THE GROWTH OF COTTON SPINNING FIRMS AND VERTICAL INTEGRATION

— A Comparative Study of U.K., U.S.A., India and Japan—†

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I

While remarkable progress has recently been made in the study of the organizational development in modern firms, it appears to the author that little attention has been paid to that of cotton textile firms, the nucleus of whose manufacturing processes is spinning. In his recent brilliant and influencial book, for example, Prof. D.A. Chandler Jr. did not mention at all of integrated firms, except of the merger movement. In that book he cited Livermore's article, showing that nearly all the mergers failed in the textile industry of U.S.A.[1] This may be largely because, according to his opinion, 'despite the fact that the integrated textile mills were the first large factories in this country, the new textile industry had little impact on the development of modern industrial management'.[2]

Indeed it is true that a single product-single function firm , that is, a single mill firm located at a single place, was still dominant in number at the coming of the First World War. This was basically a copy of mills built in the late nineteenth century, though the size of mills tended to become larger. This fact appears to be most noticeable in English cotton spinning firms as mentioned below. As a matter of fact, however, the merger movement at the turn of the century influenced cotton spinning firms across the world, though the degree was considerably different from one country to another. Indeed it has been usually stated that many of the amalgamated firms could not attain their expected financial achievement.[3] However, some of the cotton spinning companies, especially in U.S.A., succeeded in proceeding with their business integration. Then, granting that cotton spinning firms were rather slow in their growth, it might not be concluded that the administration and organization of the firms belonging to this industry remained as simple as in the nineteenth century. It is to be remembered that once in the middle of the depression in 1930s. M. Copeland put his emphasis on the integrating tendency clearly observed in the industry and the need to build an organization fit for each firm to attain its good financial result.[4] A detailed survey of American cotton textile industry confirmed his opinion with the conclusion that both man power and

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[1] J.D. Chandler Jr., The visible Hand: The Managerial Revolution in American Business, 1977, pp. 337–8.

[2] Ibid., p. 72.

[3] Aa far as U.K. was concerned, conf. H.W. Macrosty, The Trust Movement in British Industry, 1907, p. 117.

organization policies were crucial. In Great Britan R. Robson emphasized the same conclusion in 1949.[5]

After taking a general view of cotton textile firms in the world containing spinning units after the First World War, it will be maintained that their business activities were very different from each other. Nevertheless it may be properly summed up that the business developments towards integration and, in some cases, diversification were slow but steady even in the cotton spinning firms in the world. On the other hand the slow growth might appear to tell us that the cotton textile firms, generally speaking, did not easily and actively grow up to become the large modern corporation. It is widely said that the growth of firm is closely related to the building of managerial organization.[6] In other words it might be said that if the management is not confident of the organizational building or doubts that large firms can keep their managerial efficiency through building the organization best fit to the strategy of the firms, they naturally are hesitant in proceeding and developing advanced and complicated organizations.

In this essay the author will make a survey of the growth, horizontal and vertical, of cotton textile firms covering four main cotton textile producing countries, U.K., U.S.A., India and Japan. They comprised the main cotton textile exporting countries. Their products were competitive in the world market. Lastly from the organizational point view some special reference will be made to Japanese firms, which built their managerial organization including overseas networks and proceeded to diversification to some extent before the Second World War. One of the characteristics of this industry lies in the large number of firms in comparison with other industries. My interest is in behaviors of the group of largest firms in each country. In the beginning the largest ten firms will be picked up from the directories of the industry. The spindle number is selected as a measure of their size at the moment. It would be suitable for expressing the horizontal growth, but it would tell nothing of the vertical growth. So two steps will be taken here. The first is to find out the largest ten firms in reference to their spindle number. The type of the spindle is not taken into account in this case, though the spindle for lower count yarns consumes more capital and labour force. The second is to consult the extent of integration about the firms picked out and further to look for other firms not ranked but listed in the directories as managerially integrated to a considerable extent. It was sometimes asserted that the spindle number was utterly unsuitable for expressing the size of firms[7]. It is however thought that after all there is no available figure better than this at this moment. Not to make the table complicated, a line between mule and ring was not drawn. It is to be remembered that while mules predominated overwhelmingly in U.K., rings commanded an absolute majority in Japan and U.S.A.[8] If it was reckoned that a spindle of ring was equivalent to 1.5 spindle

[4] M. Copeland & E.P. Learned, Merchandising of Cotton Textiles: Methods and Organization, 1933, p. 78 ff.

[5] H.S. Davis and others, Vertical Integration in the Textile Industries, 1938, pp. 14–16; R. Robson, Sizes of Factories and Firms in the Cotton Industry, Journal of Manchester Statistical Society, 1950, p. 25.

