The Finance and Growth of the Lancashire Cotton Textile Industry, 1870-1914

J.S. Toms[1]

School of Management and Finance
University of Nottingham

The cotton industry, and its dark satanic mills, has long been a metaphor for the rise and fall of Britain as a manufacturing economy. Useful questions can thus be addressed by examining the industry's transition from growth to maturity. In 1860, no one would have disputed its world supremacy and domination of the British export economy. By 1922 there were as many pessimists as optimists regarding future prospects. It is therefore appropriate to investigate the conditions that governed long-term development in the period between these dates.

Many previous authors have addressed the broad agenda of the evolution and growth of the cotton industry. In following that agenda, the evidence presented below is intended primarily as a contribution towards business history offering originality via what might be called an accounting method; that is, the use of published company financial statements to assess the performance of individual and groups of businesses. Publications of accounting numbers are treated as historical events and form a body of empirical evidence for judging the behavior and response of entrepreneurs and investors. Accounting techniques may have been relatively primitive, but the purpose here is to examine what was actually reported under historical conditions, rather than to say what would have been reported under modern conditions.

No other business history of Lancashire textiles has thus far sought to make such a direct and integral use of accounting data. Yet such evidence is of relevance to the major areas of discussion and controversy, such as entrepreneurship, technology and structure, and the world market, dealt with by previous histories. The "state of the debates" [Mass and Lazonick, 1990] surrounding them are of particular importance when considering new evidence and the discussion below comments upon them in turn. In doing so it seeks also to develop new perspectives. *Obiter dicta*, the use of the accounting method also allows room for comment on issues of accounting history [Toms, 1997]. Similarly, the data used lends itself to the review of aspects of economic, labor, financial, and econometric history (or "cliometrics"), as well as historical geography.

---

[1] The thesis from which this piece was drawn was written under the supervision of Professor S.D. Chapman and Dr. P.A. Barnes at the University of Nottingham.

BUSINESS AND ECONOMIC HISTORY, Volume Twenty-six, no. 2, Winter 1997.
Copyright ©1997 by the Business History Conference. ISSN 0894-6825.

Nonetheless, the primary focus and differentiating feature of the present study is its concern with the financing and the financial performance of the industry. Financing of productive activities serves both as an issue in its own right, much neglected hitherto in the pre-1914 period, and as a vehicle for the introduction of new evidence. In addition to established sources of evidence, the two most important types of new evidence are financial statements of cotton companies and capital market data in respect of their shares. A summary of some of the most important statistics from these sources, using averages for the period 1884-1914, is provided in Table 1. Financial performance, growth, and financial policy are the three broad aspects of business strategy examined. The main performance measure is average profitability, taken as return on capital employed (ROCE), defined as profit before interest as a percentage of long-term capital invested. Capital employed is shareholders' equity plus fixed interest loan finance. Risk is measured by the standard deviation of ROCE. Other performance measures used in the original study were return and risk measures calculated from stock market data. These mirrored the trends reported in Table 1 and are not reproduced here. Table 1 also shows growth rates. They are calculated as the continuously compounded annual percentage growth in capital employed and reflect the average propensity of corporations to retain profits and raise new capital to fund investment. The final detail in Table 1 is financial policy, which has two proxy variables. Borrowing shows the percentage of total capital employed raised from third party lenders through loan accounts (banks were not widely used as providers of long term finance), excluding overdrafts but in many cases including debentures and preference shares. Finally the dividend column shows the ratio of profits paid to shareholders to the total profit available for distribution.

Ownership, Profitability, and Growth

The most important theme illustrated in Table 1 is the process of capital accumulation, and in particular how that process underpinned the emergence of family and local commercial elites. Thus it can be observed that capital growth rates were strongest where private or family control was exercised and weakest where there was dependency on regional stock markets. Dramatic increases in capital in the period 1896-1914, absent from Table 1, but well exemplified by the rise of capitalists such as John Bunting and William Birtwistle, accrued to individuals rather than corporations [Toms, 1996, ch. 9]. Profits were divested, as the dividend payout ratios in Table 1 suggest, from established businesses for reinvestment through personal flotation or acquisition of other concerns. The important point is that such funds were channelled via the estates of proprietary capitalists. Strategy formulation remained the exclusive remit of these individuals. Meanwhile managers functioned merely at plant level, trusted only with routine mill management, heading a small hierarchy, and fulfilling a stewardship function designed to ensure surplus cash flow was remitted to the owner as soon as possible [Toms, 1996, ch. 7]. For

