

“Spinning a Yarn”: Institutions, Law, and Standards c.1880–1914

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The Manchester Chamber of Commerce established the Manchester Testing House in 1895, and introduced uniform yarn contracting rules in 1897. The chamber made these institutional “innovations” to deal with the nefarious practice of “short-reeling.” This case study explains how and why merchants were crucial to undoing weaknesses in domestic—and to some extent foreign—legislation to overcome this fraudulent activity. We argue that the Testing House and uniform contract were tantamount to developing a quasi-legal system such that private standards established through cooperative agreements had legal sanction. Our study shows how institutions evolved to improve governance along the supply chain for this highly specialized export-orientated industry. This article contributes to the growing literature on historical markets, institutions, and standards. Based on extensive archival sources, we show how specific and complementary commercial institutions developed within grounded notions of governance rather than abstracted spaces of market exchange.

During the nineteenth and early twentieth centuries, the global production and trade in cotton-textiles was dominated by Lancashire. It was

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“the leading industry of its day.”¹ The data supporting this claim are convincing: by 1913 the United Kingdom owned approximately 40 percent and 30 percent, respectively, of the world’s spindles and power looms.² Between 1910 and 1913, the United Kingdom accounted for 70 percent of world trade in cotton textiles. To place the latter figure into context, the UK’s share of world trade in these products exceeded those of Europe, the United States, and India, by a factor of 3.5, 16.6, and 74, respectively.³

High levels of vertical and horizontal specialization were a defining characteristic of the industry. Before the mid-nineteenth century, vertically integrated spinning and weaving firms predominated.⁴ However, by 1911, 77 percent of spinning capacity and 65 percent of weaving capacity were controlled by specialist spinning and specialist weaving firms, respectively.⁵ Within each of the principal stages of cotton-textile production, there existed a plethora of firms. In total, approximately two thousand firms were engaged in spinning and weaving in the years immediately preceding World War I. Competition within the industry as a whole was vividly described by Barnard and Hugh Ellinger as being “without cohesion, without nucleus, loose, higgledy-piggledy, rushing hither and thither, jostling, chasing, fighting.”⁶ The separation of spinning and weaving was complemented by geographic concentration. In broad terms, spinning and weaving were highly concentrated in, respectively, the south and southwest and north and northeast of Lancashire.⁷

Unsurprisingly, perhaps, much of the historiography on the Lancashire cotton-textile industry has focused on the relationship between structure and performance. Particular attention has been devoted to whether the industry’s structure impeded technological choice and productivity. This has also been the subject of Anglo-American comparisons, particularly the role of labor relations on productivity and employment practices and the extent to which differences in firm structure (specialized or vertically integrated) affected financial performance.⁸

1. Leunig, “British Industrial Success Story,” 90.

2. Jeremy, “Lancashire and the International Diffusion of Technology,” 231.

3. Calculated from Dupree, “Foreign Competition,” 273. Although these data refer to the United Kingdom, the cotton-textile industry was predominantly Lancashire-based. For example, by the late 1890s, Lancashire accounted for 75.8 percent of the cotton operatives employed in the United Kingdom. Broadberry and Marrison, “External Economies,” 55.

4. Spinning refers to the process of converting raw cotton into yarn. Manufacturing refers to weaving, which is when yarn is made into cloth.

5. Jewkes and Jewkes, “Hundred Years,” 118.

6. Ellinger and Ellinger, “Japanese Competition,” 185.

7. See, for example, Kenny, “Sub-Regional Specialization”; Farnie, *English Cotton Industry*.

8. There is a substantial literature in this field. See, for example, Higgins and Toms, “Firm Structure”; Lazonick, “Industrial Organisation”; Lazonick, “Cotton Industry”; Leunig, “British Industrial Success Story”; Rose, *Firms, Networks*.

In contrast, the role of merchants has been comparatively neglected; no clear consensus has emerged about the impact of these agents on the Lancashire cotton-textile industry. Steven Broadberry and Andrew Marrison, for example, have argued that merchants “played a key part” in the creation of external economies that underpinned the industry.⁹ Their econometric analysis quantified the views of contemporaries, such as Elijah Helm, for whom “there [was] no mercantile organisation in the world which [was] so capable of widespread, efficient, and economical distribution.”¹⁰ Other commentators have been less favorable in their assessment of merchants. One report stated that merchants had “made mass production of any particular line almost impossible,” and that “the interests of the merchants are often different from those of the manufacturers, for it may pay the former to push foreign goods at the expense of the latter.”¹¹

The purpose of this article is to reassess the contribution of merchants to the international dominance of the Lancashire industry. Unlike the previous studies detailed above, our examination focuses on two institutional developments—the establishment of the Manchester Testing House (1895) and the introduction of a uniform contract (1897)—in which textile merchants belonging to the Manchester Chamber of Commerce (MCC) played a pivotal role. We argue that such institutional innovations are examples of the ways the merchants sought solutions to endemic contractual problems that confronted the industry in the late nineteenth century. Our focus is on the nefarious practice of “short-reeling” of cotton yarn, whereby yarn counts were deliberately and systematically misrepresented.¹² This practice undermined the genuine yarn trade and, consequently, the cloth trade, which the Lancashire merchants dominated internationally. To improve governance, they introduced the two institutional solutions that were tantamount to developing a quasi-legal system: private standards established through cooperative agreements, which were legally enforceable. Such institutions are unusual for manufactures, being more characteristic of organized commodity markets.¹³

9. Broadberry and Marrison, “External Economies.”

10. Helm, “Middleman,” 60, 65.

11. PEP Industries Group, *Report on the British Cotton Industry*, 71.

12. By 1912, there were 10.3 million ring spindles in the industry (which equates to about 25 percent of capacity). Calculated from Robson, *Cotton Industry in Britain*, Table 5, 339, using the “standard” assumption that one ring spindle was about 1.5 times more productive than a mule spindle. Irrespective of whether the yarn was mule-spun or ring-spun, the MCC was adamant that the standard hank should be 840 yards.

13. See, for example, the recent conference, “Making Markets: Histories of Commodity Grading and Trading,” Centre for Science, Technology, Medicine & Society, University of California, Berkeley, November 20, 2015 (cstms.berkeley.

The role of merchants in the standardization of quality and setting rules of contractual exchange has been recognized in the broader historical literature. Simon Ville has argued that merchants, through associations, provided strong structural and cultural properties to markets, thereby strengthening them.¹⁴ Craig Pirrong has shown how merchants, via commodity exchanges, governed contractual relations through commodity measurements, standardization, and contract enforcement.¹⁵ Similarly, Kenneth Lipartito demonstrated how an efficient market for cotton depended on rules enforced through the New York Cotton Exchange that involved, inter alia, stamping out the circulation of false and unreliable information to reduce information asymmetry.¹⁶ Other disciplines have similarly studied the role of merchants in regulating international trade in commodities, standardizing product quality, developing and enforcing contracts, and generally improving governance when exchange occurred between “actors in a value chain having only partial knowledge of the product and its related production methods.”¹⁷ In other words, the agency for developing contract rules often lies with the intermediaries rather than the producers or end-buyers in a commodity chain: in our case, Manchester merchants developed the rules for the sale of yarn.¹⁸

The relationship between contracts and exchange is fundamental to the operation of markets. According to Alessandro Stanziani, a mainspring for the evolution of capitalist economies was the tension between national institutions, global dynamics, and local products;¹⁹ for example, how to determine a market price that ensures accurate correspondence between price and quality? One response was to define the quality characteristics of a product. This solution, however, was not always successful because market participants might not share

edu/current-events/making-markets). The conference program states that the “technical aspects of grading and trading [are] often overlooked by historians ... [the] practices of measurement and exchange are at the heart of the process of commoditization.” This conference focused on a variety of commodities, including grain, lumber, metals, and slavery. Our paper demonstrates that a major manufacturing industry grappled with similar problems.