[6] Conf. J.D. Chandler Jr. Strategy and Structure, 1962.

[7] S.D. Mehta, The Indian Cotton Textile Industry: An Economic Analysis, 1953, pp. 188–200.

[8] G.C. Allen, British Industries and their Organization, 1933; S.J. Chapman, The Lancashire Cotton Industry, 1904; R. Robson. The Cotton Industry in Britain, 1957; M. Copleland, Cotton Manufacturing Industry of the United States, 1923; S.D. Mehta, op. cit.

of mule, the ratio R. Robson used in his book, the difference in size among four countries would have been more remarkable.[9]

II

It is a well-known fact that the amalgamation was largely horizontal as far as the merger movement in Great Britain around 1900 was concerned.[10] The single big result of horizontal combination in the spinning section was Fine Cotton Spinners' and Doublers' Association. The amalgamation toward Calico Printing Association contained two firms having spinning and weaving units with more than 100,000 spindles in all.[11] However, the Association did not extend these manufacturing sections afterwards. In Great Britain, there had been a comparatively small number of amalgamations and absorptions in the cotton spinning section up to the late twenties of this century. This seems to have necessarily resulted in their slow growth. It also seems that the big horizontal amalgamations caused by the merger movement were so strong as to prevent the formation of integrated firms. The firms ranked in Tables I were mostly specialized just in cotton spinning process.

It has been said that the spinning and weaving sections were operated by separate firms in Great Britain in the latter half of last century.[12] This means that almost all of large spinning firms promoted as public companies during the period pursued the single process of spinning.[13] Among the ten firms in Tables I Horrockses and Crewdson was the only firm that had maintained both processes since the formative period[14] Other firms all engaged themselves in just spinning section. It seems that the management's interest in the growth of firm, if any, was in building as large a mill as possible at that moment. Generally speaking cotton spinning firms in Lancashire took on their producing activities at a single location. They used to extend their mill and add one or two new mills at their initial site. However the area originally selected set physical limits to the expansion of their business activities. Some of the firms ranked in the table were exceptional in this respect. Crosesses & Winkworth with the largest number of spindles had five mills at three separate locations in Bolton district. Its initial three mills had 44,000, 55,000 and 68,000 spindles respectively. Another mill built in 1878 was furnished with 75,000 spindles, and in 1884 the firm built the fifth mill of 83,000 spindlage.[15] As in this case, the management usually paid attention to building as large a mill as possible at that moment in the original site. Thus the size of mill newly built became so large up to the First World War that a single mill was usually equipped with more than 100,000 spindles. The new mill of Times was the largest in Middleton when

[9] Conf. R. Robson, op. cit., p. 134 ff.

[10] H.W. Macrosty ,op. cit., p. 155 ff.

[11] Warrall's Cotton Spinners and Manufactures' Directory for Lancashire, 1913. These firms were E. Gartside Ltd. of Manchester and Andrew George & Sons Ltd. of Stockport.

[12] D.A. Farnie, The English Cotton Industry and the World Market, 1979, Chapter VIII; Robson, op. cit., p. 120: A.J. Taylor, Concentration and Specialization in the Lancashire Cotton Industry 1825–50. Eco. Hist. Rev. 2nd ser. Vol. I.

[13] Shin-ichi Yonekawa, Oldham Boseki Kabushikigaisha Setsuritus Boom 1873–5. (The Floating Boom of Oldham Cotton Spinning Companies) The Hitotsubashi Rev. Vol. 77 No. 6 pp. 16–35.

[14] Sir C. Browh, Origin and Progress of Horrockses Crewdsow & Co. no date, p. 5.

[15] Lancashire, the Premier County of the Kingdom Cities and Towns, 1889, Part II, p. 77.

TABLE I THE LARGEST TEN COTTON TEXTILE FIRMS IN U.K.

