriae, C. 31, 1852; 25 & 26 Victoriae, C. 87, 1862. E.V. Neale, "The Legislation relating to Industrial and Provident Societies, *C.W.S., Annual for 1887*," pp. 344-74.

¹⁶ F.W. Peaples, *History of the Great and Little Bolton Co-operative Society Limited, Showing Fifty Years Progress, 1859-1909*, 1909, pp. 37, 75; J.H. Ogden, *Failsworth Industrial Society Limited, Jubilee History, 1857-1909*, p. 136; J. Bennett and J. Baldwin, *City of Bradford Co-operative Society Limited, 1860-1910*, 1911, p. 145; J.H. Priestley, op. cit., pp. 113-5.

¹⁷ O. Balmforth, *The Huddersfield Insudtrial Society Limited, History of Fifty Years' Progress, 1860-1910*, 1911, p. 174; J.H. Priestley, op. cit., p. 91. Proposals to lower interest rates were often rejected on the basis of the co-operative principle. C. Walters, *History of the Oldham Equitable Co-operative Society Limited, 1850-1900*, 1901, p. 132; O. Balmforth, op. cit., pp. 117, 126; G. Knight and A. Farrington, *History of the Radcliffe & Pilkington District Co-operative Society Ltd., 1860-1910*, 1910, p. 116. Another measure was to limit the number of members from one household to a single person. W. Hartley, *Fifty Years of Co-operation in Bingley*, 1900, p. 74; S. Partington, *Jubilee of the Middleton & Tonge Industrial Society Limited*, 1900, p. 92; C. Walters, op. cit., p. 104; T. Boydell, *The Jubilee History of the Leigh Friendly Co-operative Society Limited, 1857-1907*, 1907, p. 211; J. Haslam, *Accrington and Curch Industrial Co-operative Society Limited, 1860-1910*, 1910, p. 103.

¹⁸ Failsworth Industrial Society, for example, lowered the maximum share from 200 to 150 in 1883 and again from 150 to 100 in 1885. J.H. Ogden, op. cit., p. 70, 117, 128, 133, etc.; S. Partington, op. cit., pp. 74, 87; T. Boydell, op. cit., p. 212.

¹⁹ Housing loans and the building of houses to members were also common measures for using up surplus capital. G.J. Holyoake, op. cit., p. 90; W. Hartley, op. cit., p. 100; F.W. Peaples, op. cit., p. 168; W.E. Baxendale, *Sowerby-Bridge Industrial Society Limited, Jubilee History, 1860-1910*, 1910, p. 43.

²⁰ First they created a production department within their own society; and secondly co-operators founded separate productive societies which distributed their manufactured goods to a number of distributive societies. The Great and Little Bolton Co-operative Society built up a number of productive departments, employing ten to fifty workers in 1880s. F.W. Peaples, op. cit., p. 143, pp. 179-80; W. Hartley, op. cit., p. 75, etc. Many articles have been written concerning the co-operative productive societies. *New Statesman, Special Supplement on Co-operative Production and Profit-sharing*, p. 12ff.; J.G. Gray, *Co-operative Production*, 1886; B. Jones, *Co-operative Production*, 1894.

tion of semi-finished goods, such as, for example, yarn.²¹ Over the course of time they tended to invest their oversupplied money in a variety of securities which led to criticism by members.²² The failure of the co-operative productive societies was in strong contrast to the success of the co-operative distributive societies.

In fact the two commonest reactions of societies confronted with an oversupply of capital were firstly to advance loans to other co-operative institutions, and secondly to bring down the maximum share of members.²³ The Oldham Industrial Co-operative Society, for example, lowered the member's maximum share five times during the 1870s-1890s, bringing it down from £200 to £20.²⁴ Oldham people had to seek for outlets for their savings,²⁵ and co-operative leaders were requested to find an outlet for members' savings. It is symbolic that two years after the Society first reduced the maximum share from £200 to £100 in 1871 the largest boom in the floatation of public cotton-spinning companies took place.

In the space of three years seventy-six public spinning companies were organized in the Oldham district, although 'turnover' companies were in a majority in the first and last stages of the boom.²⁶ It is well-known that these companies were spurred on by the great success of their forerunners which had come into being since the Companies Act of 1856. The leading firm of these forerunners was the Sun Mill Company, upon which all followers were modelled. The Sun Mill Co. had been organized as the Oldham Building and Manufacturing Company Limited in 1858 and was modelled after the Rochdale Co-operative Manufacturing Society.²⁷ What must be emphasized here is the underlying management

²¹ Considerable amount of discussions on co-operative production appeared in *Co-operative News* in the 1870s. *Co-operative News*, 30 January 1875; 6 February 1875; 26 February 1876; 6 May 1876; 27 October 1877, etc. "Failures of Co-operative Productive Societies, 1850-1880," *Co-operative Wholesale Society, Annual for 1883*, pp. 167-7.

²² Runcorn and Widnes Industrial Co-operative Society invested in the United Alkali Co. and Halifax Industrial Society, which were deeply involved in investment in securities of foreign governments, with the result that the proportion of securities investment to total share capital went up from 44 percent in 1870 to 68 percent in 1974. W. Millington, op. cit., p. 128; M. Blachford, *The History of the Halifax Industrial Society, Limited*, 1901, pp. 106-16, 126.

²³ W. Hartley, op. cit., p. 82; C. Walters, op. cit., p. 58; J.H. Ogden, op. cit., p. 70; F.W. Peaples, op. cit., p. 179; J. Bennett and J. Baldwin, op. cit., pp. 86, 118; O. Balmforth, op. cit., pp. 69, 76; G. Knight and A. Farrington, op. cit., p. 76.

²⁴ J.H. Ogden, op. cit., pp. 70, 117, 128, 133, etc.

²⁵ *The Oldham Standard* stated that "the working classes were never so prosperous as at the present time—certainly their wages were never so high." (3 March 1874, 5v.). *The Oldham Chronicle*, 13 February 1975, 8vi.

²⁶ At the beginning the floating boom began in rather wider area of Lancashire which included Darwen, Hyde, Heywood, and Stockport, but afterward tended to be centred in the Oldham district. Many companies, say Croft Bank, Holyrood, and New Earth, which were organized at this stage did not succeed in their management. Some of the companies whose foundation was advertized in local newspapers were never registered. The gigantic floating boom of mill-building companies started from the spring of 1874. The 'feverish excitement' in the share market was subdued in the summer, but on the coming of winter it was restored. *The Oldham Standard*, 23 May 1874, 5iii; June 4 1874, 4vii; 2 February 1875, 5i, etc. It took more than two years for mill-building companies to set about operating their mills. The boom in floatation, therefore, focused on the turnover of existing companies on the turn of the year. *Ibid.*, 6 February 1875, 8ii. Concerning a general description of the boom, see D.A. Farnie, op. cit., pp. 251-4. An excellent case study in reference to the business activities of four Oldham limiteds in their formative years is found in the followings. R. Smith, op. cit., 1954, Ch. 3, pp. 130-203; the same, op. cit., 1961.

²⁷ W. Marcroft, op. cit., 1877; "Mills and Their Progress, No. 1, Sun Mill," *The Oldham Standard*, 13 July 1907, 14iv; R.E. Tyson, "The Sun Mill Company Limited—A Study in Democratic Investment, 1858-1959," M.A. Thesis, University of Manchester, 1962. Rochdale Co-operative Manufacturing Society was registered under the Industrial and Provident Societies Act; this act made it possible for co-operative societies

philosophy of these 'co-operative spinning companies' and its concrete manifestations. The founders of these companies asserted that the promoion of spinning companies was not contrary to the co-operative principle, that it meant co-operation of capital with the object of running a large mill able to compete with the mills managed by private spinners, and that the management had to be 'democratic.'²⁸ Regardless of the credibility of such statements, the significant fact is that long after the ethos of the co-operative movement was dispelled in the management of these spinning companies, the characteristic methods of company management were left untouched, and this continued up to this century.

Limited liability companies were entirely new to Oldham people when the Sun Mill was founded.²⁹ As a matter of fact, working people in Oldham, including the mill's organizers, had no idea how to manage companies, so they had no choice but to rely upon their experiences in co-operative society management. It was their success in co-operative management that led them to attempt the promotion of a company. The consequence was that the Sun Mill Company had certain particularities regarding its management during its formative years.³⁰ These demonstrate that the company's management policy did not differ greatly from that of co-operative society.

Such managerial characteristics were not maintained for sufficiently long for them to be transferred to more than a few of the mass of 'co-operative' companies which grew up in 1873-5. The company 'in its early history was too democratic in business to be practical.'³¹ Nevertheless, there remained three characteristics of the management that pointed the direction for the strategy of public cotton spinning companies up to this century; these were the 'democratic' nature of management and its organization, localism, and their particular finance system. Each of these characteristics, which are, of course, interrelated, will be described below.

It is a well-known fact that in the companies founded in the years before the boom of 1873-5 there were a great number of single share holders, these shareholders being working

to issue transferable shares. As a result the shares of the society were circulated in the Oldham share market. The society was actually converted into a limited company during the First World War under the provisions of the Industrial and Provident Societies Act. The Act of 1862 first permitted the issue of transferable shares, but co-operators often objected to doing so. W. Nuttall, *Co-operative Share Capital, should it be transferable or withdrawable?* 1872; *Co-operative News*, 28 May 1874, p. 283; T. Boydell, op. cit., pp. 226-8; J.H. Priestley, op. cit., p. 110; Regarding Rochdale Co-operative Manufacturing Society, see *Co-operative Wholesale Society: Annual for 1883*, pp. 165-7; B. Jones, op. cit., pp. 260-5.

²⁸ One object of the Industrial and Provident Societies Act was "for the frugal Investment of the Savings of the Members." 15 & 16 Victoriae, Cap. XXXI. In this regard the initiators of the "co-operative spinning companies" maintained that the founding of limited companies under the companies Act was not contrary to the principle of the co-operative society. In general, however, co-operators increasingly criticized "co-operative companies" in the boom and the following years of depression. *Co-operative News*, 5 February 1875, pp. 66-7; 22 July 1876, p. 395; 17 November 1877, pp. 625-6; 5 February 1879, pp. 66-7. W. Marcroft, *The Companies' Circular*, 1879, p. 16.

²⁹ Its founders resolved to print its memorandum of association on a large sheet "which, in size and appearance, bore a great resemblance to Old Moore's Almanack," and at the bottom of which was printed the sentence "The word limited means, that persons taking shares in this country will be responsibly for the amount of shares taken by themselves. No further claims can be made by the company, or its creditors, under any circumstances." Company File (hereafter as C.F.), 1119/1.

³⁰ Some of shareholders worked in the company. Shareholders are entitled to attend the meetings of the board. A redemption fund had to be created to advance loans upon, or to purchase, distressed shareholders' shares. Interest was added to the principal quarterly. The last was applied to almost all of the companies organized during the boom until they began to operate.