14. Ville, “Rent Seeking,” 319.

15. Pirrong, “Efficient Scope,” 232–236.

16. Lipartito, “New York Cotton Exchange,” 55.

17. Ponte and Gibbon, “Quality Standards,” 2. There is considerable literature on global value chains in which such merchants or merchant intermediaries play important governance roles. See Gereffi, Humphrey, and Sturgeon, “Governance of Global Value Chains”; Gibbon, “Primary Production”; Henson and Humphrey, “Understanding the Complexities of Private Standards.”

18. Quark, “Transnational Governance,” 5. For similar arguments in a historical setting, compare Olmstead and Rhode, “Hog-Round Marketing,” Bernstein, “Private Commercial Law,” and Simpson, “Origins of Futures.”

19. Stanziani, *Rules of Exchange*, 115–144.

the same perspective on the price–quality nexus and, in any case, there may exist several definitions of “quality.”²⁰ The chambers of commerce (and other certifying bodies) resolved this conflict by developing benchmark standards. This, in turn, facilitated product standardization: the characteristics of the product do not vary through time. Other benefits that ensued from standards-certification included a reduction in the costs of negotiation and inspection and a reduction in uncertainty. Stanziani’s analysis focused on commodities such as alcohol, cooking oil, oats, rye, and wheat, and he concluded that detailed product–quality definitions were not necessary in other markets. Although the establishment of certifying bodies was more characteristic of market trade in primary products, the evidence presented in this article shows that quality certification was practiced in cotton textiles.

In the same vein, this article complements and extends historical analysis of governance in the supply chain. A substantial literature has documented the quality-control issues that can arise when producers are “separated” from distributors and merchants. Alcoholic beverages have featured prominently in these analyses. In the wine trade, James Simpson has demonstrated that merchants helped undermine the repute of famous Chateau, such as *Lafite* and *Marguax*, by selling “inferior” wines from earlier vintages; they also opposed implementation of *Appellation d’Origine* regulations, which restricted their ability to blend wine from different regions and to market the composite product as “Bordeaux.” Wine growers unsuccessfully attempted to wrestle back control from merchants; by the early twentieth century, most commodity chains in the French wine trade failed to provide “accurate information that would enable consumers to discriminate between differences in quality.”²¹ Similarly, Paul Duguid has examined the advertising campaigns of merchants representing growers in the Douro and Porto regions, which had the effect of ceding more authority to earlier points in the supply chain—and subordinating merchants’ names.²²

In contrast to the above studies, merchants in the Lancashire textile industry remained of paramount importance during the industry’s rapid growth before 1914. Few manufacturers marketed their products under their own brands. One estimate indicates that by the

20. For example, producers may define quality in narrow terms, but consumers may define quality more broadly; quality definitions depend on who is measuring it. Velkar, *Markets and Measurements*, 172–175; Bowbrick, *Economics of Quality*, 2–11; Barzel, “Measurement Cost,” 28–32.

21. Simpson, “Cooperation and Conflicts,” 547, 550–551.

22. Duguid, “Networks and Knowledge,” 522. Also, Duguid, “Developing the Brand.”

early 1920s, there existed no more than eight publicly quoted companies and eighteen private companies that had developed their own marketing activities.²³ Many of these—for example, Sir Elkanah Armitage, Barlow & Jones, Ashton Brothers, Horrockses Crewdson & Co., and Tootal Broadhurst & Lee—were established in the nineteenth and early twentieth centuries. Nonetheless, even for these companies and other famous integrated concerns, such as John Rylands & Sons, the Latin American market for textiles was still controlled by merchants.²⁴ Consequently, merchants' trademarks and brands prevailed in the sale of cotton-textiles. Indeed, some of the biggest merchants in this industry owned substantial numbers of trademarks: Ralli Brothers, owned three thousand marks; William Graham & Co. and G & R Dewhurst owned over one thousand marks each. Many other merchants owned in excess of five hundred marks.²⁵ The dominance of merchants' brands meant they could not be insensible to the quality of yarn and cloth supplied in the "upstream" stages of production: failure to supply products that met expected quality would have damaged their own reputation, not those of the manufacturers. For Stanley Chapman, "competition among spinners and weavers guaranteed cheapness, while the merchants' insistence on perfection and exact adaption to particular consumers' wants was a guarantee of quality."²⁶ We argue that merchants, operating through the MCC, effected standardization of products via the introduction of a uniform contract, which defined appropriate trade descriptions. This initiative was supported by the establishment of the Manchester Testing House, the decisions of which were accepted as a means to settle trade disputes without recourse to the courts. We recognize that the growth of specialist merchants facilitated vertical specialization within the industry. Nevertheless, in contradistinction to previous analyses of these agents, we argue that their role in developing better governance within the supply chain has not received the attention it warrants.

We contend that deconstructing how institutions counteract the pernicious effects of competition is crucial to improving an understanding of the governance of market-based exchanges. Institutions do matter, but so too do the *complementarities* between different institutions, both public and private.²⁷ We show how civic actors (merchants) established private institutions when state regulation proved

23. PEP Industries Group, *Report on the British Cotton Industry*, 71.

24. Chapman, *Merchant Enterprise*, 188, 200.

25. Higgins and Tweedale, "Trade Marks Question," 213.

26. Chapman, "Commercial," 84.

27. Ogilvie, "'Whatever Is, Is Right?,'" 674.

inadequate for market governance. Our research also contributes to the understanding of different forms of market governance, especially those that operate at the boundary of state and civil society.²⁸ Under certain conditions, such as those we study, competition without cooperation may prove inadequate to foster stronger governance. Nevertheless, cooperation could be unequal and does not imply consensus, just as standardization is often fraught with politics, negotiations, and compromise.²⁹ The lesson from this case study should be that competitive- or market-based exchange does not *by itself* imply robust governance. Market exchanges are based on rules, but how these rules emerge is still largely unclear.³⁰

This article is based on a detailed examination of archival sources of key industry associations, including the MCC, the Master Cotton Spinners Associations, and various parliamentary reports and other official publications. It is organized as follows. Section Two briefly explains the importance of merchants in the Lancashire cotton-textile industry and the functioning of the MCC, which was the principle institution through which merchants aired their grievances. It further outlines the problems generated by “false measurements” that the merchants experienced. Section Three examines the legislative landscape and why Manchester merchants considered it inadequate to resolve the issues of product quality. Section Four details the historical context in which uniform contracting and the centralized testing for quality emerged through merchant intervention. Section Five examines the legacy of this intervention, and Section Six concludes.

Merchants in the Lancashire Cotton-Textile Industry

It is well established that the Lancashire cotton-textile industry benefited from rapidly expanding export markets for most of the nineteenth century and up to 1914.³¹ Table 1 shows the broad patterns of export trade during this period, from which the following trends are apparent. First, yarn exports were substantial throughout our period. Second, yarn, as a percentage of total cotton-textile exports, declined from the 1890s, which was a continuing trend that began in the 1870s.³² There is no doubt that India was, by far, Lancashire’s biggest export

28. Bevir and Trentmann, “Markets in Historical Contexts,” 7.

29. Scranton and Fridenson, *Reimagining Business History*, 160.

30. Johnson, *Making the Market*, 3.

31. Mass and Lazonick, “British Cotton Industry,” 16.

32. Marrison, “Indian Summer,” 243–249. Historiography attributes such trends to growing international competition in export markets, especially for coarser yarn and cloth, as well as growing domestic demand for yarn to fuel the export boom in cloth and piece goods after 1900.