Firms	Ranking 1913	Ranking 1928	Place of Mills 1913	Place of Mills 1928	Spindles 1913	Spindles 1928	Looms 1913	Looms 1928	Integration in 1928
F.C.S.D.A.	1	1	Ashton Bolton Leigh Manchester	Ashton Bolton Leigh Manchester	3,243,674**	3,295,460**	0	0	C. S.
Crosses & Winkworth	2	3	Bolton	Bolton	346,000	599,344	0	0	C. S.
Iwell Bank	3	5	Farnworth	Farnworth	326,160	374,034	0	0	C. S.
How Bridge	4	2	Leigh	Leigh Bolton Farnworth	316,000	718,400	0	0	C. S.
Bolton Union	5	under 10	Bolton	Bolton	290,478	120,272	0	0	C. S.
Times	6	under 10	Middleton	Middleton	264,144	264,144	0	0	C. S.
Tunncriffe	7	under 10	Leigh	Leigh	263,793	208,936	0	0	C. S.
Broadstone	8	under 10	Stockport	Stockport	262,504	262,504	0	0	C. S.
Bee Hive	9	under 10	Bolton	Bolton	262,000	262,000	0	0	C. S.
Horrockses & Crewdson	10	6	Preston Mossley	Preston Mossley	250,000	320,000	1,300	8,300	C. S. W.
Amalgamated Cotton Mills	—*	2	—	Bolton Manchester Mossley Stalybridge Wigan	—	1.064,802	—	5,625	C. S. W. F. Se.
Swan Lane	under 10	4	Bolton	Bolton	210,000	400,000	0	0	C. S.
Laburham	under 10	7	Leigh	Leigh	120,000	345,000	0	0	C. S.
Atlas	under 10	8	Ashton	Ashton	87,232	323,772	0	0	C. S.
Lee & Wrightley	under 10	9	Oldham	Oldham	150,040	300,000	0	0	C. S.
Sudan	under 10	10	Middleton	Midlleton	190,000	267,500	0	0	C. S.

Source: John Warrall, Cotton Spinners' and Manufacturers' Directory.

Abridgement in Table I–IV:

C. . . . Cotton Wo. . . . Wool L. . . . Linen Si. . . . Silk S. . . . Spinning W. . . . Weaving F. . . . Finishing (Dyeing, Printing etc).
K. . . . Knitting Se. . . . Selling.

* This means 'not in exsistence' or 'absorbed'.

** This does not contain spindles in Scotland and France.

founded in 1898. The result might be that the majority of the firms ranked in the table were ones quite recently born at the time of observation. General interest in the growth of firms, if any, was horizontal for the top managers in the twenties and thirties. Atlas Mills in Table I was the amalgamated one of four firms engaged in spinning in Ashton. It was properly said that one of the best examples was the Lancashire Cotton Corporation founded in 1929 under the sponsorship of the Bank of England.

Well-known integrated companies were found among the firms not ranked here. J. P. Coats is one of the most successfully integrated firms in the textile industry. Specialized in manufacturing cotton thread, it controlled the world market together with the English Sewing Cotton Thread Company.[16] The Central Thread Agency remained their common selling subsidiary for the world thread market. Also it had mills abroad.[17] Amalgamated Cotton Mills, emerged after the First World War, was a holding company till 1937 when a drastic reorganization took place.[18] Each firm does not seem to lost its individuality. As an amalgamation of large firms including a selling company it would have been expected to succeed. Some old established firms made their business integrated to a considerable extent in the nineteenth century. Joshua Hoyle, an influencial integrated firm of spinning and weaving, absorbed a few firms after the War.[19] Tootal formed by the amalgamation of two firms in 1888 had several mills in Bolton, Leigh, Radcriffe and Macnhester, making a speciality in jacconettes, twills etc. John Ryland also was a famous integrated firm, having seventeen mills in Wagan, Bolton and Manchester districts.[20] Likewise, producing sewing cotton thread at several mills in Lancashire, Bagley & Wright made a number of distributing centres in the world besides a spooling mill in Montreal.[21] One of smallest integrated firms might be A. & A. Crompton. As an old firm located at Shaw near Oldham, it had two mills in the late nineteenth century. Its products, dyed coarse yarns, were mainly exported to S. E. Europe. The management was so entrepreneurial that in addition to bleach works built in 1885, the firm established a weaving mill at Bucharest and took on shipping business. It was said that 'Crompton' brand could be found at every townshop of S.E. European countries.[22]

In U.S.A. spinning and weaving processes had been integrated in the cotton textile firms since the time of their promotion. On the coming of this century the competition from the South became severe for New England firms, and the location of the industry was gradually transferred from New England to the Southern States.[23] Though many firms of New England had their mills in a single site like English firms, a considerable number of the larger

[16] Macrosty, Ibid, pp. 125–9; S. Yonekawa, Structure of Strategy of Cotton and Steel Enterprises in Britain, 1900–1939 in K. Nanagawa (ed.) Proceedings of the First Fugi Conference, 1976, pp. 220–22.

[17] The mill abroad was built at the first time in Pawtucket in 1868. At the end of last century this mill had 200,000 spindles.

[18] Company Registration Office, Company file, 16592; Amalgamated Cotton Mills Trust Ltd., Concerning Cotton: a Brief Account of ——, 1921, Foreword.

[19] C.R.O., Company files, 7903.