³¹ W. Marcroft, op. cit., 1877, p. 69.

people of the Oldham district.³² Such single shareholders decreased in number, especially in companies which were organized in the 1880s, but did not disappear. At Shiloh Cotton Spinning Company (hereafter C.S.C.) which was registered in 1874, of 288 shareholders a considerable number owned one share only; furthermore, forty-two shareholders designated their occupation as labourer.³³ Figures of shareholding in eighty-two companies registered prior to the end of 1875 showed that shares were widely dispersed; forty percent of the total number of companies consisted of more than three hundred shareholders; moreover of eighty-two companies more than twenty percent had over five hundred shareholders.³⁴ There was a strong contrast between mill-building and 'turnover' companies regarding the presence of large shareholders,³⁵ but many of the latter gradually changed their hierarchical shareholding structure, so that by the end of the last century the difference in the structure of shareholding and mode of management between the two types of company had become blurred. With regard to mill-building companies, in forty companies the directorate controlled well under ten percent of the shares.³⁶ Directors often owned twenty to fifty shares, which meant in the case of the Oldham limiteds that they each invested £50 to £125, the equivalent of 40 to 100 weeks' wages for a spinning operative at the time. The overwhelming majority of directors had an occupation associated with the industry. Of more than three hundred directors sixty eight were engaged in spinning as masters or spinning operatives. Next most numerous were mill managers and cotton waste dealers, followed by mill overlookers and engineers.³⁷

It was widely asserted at the time that long experience in the industry was essential for directors of cotton spinning companies; the number of shares they held was not necessarily important. Articles of association of mill-building companies show that of sixty-six companies, twenty-one laid down no qualifying condition for being a director, or stipulated a holding of only one share, while the qualification in 'turnover' companies was to hold a good deal more, say, twenty shares.³⁸ In this regard the conditions were similar to those in private companies. Directors in mill-building companies were ordinarily elected by a show of hands under a one man-one vote system. Around half the companies introduced

³² These figures are available in the first shareholders' lists presented to the Company Registrar. Company File 1119, 4541, 5389. Public Record Office (hereinafter as P.R.O.) BT 31, 14389/3560; 14311/1774; 14430/15751; 14428/5677; 14436/6221.

³³ P.R.O., BT 31, 14486/8310. "There can be no question but that the working classes supply one-half of the capital of all these companies," *Co-operative News*, 7 April 1877, p. 167. "Out of ten millions of capital in the Oldham cotton mills, three-fourths of it was owned by working men and women, many of whom went to their work in clogs." *Co-operative News*, 16 May 1885, p. 431. Even in the mills organized during the 1880s where a smaller number of shareholders were registered during the formative years, their number did increase over the course of time.

³⁴ Calculated from the first shareholders' list of each companies presented to the Company Registrar.

³⁵ In the latter case, former millowners had a considerable part of the shares, exerting an influence on the company's management after it had been converted into a public limited company. In many cases, however, the owner's interest in management does not seem to have continued for long.

³⁶ Calculated from the existing above-mentioned records.

³⁷ It is difficult to distinguish between masters and operatives when the signature is just "spinner." In fact Worrall's directory contains around two hundred "cotton spinners" which meant private spinners. *Worrall's Directory of Oldham*, 2nd edition, 1975. Calculated from company shareholders lists stored at the Company Registration Office and the Public Record Office. It should be noted that the figures were often duplicated.

³⁸ Compiled from articles of the association of each company in Company Files. The initial articles of association of these companies are in some cases missing.

a poll under this system. In such cases a system of limited voting rights for large shareholders almost always applied. However, a poll was rarely requested in general meetings. 'Turnover' companies fairly often had a one share-one vote system similar to that of private companies.³⁹

In the formative years of public companies, especially in the case of mill-building companies, their management followed that of the co-operative societies. General meetings of shareholders were important places in terms of directing the company strategy.⁴⁰ Candidates for board membership normally exceeded the number of directors, who were elected by the shareholders present at the general meeting by a show of hands.

All directors were part-time in the sense that each had his own job. No director could hold the post of managing director; the office of director had to be vacated 'if he participate in any contract with the company.'⁴¹ The chairman of the board functioned merely to preside at the meetings of the company. He was not *primus inter pares* on the board of the company because he had no priority in corporate policy making.⁴² The tradition of minimal remuneration for directors seems to be somewhat inherited from the management of the co-operative societies, where directorships were originally unpaid.⁴³ This, however, tended to undermine the degree of boldness of entrepreneurial management. These facts necessarily lead us to the conclusion that after their mills began to operate directors had few things to do, and what they actually did was to confirm the day-to-day management pursued by the full-time mill manager.⁴⁴ Directorships in the spinning companies tended to be honorary posts, which became a social ladder for working people in Lancashire.⁴⁵ Despite a number of objections personal interlocking of directorship did occur and become more frequent in the course of time.⁴⁶ What mattered for mill managers, on the other hand, was not the management of the cotton company, but the *de facto* 'cotton mill management' in the technical sense.⁴⁷

It should be noted, however, that management's attitude toward the conventional mode

³⁹ Existing records show that fifteen firms adopted this provision.

⁴⁰ In addition to the remuneration of directors, common topics in general meetings in the 1870s were the selection of machinery and participation in the proposed co-operative insurance company. New mill-building also was frequently discussed.

⁴¹ This provision tended to be revised by the turn of the century so as to admit the post of managing director. However it was thought at the time that the concurrent holding of both directorship and manager-ship was not democratic. In contrast to public companies, private spinning companies provided for managing directors in their articles of association. Regarding Joshua Hoyle & Sons and Grewdson, Crosses and Co., see following records: P.R.O., BT 31, 2341/11431; C.R.O., C.F., 7903/2.

⁴² W. Marcroft, *op. cit.*, 1877, pp. 103, 150-2.

⁴³ In general the remuneration for directors ranged from £25 to £50 quarterly. For concrete figures from representative companies, see *The Oldham Chronicle*, 26 May 1877, 8v; 29 May 1875, 8vi. Proposals to increase their remuneration was often resisted in general meetings. T. Knott Ltd., a converted private spinning company, made clear in its articles of association that the two acting directors were each entitled to receive an annual salary of £500 to £1,000. *The Oldham Chronicle*, 7 January 1888, 8vi.

⁴⁴ With reference to reducing the number of directors, a courageous director in Crompton S. C. said in a general meeting that "there was now very little work for the directors to do." *The Oldham Chronicle*, 14 May 1881, 6ii.

⁴⁵ The reduction in the number of directors was one of most popular topics at general meetings of spinning companies, but it was rarely implemented. *The Oldham Chronicle*, 28 October 1875, 6vii, 3 February 1877, 7iii; 10 November 1877, 6iii. W. Marcroft, *The Management of a Company's Cotton Mill*, 1878, pp. 3-5.

⁴⁶ Among twenty-six mill managers twelve managers held directorships concurrently in more than two companies, while two of them were directors of four companies. Also see M.A. Thesis, D.A. Farnie, Ch. 20.

of management resulted in a low rate of bankruptcy among public spinning companies. Twenty of the eighty four companies registered before and during the boom period had been dissolved by the end of the century. This is not a high failure rate, considering that most of the dissolutions were caused by a shortage of original capital or antiquated machinery in 'turnover' companies.⁴⁸ The companies took an interest purely in the production process; they had insufficient money to speculate on cotton, and the sales function rested entirely with yarn dealers. This single-functioned one-unit company was a conspicuous characteristic of the Lancashire spinning industry.

A striking feature of the management of public spinning companies in Lancashire lies in the uniformity of their management strategy. This reflects the homogeneity of the managerial class in Oldham. Even companies outside Oldham district behaved in the manner of 'the Oldham system of spinning.'⁴⁹ Apart from the common origins of their management philosophy, two factors contributed to this uniformity: open management and personal links between companies. Accounts of general meetings in local newspapers were so detailed it was sometimes discussed at the meeting if the attendance of reporters was legitimate.⁵⁰ People used to compare the performances of this and that company with the object to securing as high a dividend as possible at a particular time. The founders of popular companies, including active co-operative members, participated in promoting a number of companies concurrently.⁵¹ As a result some people had an interest in several companies as a director or an officer as mentioned above. Accordingly information as to company management was quickly diffused throughout the Oldham district.⁵² The earliest of these mills, including the Sun Mill, were highly influential in the context of shaping a common management policy among the Oldham limiteds.

The above-mentioned managerial characteristics were associated to a greater or lesser degree with their managerial localism, which constituted a feature of the management of co-operative societies. For example, the activities of the co-operative societies had been limited to their own areas, so that co-operative companies had no intention at all of expand-

⁴⁷ Up to the First World War no book had been written on the management of a spinning or textile company. The following three somewhat technical books were popular among mill men: R. Marsden, *Cotton Spinning: Its Development, Principles, and Practice*, 1st ed., 1884; J.E. Holme, *A Handbook of Cotton Spinning*, 1889; W.S. Taggart, *Cotton Spinning*, 2 vols., 1st ed., 1896.

⁴⁸ The lifespans of these companies can be regarded as long, firstly compared with those of public spinning companies in other countries, secondly by comparison with the lifespan of companies in other British industries, and thirdly compared with those of private spinners in Lancashire. Much talked-about dissolutions can be found in the case both of the Lancashire C. S. Co. in 1886 and Middleton & Tonge C. M. Co. in 1894, both of which were along the largest cotton spinning firms in the Oldham district. P. R. O., BT 31, 1971/8375; P. R. O., BT 31, 14313/1796. The latter, organized in Middleton in 1860, engaged in a massive expansion of its productive capacity, but failed during the depression following 1875. *The Oldham Chronicle*, 15 May 1875, 8vii. G.A. Shannon, "The Limited Companies of 1866-1883," *Economic History Review*, 1st ser. Vol. 4, 1933, pp. 304-5; D.A. Farnie, M.A. Thesis, pp. 277-80.

⁴⁹ *The Oldham Chronicle*, 4 July 1874, 8v; 27 May 1876, 6vi; 18 November 1876, 6v; 17 February 1877, 6vi; 17 August 1878, 6iv.

⁵⁰ *The Oldham Chronicle*, 20 October 1877, 6iv; 15 December 1877, 8iv; 19 January 1878, 8vii.

⁵¹ D.A. Farnie, M. A. Thesis, Ch. 20.

⁵² For example, the articles of association of later companies were very often modelled upon their predecessors. *The Oldham Chronicle*, 23 January 1975, 8iii; R. Smith, Ph.D. Thesis, p. 138; D.A. Farnie, M.A. Thesis, pp. 281-2; the same, op. cit., 1979, p. 266.

ing their businesses outside the initial mill sites.⁵³ Local shareholders were given preference when shares were allotted, likewise co-operative societies gave preference in advancing loans to nearby spinning companies. In fact shareholders were concentrated in a very narrow area.⁵⁴ Sometimes preference in share allocation was also given to those applying for small numbers.

Two particular characteristics of financing have been noted in the public cotton spinning companies: the loan system and capital reduction. The former is fairly well-known,⁵⁵ but the latter has been left entirely untouched. What matters for the former is why it came into wide use especially in the cotton spinning companies of Lancashire. The loan system seems to have originated in the Industrial and Provident Act of 1852, which declared that it was possible for societies to receive loans from members or other people at six percent maximum interest, as well as share capital with a limit of five percent interest. Since then, therefore, productive co-operative societies had employed both share and loan capitals.⁵⁶ The organizers of the Sun Mill Company were the first to follow suit; they were aware of shareholders' requests for loans.⁵⁷ The system did not prevail in private companies, and moreover the ratio of loan capital to share capital was lower at turnover companies.⁵⁸ Companies preferred to have shareholders as loanholders in their formative years; in fact an overwhelming part of such loans was supplied by the shareholders themselves during the period.⁵⁹ The loan capital was used to make up for the unpaid capital which was from the start not intended to be fully paid up.⁶⁰

Once established, the system proved useful not only to shareholders but also to company management. It could keep a company's dividend higher than would have been the case if the shares had been fully paid up instead of their being a loan.⁶¹ With the advent of the depression of the late 1870s a serious problem emerged with the withdrawal of a con-

⁵³ With the diffusion of the co-operative movement, the Central Board had to set up a Boundary Committee to clarify the area of activity of each society. J.H. Ogden, op. cit., p. 136; J.H. Priestley, op. cit., pp. 113-5. "On many occasions, despite of the absurdity of having two Co-operative Societies in Rochdale, the recognised birthplace of Modern Co-operation, several attempts to secure amalgamation having failed, until on Monday November 6th 1932, the Provident Society having got into financial difficulties." Minutes of Rochdale Equitable Society, Manuscripts and its typescript at Hitotsubashi University.