Table 1: *Profitability, Growth, and Financial Policies 1884-1913*

	Profitability		Investment	Financial Policy	
	Avg.	Std. dev.	Growth	Borrowing	Dividend
Specialized coarse mule spinners					
Sun Mill (Q)	4.60	6.92	-1.56	36.76	0.67
Werneth (Q)	4.60	4.60	0.30	42.41	0.76
Dowry (Q)	4.70	7.44	-4.24	35.85	1.03
Moorfield (Q)	4.96	6.11	-2.00	16.81	0.97
Crawford (Q)	6.30	5.83	-1.02	41.83	0.75
Osborne	7.19	7.84	-3.50	37.16	0.95
Average	*5.39*	*6.46*	*-2.00*	*35.14*	*0.86*
Specialized coarse ring spinners					
Haugh (Q)	8.07	6.40	-0.92	51.90	0.87
New Ladyhouse (Q)	13.79	4.86	-0.78	39.69	0.81
New Hey (Q)	9.37	7.70	-1.52	30.20	0.85
Average	*10.41*	*6.32*	*-1.07*	*40.60*	*0.84*
Specialized fine mule spinners					
FCSDA (LQ)	6.17	1.95	6.70	62.47	0.58
Barlow & Jones (LQ)	6.75	1.39	0.90	64.00	0.73
Average	*6.46*	*1.67*	*3.80*	*63.23*	*0.65*
Specialized weaver					
T & R Eccles	16.66	8.26	1.46	24.51	0.38
Vertically integrated					
E. Armitage (LQ)	8.73	4.01	0.34	11.86	0.70
Ashton Bros. (LQ)	7.41	3.21	3.43	46.35	0.72
Rylands (LQ)	7.12	1.17	1.63	17.18	0.87
Whiteley	6.19	5.04	2.82	35.87	0.53
Horrockses	12.33	3.80	2.93	46.00	0.57
Tootal	4.67	3.60	1.78	59.62	0.49
Fielden Bros.	2.19	5.51	1.42	nil	0.75
Healey Wood*	13.44	8.13	nil	nil	N/A
Average	*7.76*	*2.24*	*1.79*	*27.11*	*0.58*
Avg. (all cos.)	7.76	3.72	0.41	35.00	0.74
Avg. (specialized)	7.76	5.17	-0.51	40.30	0.83
Avg. (private)	10.45	3.92	0.99	28.95	0.62

Notes: * Years 1884-1906 based on estimates only.
N/A Data not available.
Q; LQ Quoted on a regional stock market; quoted on the London stock market (private otherwise).
FCDSA Fine Cotton Spinners and Doublers Association

Sources: Calculated for each company from the sources listed in Toms [1996] Table 1.2, p. 28; Crawford Spinning Company, 'Commercial Reports', *Oldham Chronicle* (Saturday issues, published summaries of quarterly reports detailing profits, dividends, share and loan capital) April 1884–December 1913; FCDSA, London Guildhall Library, Commercial Reports, Half Yearly Balance Sheets, 1899-1913.

quoted stock market companies in the Oldham district, the pattern of management was similar, except that shareholder mistrust of management reflected the traditions of shareholder activism associated with working and middle class investment in the 1860s and 1870s. A series of slumps in share values, especially in the period 1892-1895, when an index of representative companies declined continuously for 48 months, undermined this ownership structure [Toms, 1996, ch.8; Toms, 1997]. As these investors exited during this local equivalent of the Wall Street Crash, capital ownership centralized around cliques of much wealthier shareholders skilled at speculation and company flotation. Much borrowing capacity remained unused, while lines of credit increased with the social standing of individual proprietors. Furthermore, as the industry recovered and values rose, these new proprietors were the main beneficiaries. By the 1900s "empires" of individually controlled mills, whose proprietors possessed ready access to financial resources, became more clearly established on the lines suggested above [Toms, 1996, ch. 9].

Structure, Technology, and Specialization

Such governance mechanisms might be said to form a regional variant of Chandler's [1990] "individual capitalism." In particular, their encapsulation of separate roles for entrepreneurs and managers raises the crucial question of the extent to which these individuals contributed to the decline of the industry, for example their inability to invest in new technology [Chandler, 1990, p. 333]. As a variant on that theme, it has been argued, investment was prevented by industry structure [Lazonick, 1983, pp. 198-9]. Specialized spinning mills were unable to modernize without guarantees that parallel investment would simultaneously occur in weaving sheds, impossible to secure due to their separate ownership. However, this is not an entirely different hypothesis to the question of entrepreneurial failure [Saxonhouse and Wright, 1987, p. 89], a view also suggested by the differences between entrepreneurs and managers noted above. The emergent class of new entrepreneurs had the purchase of new factories as their hallmark, and this was also a strategy option exercisable by private companies, as the experience of Horrockses demonstrated [Toms, 1993; Toms 1996, ch. 7]. Given the accumulated financial resources and flotation skills of individuals, and the expansion strategies of some private companies around 1900, there was nothing to stop entrepreneurs from investing simultaneously in spinning and weaving capacity.