[20] D.A. Farnie, John Ryland of Manchester, Bulletin of the John Ryland Library of the University of Manchester, 1973.

[21] Manchester of Today, 1888, p. 158.

[22] Public Record Office, BT 31, 16880/2298, 21; J.E. Hargreaves, A History of the Families of Crompton and Milne and of A. & A. Crompton & Co. 1967, pp. 102–6.

[23] M. Copeland, op. cit., p. 32 ff.

TABLE II THE LARGEST TEN COTTON TEXTILE FIRMS IN U.S.A.

Firms	Ranking 1913	Ranking 1928	Place of Mills 1913	Place of Mills 1928	Spindles 1913	Spindles 1928	Looms 1913	Looms 1928	Integration in 1928	
Amoskeag	1	1	Manchester	Manchester	790,000	790,000	24,400	29,600	C. W.	S.W.F.Se.
Union	2	3	Taunton	Taunton						
			Fall River	Fall River	540,000	not available	0	0	C.	S.K.Se.
			New Bedford	New Bedford						
			Mechanicville	Mechanicsville						
			St. Gohnsville	St. Gohnsville						
Fall River Iron Works	3	7	Fall River	Fall River	485,288	358,952	13,767	8,396	C.	S.W.F.Se.
Pacific	4	6	Lawrence	Lawrence						
			Dover	Dover						
				Columbia	404,360	468,648	10,468	11,076	C. W.	S.W.F.Se.
				Lyman						
American Thread	5	8	Glaso	Dalton						
			Willimantic	Willimantic						
			Fall River	Fall River	434,301	not available	0	0	C.	S.F.(Sc.)*
			Holyoke	Holyoke						
			Westerly	Westerly						
Parker	6	**	Greenville Union							
			Green							
			Wallhalla							
			Seneca							
			Arlington							
			Jonesville		289,652	**	6,406		C.	S.W.
			Columbia							
			Edegefield							
			Camaden							
			Chester							
			Winnsboro							

Massachussett	7	4	Lowell Lindale	Lowell Opelika Biddesford Lewiston	273,088	512,016	8,238	14,704	C.	S.W.F.Se.
Berkshire	8	10	Adams	Adams	260,079	265,724	6,400	6,000	C.	S.W.
Merrimack	9	under 10	Lowel Huntsville	Lowell Huntsville	259,056	236,268	7,096	6,517	C.	S.W.F.
Riverside & Dan River	10	5	Danville	Danville	246,800	472,220	8,276	13,500	C.	S.D.W.F.
Lockwood Green	—	2	—	Pelzer, Lowell Hogansville Le Grange Lisbon Clinton Tucapau Palinfield Winsborough	—	570,966	—	8,523	C.L.	S.W.F.
Lonsdale	under 10	9	Lonsdale Ashton	Lonsdale Ashton Berkley Phoenix Hope Blackstone Seneca	184,804	294,756	4,659	8,230	C.	S.W.F.

Sources: Dockhan's American Report and Directory of the Textile Manufacture and Dry Goods Trade.
Textile World Record, ed., Textile Establishments in the U.S. and Canada.

* (Se) means 'by subsidiary' ** Liquidated

firms built their new mills in these Southern States before the First World War.[24] This applies to several firms ranked in Table II.

In due course of time the integration proceeded step by step in many of the largest firms ranked here. Amoskeag of Manchester, New Hampshire, abolished its sales agent in 1907 and began direct sales apparently with the resulting yearly saving of a huge amount of money.[25] It had ten mills in three areas of Manchester because it had stemmed from the amalgamation of three large firms located in the city.[26] Fall River Iron Works originated in building spinning mills at the site of iron works by M.C.D. Borden, most influencial dry goods agent of New York in 1880s. At the same time he controlled American Printing Company in the same city, one of the largest printing firms.[27] Three processes of manufacturing were afterwards integrated because the spinning and weaving machines of the Iron Works were carried over to American Printing Company. Likewise Pacific Mills was best known for the integrated business. It built the huge print works in Lawrence in 1916.[28] It specialized in cotton and worsted dress goods, and expanded the capacity for production by means of buying out Cocheco Manuf. Co. in 1909. Also Massachussett Cotton Mills was integrated in 1928, selling its products at 'Pepperell Sales Offices' of six large cities.[29]

Union Mills originally specialized in knitting women's and children's underwears, but afterwards integrated its spinning section through the lease of the mills owned by New England Cotton Yarn Company.[30] Parker Mills, being a holding company, had not shown good performances. The falilure in the cotton speculation made by the president brought Parker Mills into collapse in 1916 and four mills were bought by Pacific Mills.[31] On the other hand American Thread was controlled by English Sewing Cotton and shared Central Thread Agency as its selling organization with the latter. It had its mills in R.I. and Mass.[32] The only firm that originated in the South and is ranked in the table, is Riverside & Dan River. This was founded in Georgia in 1882 and made rapid progress in the growth. Its sales organization took over the sales of all products in 1941.[33]