Table 1 Yarn and cloth exports by volume, 1880–1913

	Average annual volume of exports		Yarn exports as % of total textile exports
	Yarn	Piece goods/cloth	
1880–1889	250.39	833.17	23.3
1890–1899	239.02	923.04	20.6
1900–1909	189.26	1030.95	15.4
1910–1913	217.40	1216.45	15.2
1880–1913	225.18	962.86	19.2

Source: Robson, *Cotton Industry in Britain*, Statistics (A), Table 1, 331.

Notes:

1. Volume denotes pound weight (millions).
2. Values in Columns 2, 3, and 4 refer to annual averages.
3. Robson assumed an average weight of 5.5 yards per 1 pound for piece goods/cloth.

market in the late nineteenth century, accounting for almost 40 percent, on average, of cloth exports (by volume) between 1880 and 1913. The comparable figures for Latin America and the Far East (China and Hong Kong) are 8 percent and 10 percent, respectively. In contrast, Lancashire exported more yarn to continental Europe as compared to India.

The production and marketing of yarn and cloth were coordinated by a multitude of specialist merchants at each stage of production. In the early stages of the industry's development, spinners and manufacturers employed their own agents to sell their products. Wright Armitage, a Manchester-based manufacturer, used family members to sell its cloth in the United States; McConnell & Kennedy, one of the most famous Manchester spinners, corresponded with business partners in Egypt, India, and Poland. Some merchants, such as Greys, successfully became mill owners by the late eighteenth century.³³ However, from the early to mid-nineteenth century, yarn spinners and manufacturers began to rely on specialist merchants for distribution and retailing.³⁴ Estimates indicate that there were approximately one thousand merchants in the industry between 1911 and 1931.³⁵ This number conceals considerable specialization among this group. Yarn agents acted as intermediaries between spinners and manufacturers; it appears that they purchased approximately 50 percent of the yarn sold on the Manchester Royal Exchange.³⁶ Merchants were responsible

33. Rose, "Role of Family," 39–40.

34. Beckert, *Empire of Cotton*, 150.

35. Broadberry and Marrison, "External Economies," 56; Clay, *Confidential Report*, 2.

36. PEP Industries Group, *Report on the British Cotton Industry*, 69. This report was published in 1934 after the industry's export markets had collapsed. The industry enjoyed substantial export growth just prior to 1914, and it is likely that yarn agents accounted for an even greater proportion of yarn sales during the boom.

for converting cloth into the final product to suit the requirements of their particular customers. Converting involved bleaching, dyeing, printing, and the processing of cloth into specific garments (handkerchiefs, household linens, shirts, underclothing). Most merchants were engaged in the export trade, but a few, such as J & N Phillips, I & J Cooper and S & J Watts, specialized in the home trade.³⁷ In addition, merchants also played a crucial role in disseminating market information: “The industry looks to [merchants] to maintain contact with markets ... to push the sales of its products in these markets and to bring back knowledge of what the consumer needs.”³⁸

Foreign merchants featured prominently in the Lancashire textile trade. One of the most famous (and largest) firms, the Greek Ralli Brothers, was established in Manchester by 1828; by 1865, through a series of interlocking partnerships, they were operating in fifteen centers across Europe, India, and the Middle East.³⁹ Subsequently, other Greek houses joined Ralli Brothers, including Rodocanachi, Sons & Co., Rocca Brothers, and Cassavetti Brothers & Co. It was stated of the Cababé Brothers, who began in Manchester in 1840, that they had almost a monopoly in the trade with Syria. The number of Greek merchants based in Manchester grew rapidly, and by 1870 they exceeded the number of German houses. According to Stanley Chapman, the principal reasons for the success of Greek merchants was “that they succeeded in finding new markets for cotton piece goods in a part of the world where British representation was weak.”⁴⁰ In addition, Greek merchants acted as a conduit for other merchants operating in particular ports, such as in Beirut, and they developed reciprocal trading relationships between Britain and the Middle East. By the mid-nineteenth century, Ralli Brothers were establishing a “massive mercantile operation” in India; together with another leading Greek merchant house (Spartali & Lascardi), they were probably the largest merchants operating in the United Kingdom, surpassed only by the Rothschilds.⁴¹ However, for other export markets, such as Latin America, it appears that British merchants, such as Hugo Dallas, were prominent.⁴² By the end of the nineteenth century, there were about 150 Middle Eastern merchant houses based in Manchester, further consolidating Lancashire’s links with this region.⁴³

37. *Ibid.*, 34.

38. *Board of Trade, Working Party Reports: Cotton*, 44.

39. Chapman, *Merchant Enterprise*, 155; Beckert, *Empire of Cotton*, 232–233.

40. Chapman, *Merchant Enterprise*, 157.

41. *Ibid.*, 155–159.

42. Beckert, *Empire of Cotton*, 151.

43. Halliday, “Millet of Manchester,” 161.

The MCC was the principal institution representing cotton-textile merchants. It began as the Commercial Society, founded in 1794, and its stated objectives included efforts “to resist and prevent ... the depredations committed on mercantile property in foreign parts, detect swindlers, expose chicanes and persons void of principle and honour in their dealings.”⁴⁴ In 1820, the Commercial Society was reconstituted as the MCC. Merchants engaged in the Lancashire cotton-textile trade were the single most important group belonging to the MCC. Members engaged in the Lancashire cotton industry (in any capacity) accounted for 73 percent and 61 percent of total membership in 1860 and 1900, respectively. Within this textile cohort, members who were only merchants comprised 45 percent and 48 percent, respectively, of the “textile” membership, and 33 percent and 29 percent, respectively, of the MCC’s total membership in these years.⁴⁵ Given the importance of textile interests within the MCC, and especially the prominence of merchants, it is unsurprising that, in common with other chambers, the MCC lobbied actively on behalf of its members when common interests were threatened. For example, Sven Beckert has demonstrated that this chamber was involved in efforts to reduce tariffs, it opposed the emigration of artisans, and it played a key role in the agitation to secure Indian cotton during the American Civil War.⁴⁶ Beckert emphasizes that merchants were acutely aware of the need for a sound legal infrastructure, backed by the state, to safeguard their activities:

Trade ultimately depended on a legal infrastructure devised and enforced by states. Unsurprisingly, merchants spent much of their political energy on trying to strengthen this legal order and make it conform to their interests. ... Conventions, although agreed upon by merchants themselves, needed enforceable rules, and merchants understood that no single actor was as efficient in enforcing those rules as the state.⁴⁷

We argue that this statement is only partly correct. The British government enacted the Merchandise Marks Acts in an attempt to eradicate, or at least minimize, fraudulent activity across various industrial sectors. As we demonstrate below, however, the MCC perceived weaknesses in this legislation; it was particularly aggrieved that these acts only applied to *falsely* marked yarn. The acts did not specify that yarn had to be spun to a uniform length when sold in

44. Helm, *Chapters in the History*, 1.

45. Redford, *Manchester Merchants*, 299; Farnie, “Index of Commercial Activity.”

46. Beckert, *Empire of Cotton*, 237, 251–256.

47. *Ibid.*, 236.

the open market. This subtle distinction created a serious lacuna for “genuine trading.” As far as the merchants were concerned, the legal infrastructure only partially addressed their concerns. A fundamental impasse existed between trade understanding of yarn and cloth measurements and those specified in the Merchandise Marks Acts. For the same reason, discussed later, attempts by the MCC to ensure alignment between Indian and British legislation was only partially successful. We explain this issue in more detail in the context of the trade problems generated by false lengths.