There were many reasons why entrepreneurs were enthusiastic specializers rather than constrained integrators in this period. First, as the data in Table 1 illustrate, to specialize was more profitable. Specialized companies generally performed much better than those companies that perhaps attempted to achieve internal throughput economies through the adoption of vertically integrated structures. One company that almost uniquely followed the strategy of simultaneous investment in ring spinning and automatic looms was Ashton Brothers (another less prominent case was Fielden Bros. Ltd [Toms 1996, ch.6]). While the performance of the Ashtons was average, specialized ring

spinners enjoyed superior performance in terms of profitability. Accordingly, the argument that entrepreneurs employing this technology had more to gain when using ring spinning in integrated production appears illusory. Second, and a reason why the observed profit differentials are not surprising, is that the technical advantages of integrating ring spinning and loom automation were not fully established until the 1920s. In particular the automation of intermediate processes such as high drafting and high speed winding were important prerequisites of such efficiency gains [Saxonhouse and Wright, 1987, p. 92; Toms, 1996, ch. 5]. Third, the use of ring spinning did not necessarily provide British entrepreneurs with cheap labor-based competitive advantage. Traditions of throstle-based continuous spinning method and flannel production meant that ring spinning became more developed in the Rochdale area than elsewhere and as such became an extension of regional product specialization. Due mainly to high labor intensity in intermediate processes, in the 1890s labor cost and labor intensity was higher in Rochdale ring mills than their mule equivalents in Oldham [Toms, 1996, ch. 5]. Superior profits demonstrated in Table 1 arose from greater efficiency in material usage. Fourth, many new flotations including New Ladyhouse, Haugh, and New Hey, the earliest Rochdale ring mills, were backed directly by capital equipment manufacturers. In the 1870s Howard and Bullough of Accrington together with the Heaps and Tweedales of Rochdale were responsible for the introduction of ring spinning into Lancashire at New Ladyhouse Mill. In the 1900s the Draper Corporation backed British Northrop Loom Company, in liaison with the Greg, Tootal Broadhurst, and Hollins family entrepreneurial group, fostered similar local experiments in automatic weaving [Toms, 1996, ch. 6]. Fifth, in a parallel study to this research, it has been established that transport costs were relatively insignificant and were unlikely to have increased costs of vertically specialized ring spinners [Leunig, 1996] – a conclusion supported by the healthy profit levels of such companies in Table 1. Sixth, some of the benefits of vertical integration could be achieved through informal networks without the cost of creating complex organizational structures. One example consists of the contacts built by most firms with the Liverpool and Manchester markets; particularly the use made by Oldham spinners of Liverpool warehouse operators as cotton stockholders [Farnie, 1980, pp. 74-5]. Seventh, although factor costs and productivity were important and their emphasis in recent debates is well justified, they do not fully explain performance differentials. Managements of integrated companies such as Horrockses and Tootals tended to find that efficient marketing and efficient production worked in opposite directions. Investment in wide product ranges limited the benefits of internal economies of scale in these companies, but especially in the case of Horrockses, provided the basis of sustained competitive advantage via superior profit margins [Toms, 1993; Toms, 1996, ch. 6]. Finally, the information content of accounting reports and the profit signals sent to decision makers had an important iterative influence on investor behavior and reinforced the tendency towards specialization. This was particularly true of the over investment in coarse mule spinning capacity during the boom of 1905-7 [Toms, 1996, ch. 10].

Such tendencies were reinforced by the trade cycle. The British government's commitment to free trade and the gold standard were capable of exercising a dominant influence on the destiny of the industry. For example the loss and recovery of Indian market, reflecting lobbying, British electoral arithmetic, and the relationship between the British and Indian governments [Green, 1988, p. 588; Toms, 1996, Ch. 11], had a decisive impact on the development of the Oldham district. First, market changes impoverished working and middle class investors and centralised capital ownership in the 1890s. They then led to the investment boom in specialized concerns during the 1900s backed by the new class of individualistic freelance promotional and speculative capitalists referred to above. In all sections of the industry, the world market, rather than managerial policy, was vital to profitability and variation in profitability [Toms, 1996, Ch. 11]. Risk associated with large variations in demand also reduced the value of internal economies of scale.