Not ranked in the Table, some of large firms had integrated their business activities. Graniteville Manufacturing Company, one of the oldest firms in South Calorina had four

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[24] An example is that Merrimack decided to build a new mill of 25,000 spindles in Huntsville, Alabama, 1898. This establishment was afterward expanded, having more than 100,000 spindles. This firm also integrated printing process in the last century. Minutes of Board of Directors. Archive Dept. of Baker Library, Typscript.

[25] Amoskeag Manufacturing Company: A History 1805–1945, Typscript, Section 2, p. 16, Archive Dept., Baker Library.

[26] G.W. Browne, Amoskeag Manufacturing Company, 1915; A History, Section 1.

[27] Fall Weekly News, March 31: December 19, 1887 etc.

[28] Business Records of Parker Mills, Corporate Dept. Baker Library; The Company, Memoirs of a Corporate, 1850–1950, a series of booklets. no date.

[29] Textile Establishments in the United States, Canada and Mexico, 34th edition by Textile World, 1928, p. 200.

[30] To the Stockholders of New England Cotton Yarn Company, 1913, Corporate Dept. Baker Library.

[31] To the Stockholders of Parker Cotton Mills Company, 1915, Corporate Dept. Barker Library.

[32] English Sewing Cotton Company was formulated through the amalgamation of 13 firms producing cotton thread in 1897. Conf. H.E. Blyth, Through the Eye of a Needle: the Story of the English Sewing Cotton Company, 1947: American Thread Company, Prospect of 1898, Corporate Pept., Baker Library

[33] R.S. Smith, Mill on the Dan, 1960, pp. 454–5.

TABLE III THE LARGEST TEN COTTON TEXTILE FIRMS IN INDIA

Firm	Ranking 1913	Ranking 1928	Place of Mills 1913	Place of Mills 1928	Spindles 1913	Spindles 1928	Looms 1913	Looms 1928	Integration in 1928	
Maneckji Petit	1	4	Bombay Tardeo Parel Mabaluxmee	Bombay Tardeo Parel Mabaluxmee	148,388	153,363	5,043	4,683	C.	S.W.
Madura	2	1	Madura	Madura Tuticonn Ambasamndram	106,536	335,606	0	0	C.	S.
Victoria	3	6	Guwaltolic (Campore)	Guwaltolic (Campore)	106,000	104,336	1,400	1,500	C.	S.W.
J. Sassoon*	4	2	Bombay	Bombay	103,816	245,238	2,079	6,929	C.	S.W.F.
Campore	5	under 10	Coopergani Juhi (Campore)	Coopergani Juhi (Campore)	102,504	78,100	1,400	1,000	C.	S.W.
Central Lindia	6	8	Nagpur	Nagpur	100,352	100,352	2,264	2,220	C.	S.W.
Century	7	9	Bombay	Bombay	92,016	100,156	3,093	3,130	C.	S.W.
Buckingham	8	under 10	Perambur (Madras)	Perambur (Madras)	89,284	96,540	1,076	2,692	C.	S.W.
Bengal**	9	**	Calcutta	**	85,048	**	1,050	**		
Curimbhey	10	under 10	Bombay	Bombay	83,396	86,540	1,014	1,030	C.	S.W.
Bombay D. & M.	—	3	Bombay	Bombay	46,488	181,544	988	4,848	C.	S.W.F.
Sholapur	under 10	5	Sholapur	Sholapur	59,893	111,360	1,044	2,209	C.	S.W.
Swadeshi M.	under 10	7	Coolra	Coolra Girgaum	53,396	102,592	1,461	2,722	C.	S.W.
Sir Shapurgi Broacha	—	10	Bombay	Bombay	—	97,284	—	723	C.	S.W.

Source: Annual Reports of Bombay Millowners' Association.

* Amalgamated into Sassoon United Mills in 1920.

** This was London-registered firm, liquidated before 1928.

mills with a finishing mill built in 1924.[34] Arlington Mills of Lawrence was proud of the speciality in dress goods and men's wears. Cannon Manufacturing Company specialized in sheetings and towels, having many mills in three cities in N. and S. Carolina. Nashua Manufacturing Company had several mills in N. Hampshire and Mass., and its products were cotton flannels, domets and blankets. Some of substantial backward integration were still in progress in 1928. Cone Export and Commission Company was an influencial sole agent for about ten firms of the Southern States at that time, some of whom were already controlled by the company.[35] The birth of Cone Mills in 1946 meant the organizational integration of this group. It may be concluded that many of the largest cotton spinning and weaving firms in U.S.A. took the policy for integration successfully during the period considered in this essay.