⁵⁴ *The Oldham Standard*, 28 February 1874, 1iv; 9 January 1875, 4vii; 6 March 1875, 5vi-vii; *The Oldham Chronicle*, 22 January 1976, 3v; R. Smith, op. cit., p. 41.

⁵⁵ W.A. Thomas, *The Provincial Stock Exchange*, 1973, pp. 152-5; D.A. Farnie, op. cit., 1979, pp. 254-7; J.B. Jefferys, op. cit., pp. 190-93.

⁵⁶ According to a record of 1884, when the total capital shares of co-operative societies in Lancashire amounted to ££2,708,000, total loan capital accounted for £761,000. *Co-operative Wholesale Society, Annual for 1884*, p. 31.

⁵⁷ A company's share capital was not withdrawable. Small shareholders, therefore, wanted to invest the half of their savings as loan as they used to, laying against a rainy day.

⁵⁸ Lime C. S. Co., a turn-over firm, originally had no intention of availing itself of loans, but its shareholders were keen to supply their money partly on loan. *The Oldham Chronicle*, 8 August 1874. While the total paid up capital of six mill-building forerunners including Sun Mill Co. numbered £216,949, the loan in these companies amounted to £315,241 in 1875. However, the loan capital in twenty-one "converted" companies was £428,120 in contrast with £473,404 of the total paid up capital at the same year. *The Oldham Standard*, 17 June 1875, 8ii-iii; 31 June 1875, 8ii.

⁵⁹ W. Marcroft, op. cit., 1877, p. 23. *The Oldham Chronicle*, 25 July 1874, 8iv. In 1874, West End C. S. Co. had 672 loan holders, many of whom were its shareholders, *The Oldham Chronicle*, 25 July 1874, 8vi.

⁶⁰ This was sometimes made clear in the advertisement. *The Oldham Standard*, 5 April 1873, 4iii.

⁶¹ W. Natall was an enthusiastic supporter of loan capital with the aim of enabling high dividends. W. Marcroft, on the other hand, did not object to loan capital, but maintained that shares should be fully paid up. In effect Sun M. Co. was fully paid up. However this is an exception, C. R. O., C. F., 1119.

siderable amount of loan money. The interest rate had to be raised to six percent to maintain funds.⁶² Unpaid capital was in some cases called. The companies, however, could manage to survive. The success of the entire system depended upon the share- and loan-holders' having confidence in the 'co-operative' style of management of the spinning companies, and this confidence remained unshaken up to the end of the First World War. It should be noted, however, that this operation based on loans and unpaid capital made any increase of capital for the expansion of mill difficult, because such increases would enlarge the shareholders' liability at the time of a call of unpaid capital.

However what is perhaps more interesting is the reduction of capital, which really meant to give back a part of the capital that shareholders paid up on the condition that 'the amount returned or any part thereof may be called again.'⁶³ This measure had already been taken in Windsor C.S.C. 'subject to a favorable answer from the registrar of joint-stock companies as to the legality of the proceeding' in 1874, shortly after its foundation.⁶⁴ This sort of reduction of capital, however, can be widely observed in the brisk years of the industry; it had the result of lightening the burden of dividends in the future.⁶⁵ It was not unrelated to the loan system, since it was used by companies more than half of whose capital had been paid up. In these companies loans were paid back annually, and next a part of the paid up capital was returned, so keeping the balance between paid up capital and loan. Of ten companies organized in Royton and Shaw in the 1870s and 1880s, five carried out such a reduction of capital.⁶⁶ This is reminiscent of the return of share capital in the co-operative societies, resulting from a surplus of capital. What this without doubt means is that from the beginning company managements had no intention of expanding their business activities beyond the original business site; extension of the original mill and the addition of one or two mills at the original site marked the end of their business expansion. Since they started as local movements in specific areas, amalgamation between them was inconceivable. 'Mills of 50,000 to 60,000 spindles were the most successful in Oldham' and 'when a mill was getting upwards of 120,000 spindles it was quite large enough for a board of directors and a manager to grasp' a shareholder asserted, taking Middleton & Tonge C.S.C. as an instance of failure.⁶⁷ These features all demonstrate that the heritage of co-operative society management was extensive and fundamental even after its ethos was evaporated.

⁶² *The Oldham Chronicle*, 25 March 1876, 6iii-vi; 10 February 1877, 7v. However, "the competition for loan capital is increasing in intensity, but the resources of locality show no symptom of exhaustion." *The Oldham Standard*, 5 June 1875, 8i.

⁶³ Accordingly it was not an ordinary reduction of capital accompanied by a decrease in real assets.

⁶⁴ *The Oldham Chronicle*, 5 December 1874, 8vi; 16 December 1876, 6v.

⁶⁵ The dominant opinion was that the loan capital should tend to become equal to the half of nominal capital. This means that the uncalled capital was available for the security of loans, even if it is not in the legal sense of the words. Consequently companies made an effort to reduce their paid-up capital down to the above limit. W. Marcroft, *op. cit.*, 1878, p. 2. A remarkable case was the Werneth Ring S. Mill, which reduced its paid up capital three times by 1914. C.R.O., C.F. 8985.

⁶⁶ C. R. O., C. F., 9131; P. R. O., BT 31, 14517/9184, 14726/17891, 14762/19447. They included Moorfield, Duke, Smallbrook, Fern and J. Clegg, the last of which became a private company when it paid back a part of its paid-up capital in 1915.

⁶⁷ *The Oldham Chronicle*, 15 March 1884, 6iv; 14 April 1888, 6ii.

II

Three years prior to the phenomenal emergence of public cotton spinning companies in Oldham, the U.S.A. had already experienced similar activity in Fall River, Mass.⁶⁸

Unlike in Great Britain and India, in the U.S. the formulation of company acts was not directly connected with this great boom in floatation. The first statutory law relating to business corporation with limited liability appeared in Massachusetts in 1830s.⁶⁹ Within several years from 1828, large one-unit cotton spinning and weaving companies appeared under special charters, mainly in Lowell and Lawrence, which as a result became the most widely-known cotton textile cities in the U.S., until Fall River took the lead as a result of the mill-building boom in the 1870s. After then the city remained the largest spinning and weaving area up to the First World War, producing the largest volumes of print cloth in the U.S., with the result that from the 1870s the city controlled the print cloth market in the U.S.⁷⁰ By the 1870s, the great Boston entrepreneurs who had initiated the Lowell and Lawrence firms had disappeared from the stockholders' lists, and the younger generation's managerial strength was not as great as that of their fathers, so certain professional managers like J.C. Ayer began to criticize the indolence of management.⁷¹ It should be noted that neither city participated in the floatation boom of 1870-3.⁷²

Fall River's economic development early in the nineteenth century differed from that of Lowell and Lawrence in that it was undertaken by local landowning entrepreneurs like the Bordens and Durfees, who in the first half of the 18th century initiated a number of spinning and weaving companies on the basis of their right to water power.⁷³ Dependence upon

⁶⁸ Regarding the cotton industry of Fall River, see the followings: F.M. Peck and H.H. Earl, *Fall River and Its Industries*, 1877; G.M. Haffords & Co., *Fall River and Its Manufactories, 1803-1906*, 1907; R.K. Lamb, *The Development of Entrepreneurship in Fall River, 1813-59*, Ph.D. Thesis, Harvard University, 1935; T. R. Smith, *The Cotton Textile Industry of Fall River: A Study of Industrial Localization*, 1944.

⁶⁹ When a few large cotton mills were organized in Lowell, they had no limited liability. Their foundation provoked the request for limited liability. The limited liability act of 1830 was applicable to all manufacturing corporations thereafter formed. E.M. Dodd, *American Business Corporation until 1860*, 1954, pp. 377-84.

⁷⁰ In the second half of the last century, the cotton industry was mainly located in the Massachusetts state, which occupied 20.0 percent of total establishments, 39.7 percent of total mule spindles and 34.0 percent of total ring spindles in 1870. These figures respectively changed only to 16.8 percent, 45.9 percent, and 38.9 percent in 1900. Censuses of the United States. New Bedford rapidly ran after Fall River from 1890s onward but could not catch up with the latter whose maximum total spindles numbered around four million at the end of the First World War. Sanford and Kelly, *Fall River: Statistics relating to Its Cotton Manufacturing Corporations*, 1878 (Annual).

⁷¹ J.C. Ayer, *Some of the Uses and Abuses in the Management of Our Manufacturing Corporations*, 1863; F.W. Coburn, *History of Lowell and Its People*, Vol. 1, 1920, pp. 344ff.; R.V. Spalding, *The Boston Mercantile Community and the Promotion of the Textile Industry in New England, 1813-1860*, Ph.D. Thesis, Yale University, 1963, pp. 212ff.; H.V. Wortzel, "Changing Patterns of Management in the Lowell Mills," in A. Okochi and S. Yonekawa, ed., op. cit., pp. 199-200.

⁷² Large spinning companies in New England also performed well during this period: Boston Manufacturing Co. paid twelve percent dividend in 1872, twice as high as that of late 1870s, and Layman Mills paid ten percent in the same year but no dividend in 1876, the year of depression. Amoskeag in New Hampshire followed them. Documents stocked at Archive Department of Baker Library.

⁷³ C.F. Ware, *The Early New England Cotton Manufacture*, 1931, pp. 36-8; *Fall River Weekly News* (hereafter abbreviated as *F.R.W.N.*), 13 April 1871, pp. 2v; F.M. Peck and H.H. Earl, op. cit., p. 36; W.R. Bagnall, "Papers relating to Manufacturing Establishments," typescript, Baker Library, Vol. 3, pp. 1861ff.; R.

water power, however, did not last long. The emergence of Fall River as the largest city of the cotton industry was in considerable measure due to the rapid transfer from water to the steam engine in the 1850s and 1860s.⁷⁴ At the same time as a result of the emergence of a new middle-class which had made its fortune in businesses, as tradesmen or even as mechanics in the formative years of Fall River's industrial development, the traditional influence of the landowning families was diluted.⁷⁵ It was the new middle-class that was behind the mill-building boom.⁷⁶ Here, like Oldham, were also a group of companies which acted as forerunners; these companies were founded largely by special acts passed by the Massachusetts government. Of these eight companies the first and most influential was Union Mills, which was founded in 1859 and was to act as the leading firm in Fall River. Of the twenty or so shareholders only five had more than ten shares of \$1,000, and H.L. Remington, the principal organizer, had started life as a clerk in a drugstore.⁷⁷ Union Mills was outstanding in its performance, paying twenty to forty percent dividends soon after its foundation.⁷⁸ 'This enterprise was eminently successful and marked the commencement of a new era in the business history of Fall River' with the result that 'the success of which (Union Mills), under the management of Mr. Stafford, led the way for the other enterprises which have followed, until the present time (1871), eight mills having been built with 261,668 spindles.'⁷⁹ Shareholders of Merchants Mills numbered two hundred and fifty at the time of its foundation. Mechanics Mills, the last of the forerunners, was founded in 1869 and had 328 shareholders, 188 of which held no more than between one and ten shares of \$100.⁸⁰

In the two years following a short period of recession which had finished by the autumn of 1870 there occurred a furious mill-building boom. The mill boom started with the building of a second mill by Granite Mills, organized in 1863. The floating of Stafford and Weetamoe soon followed. The boom accelerated with the coming of spring, when five companies were initiated, though not simultaneously. During the short period of two years, fifteen firms emerged; three firms added second mills.⁸¹ Almost all of them were founded by individual charters the securing of which was in general neither time-consuming

K. Lamb, op. cit., Ch. 2; the same, "The Entrepreneur and the Community," in W. Miller, ed., *Men in Business*, 1962, pp. 102-6.