Cotton yarn was sold by weight, but the “count” denoted its fineness or quality. A count indicated the number of hanks—each of 840 yards—of yarn needed to make a weight of one pound. Thus, a count of 100s meant that 100 hanks (totaling 84,000 yards) made up one pound. Higher counts indicated lighter, finer, and more expensive yarn, whereas lower counts were heavier, coarser, and cheaper. The count of yarn determined its subsequent manufacture: coarse-medium yarns were used to produce a range of products that included belting, cleaning cloths, heavy sheeting, ropes, and sailcloth. Fine yarns were processed into cambrics, handkerchiefs, lace, and muslins.⁴⁸ Short-reeling exploited this relationship. For example, a contract for 100s might be specified, but the yarn delivered was in hanks of only 820 yards (totaling 82,000 yards). To make good the deficiency in weight, coarser (heavier) yarn was actually supplied. In other words, the weight of yarn delivered was correct but not its composition. Other instances of misrepresenting the true count included increasing the thickness of cardboard backing when transporting the yarn to make up the weight deficiency. Manchester firms were clearly identified as the principal culprits: “goods which were marked 100 yards did not measure 50; those marked 150 yards only measured 70 or 80.”⁴⁹ Short-reeling was not unique to the Lancashire industry, but its prevalence was greater and more persistent compared to other UK textile regions. In Yorkshire, the formation of an “association for suppressing the practice of false marking or labelling of goods for sale” by the Huddersfield Chamber of Commerce effectively led to the disappearance of the practice of short-reeling from the woollen industry.⁵⁰ The Leeds Chamber of Commerce also supported the

48. Clay, *Confidential Report*, 11–12. For the historical development of the counts system, see Biggs, “Tale Untangled.”

49. *Huddersfield Chronicle and West Yorkshire Advertiser*, January 21, 1860, 5; March 3, 1860, 6.

50. *Grocer*, February 5, 1910, 329–330; *Report from the Select Committee on the Trade Marks Bill and Merchandise Marks Bill of 1862*, P.P. 1862, vol. 12, QQ. 1420–1431.

eradication of stamping false lengths.⁵¹ Nevertheless, short-reeling was potentially far more damaging to the Lancashire cotton-textile industry because of the sheer volume of its exports. From 1890 to 1913, exports of cotton cloth and yarn exceeded those composed of wool by a factor of 32 and 4,300, respectively. Over the same period, exports of cotton yarn exceeded those of thread by a factor of 8.5.⁵²

Contemporaries claimed that the industry's structure provided an incentive to short-reel and that specialized spinners deliberately short-reeled the yarn that was then knowingly purchased by merchants.⁵³ The financial rewards generated from slight discrepancies between reported and actual counts were enormous. James Lees, managing director of both Crompton & Co. and Wood End Mills, reported that his mills produced 80,000 pounds weight of 12s every week, and to mark these as 14s would yield £2,000 per annum profit if the price difference between these counts was just half a farthing.⁵⁴ Some merchants instructed bleaching companies "to make-up and mark the lengths of white piece goods in ways which are at least of doubtful legality."⁵⁵

The insidious effects of short-reeling within Manchester were exacerbated by similar practices abroad. The MCC complained about Austro-Hungarian firms selling short-reeled yarn in Continental Europe. The chamber vociferously objected to Austrian short-reeled yarn exported to Romania, Bulgaria, Serbia, and Turkey, and it urged the Foreign Office to encourage these countries to introduce appropriate legislation.⁵⁶ Complaints regarding short-reeling in international markets emerged in the 1880s, and reached a crescendo in the following decade.⁵⁷ Merchants complained that short-reeling by foreign spinners "acted to the detriment of full reeled English spun yarn," and that such practices "defraud the buyer and consumer, to the great disadvantage of all honest traders." By 1892 the chamber

51. *Leeds Mercury*, August 7, 1862, 3.

52. Calculated from Mitchell, *Abstract of British Historical Statistics*, Tables 4 and 15, 182, 197.

53. *Report from the Select Committee on the Merchandise Marks Act (1862) Amendment Bill*, 10 P.P. 1887, 357, Q. 3838, Q. 4237, QQ. 4454–4462, QQ. 4533–4555.

54. *Ibid.*, QQ. 4469–4472.

55. Archives of the Manchester Chamber of Commerce, Greater Manchester County Record Office (hereafter, GMCRO, MCC), M8/2/10, 24 June 1891, 21 October 1891, 24 February 1892.

56. GMCRO, MCC M8/2/11, 26 March 1890, 22 September 1890, 22 July 1891, 21 October 1891; M8/4/31, 18 March 1890, 5 August 1890, 25 November 1890, 20 January 1891; M8/4/32, 24 November 1896, 4 April 1898, 14 May 1898, 27 June 1898; M8/4/34, 9 March 1898, 22 February 1901.

57. GMCRO, MCC, M8/2/10, 13 October 1886, 28 March 1888; *Report from the Select Committee on Merchandise Marks Act (1862) Amendment Bill*, P.P. 1887, vol. 10, Q. 3624, QQ. 4464–4472.

was demanding “an international agreement [and] legislation to [end] fraudulent trading induced by improper competition.”⁵⁸

Contemporaneous with short-reeling was the practice of falsely stamping piece goods. A dedicated committee—comprising representatives of prominent merchants and manufacturers such as G & R Dewhurst, Ralli Brothers, and Tootal Broadhurst & Lee—was established in 1886 to investigate “the frequent complaints arising, principally in India, of the false marking of piece goods [imported into] that country from Lancashire.”⁵⁹ To ensure a higher standard of commercial morality within Manchester, the committee recommended that all cotton piece goods exported to India be plainly marked with the length of each piece in imperial yards; the average length of the pieces of any lot had to conform with the indicated length; and each piece could deviate from the indicated length by only a small discrepancy equivalent to 0.7 percent.⁶⁰ The MCC also instructed customs officials in Calcutta and the Bengal Chamber of Commerce about the “proper methods to be observed in determining the widths of cotton piece goods, when such widths are stamped upon the ‘face-plait’ of the goods.”⁶¹ The MCC took a dim view of traders who employed “false folding” methods for cloth sold in Egypt and Nigeria, making the cloth appear longer than it actually was.⁶²

By the late nineteenth century, Lancashire merchants became increasingly concerned about the marketability of their textiles in foreign markets. Issues surrounding product quality featured prominently. “Quality” in this context was distinct from “bad spinning.”⁶³ For the merchants, maintaining quality meant standardization and measurement uniformity of yarn and piece-goods in terms of counts or lengths. By controlling quality in this manner, merchants sought

58. GMCRO, MCC, M8/4/31, Yarn Section Minutes, 14 October 1890, 25 November 1890, 14 July 1891, 29 January 1892.

59. GMCRO, MCC, M8/2/10, 28 September 1886, 13 October 1886.

60. GMCRO, MCC, M8/2/10, 28 September 1886, 13 October 1886, 22 October 1886.

61. MCC to Collector of Customs, Calcutta and the Bengal Chamber of Commerce, 18 March 1904, *The Manchester Chamber of Commerce Monthly Record* (hereafter, *MCC Monthly Record*) 1904, vol. 15, 70–72, 145.

62. *MCC Monthly Record* 1910, vol. 21, 308–309, 347.

63. Huberman, “Piece Rates,” 410; Mass and Lazonick, “British Cotton Industry,” 21, 26–27. See GB 133 OLD/1/5/1 Calendar of Cases (1905–1915), Archive of the Oldham Master Cotton Spinners Association (hereafter, OMCSA), John Rylands Library (hereafter JRL), Manchester. Lancashire spinning firms used inferior cotton as a cost-minimizing strategy to maintain their competitive advantages under increasing international pressures. The resultant “bad spinning” further deteriorated already tenuous industrial relations, which the industry dealt with through a series of cooperative arrangements between workers and firms and among spinning firms. Huberman, *Escape from the Market*.

to strengthen governance within the textile industry. Their actions must be situated within the scope and limitations of existing state regulation at the time.