In India many of spinning firms were equipped with some hundreds of looms in their mills at the end of last century. However the number of looms they possessed was limited because the firms sold yearns to hand-weavers even in this century. A number of spinning firms remained a single-mill firm throughout the period considered here. They were controlled by managing agency houses.[36] A member of the house was usually one of the largest stockholders of the firm. Though the houses often dominated more than one spinning firms, they did not make those mills their operating units. In a few cases agency houses had some spinning firms amalgamated. E.D Sassoon and Co., an agency house, controlled five spinning & weaving firms.[37] They were amalgamated to form E.D. Sassoon United Mills in 1920. All products were sold by the agency house. More organizationally integrated business activities were found in Bombay Dyeing & Manufacturing Co. Promoted in 1879 as a dye work, it took on its backward integration, making a spinning firm its subsidiary in 1895 and adding a weaving section in the mill in 1904.[38]

There is no room here to make a comparative study in regard to the structure of cotton textile industry among the countries mentioned above. However it would be useful for us to sum up that the structure of cotton textile industry became highly oligopolistic in Japan since the merger movement began at the beginning of this century.[39] It may be generally said that the merger movement around 1900 was mostly unsuccessful in the field of this industry in Europe and U.S.A. On the other hand, the movement in Japan was most prominent and successful in the cotoon textile industry. All of the largest firms in Table IV grew up by means of absorbing many of other small firms. Thus the largest three firms respectively took over

[34] L. McCampbell, Graniteville, 1845–1935, 1935, pp. 24–28.

[35] TheCompany, Ashville Cotton Mills: Half Century Book, n.d.; World Leadership in Denims: Through Thirty Years of Progress, n.d.

[36] A general description of this system is found in P.S. Lokanathan, 'Industrial Organization in India' 1935 pp. 15–32. Also conf. R.S. Rungta, The Rise of Business Corporation in India, 1970, 219 ff.

[37] Indian Textile Journal, April 1920, p. 130; S.M. Rutnagur, Bombay Industries: The Cotton Mills, 1927, pp. 189–95; C. Roth, The Sasson Dynasty, 1977, pp. 106–7.

[38] The Company, Diamond Jubilee, 1897–1939, pp. 11–16; The Employers' Association Achievements of Managing Agency System, 1954, p. 23 ff.

[39] A standard work on the history of Japanese Cotton Spinning Industry is N. Takamura, 'Nippon Bōsekishi Josetsu' (A History of the Cotton Spinning Industry in Japan) 2 vols, 1971–2.

The spindle shares of large firms were following in 1913 and 1928.

	1913	1928
The Largest Five	47%	46%
The Largest Ten	68%	65%

TABLE IV THE LARGEST TEN COTTON TEXTILE FIRMS IN JAPAN

Firm	Ranking		Place of Mills		Spindles		Looms		Integration	
	1913	1928	1913	1928	1913	1928	1913	1928	1928	
Kanegafuchi	1	3	15	17	465,524	680,852	4,783	8,007	C.Si.	S.W.F.
Mie*	2	2	11	19	283,522	859,940	5,330	12,257	C.Si.R.	S.W.
Fugigasu	3	4	3	6	245,688	595,952	979	2,713	C.Si.	S.W.
Nihon	4	(1)	2	—	173,412	—	0	—		
Osakagodo	5	6	6	8	163,252	476,800	400	3,638	C.	S.W.
Settsu	6	(1)	6	—	157,174	—	0	—		
Osaka	7	(2)	5	—	156,496	—	4,532	—		
Tokyo	8	(1)	2	—	138,696	—	884	—		
Amagasaki**	9	1	2	13	132,392	896,676	1,785	9,555	C.Si.(R)***	S.W.F.
Fukushima	10	7	5	7	103,616	255,308	0	1,996	C.	S.W.
Nissin	under 10	5	2	5	95,156	480,518	0	2,965	C.	S.W.
Kurashiki	under 10	8	2	8	59,032	296,840	0	1,812	C.(R).k.***	S.W.F.
Kishiwada	under 10	9	3	5	96,840	203,892	0	1,150	C.	S.W.
Wakayama	under 10	10	3	5	63,388	138,822	856	1,463	C.	S.W.

* Toyobo since 1914 through the amalgametion with Osaka.