⁷⁴ American Linen Co., which was organized in 1853 as the largest firm, was due to the steam engine for its large scale. When the boom of the early 1870s finished, the proportion of water power had lowered to less than 7 percent of the total powers. K. Rook, *Fall River: Today and Tomorrow*, 1972, p. 12.

⁷⁵ "While the other cities have grown from without, Fall River has grown from within, receiving but little foreign capital for the development of existing industries or the introduction of new ones." *F.R.W.N.*, 8 October 1890, 2iv-v.

⁷⁶ R.K. Lamb, op. cit., 1935, Ch. 12, pp. 36-7.

⁷⁷ W.R. Bagnall, Papers, p. 1944; F.M. Peck and H.H. Earl, op. cit., p. 63.

⁷⁸ *F.R.W.N.*, 19 August 1891, 2v.

⁷⁹ *F.R.W.N.*, 13 March 1871, 2v. This was reported at the height of the booming years.

⁸⁰ F.M. Peck and H.H. Earl, op. cit., p. 192. The organization of both companies was 'the development of a new feature in the ownership of manufacturing property in Fall River.' *Ibid.*, p. 129.

⁸¹ This is based on the description of *Fall River Weekly News*. The lively market seemed to have visited quite suddenly and unexpectedly. A rush of orders was such that companies had to quite the Christmas holidays. News of floating companies was quickly reported in the local press. *F.R.W.N.*, 29 December 1870, 2v. Interestingly enough these new mills were clearly classified into three groups according to their location. F.M. Peck and H.H. Earl, op. cit., pp. 59-70.

nor expensive.⁸² Their capital exceeded the limitation placed by the Joint Stock Companies Act of 1852. Like their predecessors, they all fully integrated the spinning and weaving processes. Their spindleage numbered 30,000 to 40,000; this means that the scale of these companies in terms of used capital were roughly equal to those of Oldham. The background of this boom can be found in the surplus of funds deposited with local banks. Fall River had eleven banks at the time, seven of which were founded in the 1850s and 1860s. Since the Civil War the amount of money deposited in these banks had been rapidly increasing. Fall River Savings Bank, the largest and oldest savings bank in the city, had tended to receive approximately \$0.1 million every year, but the increase in deposits so accelerated that in six months in 1870 total deposits increased by half a million dollars, a fantastically large sum given the size of the city.⁸³ As a result banks were generous in their lending policy. In fact the directors of these banks acted as active directors and officers of these cotton spinning and weaving companies. The author's survey of executives from both firms and banks demonstrates that in all but one of thirty three spinning companies in 1880, three or four executives concurrently held a directorship in some bank.⁸⁴

Oldham was the former home of many of the operatives of Fall River, and the co-operative movement had taken root in the city. The number of members of co-operative societies, however, was small and a project for a co-operative spinning company failed.⁸⁵ The reckless mill-building rush was motivated by nothing but profit-making.⁸⁶ Shareholders consisted of 'two or three hundred individuals of all classes in the community, operatives, mechanics, shop-keepers, widows and others who have invested in this form of property the earning of the past.'⁸⁷ This statement, however, is rather applicable to the period following the coming depression. Share-lists did not include a number of operatives of textile companies in Fall River, who mainly consisted of French Canadians, immigrants.⁸⁸ Shareholders were large in number, but shareholding was not very widely dispersed among Fall River people in comparison with that of Oldham.⁸⁹ There was no social continuity between the middle class people and mill workers. Unlike Oldham, operative spinners were not easily promoted to become mill managers within the city in the late-nineteenth century. The face value of these shares was normally reduced from \$1,000 to \$100 per share, which still corresponded to more than twenty pounds, and which was fully paid up. Company executives were always large shareholders, presumably in many cases holding twenty to

⁸² By-laws of these companies are not existing except for a few companies whose records are stocked at Fall River Historical Society and Baker Library. E.M. Dodd, op. cit., pp. 310-26.

⁸³ F.M. Peck and H.H. Earl, op. cit., p. 171.

⁸⁴ *F.R.W.N.*, 13 April 1871, 2v.

⁸⁵ Compiled from records in Sanford and Kelly, op. cit., 1880. "The mill lords own the city, banks, run the political machine, and the workers also belong to them." *F.R.W.N.*, 21 February 1884, liii.

⁸⁶ *F.R.W.N.*, 11 February 1869, 2iv; 16 April 1874, 2vi; 14 January 1875, 2vii.

⁸⁷ "They (mills) had yielded magnificent profits in the past; and this had led to an intemperance in mill and real estate speculation. . . . The manufacturers were now bearing the penalty of this intemperance." *F.R.W.N.*, 7 February 1884, 2i.

⁸⁸ H.M. Fenner, *History of Fall River, Massachusetts*, 1911, pp. 30-1. "Up to the present time it is doubtful if a single share of manufacturing stock in any of our corporations has been held by any French resident." *F.R.W.N.*, 6 March 1884, liii. P.T. Silvia, Jr., "The Position of Workers in a Textile Community: Fall River in the Early 1880s, *Labour History*, Vol. 16, No. 2, 1975.

⁸⁹ This seems to have associated with the high face value of one share. Another reason would be that these immigrants were not readily settled in the city, getting back to Canada.

forty percent of total shares.⁹⁰

The management of these companies was, in general, not open, as will be later suggested. Personal interlocking of directorships existed between textile companies. R.B. Borden and S.A. Chace, for example, were each associated with ten manufacturing corporations as an executive in 1876. The latter was also the president of both the Second National Bank and the Five Percent Saving Bank.⁹¹ As a result an influential group of entrepreneurs, in which the *nouveau riche* was mixed with members of the established land owning families, was newly created. The strategy of Fall River's textile management was thus made by this kind of entrepreneurial group.⁹² Regarding the uniformity of their managerial behavior, they were somewhat similar to the case of Oldham; they bought cotton from cotton brokers in the city; they almost all specialized in the production of print cloth made of yarns of thirty two counts, selling it locally in the open market of the city.⁹³ Shares of these companies organized by Fall River people were only locally circulated.⁹⁴

As far as company organization is concerned, the companies of Fall River did not differ greatly from those in Lowell and Lawrence apart from the fact that the mill agents commonly found in Lowell and Lawrence did not appear, since company executives usually lived in the city. Apart from the directors the treasurer, clerk (secretary), and superintendent were the main officers in the textile companies. The one share-one vote system tended to be the rule although the company by-laws were not necessarily clear in this regard. The power of top management was strong. This was particularly true of treasurers, who 'in many cases do more than the strict letter of the by-laws requires, because directors shirk.'⁹⁵ They very often served concurrently as directors. This did not always mean that as a group of large shareholders executives were all-powerful. The conduct of the general meetings of these companies was active and open regarding issues related to the management of companies.⁹⁶ Furthermore the motions proposed by management were sometimes rejected by attendant shareholders, especially where they concerned an increase in capital. Mill executives were more active than those in Oldham in extending their productive capacity, partly because the sites where the companies were located commonly had room to extend. Early in the 1890s half of the textile companies in the city had more than one mill.⁹⁷ The increase in capacity was normally carried out through increases in capital, but sometimes only by means of reserve capital.⁹⁸ However they remained from start to finish one-unit firms.

The business society of the city, however, was more dynamic than that of Oldham.

⁹⁰ "Officers of mills are generally large stock holders. . .," *F.R.W.N.*, 24 September 1885, 2vi. Some large companies like Durfee Mills and Fall River Iron Works which turned to a spinning firm in 1880s were entirely closed companies.

⁹¹ H.K. Lamb., op. cit., 1935, Ch. 13. Calculated from Sanford and Kelley, *Fall River and Its Manufactories, 1803-1878*, 1878.

⁹² F.M. Peck and H. H. Earl, op. cit., p. 113ff.

⁹³ M. Copeland, op. cit., pp. 205, 208; T.R. Smith, op. cit., pp. 80-2. *F.R.W.N.*, 19 August 1880, 1viii.

⁹⁴ The prices of shares were listed in the local press, but there had been little information for the institution of stock exchange in Fall River.

⁹⁵ *F.R.W.N.*, 20 August 1885, 1iv-v. Directors functioned poorly; they resembled those of Lowell and Lawrence, and also of Oldham. R.V. Sapling, op. cit., 1963, pp. 214-5; H.V. Wortzel, op. cit., pp. 204-5.

⁹⁶ Reports on general meetings of these textile companies did not normally appear in the local newspaper, but discussions at extraordinary meetings were often reported in details.

⁹⁷ Sanford and Kelly, op. cit., 1890, p. 17; H.M. Fenner, op. cit., pp. 38-9.

The personal linkage between banks and textile firms provoked such extraordinary speculation during the boom period that it led to a gigantic swindle which originated in the embezzlement of companies' money by S.A. Chase, a well-known local entrepreneur at the time. Chase's private firms were losing money in the late-1860s.⁹⁹ Short of money, he gambled in textile shares, ending in failure. Approaching a couple of established businessmen, he then hinted that they should organize textile companies, taking advantage of the mill-building boom, with the object of diverting the paid-up capital to their own use. Nobody knew this at the time the Sagamore and Border City mills were founded. The defalcation, however, became apparent during the long economic depression which followed. The economic consequence of this unprecedented scandal in Massachusetts was that a number of firms, including Union Mills, were dissolved and then reorganized by their creditors.

Through the severe and long depression following the boom, approximately half the textile firms were reorganized or underwent a change in the large shareholders who were the main element in the companies. As we observed in the case of Oldham, so in Fall River poor mill management and high brokerage were censured.¹⁰⁰ Responses in both cities, however, differed remarkably. In Fall River the replacement of mules by rings started in the depressed years of the 1870s and new mills were equipped with ring spindles. 'Within the last ten years the introduction of ring frames has gone on with remarkable rapidity.' By 1897 twenty seven companies organized prior to the end of 1872 were equipped with rings for two thirds of their total spindle capacity.¹⁰¹ What is important is that outside capital made inroads into the city's textile industry during the depression.¹⁰² M.C.D. Borden, the largest print merchant in New York, changed the Fall River Iron Works, then not operative, into a huge textile firm controlling 265,000 spindles and 7,700 looms with 2,700 employees. He also controlled the American Printing Co., the second largest firm in the printing business.¹⁰³ In effect his business was fully integrated. Kerr and Co., one of the subsequent founders of English Sewing Cotton, also came into the city.¹⁰⁴ An observable change occurred within established families in the city; the Brightons, who had been active mainly in banking circles, also turned to controlling a number of textile companies through the following depression years.¹⁰⁵ These three influential groups remained outside the Fall River Manufacturers' Association, and the short-time movement organized by the

⁹⁸ A precedent was made by the Union Mills that paid no dividend in 1866 and 1867 to build the second mill. The building had been undertaken in 1865 by the bank loan secured on companies' promissory notes which were paid from future profits. *F.R.W.N.*, 19 August 1891. American Linen also built the second mill containing 50,000 spindles by means of issuing notes of the company with the result that the company paid no dividends during 1865-71. *Ibid.*, 21 August 1879, 2v-vi.