Merchandise Marks Legislation in the United Kingdom and Abroad

Short-reeling was viewed as part of a more general problem of accurate “labeling and marking” of merchandise rather than as a weights and measures issue of “false measurement.” The Merchandise Marks Act 1862 introduced legislation criminalizing false indications of quantity.⁶⁴ However, in the Lancashire industry, no prosecutions involving short-reeling were effected before 1888 because there was no universal custom for marking yarn or cloth: marks might refer to either quantity or quality, as noted above. In addition, the act required proof of intent to defraud, which was a difficult task if spinners indicated that the yarn supplied did not contain hanks of 840 yards.⁶⁵ The effect of moisture on yarn was recognized as problematic. It was estimated that the amount of moisture contained in yarn in the spinning room varied from 3.5 percent to 7.5 percent. Stocks of yarn containing a high level of moisture would be affected by mildew, especially if it was exported to warmer climates. If very damp yarn was reeled in the full glare of the sun and then weighed, a totally erroneous indication of count was generated. Moreover, inherent variation in length during spinning meant that the reported “count” was not exact and this variation depended on the counts spun. For bleached yarns, the variation could be 8.5 percent.⁶⁶ Given these difficulties, the problem of marking short-lengths persisted.⁶⁷

To a large extent, the Merchandise Marks Act of 1887 remedied many of the weaknesses in the 1862 act. The 1887 act stipulated that persons who applied a false trade description to products, “unless he proves that he acted without intent to defraud,” was guilty of an offense and could be imprisoned for up to two years (with hard labor) or fined £20.⁶⁸ A Select Committee appointed to review the workings of the former

64. 25 and 26 Victoria, ch. 88. The Merchandise Marks Act of 1862 was amended by 50 and 51 Victoria ch. 28 of the Merchandise Marks Act of 1887, which was a more comprehensive statute.

65. Newspaper reports indicate that some merchants instructed spinners to short-reel. *Manchester Guardian*, February 21, 1888, 4; February 23, 1888, 4.

66. *Notes on Sampling and Testing*, 24–33.

67. Testimony by George Lord, President of the Manchester Chamber of Commerce, Q. 3571, Q. 3669, *Report from the Select Committee on the Merchandise Marks Act (1862) Amendment Bill*, 10 P.P. 1887, 357.

68. 50 & 51 Victoria, ch. 28 Merchandise Marks Act of 1887, s. 2 (d); s. 3 (i), (ii).

act reported on its benefits.⁶⁹ However, as far as the Lancashire cotton-textile industry was concerned, major deficiencies remained. The president of the MCC, George Lord, testified to collusion on short-lengths involving Lancashire spinners, Manchester merchants, and Indian dealers. In Lord's opinion, collusion meant it was impossible to obtain sufficient evidence to instigate a successful prosecution under the 1887 act.⁷⁰

Dissatisfied with the 1887 act, the MCC established its own investigation in 1888, which revealed that the practice of marking "short-length" was particularly acute in "bundle yarns."⁷¹ This inquiry revealed further problems in the application of the Merchandise Marks Act of 1887. Much depended on how the courts interpreted this act; without clarity, it was impossible for the merchants to establish how this act affected existing practices in Lancashire.⁷² Because the Merchandise Marks Acts were criminal statutes, there was no opportunity to "test the water" by instigating a "friendly" civil test case.⁷³ The MCC was concerned that although the standard practice in Lancashire was to reel hanks of 840 yards, the Merchandise Marks Act of 1887 "does not limit spinners to this mode of reeling, but allows them full liberty to reel and tie up in any way which is not calculated to deceive."⁷⁴ In the absence of deception, the 1887 act prevented Manchester merchants from instigating legal action even when hanks contained less than 840 yards. Short-reeling was first introduced to deceive customers but had "become so general that the practice had ceased to be dishonest."⁷⁵ Others claimed that the practice was especially damaging to the reputation of Manchester's cotton merchants because it represented a double fraud in terms of quantity and quality.⁷⁶

Two high-profile cases on short-reeling indicated the scale of fraud practiced by certain unscrupulous spinners and merchants after the 1887 act. In 1888, M/s. Pemberton, a Lancashire-based spinner, charged Greenhalgh & Sons with falsely supplying 60s yarn in hanks

69. *Report from the Select Committee on Merchandise Marks Act, 1887*, 15 P.P. 1890 19, iii.

70. *Report from the Select Committee on the Merchandise Marks Act (1862) Amendment Bill*, 10 P.P. 1887, 357, Q.Q. 3838–3839, Q.Q. 3879–3881.

71. The general practice in making up bundle yarns was to place together five hanks, each of 840 yards, into a "knot" and to then press into bundles of five or ten pounds weight. In the absence of short-reeling, the true count of a yarn was equal to half the number of knots. Short-reeling meant that the number of knots was no longer an accurate indicator of count or length. *Manchester Guardian*, February 23, 1888, 4.

72. *Ibid.*

73. *Ibid.*

74. *Ibid.*

75. *Ibid.*, March 6, 1888, 4.

76. GMCRO, MCC, M8/2/10, May 1887.

of 570 yards, the total fraud in the transaction amounting to 81,000 yards. The plaintiffs referred to the Select Committee evidence (discussed above): if a spinner could make an extra £2000 per annum by selling 12s as 14s, just imagine the profits to be earned by selling yarn in hanks of 570 instead of 840 yards. The defendants were also accused of supplying the Manchester merchant Messrs G. and A. Ananiadi with the spurious yarn; the latter were able to sell this yarn at a price that was below the production costs of genuine 60s. This then threatened to destroy the genuine trade in this yarn. M/s. Pemberton stated:

They wanted a conviction, and they wanted to put an end to those dishonest practices. If the case was given the publicity which he anticipated it would have, because it was a case which was watched with the greatest interest by the mercantile societies in Manchester ... and wherever cotton spinning was carried on, it would achieve that end.⁷⁷

The defendant was found guilty, fined £4, ordered to pay £120 in costs, and required to furnish information that would allow an action to be brought against Ananiadi.⁷⁸ Subsequently, in 1889, Ananiadi was convicted of causing bundles of yarn containing 45 hanks to the pound (weight) to be made up as 60 hanks and marking these bundles with “60” to indicate the count of yarn contained in the bundle. According to Lewis Boyd Sebastian, a prominent British authority on merchandise marks, these practices represented a double fraud:

[T]he yarn was made to appear to be of a finer quality than it really was, and the hank, instead of containing its normal number of yards, viz., 840, contained only about 630 yards, and was, in fact, a spurious hank. Consequently, there was a misrepresentation both as to the length and the fineness of the yarn.⁷⁹

Despite such convictions, the MCC remained skeptical of the Merchandise Marks Acts. Convictions were secured in the above cases precisely because the yarn was *falsely described*. The MCC was adamant that selling hanks of yarn that were less than 840 yards was wrong per se, not just when they were falsely described: merchants were not satisfied merely by punishing false descriptions. They sought to standardize the hank of 840 yards throughout the industry and to punish anyone who provided hanks less than this standard, even if

77. *Manchester Guardian*, December 7, 1888, 4.