** Dainippon since 1918 through amalgamation with Tokyo in 1916 and Settsu in 1918.

*** Rayon by subsidiary.

Source: Dainippon Boseki Rengokai, Menshi Boseki Jijo Sankosho (Japan Cotton Spinners' Association, The Half-Year's Reports)

ten to twenty firms by the time of the World Depression, although sometimes a new firm resulted from the amalgamation of two firms equal in strength. The consequence was that they each had a number of mills or mill groups in many districts of the country. One of the most remarkable cases was Kanegafuchi Spinning Co.[40] It absorbed a small firm for the first time in 1895 and grew up so large that it owned 17 groups of mills across the country in 1928. The size of each mill was comparatively small. The largest mills with the central office had 108,772 spindles and 34,620 doubling spindles besides 760 looms. At the same time the firm owned ten groups of mills equipped with 10,000–20,000 spindles besides several hundred looms. In addition to that, Japanese firms did not concentrate their spindles at a single place, or district, even if they built new mills. In this regard the contrast with firms in other countries was very noticeable.

Originating in a single process of spinning, the large Japanese firms started their weaving units in 1890s and added their finishing section after the First World War. Nevertheless they did not integrate the purchasing and selling functions, depending, instead, upon large and most efficient trading companies.[41] With the coming of late 1930s, some of them tried to diversify their products with the anticipation that the demand on the cotton textile goods

[40] S. Muto, president of Kanegafuchi Spinning Co. was an eager advocate of merger. He learned much from the merger movement in U. S. A. and wrote a series of articles for an influencial weekly commercial news in 1902. It was natural that his firm had taken an active part in absorbing a number of small firms since the late 1890s. It was in 1895 that the first time for it absorbed two small spinning firms under the auspices of Mitsui Trading Company.

[41] At the turn of the century more than fifty percent of Indian cotton was imported by Mitsui Trading and Nippon Menka Companies. These firms also were very active in exporting yarns and cloths made in Japan. However it ought to be remembered that the spinning firms left the domestic market in the care of traditional merchants.

would not be elastic in the future. Especially they were very eager to take on artificial fibres. Thus Osaka Spinning Co., the first successful cotton spinning firm in Japan, took on the weaving process in 1900. Toyobo Spinning Co., the firm formed by the amalgamation between Osaka and Mie added dyeing works in early twenties, and geared to the policy for divertification after the world depression.

III

As mentioned before, large cotton textile firms became integrated, and in some cases diversified up to the Second World War. At the same time a refined organization of divisional system was sometimes pointed out for the firms in this industry.

Kendal Company, was a comparatively new firm of rapid growth. The president, Henry P. Kendal, was also president of the Taylor Society, being enthusiastic about the scientific approach to business organization. The firm had nine mills mainly in Mass. and S. & N. Carolina in the 1930s.[42] The management was centralized up to the end of the First World War. However since that time the delegation of responsibility had been felt necessary with the rapid expansion of the firm. Consequently the fundamental change of organization was realized in 1929. According to the product lines, four operating divisions were newly created and five cotton mills of N. & S. Carolina belonged to Kendall Mills division. A general manager was in charge of each division, and in Kendal Mills division five mills respectively had a local manager. Each division was autonomous and the divisional general manager had 'the final responsibility for divisions.' On the other hand the committee of central staff, 'The Staff Committee' was primarily concerned with divisional coordination and long-term policy-making of the firm, while 'Operating Committee' in each division formulated the divisional policy. It ought to be made clear that while Kendal Company made a speciality of something like the surgical dressing and absorbent cotton and gauze of 'Curity' brand, a part of intermediate products was sold to other firms. At the same time the firm bought some sorts of cloth made by other firms.[43] Consequently it seems that three autonomous divisions mainly along the processes were suitable because this divisional system made it possible for the firm in 1940s to further the diversification of business activities.

As a matter of fact, it seems that almost all of large spinning firms took on the divisional organization just after II World War. Nevertheless, several oligopolistic cotton spinning firms in Japan developed a complicated managerial structure before the War presumably as a result of a number of dispersed mill groups across the country. Referring to the cases of these firms, some evolutional phases of managerial structures in Japanese textile firms at large will be described.[44]

It is widely known that the structure was very simple in the case where the firm was composed of a mill or mills built on a single site. Nisshin Spinning Co. employed thirty seven

[42] The following description was found in F.L. Lamson, General Administrative Organization and Control, Bulletin of the Taylor Society, 1930.

[43] The Company, the Kendal Company; An Integrated Industrial Enterprise. n.d.