⁹⁹ The description was compiled from the report of the testimony appeared in the press. *F.R.W.N.*, 11 April 1878, 2iv; 25 April 1878, 2iv; 6 June 1878, 2v-vi; 27 June 1878, 2iv-v. H.M. Fenner, op. cit., pp. 36-7.

¹⁰⁰ *F.R.W.N.*, 24 February 1887, 2ii.

¹⁰¹ Calculated from *Dockham's American Report and Directory of the Textile Manufacture*, 1897. The figure rose to 80 percent in 1906. G.M. Haffords & Co., op. cit., p. 35.

¹⁰² "Green & Son, real estate and stockbrokers, are receiving numerous letters from outside capitalists in regard to the purchase of both mill stocks and real estate in this city." *F.R.W.N.*, 10 March 1887, 2iii.

¹⁰³ By-laws and Stockholders' lists, Baker Library; *F.R.W.N.*, 23 October 1895, 2iii-iv; H.M. Fenner, op. cit., p. 38. *Commonwealth of Massachusetts, Bristol vs. Supreme Judicial Court*, 1862, The Fall River Iron Works Company vs. The Old Colony Fall River Railroad Company, 1862, pp. 7ff.

¹⁰⁴ *F.R.W.N.*, 24 December 1890, 3 iii; 9 November 1892. *Moody's Manual of Corporation Securities, Annual for 1900*, p. 757.

¹⁰⁵ R.K. Lamb, op. cit., Ph.D. Thesis, Ch. 12, p. 47, etc.; *F.R.W.N.*, 23 October 1879, 2 iii; *Commonwealth of Massachusetts*, op. cit., p. 12.

Association was, therefore, never successful.¹⁰⁶ Well-known local entrepreneurs declined,¹⁰⁷ but working people were as prosperous as before. Mill workers began to buy company shares.¹⁰⁸ Outside capital had the benefit of the next boom years of 1887-8. The industrial structure was more mobile than that of Oldham, even if it was less so than that of the later textile cities of the South.

III

There were a couple of new ventures in transferring cotton spinning machinery to India in the first half of the 19th century, but the industry only became established in the mid-1850s when three mills began to operate successfully in Broach, Bombay and Ahmedabad.¹⁰⁹ The mills which followed were concentrated in Bombay, and the development culminated in the spinning mill boom of 1872-4, almost the same years of that in Oldham. A large boom in mill-building took place in Bombay 1888-90, while in Japan the first and largest boom came almost simultaneously.¹¹⁰ During three years in the 1870s, seventeen Indian mill-building companies were organized. Bombay's proportion of total Indian spindleage tended to decrease from the 1890s onward.¹¹¹ Of the thirteen early mills organized prior to the boom years, the third organized, the Oriental Mills, was the first to be converted into a public limited company, thus enabling it to occupy the position of the leading firm both in terms of performance and by its publicity. According to *the Indian Textile Journal* 'in fact, the history of this manufactory may fairly be taken as the history of the cotton industry in our midst.'¹¹² A maximum of five shares was allotted to a subscriber, so that a great number of shareholders emerged. The qualification for directors was a holding of one share only. The initiators of these mills were all Parsi who had established a connection as brokers with European businessmen; and also had experience in the trade with China. In this context it should be noted that while the market for the companies founded in the 1860s was in Bombay city and the Presidency the products of the companies organized dur-

¹⁰⁶ *F.R.W.N.*, 29 August 1894, 3i.

¹⁰⁷ Two men of high repute went into bankruptcy; Dr. N. Durfee, a graduate of Brown and Harvard, died with the debt of \$250,000 in 1876 and J. Borden who was associated with seven manufacturing corporations, also failed in 1879.

¹⁰⁸ *F.R.W.N.*, 24 February 1887, 2i. "The people of this city are all in a fairly prosperous way. . . . The constant increase of the deposits in our savings banks, and in the number of depositors, seems to sustain this view."

¹⁰⁹ Broach Cotton Mills was first organized in 1853, immediately followed by Bombay Spinning and Weaving Company in 1854, and Ahmedabad Spinning and Weaving Company in 1857. A couple of spinning mills were built in the first half of the nineteenth century, but failed. *Indian Textile Journal* (hereafter abbreviated as *I.T.J.*), February 1891, p. 81; January 1894, p. 88; May 1901, p. 213. S.D. Mehta, *The Cotton Mills of India, 1854-1954*, 1954, pp. 3-13. N.N. Desai, *Directory of Ahmedabad Mill Industry: History and Deed Section*, 1929, p. 4.

¹¹⁰ S.M. Rutnagar, *Bombay Industries: The Cotton Mills*, 1927, p. 20.

¹¹¹ The proportion of Bombay in the years of 1897, 1913, 1928, and 1938 decreased to 54%, 44%, 40% and 29%, respectively. Calculated from Bombay Millowners' Association, *Annual Report*. In terms of products, 74% of total yarn and 81% of total cloth were in the Bombay Presidency in 1895. *I.T.J.*, December 1898, p. 81. This was due to the rise of the industry in Ahmedabad.

¹¹² *I.T.J.*, February 1900, p. 135. Bombay S. & W. Co. became a private company in due time, because N. Cowasjee, the organizer of the firm, bought up all of its shares. Oriental S. & W. Co. was first built a private enterprise by D.M. Petit in 1855, its shares being opened in 1856. Next year it was registered.

ing the boom were largely exported to the Chinese Market.¹¹³

Before any consideration of the management problems in the Bombay cotton spinning companies, the establishment of the well-known managing agency system in India must be analyzed in detail, because this system can be thought of as a typical case of institutional transformation in the sense that it embodied a version of the management of a public limited company. A number of works have been published concerning the origins and development of the managing agency system, which meant that the actual management of the spinning companies was undertaken by a managing agent who was in fact one of the directors of the company, and one of its largest shareholders.¹¹⁴ In a sense the system was a legal fiction (trick), since a single person embodied both the contracting parties of the agency agreement. The origins and establishment of the system become apparent in any consideration of the history of the cotton industry. The origin of the cotton industry in India can be traced to the (Bombay) Spinning and Weaving Company founded in 1854, the year prior to the enactment of the Indian Companies Act of 1857 which was largely modelled on the Companies Act of 1856 in England. At the time of its foundation the shareholders of the company made a deed of agreement with C.N. Davar, an actual organizer of the company, who had become a general entrepreneur after acting as the Indian agent for an English trading firm. The shareholders resolved that;

‘In recompence of the trouble taken by you (Davar) in the floatation of the factory, you are appointed Arhatiya or Broker of the said factory during your lifetime, that is to say, that whatever cotton is requested for the said factory should be purchased by you and whatever yarn and cloth are manufactured in the said factory should also be sold by you, and on whatever sales you effect on account of the said Company, a commission of 5% shall be taken by you in your life.’¹¹⁵

This is not itself a managing agency system but could be said to be the germ of such a system. The Indian Companies Act was enacted shortly after, and Oriental Mills, the first spinning company formed under the act, had such officers as director, treasurer and secretary. The years up to the end of the boom seem to have been a transitional period during which it was discussed in *The Times of India* whether an agent was preferable to a managing director or a salaried manager for the management of spinning companies.¹¹⁶ As far as the forerunner companies are concerned, not all companies necessarily adopted the agency system during this period. Oriental Mills first adopted it in the mid-1860s.¹¹⁷ At a general meeting of Central India, Tata, the actual organizer of the company, was nominated as managing director in 1874, the year of its foundation. N.J. Tata, the well-known

¹¹³ It was after the mid 1870s that the export of cotton yarn to China increased remarkably. *Review of the Trade of British India for the Official Year 1877-78, 1879*, pp. 15-6.

¹¹⁴ B.B. Kling, "The Origin of Managing Agency System in India," *Journal of Asian Studies*, Vol. 26, No. 1, 1966, pp. 37-47; R.S. Rungta, *The Rise of Business Corporations in India*, pp. 219ff. An excellent analysis was made by K. Koike in his *Keiei Dairi Seido Ron* (On the Managing Agent System), 1979.

¹¹⁵ This invaluable document originally written in Gujerati was translated into English by S.D. Mehta. S.D. Mehta, op. cit., pp. 26-7.

¹¹⁶ *The Times of India*, 23 March 1871, 2vi; 30 March 1871, 2iii; 7 April 1871, 2ii; 26 April 1871, 2ii.

¹¹⁷ *The Times of India*, 14 June 1876, 2v-vi. *I.T.J.*, February 1900, p. 135.

entrepreneur, opposed the agency system for years.¹¹⁸ The same happened in two other companies.¹¹⁹ However, the managing agency system became dominant towards the end of the boom years. The mills built during the boom years were founded on the assumption that this system would be introduced.¹²⁰ Interestingly the Bombay Co-operative Society organized in 1874 also adopted the system.¹²¹ The introduction of the system to Royal S. & W. Co. provoked such stormy objections among shareholders that the matter was brought to court. The judgement was against the plaintiff.¹²² In spite of a campaign waged by *The Times of India* and afterwards by *the Indian Textile Journal* against the managing agency system, it persisted in the postwar period.¹²³ What matters here is not only the system itself but also the type of management remuneration which existed. The articles of association of a company usually clarified the agent's reward in such terms as 'they shall receive a commission of a quarter of an Anna per pound on all material manufactured and sold by the company.' Significantly the agent's reward was based not on the firm's profit but on the agent's turnover. Here is the link between the agent's remuneration and the brokerage agreed in (Bombay) Spinning and Weaving Company mentioned above. At any rate once the agreement was made between a company and an agency house, it was found most difficult to change it.

Throughout the 1860s native Indian merchants tended to be jostled out of the trade by British merchants.¹²⁴ The mania resulting from the American Civil War finally ended in the economic panic of 1864-5, when in Bombay many financial institutions, including the Bank of Bombay, became insolvent.¹²⁵ By contrast spinning companies then existing in the country did not suffer heavily. The fall in the cotton price during the years of crisis further favoured investment by native merchants in the spinning industry. All these favorable conditions explain the mill-building mania. It is also true, however, that 'the real motives for starting new spinning and weaving companies are to be found in the enormous commissions paid to the secretaries and treasurers who were to be nominated as agents.'¹²⁶

¹¹⁸ Company Registration Office of Bombay (hereafter abbreviated as C.R.O.B.), Company File 21, 1/94. The Company, *A Short History of the "Empress Mills,"* 1927, p. 94. The system did not exist in Bombay, Dyeing until 1906 when a spinning mill was attached to dye works. C.R.O.B., C. F. 37, 1/94, Bombay United S. & W. Co. founded in 1860, introduced the system in 1872. *The Times of India*, 5 March 1873, 2ii-iii.

¹¹⁹ *The Times of India*, 9 March 1871, 4i-iii; 14 October 1872, 3v.