The Dynamics of Lancashire Capitalism

The above discussion has used a political economy framework to examine the development of the cotton economy of Lancashire. Within this framework, the use of accounting and financial data facilitates an examination of the relationship between profits and growth, reported signal and investor response. Political economic analysis mitigates the usual difficulties of following an accounting based method, for example the presupposition of capital market efficiency. Indeed many aspects of market efficiency were lost from the Oldham stock market as a result of ownership changes in the 1892-5 crash. Such events, and the social changes that sprang from them have been overlooked in recent deductive theorizing on the causes of Lancashire's decline.

There are some obvious limitations to the study presented here. For example the absence of comparatives with other economies and with other periods (but see Higgins and Toms [1997]). Further work is clearly required, especially as the causes of decline were absent before 1914. However, the current study has hopefully succeeded in deepening the debate and through introducing new evidence might promote a wider triangulation of views beyond simple economic categories of efficiency. Accordingly, some useful conclusions can be drawn at this stage.

The first is that ownership decisively affected growth and industry structure. Lancashire entrepreneurship had several interesting features. Perhaps the most significant was the creation of business empires through personal shareholdings and the ability of entrepreneurs to personally manage relatively large numbers of similar firms. Conversely, they were reluctant to establish professional management hierarchies, which, although increasingly common elsewhere, were compromised in Lancashire by preference for individual, and not corporate, accumulation. The lack of institutional capital accumulation in the industry was, at least in part, a function of the separate development of Lancashire, as an export-led manufacturing sector, from the institutional and investment priorities of the British economy as a whole. Ownership of capital

thereby became crucial to the development of the industry, with profitability an important determinant of its deployment.

The second conclusion, as recently argued elsewhere, is that internal economies of scale were absent [Mass and Lazonick, 1990, pp. 16-7; Higgins and Toms, 1997], and that because manufacturing cost was insignificant relative to total cost, "big firm" theory has been inappropriately applied [Marrison, 1996]. To argue that structure and labor relations were simultaneously a constraint and non-problematic [Mass and Lazonick, 1990, p. 57] is a historical tautology. Necessary remedial action is definable by the hindsight blessed historian and not by the entrepreneur. If, at the time the Schumpeterian entrepreneur is supposed to realise a constraint exists, the historian also defines the constraint as non-problematic, it is difficult to see how the entrepreneur can escape the opprobrium that has been applied in the case of Lancashire cotton. What actually happened was the opposite. No constraints existed, but even if they had, the means to eliminate them were also present, namely the fortunes and reinvestment priorities of individual entrepreneurs. To them, specialization meant profits and rational entrepreneurs do not restructure profitable industries. Pre-1914 Lancashire hosted a successful and thriving cotton economy.

References

Chandler, A., *Scale and Scope: The Dynamics of Industrial Capitalism*, (Cambridge, MA: 1990).

Farnie, D.A., *The Manchester Ship Canal and the Rise of the Port of Manchester, 1894-1975* (Manchester, 1980).

Green, E., "Rentiers versus producers? the political economy of the Bimetallic controversy, c.1880-98," *English Historical Review*, 103 (1988), 588-612.

Higgins, D.M. and J.S. Toms, "Firm Structure and Financial Performance: the Lancashire textile industry, c. 1884-1960," *Accounting Business and Financial History*, 7 (1997), forthcoming.

Lazonick, W., "Industrial Organization and Technological Change: The Decline of the British Cotton Industry," *Business History Review*, 57 (1983), 195-236.

Leunig, T., *The Myth of the Corporate Economy*, (Unpublished Ph.D thesis, University of Oxford, 1996).

Marrison, A.V., "Indian Summer," in M.B. Rose, ed., *The Lancashire Cotton Industry: A History Since 1700* (Preston, 1996).

Mass, W. and W. Lazonick, "The British Cotton Industry and International Competitive Advantage: the state of the debates," *Business History*, 32 (1990), 9-65

Saxonhouse, G. and G. Wright, "Stubborn Mules and Vertical Integration: The Disappearing Constraint," *Economic History Review*, Vol. XL(i) (1987), 87-94.

Toms, J.S., "The Profitability of the First Lancashire Merger: the Case of Horrocks Crewdson, 1887-1905," *Textile History*, 24 (1993), 129-46.

Toms, J.S., *The Finance and Growth of the Lancashire Cotton Textile Industry, 1870-1914* (Unpublished Ph.D Thesis, University of Nottingham, 1996).

Toms, J.S., "The Supply of and Demand for Accounting Information in an Unregulated Market: Examples from the Lancashire Cotton Mills," *Accounting Organizations and Society* 22 (1997), forthcoming.