[44] All of the large cotton spinning firms except Kanegafuchi S.C. have published company histories by themselves often with the help of academics. In many cases they are voluminous, containing good sources for research works.

office worker in the formative year of 1907. The managing director was finally responsible for the executive function. The middle management was undertaken both by an office manager (jimuchō) and a mill manager (kōmuchō). The four lower positions responsible for Purchase & Sales, Mill Building & Maintenance, Dormitory and Canteen were under the office manager's supervision. The mill manager answered for the operation of mills together with a Chief Engineer. At the same time the managing director had three staff sections of Secretariat, Accountancy and Business Data. As a late-comer the organization of this firm seems clearly defined.[45] However forerunners may have had difficulties in their organizational building. Though Amagasaki Spinning Co. experienced many trials and errors up to the formation of Dainippon Spinning Co. of 1914, besides president and three directors, the management was composed of two or three heads of functional departments (bu). From an organizational point of view, to add mills in a new area meant the creation of another local mill manager supervised by a general mill manager (kōmu shihainin), head of manufacturing department. The emergence of Dainippon Spinning Co. consisting of 14 mills with around 700,000 spindles and 4,300 looms across the country made it essential to reshape functional organization. What came out was the system of functional sections (ka). It was made up of ten sections, some of which had staff functions. Production and Commercial Managers remained two departmental heads. Each mill had a mill manager and an assistant mill manager.[46]

Grown up as one of progressive local firms, Kurashiki Spinning Co. seemed aware of the organizational problems. When it absorbed a local firm in 1908 and consequently owned a group of mills in a separate area, the management set up a functional organization, learning much from Kanegafuchi and Mie. It consisted of three departments (bu), that is, Production, Commercial and General Affairs, of which the first was much larger than the others. Production Department had four functional sections (ka), Spinning, Personnel, Engine and Maintenance. President himself seems to have answered for Production Department, and at the same time some directors were heads of these departments. However it was learned that this blurred their function and responsibility and made all decisions dependent upon the president. A fundamental reorganization was made in 1922 with the consequence that the function of the board was made clear, being free from the day-to-day management. Central office had eleven functional sections with their respective heads. Once again in 1939 with the growth of the firm and the president's death, the central office revised the functionally departmentalized organization. At this time three departments—Production, Purchase & Sales and General Affairs—controlled well-defined nine sub-divided sections. The top management consisted of president, a senior director and six directors, three of whom were each responsible for a department.[47] The elabolate but basically same sort of organization was found in Nisshin Spinning Co. in 1941. The top management was composed of president, two senior directors (jōmu torishimari yaku) and six directors, some of whom were at the same time the head of five departments respectively. Each department was divided into two

[45] Nisshin S.C., Nisshin Boseki Rokujū Nen Shi (Sixty Years of Nisshin Spinning Company) 1969 pp. 75, 124–5, 363–4.

[46] Nichibō Company, Nichibō Nanajūgo Nen Shi (Seventy-five Years of Nichibō Company) 1966, pp. 73, 85–6, 160, 316, 434, 476–7, 588–9, 871–2.

[47] Kurashiki Spinning Company, Kaiko Rokujūgo Nen (The Sixty-five Years' Recollection) 1953, pp. 127–9, 139–141, 274–5, 529–30, 670–71.

to five sections. Each mill was under the supervision of Production Department, while two sales branches were controlled by Commercial Department.[48]

It seems to the author that despite of the clear management policy toward diversification in 1930s in Japanese cotton spinning firms, the creation of divisional organization was generally slow to come, because at first diversification just meant including different sorts of fibres. In the organization of Dainippon S. Co. several of departments were based on the kinds of product. However these products—cotton, artificial fibre, silk and wool—were closely related with each other in regard to their uses, and were for similar markets. Consequently it did not lead to the diversified organization. It was after the Second World War that the divisional system came to appear in large cotton textile firms of Japan.

IV

Much emphasis has been put on the business trends toward diversified firm, and my essay has shown that this general conclusion is applicable to the cotton industry. Especially the tendency toward the managerial integration was clearly observed in American firms since the beginning of this century. It is also safely said that these integrated firms showed good financial performances not only in U.S.A. but also in other countries.

However, at the same time, the characteristics of four countries in this regard were also very remarkable. In U.K. the integrated firms were comparatively small in number and moreover almost all of them were the old-established firms originated in a family business. It is worth while to point out that the large public companies founded since the American Civil War usually specialised just in spinning process throughout the period observed here. So this tendency toward integration seems to have been rather faint in U.K. This is just an example. To explain main characteristics observed in these countries, the auther will need to take the business environment into consideration, which were closely related to the firm's managerial behaviors and the structure of this industry in each country.

[48] Nissin S.C. op. cit., pp. 505–6, 663.