¹²⁰ "While on this (the system) subject the first question suggests itself, is there a mill in Bombay which has no agents? I am sure the answer will be none; and no amount of ingenuity can gainsay the fact." *The Times of India*, 28 November 1873, 3iv-v.

¹²¹ *The Times of India*, 23 November 1874, 3vi.

¹²² *The Times of India*, 17 June 1873, 3iv; 22 November 1887, 3vi.

¹²³ Originated in 1880, *The Indian Textile Journal* consistently objected to the system. *I.T.J.*, December 1894, p. 50; September 1899, p. 338, etc.

¹²⁴ A.M. Vicziány, "The Cotton Trade and the Commercial Development of Bombay, 1857-1875," Ph. D. Thesis, University of London, 1975, p. 223ff.; the same, Bombay Merchants and Structural Changes in the Export Community, 1850-1880," in K.N. Chaudhuri and C.J. Dewey, ed., *Economy and Society: Essays in Indian Economic and Social History*, 1979, pp. 163-96.

¹²⁵ "Of the fifty-two Banks and Financial Institutions of February 1865 just four remain of decided practical benefit to the community. . . ." "All the credit and all the resources of these establishments, were being boldly employed to sustain the prices of cotton on the one hand, and on the other to inflate to the utmost the great Bombay share bubble." *The Times of India, Overland Summary*, 8 to 28 December 1866, 3v-vi.

¹²⁶ *The Times of India*, 23 March 1871, 2v.

The primary motive for their investment was to monopolize the buying and selling functions of the industrial firm. A shareholding of twenty five percent was said to be enough for the agency house to control companies.¹²⁸ This meant that in comparison with the case of private companies agents could save a great deal of money, with the result that they could control more companies than they would have been able to do otherwise. The problem that remains is why this system prevailed, and the fundamental reason is that it was basically created by a comparative shortage of entrepreneurship and management know-how, a shortage tied-up with the social climate of India.

At the time spinning companies in Bombay issued shares with a face value of R500 While investing in the cotton spinning sector, they remained merchant entrepreneurs.¹²⁷ or R1,000 which was fully paid up.¹²⁹ A share gave the right to one vote at a general meeting without exception. The occupations of the founders were usually designated as merchants or brokers, sometimes as bankers.¹³⁰ The number of shareholders was not large at the time of founding. There were some exceptions, however; Coorla and Central India, each organized in 1874, had 58 and 75 shareholders respectively.¹³¹ The Bombay stock exchange was active in the 1870s, with thirty-six share-brokers being recorded in 1874.¹³² The constitution of shareholding was characterized on the one hand by a small number of large shareholders and the other an overwhelming majority of petit bourgeois shareholders owning one or two shares only.¹³³

In most cases the managing agent held the position of treasurer and secretary concurrently and the other elected directorships were purely nominal posts, their occupants being under the agent's influence. Once arranged, the agency agreement was deemed to be a problem of 'internal management' in which it was difficult for a court to intervene.¹³⁴ The agent possessed an overwhelming managerial power parallel to that held by the managing director in a private company in England. In two spinning companies registered in London during the period which had their mills in Bombay, actual agents were, interestingly, mentioned as managing directors in their articles of association.¹³⁵ In other words the agent could effectively manage like a despot despite his possession of only part of the company's shares. He was entitled to ample reward, calculated in proportion to the company's turn-

¹²⁷ Prominent agents were found in the member-lists of Bombay Cotton Trades' Association and Bombay Native Merchants' Association. *The Times of India: Calendar and Bombay Directory for 1883*, 1883, pp. 435-6.

¹²⁸ It was not always necessary for agents to own them by themselves. N. Kesowjee owned 88 shares of Royal, but controlled 328 shares owned by others. *The Times of India*, 9 March 1871, 4i-iii. The term of contract tended to become long, often for agent's life.

¹²⁹ The face value of a share normally started from R 5,000 in 1860s, but it tended to be R 1,000 or R 500, an equivalent of £100 or £50 in 1880.

¹³⁰ Of the companies whose records are stocked at the Company Registration Office of Bombay, only eleven were organized in the nineteenth century. The overwhelming majority of their initiators designated their occupation as merchants. See C.R.O.B., Company File 5/17 for Morarji Gokuldas S. & W. Co.

¹³¹ C.R.O.B. Company File, 19/1 and 21/2.

¹³² The list of share price appeared in *The Times of India* even in the 1860s. *The Times of India*, 28 September 1870, 3i. *The Times of India: Calendar and Bombay Directory for 1874*, 1874, p. 771.

¹³³ When Kesowji Naik became insolvent in 1879, he was the agent of four companies: New Fleming, Nursey, Colaba, and New Alexandra spinning and weaving companies.

¹³⁴ *The Times of India*, 14 November 1876, 3vii.

¹³⁵ P.R.O., BT 31, 2036/8855, 2089/9353. These are Anglo-Indian S. & M. Co. and Manchester and Bombay C. S. & M. Co. In the articles of association of Bengal Mills registered in London in 1872, the word "Agents of the Company" was clarified. P.R.O., BT 31, 14447/6778.

over before profit and dividend were deducted.¹³⁶

Although there were scarcely any amalgamations or takeovers among spinning companies in Bombay, out of twenty eight companies founded before 1875 only five were able to survive without reorganization until 1925.¹³⁷ The short life of these spinning companies may be attributed to poor management by agents, as was often asserted at the time; agents tended to try and get as quick as possible a return on the money that they invested, demonstrating the characteristics of the management policy followed by general merchants.¹³⁸ The writer's calculations based on the share price lists in *The Times of India* show that in the twenty-two spinning companies founded in India up to 1875, the average yearly dividend in 1878-88 was approximately seven percent, which is fairly low considering the high interest rate in the country.¹³⁹ What is interesting, however, is that the difference between the performances of individual companies was more striking than in Oldham.¹⁴⁰ This suggests that their performance depended largely upon the agent's managerial ability. There was another serious barrier to well-organized management in Indian mills. In the formative years of the industry, managing agents, usually Parsi, were not familiar with handling machinery, so that an English person tended to be employed as mill manager, helped by a Parsee assistant. These men, however, were unable to control the Hindu operatives, who worked under a Hindu jobber. Managerial troubles were often caused both by the language barrier and by lack of clarification of the functions of various jobs. A heavy dependence on English mill staffs persisted, and such managers still amounted to more than forty percent of all managers in 1895.¹⁴¹ Their presence was an obvious reason for the slow diffusion of ring spindles, because English mill managers were naturally inclined to stick to mules. As will be mentioned later, technological diffusion in India was in strong contrast with that in Japan.

The management of spinning and, sometimes, weaving mills by agents who were also general merchants could have led to a process of full integration, because they also controlled plural companies concurrently, thus forming their respective business groups¹⁴²

¹³⁶ It should be noted that even in the nineteenth century the reward based on profit was adopted by N. J. Tata's Empress Mills in Nagpur in 1877. Greaves, Cotton & Co. followed it at the time of the foundation of his four ring mills organized in Bombay in 1880s. The reward based on profit, however, does not seem to have been the majority even in the period of the First World War. The Company, op. cit., 1927, p. 94. *The Indian Textile Journal* stated that only four years would be enough for agents to recover the capital he invested in the company by means of his remuneration and dividend. *I.T.J.*, September 1899, pp. 338-9.

¹³⁷ S.M. Rutnagar, op. cit., pp. 10-14, 37; *I.T.J.*, October 1901, p. 3; *The Gazetteer of Bombay City*, Vol. 1, pp. 492ff.

¹³⁸ *The Times of India*, 6 August 1889, 6i. *I.T.J.*, July 1891, p. 167; November 1892, p. 24; March 1895, pp. 134-46; February 1895, p. 115.

¹³⁹ Calculated from the share lists in *The Times of India*. The calculation has some possibility of small errors caused by ambiguity of the description. The performance of companies outside of the Bombay city was distinctly good, and the forerunning companies prior to the boom followed them by a lesser degree.

¹⁴⁰ For example, companies of M. Gokuldas group were excellent in their performance, although the reward of management was based on the volume of products.

¹⁴¹ S.M. Rutnagar, op. cit., pp. 288-94; *I.T.J.*, December 1898, p. 77.

¹⁴² It is inferred that they contributed originally to the rapid increase in the export to China. However their marketing activities could not help fading as long as their remuneration depended upon the volume of products. Accordingly they sold out the products of their mills in the open market of Bombay. Government of India, *Review of the Trade of India 1899-1900*, 1900, p. 23. An exceptional case was Bombay Dyeing & Manufacturing, which had grown out of a dye works.

In fact this did not happen.¹⁴³ There were a number of factors limiting the growth of spinning companies. Oriental Mills was an exception at the time in that it built a new mill in Colaba in 1873 in addition to the original mill in Tardeo. However, judging from its later performance its growth strategy did not succeed, and it became insolvent in 1903. Coorla Mills was reorganized as Dharamsey Punjabhoy Mills in 1865; the new agent sent his son to Manchester and Oldham to buy additional machinery, so that the mill was equipped with 90,000 spindles and 1,000 looms, driven by five pairs of steam engines, which were taken care of by English fitters and managers. The experiment undertaken by this, the largest mill at the time, completely failed.¹⁴⁴ After the introduction of ring spindles to Empress Mills by N. Tata in 1877, the superiority of rings compared with mules was apparent, but later mills were reluctant to adopt ring spindles which were entirely new to them.¹⁴⁵

IV

Even prior to the Meiji Restoration the existence of joint-stock companies in the West was known to a few Japanese. One of them, Eiichi Shibusawa, was an eager advocate of joint-stock companies, which enabled people to initiate large enterprises by means of providing small amounts of capital.¹⁴⁶ After some trial and error public limited companies were first established in the banking sector in the 1870s, but it was with the development of cotton spinning in the 1880s that public limited companies came into being in the industrial sector. Shibusawa was closely involved in creating the modern business forms in both sectors.

The first small mechanized spinning mill was built in 1867 by the feudal lord of Satsuma clan.¹⁴⁷ A couple of small mills followed and then early in the 1880s the government set out to support private mill-building through the transfer of government-imported machinery. At the same time a large spinning company was organized without the government's help. Its organizer, the above mentioned Shibusawa, had been alarmed at the increasing imports of cotton yarn and cloth. He had laid careful plans for the founding of a spinning company, taking several years before the company became operative. Observing that the unhappy performances of its predecessors resulted from their being small scale mills of some 2,000 spindles run on water power, he concluded that the new mill had to be large, organized as a limited company and run by a skilled mill manager. One Takeo Yamanobe, studying at the University of London at the time, agreed to go to Lancashire to study the technology

¹⁴³ The Sassoon business group was an exception; five companies belonging to the group amalgamated to form E.D. Sassoon United Mills in 1920. *I.T.J.*, April 1920, p. 130.

¹⁴⁴ *I.T.J.*, February 1900, p. 135.

¹⁴⁵ *I.T.J.*, August 1891, pp. 176-7.

¹⁴⁶ He was dispatched to Europe to attend the Paris Exhibition in 1867, where he was deeply impressed with the form of business known as joint-stock companies.

¹⁴⁷ He is said to have been deeply disturbed by the sizable imports of cotton yarn, which he felt might pose a threat to Japan in the future. The mill was equipped with 560 throstle and 2,640 mule spindles made by Platts and fitted by its English engineer.

of spinning.¹⁴⁸ Shibusawa's Osaka Spinning Company, founded in 1882, was innovative in that it had 10,500 spindles operated by steam power; it ran night and day, and in 1885 was equipped with electric light in an attempt to reduce fires. Although a general law concerning the promotion of limited companies still did not exist, the memorandum of association submitted by the company to Osaka Prefecture made it clear that the shareholders' responsibility was limited to the capital paid up by them. The company had 79 shareholders at the time of organization.