78. *Ibid.*

79. Sebastian, *Law of Trade Marks*, 674.

they were accurately and legally described. In 1891 the MCC appointed a special committee to investigate whether current modes of reeling and the making-up of single yarns conflicted with the Merchandise Marks Act of 1887. This committee examined a sample of short-reeled yarn and found it to be “calculated to materially injure the spinning trade of this country.” However, more evidence was required for a criminal prosecution. Letters from merchants stated, “[I]t was well known and capable of proof that large quantities of yarn are being reeled in short lengths of 600 to 700 yards per hank for shipment to the continent to the injury of legitimate trade.”⁸⁰ The law remained unclear about the standard for establishing short-reeling, and it required an expensive legal process and sympathetic courts to establish that deliberate fraud had occurred when hanks did not contain 840 yards. In 1892, in an attempt to prevent intentional departures from 840 yards, the MCC issued a statement: a hank of 840 yards of single cotton yarn was a recognized trade description; deviations from 840 yards were in breach of the Merchandise Marks Act of 1887.⁸¹

However, the views of the MCC conflicted with the Merchandise Marks Act of 1887, and, as we show later, it became imperative that the chamber sought an industry-wide agreement that a hank was, in fact, 840 yards. Section 18 of the Merchandise Marks Act of 1887 stated: “Where, at the passing of this Act, a trade description is lawfully and generally applied to goods ... the provisions of this Act with respect to false trade descriptions shall not apply.” In other words, it was lawful to supply hanks of less than 840 yards, provided this was indicated. The dilemma posed by this practice, however, was that it prevented a consensus being reached on what constituted a “standard hank,” and it had the potential to undermine the competitiveness of firms, which *only* supplied hanks of 840 yards.

In any case, as a purely domestic statute, the Merchandise Marks Act of 1887 was incapable of preventing short-reeling in Austro-Hungary or, indeed, anywhere outside Britain. This created a tenuous position as far as Manchester merchants were concerned. No gain could be achieved if misrepresentation was eradicated in Lancashire but permitted to continue abroad. The inequity of this situation was forcefully communicated by the MCC in a memorandum to the Foreign Office, in which it was indicated:

The Merchandise Marks Act, 1887, has not been followed by similar legislation in competing cotton-spinning countries abroad.

80. GMCRO, MCC, M8/2/11, 18 November 1891; M8/4/31, 20 January 1891, 11 February 1891, 27 October 1891.

81. *Ibid.*, 12 January 1892.

[There is] loss of business in English yarns through the preference given to Austrian spinnings, in consequence of these being “short-reeled”... the disability thus imposed upon English spinners and merchants should be represented ... with a view to inducing the Roumanian Government to prohibit the importation into their country of yarns reeled at less standard length than 840 yards to the hank.⁸²

This begs the question: How successful was the MCC in its petitioning of the British government to encourage Bulgaria, Romania, Serbia, and Turkey to enact legislation preventing the import of yarns in hanks that were less than 840 yards? This question occupied the MCC throughout the early 1890s, but without a solution.⁸³ The Serbian government published a notice in their *Official Gazette*, but admitted “it was unlikely [they] would take any further steps in the matter.”⁸⁴ Government officials in Romania stated they did not “possess any means of preventing the importation into Roumania of cotton yarns ... not coming up to the length required by English law,” and “the state both of the intelligence and education of the Customs officials was too low to permit of the proper working of any law which might require the Customs to discriminate between true and falsely reeled yarn.”⁸⁵ Before 1913, Turkey does not appear to have introduced legislation comparable to the British Merchandise Marks Act of 1887.⁸⁶ The petitioning of individual foreign governments to prohibit the import of short-reeled yarns from Austria was the only course of action available to the MCC because there did not exist a global framework preventing unfair competition.⁸⁷

82. GMCRO, MCC, M8/2/11, 27 January 1890.

83. GMCRO, MCC, M8/2/11, 22 September 1890, 22 July 1891; M8/4/31, 14 October 1890, 25 November 1890, 20 January 1891, 14 July 1891.

84. GMCRO, MCC, M8/2/11, 30 September 1891.

85. GMCRO, MCC, M8/4/31, Esarco to MCC, 27 October 1891. These views were reiterated by the Romanian Foreign Minister. *Ibid.*, 19 December 1893.

86. GMCRO, MCC, M8/4/32, 18 December 1913.

87. “Unfair competition” refers to any act contrary to honest practice in industrial and commercial matters. It is a doctrine that extends far beyond the protection of particular types of intellectual property, such as patents and trademarks. Ladas, *Patents*, 1705. An International Convention for the Protection of Industrial Property was first convened in Paris in 1883, mostly dealing with *specific* forms of intellectual property: no specific article was dedicated to unfair competition. It was not until The Hague Convention in 1925 that a clear and comprehensive definition of unfair competition was provided. Countries with which the MCC was most concerned—Bulgaria, Romania, and Turkey—did not accede to the Paris Convention until 1921, 1920, and 1925, respectively. A more detailed treatment of this point is beyond the scope of this article. We are grateful to a referee for bringing this to our attention.

The MCC was more successful in exerting pressure on the Indian government.⁸⁸ Manchester merchants were particularly concerned with misrepresentation of textile products exported to India because of the size of the Indian market and because the British Merchandise Marks Act of 1887 did not *initially* apply to India. Exacerbating matters, there was no legal standard of “yard” in India.⁸⁹ The MCC emphasized the need for corresponding merchandise mark legislation to be introduced in India because “satisfactory and effectual means cannot be taken here to put an end to the present system of incorrect stamping,” so it petitioned the Indian government accordingly.⁹⁰ Manchester’s campaign coincided with growing dissatisfaction about the ineffectiveness of domestic legislation among India’s cotton industrialists. The chairmen of the chambers of commerce in Bengal, Bombay, and Madras, and the Millowners Association in Bombay, expressed their support for an Indian version of the UK’s Merchandise Marks Act of 1887. Indian industrialists recognized that many of the practices they wanted criminalized were identical to those practiced in Britain before 1887. The chamber of commerce in Karachi stated that it was desirable that an act be introduced, “making the false stamping of lengths and the false stamping of quantities punishable”; and a leading editorial stated that “the great bulk of mercantile opinion in India is in favour of early legislation, and this is certainly the view of the mercantile community in Great Britain who are interested in Indian trade.”⁹¹ Without corresponding legislation in India, the MCC recognized that the operation of the British Merchandise Marks Act of 1887 would have the unintended consequence of encouraging continental

88. The Indian Act was not introduced *only* as a result of the lobbying of the MCC. India, along with other members of the British Empire—Australia and New Zealand, for example—was required to enact similar legislation to the Merchandise Mark Act of 1887, after Britain acceded to the 1883 Paris Convention for the Protection of Industrial Property.

89. *Report from the Select Committee on Merchandise Marks Act (1862) Amendment Bill*, 10 P.P. 1887, 357, Q. 3575; Q. 3624; QQ. 3658-59; Q. 4220; Q. 4280. It was not until 1889 that the Indian government adopted the imperial yard as a legal measure. *Report of the Committee of the Bengal Chamber of Commerce*, Calcutta, 1889, 83.

90. GMCRO, MCC, M8/2/10, Proceedings of the Manchester Chamber of Commerce, 1885–1890, 22 October 1886, 24 January 1887, 23 February 1887, 28 March 1888. The chamber urged its members who were MPs to continue to raise this issue in the House of Commons.

91. *Times of India*, October 22, 1888, 6. See also the extensive discussions by the Bengal Chamber of Commerce on the Merchandise Marks legislation in India and its significance for short-reeling of yarn. *Report of the Committee of the Bengal Chamber of Commerce* (1889), 23–24, 34–35, 46; *Report of the Committee of the Bengal Chamber of Commerce for the year 1903*, vol. 2 (1904), 425–438.