Between 1878 and 1885 there grew up around twenty firms which can be regarded as the forerunners of the Japanese spinning industry; almost all of them, except a few including the Osaka Spinning Co., were founded with financial support from the government. This development came during the period of the Matsukata's deflation policy.¹⁴⁹ The excellent performance of the Osaka Spinning Company came to be regarded as the pattern-setter for the coming boom in floatation.

The boom in floatation was provoked by lowered interest rates which caused a boom in the stock market.¹⁵⁰ In addition the Osaka S. C. became increasingly successful in its operations. The mill-building movement really started late in 1886. Kawashima Spinning Mill, one of the forerunners, was reorganized as the Mie Spinning Company and equipped with ring and mule spindles.¹⁵¹ The following two years saw the organization of many spinning companies, including the well-known Kanegafuchi, Amagasaki and Settsu companies, the last two of which later amalgamated to form the Dainippon Spinning Co. More than ten companies were founded in 1887.¹⁵² The shortage of capital, however, was so severe that several projects never materialized, and a number of companies had to start operating with only 2,000 spindles. Roughly half of the companies could be equipped with a spindleage of around ten thousand. The difference in scale, therefore, was more remarkable than in the other three countries. In addition to this, the shortage of mill labour was another question. New mills used to send their labourers to near-by mills with the object of their learning the art of spinning. This was a custom of co-operation unique to Japanese companies.¹⁵³ During the first phase of mill-building, the All Japan Spinners Association was established. This suggests that these early companies which were supported by the government with regard to finance and/or technology, shared a sense of sol-

¹⁴⁸ He is said to have advertised in a local newspaper with the object of mastering the technology of spinning machinery, so that he could study and learn at Rose Mill of Bluckburn. O. Shōji and Y. Uno, *Yamanobe Takeo Kun Shōden* (A Biography of Takeo Yamanobe), 1918, p. 22. As for the mill, see *Worrall's Directory*, 1884, p. 7.

¹⁴⁹ *Chūgai Bukka Shinpō* (hereafter shortened as *Shinpō*), 6 May 1886, 1iii; 10 July 1886, 1ii-iii; 29 September 1886, 1iii; 11 November 1886, 1v; 21 January 1887, 1iii.

¹⁵⁰ *Shinpō*, 10 February 1887, 1i-ii; *Jiji Shinpō*, 22 February 1887, 2v; 21 April, 3iv.

¹⁵¹ In fact the reorganization was being prepared in 1886. T. Kinugawa, *Honpō Menshi Bōseki Shi*, 1937, Vol. 2, p. 535ff.

¹⁵² "The cotton spinning industry is so prosperous that a number of mills, large or small, are emerging all over the country." *Jiji Shinpō*, 12 May 1887, 2iv. As a matter of fact it is very difficult for us to know when these firms were legally organized because records exist only sporadically. The author's calculation was based largely on *Shinpō* and *Honpō Menshi Bōseki Shi*.

¹⁵³ The custom had been already observed in the formative years of forerunning companies. When the Osaka C. S. Co. was in the course of preparation, the four future foremen were dispatched to existing government mills. Such cases were usual in those days. It was also true, however, that new mills often "poached" skillful laborers in neighboring mills; when newly-built Kanegafuchi mills poached a number of laborers in 1896, it developed to a hot dispute in the trade association.

idity.¹⁵⁴ Even prior to the emergence of the association in 1882, the interchange of technological and managerial know-how between existing companies was such that almost all newly-created companies received assistance from earlier companies to which they had apprenticed their workers. The government originally took the lead in promoting co-operation between spinners in the hope that their financial and technological support would produce substantial results.

Almost all of these companies were public limited companies with shares of a face value of 25 or 50 yen, twenty to forty percent of which was usually subscribed by around ten to twenty founding members. The companies act was yet to come, but its contents were known because the bill had passed the *Genrōin* (the senate) in 1886.¹⁵⁵ The face value of the shares was fully paid up; this interestingly means that one share of 25 yen face value was approximately equal to that of £5 face value in Lancashire given that the latter was only half paid up. Many initiators were local entrepreneurs, including in particular traditional domestic cotton and yarn merchants. Landowner's participation was rare. By a strange confidence, one of their common motives in starting spinning companies was to check the imports of yarn and cloth as well as to give jobs to local people. The companies were located over a large area, however large companies tended to be situated in the Kansai district which had for long been a well-known cotton cultivation and hand-spinning area. As a result of repeated capital increases in the 1890s, the joint holdings of large shareholders decreased, with the effect that the five largest shareholders tended respectively to hold five to fifteen percent of total shares, while shareholders increased in number to three to four hundred.¹⁵⁶ There were active dealings in the shares of these spinning companies on the Tokyo and Osaka stock exchanges.¹⁵⁷ Interestingly they were often subject to limited voting rights as in the public companies in Oldham.

Corporate management was entirely new to Japan at the time. There were no particularly new clauses in the articles of association of these Japanese cotton spinning companies. *Shachō* (president), usually one of the largest investors, was stated to be responsible for the overall management, which demonstrated that it was less of an honorary post than many other directorships. Although in most cases important founders were elected as directors, the aspects of management with which they were familiar were restricted at the most to buying and selling functions. They were entirely ignorant of the management of spinning mills equipped with imported machines. Directors were few in number, often two to four persons, whose joint share-holdings might by the end of the 19th century frequently amount

¹⁵⁴ The association was founded by R. Okada, manager of government-run Aichi Spinning Mill in 1882, the year of the establishment of the Osaka C. S. Co. It is said to have functioned as a forum for the members to exchange managerial and technical know-how in its early stage. After its reorganization in 1888 the *Monthly Review* of the association had played an active role in providing member companies with current information of concern, including statistics of yarn production, cotton and coal consumed, power used, number of male and female operatives working, their average daily wages, and number of working days and working hours per day. It afterwards developed into one of the most prominent trade associations in Japan.

¹⁵⁵ *Shinpō*, 2 July 1886, 1iv; 27 and 28 April 1887, .1i-ii. Although notable Japanese businessmen were often trained in the U.K. or in the U.S., the first bill for companies' regulation had been, quite interestingly, modelled after the German companies' act, drafted by a German consultant to the Japanese government.

¹⁵⁶ These figures were calculated from *kōkajō* (semiannual report) of companies stocked at Library of Nippon Bōseki Kyōkai (All Japan Spinners' Association).

¹⁵⁷ Spinning companies in Japan differed from those in the U.K. and the U.S. in that their shares were listed at the major stock exchanges. Shares of Kanegafuchi S. C. were one of the most popular shares in the pre-war period.

to no more than ten percent of the total. Although the managing agency system was not settled in Japan, executives' bonus was usually a large sum; articles of the association often laid down it to be within ten to fifteen percent of net profit.

Strategic decision-making, therefore, tended to be carried out by a few powerful executives, president and mill manager, without any active discussion with the directors and other officers in the top management organization.¹⁵⁸ Senior executives were able to enforce their decisions on others, including shareholders. In general fifty to a hundred shareholders used to attend general meetings of the Osaka Cotton Spinning Co., but they did not participate in discussion with the company management, so that in the meeting purely formal consent was sought for the management's report and its strategic decision-making.¹⁵⁹ Confidence in the management existed; shareholders ignorant of Western style business management could not but place their trust in it. An English mechanic's salary in Japan was exorbitantly high compared with that of Japanese graduate engineers. In the companies organized during the boom years, all of the English fitters returned home after mill had begun to operate. Settsu, one of best-performing companies, even began operations entirely without British assistance. Japanese spinning mills, therefore, did not depend upon English mechanics except during their founding period.¹⁶⁰ Japanese companies differed greatly from those in India in this regard, and this factor may explain the widespread installation of ring spindles in these companies.¹⁶¹ Both countries were engaged in producing yarn of low counts, say, ten to twenty. In 1891 in India the fifteen firms founded during the boom of 1888-90 had 292,296 mule and 81,000 ring spindles, while around the same number of Japanese firms organized during the boom 1887-89 were equipped almost exclusively with ring spindles.¹⁶²

Apart from the amount of subscribed capital, the performance of these companies depended upon the *shihainin's* (mill manager's) management of the company. Small companies did not find it easy to employ skillful managers who had graduated from higher educational institutions, and/or, in many cases, worked abroad. The strategic position of the more skillful managers was such that Kyozo Kikuchi, the manager of the Hirano Spinning Co., also later held the same post in both the Settsu and Amagasaki C. S. companies.¹⁶³ Many university graduate mill managers in large spinning companies were promoted to director within about ten years of entering the company.¹⁶⁴

The production capacity of these companies differed greatly right from the start. As a result the performance of these companies also differed remarkably; small companies

¹⁵⁸ "Directors often are initiators or inept person unfamiliar with business practices." *Shinpō*, 13 November 1888, lii.

¹⁵⁹ Large shareholders' opinions used to be informally given notice by the top management before a new policy was announced at the general meeting. This did not necessarily mean that they had a powerful effect on making a company policy.

¹⁶⁰ Exceptions were that when companies added the weaving department they contracted with English engineers seeking for their technical advice.

¹⁶¹ Around 90 percent of spindles equipped in these companies was purchased from Platt and Co. through the sole agent to which Mitsui Bussan had been nominated in 1886. At the time of the boom a Japanese trade newspaper however stated that it was quite difficult to declare rings were preferable to mules. *Shinpō*, 9 June 1887, liii-v; 27 April 1888, liii-iv; 13 April 1889, li.

¹⁶² *The Indian Textile Diary and Reference Book, 1891*, pp. 8-9.

¹⁶³ This was a major reason why these companies were later amalgamated into Dainippon S. C.

¹⁶⁴ T. Yamanobe was nominated as director in 1895. Likewise K. Kikuchi of Amagasaki and S. Muto of Kanegafuchi were each promoted to director within ten years after they entered the companies.

suffered from a shortage of capital and skillful engineers. On the other, a will to expand, whatever their size, was one of the most remarkable managerial characteristics of Japanese companies. In well-performing companies, the number of spindles increased by about three times by the end of the century. The finance came largely from an increase in capital. Additionally debentures became available after the enactment of the Commercial Law in 1893. With the expansion of additional mill-buildings the absorption of small firms by larger and better-performing ones went on space. In 1891 spinning firms numbered thirty six. They increased so as to reach a peak of seventy nine in 1900, and then began to decrease as the result of absorption. Thus, they were rapidly becoming multiple unit firms by the turn of the century. One of major driving forces toward multiple unit spinning firms was ample white-collar human resources accumulated within firms. Japanese firms had hired white-collar employees of double figures including engineers from the start. To cope with the relative shortage of eligible white-collar employees who could utilize transferred soft or hard technologies for the modern company management, large and well-performing firms introduced a system of profit-sharing on meritocracy among their employees to induce skillful employees' willingness to settle in their firms.¹⁶⁵ It was proved that a considerable number of employees enjoyed long-term, sometimes life-time, employment in these firms.¹⁶⁶ Within a decade after their foundation, university graduates increased in number, forming key figures among the middle management.¹⁶⁷

V

In conclusion, one of the remarkable facts regarding the diffusion of public cotton spinning companies is the simultaneity of the mill-floatation booms in these four countries. Even in Japan where the first boom came more than a decade later than those in the other three countries, it coincided with one of the largest mill-building booms in India. Without doubt the enactment of company acts which made it easy to form public companies with limited liability provided a favorable background for these booms. The direct incentive for the organization of spinning companies, however, derived from the fact that the situation of imbalance created by the world-wide cotton famine returned to normality, and a falling rate of interest attracted ample investment in mill-building. Thus, a cheap money supply was a driving force behind these booms. However, a good performance by forerunner firms also attracted investment in mill-building. In this context the forerunners included leading companies conspicuous with regard to performance and publicity, which functioned as pattern-setters for late-comers. Concerning the booms in these four countries, the following remarks by an prominent American inventor and textile executive of the early nine-

¹⁶⁵ It was in the cotton spinning industry that the managerial capitalism first emerged in Japan before the First World War. L.G. Sandberg's assertion that the cotton spinning industry is not management-intensive, therefore, is not necessarily applicable to that in Japan. L.G. Sandberg, *Lancashire in Decline*, 1974, pp. 217-8.