European spinners to export textiles with false description of length to India, further undermining Lancashire's competitiveness.⁹²

In 1889 the Indian Merchandise Marks Act was passed.⁹³ Many of its provisions were similar to those of the British Act of 1887; for example, the definition of "trade description" and "false trade description." The Indian Act made additional provision for the identification and testing of trade descriptions featuring prominently in the textile trade.⁹⁴ At least in the early years of its operation, the Indian Act was especially effective in the detection of falsely marked textiles imported to India. Comparing 1890–1891 with 1891–1892, the total number of seizures by the Indian customs authorities was 1,133 and 894, respectively, of which 59 percent and 56 percent, respectively, were under the provisions governing false stamping of lengths on textiles.⁹⁵ Manchester cotton merchants recognized that the Indian Merchandise Marks Act of 1889 had been beneficial: it cured the deceptive marking of grey bundle yarn and it eradicated the ambiguous stamping of cloth by requiring every piece to be stamped with its actual length.⁹⁶

The Indian Act also provided for "limits of variation as regards number, quantity, measure, gauge or weight."⁹⁷ In 1890 the Indian government established a special committee to determine this latitude.⁹⁸ However, a clear consensus proved difficult to reach. The special committee recommended that the variation on grey yarns should be 5 percent either way. The Bombay Millowners Association recommended that the permissible variation on grey yarns should be 10 percent, 7.5 percent, and 5 percent, on all yarns under 16s, 16s–30s, and greater than 30s, respectively. Recognizing that such variation could not be applied to all types of yarn, for example bleached or unbleached, the committee recommended that acceptable variation as regards *count* and *length* should be the same as grey yarns, but variation in *weight* would be permissible for dyed

92. *Times of India*, January 31, 1889, 6. Florence Peel, a Manchester and Calcutta merchant, had testified earlier that the absence of a legal standard for yarn length in India may have encouraged short-reeling; *Report from the Select Committee on the Merchandise Marks Act (1862) Amendment Bill*, 10 P.P. 1887, 357, Q. 4280.

93. *The Indian Merchandise Marks Act*, Act IV, 1889, 337–345.

94. *Ibid.*, s. 4 (3), s. 20.

95. *Times of India*, December 7, 1892, 5.

96. GMCRO, MCC, M8/4/34, Manchester Yarn Contract Conference, 1896–1913, 9 March 1898.

97. *The Indian Merchandise Marks Act*, Act IV, 1889, s. 16.

98. This committee was comprised of some of the most famous merchant houses in the cotton textile trade, for example, Ralli Brothers. *Times of India*, January 16, 1890, 5.

yarns.⁹⁹ Further consultation resulted in the *Calcutta Notification*, which specified that the *only* acceptable trade description applied to dyed yarns was that denoting length in which the hank was 840 yards, from which only slight variation of 2.5 percent was permitted.¹⁰⁰ In other words, because dyeing and bleaching caused unavoidable “shrinkage” in the “grey” yarn, it was permissible to stamp the original (pre-processed) count on the treated yarn, provided the length of a hank was no less than 819 yards. The MCC fully approved this policy.¹⁰¹

However, the treatment of dyed or bleached yarns proved problematic because of differences in trade practice between spinners in Manchester and Glasgow. For example stamping “60s made up as 40s dyed” indicated a conflict between the length and weight of yarn, which was unacceptable under the new Indian legislation. Because dyeing altered the count of the yarn originally supplied, which trade description should the authorities use when determining whether a trade description was false? Should it be the original yarn count prior to dyeing or the count after dyeing?¹⁰² A fissure developed between Lancashire- and Glasgow-based exporters, who held opposing views both on trade practices and on short-reeling. According to Manchester merchants, the most honest way of denominating all dyed yarns was that it should conform throughout to the original grey counts: “Manchester firms have stipulated for many years that ... the counts of coloured yarn ... are the counts of the yarn in the grey state, and not what the yarn counts in its dyed condition.”¹⁰³ The Glasgow firms considered this to be an unworkable proposition, claiming that their existing practice of sending “net weight” yarns to India was in concord with the new legislation. They claimed that “if an attempt is made to demand a description at some former period of [an article’s] existence, which cannot be proved or disproved, the door is thereby opened for misrepresentation, deception and fraud.”¹⁰⁴

99. *Ibid.*, April 3, 1891, 6.

100. *Times of India*, April 7, 1897, 4. Letter to Under Secretary of State for India, 28 October 1897, UGD 13/5/13/1/5, *Letters*, Records of United Turkey Red Co. Ltd., Glasgow University Archival Service; GMCRO, MCC, M8/4/31, Minutes of the Yarn Section: Minutes of a Meeting of the Executive Committee 14 June 1891.

101. GMCRO, MCC, M8/2/10, Proceedings of the Manchester Chamber of Commerce, Meeting of the Board of Directors, 22 September 1890; M8/4/31, Minutes of the Yarn Section 23 March 1890, 14 July 1891.

102. GMCRO, MCC, M8/2/11, 17 March 1890, 30 June 1890, 18 December 1895; M8/4/34, Notes of Conference at Carlisle, 9 March 1898, 8–9.

103. GMCRO, MCC, M8/4/32, Minutes of the Yarn Contract Committee, 1896–1919, 24 November 1896.

104. Letter to Under Secretary of State for India, 28 October 1897, UGD 13/5/13/1/5, *Letters*, Records of United Turkey Red Co. Ltd., Glasgow University Archival Service.

To find a solution, Manchester merchants and the Scottish Turkey-Red Dyers Association met in Carlisle in 1898. The meeting did not arrive at a way of resolving the two opposing positions: stating the original grey counts or stamping the “new” count of the dyed yarn. It resulted ultimately in the former instigating unsuccessful legal action against the latter.¹⁰⁵ Despite intervention by the Board of Trade, this matter was never satisfactorily resolved before 1914, and Manchester merchants continued to complain about the export of short-reeled yarn from Glasgow to India and Singapore.¹⁰⁶

The preceding discussion has indicated that the legal infrastructure devised by national governments was only partly successful in addressing the concerns of the MCC: the standard hank of 840 yards remained elusive to monitor or enforce. Merchants were compelled to adopt a different strategy: convince Lancashire spinning firms to adopt this standard and to agree on the rules to enforce it. At stake was not just an issue of eliminating false description; also at stake was a deeper, more fundamental issue: Could parties to a contract reliably establish if a breach of contract had occurred if a hank contained less than 840 yards?

Uniform Contracting and Testing for Quality

By the early 1890s, merchants were keen to regulate the trading of yarn in Manchester by introducing uniform contracting rules; the MCC promulgated these in December 1896.¹⁰⁷ As may be expected, the contract addressed a range of issues affecting the terms of exchange, including strikes, lockouts, and compensation when a delivery of yarn was rejected because of concerns about its “quality.”¹⁰⁸ For our purposes, the key provisions of the uniform contract were:

The number of hanks in a bundle, taking 840 yards to the hank, must indicate the counts of the yarns. (Article 4)

In case of dispute as to counts, length, weight or condition, the yarn shall be tested by and according to the rules of the Manchester Testing House, and its certificates shall be binding on both parties. (Article 5)

105. GMCRO, MCC, M8/4/32, Minutes of the Yarn Contract Committee, 14 May 1898, 23 September 1903, 28 November 1904.

106. *Ibid.*, 4 April 1898, 27 June 1898, 23 April 1901.

107. *Ibid.*, M8/4/31, Minutes of the Yarn Section. The rules were dated December 1896; however, the document is not attached to a specific page in this archive.

108. GMCRO, MCC, M8/4/31, Minutes of the Yarn Section, Third Meeting of the Joint Conference, 4 December 1895; *ibid.*, Fourth Meeting of the Joint Conference, 18 December 1895.