¹⁶⁶ In general, around half of remuneration for *yakuin* (executives) was divided among white-color employees after it was approved by shareholders' general meetings. The profit-sharing system was usually extended to the foreman class.

¹⁶⁷ This is based on the evidence from such documents as minutes of general meeting, minutes of the board of directors, and annual reports kept in these companies.

teenth century are apposite.

They invest because others are investing; they believe, without knowing exactly why, that such investments are safe, and will be profitable; or they follow the lead of some friend, in whose knowledge and judgement they confide.¹⁶⁸

Given the business climates of these countries, the emerging public limited companies mutually showed similarities and dissimilarities in their modes of management, which have mentioned above. One of the most contrasting characteristics can be observed in the management strategy of these companies. Associated with this, the top management organization and its process of decision-making is another such characteristic.

In the last stage of the boom years warnings were always issued against over-production. When the products of new mills were brought to the market, their price consistently declined.¹⁶⁹ Thus, Japan, for example experienced the first depression in her industrial economy. As for the other three countries these slumps meant the advent of the world-wide 'great depression.' It is quite natural, therefore, that the performance of these companies was, to a greater or lesser degree, not in line with shareholders' expectations. Performance, however, differed considerably between the four countries. During the three years 1888-90, sixty six companies organized in the Oldham district before the end of the boom years paid on average annual dividends of 3.29%, 3.69% and 5.67%. Eleven of these companies paid no dividend at all during the period while only one company paid more than ten percent for the brisk year of 1890.¹⁷⁰ There was no conspicuous difference in dividend between mill-building and converted companies, because the ill-fated converted companies has been dissolved. The late comers organized in the 1880s undoubtedly showed a better performance than the preceding ones. In Fall River twenty five listed companies founded before the end of 1872 attained better results, paying dividends of 7.51%, 8.21% and 5.29% respectively during the same three years.¹⁷¹ In this regard they could cope with their followers founded in the next decade. Twenty one Indian companies equivalent to those in England could pay not more than moderate dividends of 6.85%, 6.45% and 5.49% each of the three years of 1887-9.¹⁷² As far as dividends are concerned, Japanese companies were outstanding; they could pay 6.7%, 13.3% and 13.3% on average in the 3 years 1891-3. Even in 1898, the most depressed year of the 1890s, they paid an average dividend of 4 percent, although company performances tended to vary.¹⁷³ The strategies which were followed, and which were characteristic to companies in each country, were formulated by the different performances of companies in each of these four countries, and in turn also influenced such performance.

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¹⁶⁸ E.B. Bigelow, *Remarks on the Depressed Condition of Manufacturers in Massachusetts—*, 1858, cited in R.V. Spalding, op. cit., 1963, p. 178.

¹⁶⁹ *The Oldham Chronicle*, 7 August 1875, 8ii; *F.R.W.N.*, 4 October 1877, 2vi; *The Times of India*, 8 March 1875, 2i; 8 June 1875, 4i; *Chūgai Shōgyō Shinpō*, 26 November 1889, 1i-ii.

¹⁷⁰ Calculated from 'Our Limited Companies' in *The Oldham Chronicle*, 27 December 1890, 3vii. These firms include a few companies outside the Oldham district.

¹⁷¹ *F.R.W.N.*, 4 October 1888, 2vi; 21 November 1889, 2vi; 19 November 1890, 2vii. The year's dividends of listed spinning companies were first reported in 1888.

¹⁷² Calculated on the basis of the list of share prices in *The Times of India*.

¹⁷³ Nōshōmu Shō, *Nippon Menshi Bōseki Gyō Enkaku Kiji*, 1902 c., pp. 61-62.

APPENDIX

TABLE 1. FLOATATION BOOM OF SPINNING COMPANIES AT OLDHAM, 1873-5 (1)

Name	Registration	Nominal Capital (=Spindles) (2)	Spindles (1884)
Hey	7/ 7/73	25,000	25,164
Hollinwood	17/ 2/74	40,000	62,280
Oak	15/ 2/74	40,000	113,400
Brough	10/ 3/74	60,000	57,246
United	12/ 3/74	80,000	88,188
Shaw	13/ 3/74	70,000	70,000
Star	14/ 3/74	70,000	69,528
Junction	17/ 3/74	100,000	73,476
Westwood	1/ 4/74	80,000	49,404
Glodwick	9/ 4/74	80,000	74,106
Shiloh	24/ 4/74	30,000	27,500
Enterprise	21/ 5/74	50,000	(3)
Thornham	9/ 6/74	60,000	54,000
Livingston	22/ 7/74	40,000	57,500
Alliance	18/10/74	20,000	19,056
Broadway	13/11/74	40,000	57,228
Honeywell	24/11/74	50,000	75,618
Werneth	14/12/74	50,000	99,992
Moorfield	12/ 1/75	70,000	72,056
Hathershaw	13/ 1/75	60,000	77,424
Prince of Wales	13/ 1/75	80,000	68,500
Industry	23/ 1/75	60,000	77,400
Boundry	27/ 1/75	50,000	64,725
Smallbrook	3/ 2/75	70,000	74,052
Abbey	5/ 2/75	50,000	45,000
Northmoor	7/ 2/75	60,000	76,500
Swan	7/ 2/75	60,000	71,700
Coldhurst	11/ 2/75	50,000	61,308
Longfield	13/ 2/75	60,000	20,760
Ridgefield	15/ 2/75	50,000	70,000
Tong Valley	8/ 5/75	70,000	55,382
Equitable	5/ 7/75	50,000	78,780

(1) The table is mill-building companies only.

(2) The figure of spindles for years prior to 1884 is not available. It was said, however, that the figure (pounds) of original nominal capital showed the first scheduled number of spindlage, as a spindle of mule cost one pound at the time.

(3) Liquidation in 1879.

Sources: Company records stocked at Company Registration Office and Public Record Office in London; Warrall's *Cotton Spinners' and Manufacturers' Directory for the year 1884*.

TABLE 2. FLOATATION BOOM OF SPINNING COMPANIES AT FALL RIVER, 1871-2

Name	Foundation	Spindles (1876)	Looms	Spindles (1884)	Looms
Stafford	1871	34,928	860	38,800	966
Weetamoe	1871	34,080	852	34,080	860
Slade	1871	37,040	860	40,624	975
Richard Borden	1871	44,064	1,032	47,616	1,100
Wampanoag	1871	28,000	620	66,432	1,605
Narragansett	1871	27,920	700	31,144	787
King Philip	1871	39,360	824	99,152	1,850
Crescent	1871	33,280	744	36,048	820
Montaup (1)	1871	7,200	112	9,120	176
Chace	1871-2	43,480	1,056	50,200	1,274
Osborn	1872	37,232	930	43,156	1,100
Flint	1872	45,368	1,008	40,064	1,164
Border City	1872	72,144	1,760	77,878	1,884
Sagamore (2)	1872	37,672	900	39,566	942
Shove	1872	37,504	960	39,040	960

(1) The company produced bags and cotton bats. Liquidation in 1877.

(2) Liquidation in 1879.

Sources: F.M. Peck and H.H. Earl, *Fall River and its Industries*, 1877, pp. 131-46; H.H. Earl, *Fall River and its Manufactories*, the edition for 1884, pp. 13-4.

TABLE 3. FLOATATION BOOM OF SPINNING COMPANIES IN BOMBAY, 1872-4*

Name	Foundation	Spindles (1878)	Looms	Spindles (1882)	Looms	Spindles (1897)	Looms
J. Baloo	1872	23,600	301	25,300	428	32,564	469
Sunderdas	1872	17,000	186	17,640	140	21,880	368
S. Jadhovji (1)	1872	28,000	Nil	25,300	428	25,108	Nil
Hindustan	1873	31,692	301	36,840	400	33,530	727
National (2)	1874	17,668	Nil	30,664	685		
Nichol (3)	1874	19,400	516	19,000	Nil		
Colaba Land	1874	35,560	338	20,664	372	27,761	507
Sassoon	1874	50,220	754	50,220	809	55,624	1,034
Colaba (4)	1874	20,654	372				
Khatau	1974	24,145	340	25,148	340	31,468	539
Mandvi (5)	1874	25,000	Nil	25,930	Nil	24,888	Nil
Mazagaon	1874	28,296	343	30,096	360	34,424	450
Coorla	1874	28,400	420	29,516	550	30,704	563
Prince of Wales (6)	1874	21,312	350	21,312	250	22,480	582
Anglo-Indian	1874	28,512	Nil	31,680	Nil	45,592	Nil

* Spindlage included a considerable number of 'throstle.'

(1) Liquidation in 1894

(2) Liquidation in 1895

(3) Liquidation in 1879

(4) Liquidation in 1880 and amalgamation with Oriental Mills

(5) Liquidation in 1879

(6) Liquidation in 1891

Sources: *Report of Bombay Chamber of Commerce for the Year 1878*, Appendix; *Report of Bombay Mill-owners' Association for the Year 1882*, Appendix; The same report for the 1897, Appendix.

TABLE 4. FLOATATION BOOM OF SPINNING COMPANIES IN JAPAN, 1887-9

Name	Foundation	Spindles (1891)	Spindles (1899)
Mie	1886 (1)	30,672	59,937
Kanegafuchi	1887	30,528	103,064
Yawata	1887	3,336	n.a.
Hirano	1887	11,520	37,821
Owari	1887	15,280	30,304
Kurashiki	1887	4,472	21,672
Wakayama	1887	5,868	13,451
Uwa	1887	2,064	10,185
Fujii	1888	1,136	1,136
Kanakin	1888	13,560	27,826
Kofu Menshi	1888	2,060	2,060
Tokyo	1889	9,014	22,075
Settsu	1889	19,200	50,608
Naniwa	1889	15,868	30,596
Senshu	1889	10,320	17,866
Amagasaki	1889	9,216	44,957
Shozujima	1889	2,000	(2)
Kurume	1889	2,064	(3)
Miike	1889	6,144	52,187 (3)

(1) Kawashima Spinning Works was converted to Mie Spinning Company late in 1886.

(2) Liquidation in 1898.

(3) Miike absorbed Kurume and Kumamoto in 1899.

Sources: K. Yamaguchi ed., op. cit., pp. 10-11; *Dai Nippon Boseki Rengo-kai Geppo*, No. 87, 1899, Appendix.