In case of dispute the decision whether a delivery may or may not be rejected, and what damages shall be paid for breach of contract, shall be left to the Tribunal of Arbitration. (Rule 14)¹⁰⁹

Here, the interests of some of the spinning firms coincided with the merchants. The Federation of Master Cotton Spinners Association (FMCSA), in fact, collaborated with the MCC to introduce the uniform contract rules in 1895.¹¹⁰ Spinning firms had recognized the need to remedy the “laxity of the present system of contracts for the sale and purchase of yarn.” This was especially the case with Oldham spinners, who depended more on yarn exports than other regions such as Bolton.¹¹¹ The FMCSA had unsuccessfully tried to introduce a standard “basis of contract” between 1893 and 1894. Oldham firms reckoned that successful standardization of contracts required “an agreement [between] not only spinners, but also manufacturers, merchants, and others interested in the subject.”¹¹² However, the series of cotton strikes in the 1890s forced this topic to the background.

Meanwhile, the MCC initiated its own campaign to develop such a contract that was “acceptable to buyers and sellers, [that it] should be framed and recommended for general use in the home and foreign yarn trade.”¹¹³ Determining the wording and content of the contract required that the MCC collaborate with representatives of the major employers’ associations to achieve consensus on the length of yarn in a hank, the contingencies that might lead to breach of contract, and the establishment of an impartial and authoritative means to resolve disputes.¹¹⁴

The introduction of the uniform contract was a necessary but insufficient condition for regulating the Lancashire yarn trade: the establishment of the Manchester Testing House was the other key component because it provided impartial and authoritative tests of disputed yarn quality. In addition, as we discuss below, the Testing House became increasingly involved in the testing of cloth, a crucial feature as exports of this product grew rapidly after 1900.

Initially, there was considerable opposition to the Testing House. William Tattersall (of the FMCSA) claimed there was “no desire

109. GMCRO, MCC, M8/4/31, Minutes of the Yarn Sectional Committee, 18 June 1896, full specification of Yarn Contract Rules.

110. Reports of Committee, 1895, 19, GB 133 OLD/6/8/5, OMCSA, JRL. GMCRO, MCC, M8/4/31, Minutes of the Yarn Section, 1890–1896, 4 January 1895, 11 January 1895, 18 January 1895, 1 February 1895, 22 February 1895, 20 March 1895.

111. Reports of Committee, 1892, 13, GB 133 OLD/6/8/2, OMCSA, JRL.

112. Reports of Committee, 1894, 18, GB 133 OLD/6/8/4, OMCSA, JRL.

113. GMCRO, MCC, M8/4/31, Minutes of the Yarn Section, 28 May 1895.

114. See, for example, GMCRO, MCC, M8/4/31, Minutes of the Yarn Sectional Committee/Joint Conference, 18 June 1895, 21 November 1895, 4 December 1895, 18 December 1895, 15 January 1896.

expressed for such a house,” and that there would be considerable difficulties in its operation.¹¹⁵ Nonetheless, the MCC was adamant that an independent facility for verifying the accuracy of statements on length and weight of textiles was vital:

The Yarn Sectional Committee is of opinion that arbitration cannot be satisfactorily carried out without accurate and impartial authority for the testing of raw materials, yarns and textiles. [We] take the necessary steps for the establishment of a Testing Room.¹¹⁶

The Testing House was established in 1895 in collaboration with the Manchester City Council. Individual members of the MCC agreed to contribute £25 to cover any deficit that might be incurred by the establishment of this facility.¹¹⁷ A manager was appointed for the new unit, and *The Manchester Guardian* was soon reporting that the activities of the Testing House “fully justify the action of the Chamber of Commerce in undertaking this new and important branch of work.”¹¹⁸

The activities of the Testing House increased rapidly; the number of samples submitted for examination nearly quadrupled in the decade preceding World War I (Table 2). Alfred Réé, the chairman of the Testing House, claimed in 1932, “Originally instituted as a convenience for local firms [samples are now sent to the Testing House] not only from firms in Lancashire but from many parts of the world.”¹¹⁹ The number of samples tested by the Testing House had increased to more than 27,000 per annum in 1930, up from about 2,700 in 1900. Based on these tests, the institution would issue “statements of opinion” certifying the relative quality of samples of yarn or cloth, the causes of defects arising in manufacture, and whether disputed goods constituted fair marketable standards.¹²⁰ It was, at the time, an almost unique institution: the linen-testing house in Belfast and the wool-testing house in Bradford, although older, were much smaller in comparison.¹²¹

115. GMCRO, MCC, M8/4/31, Yarn Sectional Committee, 15 November 1893.

116. GMCRO, MCC, M8/4/31, Minutes of the Yarn Sectional Committee, 1890–1896, 15 November 1893.

117. GMCRO, MCC, M8/4/32, Minutes of the Yarn Section, 1896–1919, 21 October 1897; M8/4/31, Minutes of the Yarn Section, 1890–1896, 15 November 1893, 15 May 1895.

118. *Manchester Guardian*, August 7, 1895, 4.

119. Réé, “Manchester Chamber of Commerce Testing House,” 63.

120. *Ibid.*, 65.

121. “The New Testing House: How Manchester Goods are Guaranteed,” *Manchester Guardian*, January 29, 1922, 11. A similar institution existed in Paris at the time that, in 1904, was roughly the same in size as the Manchester Testing House. *MCC Monthly Record* 1904, vol. 15, 162–164.

Table 2 Manchester Testing House: Samples tested, 1899–1914

Year	Fees received (£)	Samples Tested (Nos.)			Yarn + Textiles (% of total)
		Yarn	Textiles	Total samples	
1899	501.22	1525	1966	4257	82.0%
1900	739.82	642	1446	2781	75.1%
1901	1,002.85	1253	1714	3802	78.0%
1902	1,000.30	1084	1394	3388	73.1%
1903	1,167.27	1213	1549	3794	72.8%
1904	1,413.43	1601	3333	6001	82.2%
1905	2,935.78	1529	5236	7976	84.8%
1906	1,703.18	1377	2348	4657	80.0%
1907	1,661.20	1774	2729	5505	81.8%
1908	2,080.58	2210	3531	7059	81.3%
1909	2,426.45	3144	3848	7244	96.5%
1910	2,269.25	1948	3834	7229	80.0%
1911	2,236.55	2334	4435	8132	83.2%
1912	2,470.25	2621	4294	7614	90.8%
1913	4,320.68	2417	7353	11788	82.9%
1914	6,320.82	3215	9533	14824	86.0%

Source: Calculated from GMCRO, MCC, M8/4/28, Testing House Management Committee Reports, 1899–1919.

Note: Total samples refer to the sum of yarn, textiles, chemicals, and produce.

Testing House rules required samples to be supplied for analysis: a minimum of one pound (weight) for moisture and count tests. Certificates issued by the Testing House referred only to the samples submitted, not the bulk from which they were taken.¹²² For bundle yarns, testing to determine the moisture in a sample required comparison of the total moisture in the sample to its “absolutely dry weight.” Other tests compared the count determined “in condition received,” without correction for moisture, with the “count in correct condition” after appropriate allowance had been made for moisture. In some cases, the Testing House was unable to provide an exact analysis of count. For example, it was difficult to state with exact accuracy the count of grey yarn *prior* to dyeing or bleaching. Tests could also authoritatively determine the count of yarn after it had been woven into cloth.¹²³

The “scientific basis” of the Testing House rules reflected the increasing use of more sophisticated and systematic sampling techniques for ascertaining quality measurements in British industry.¹²⁴

122. *Notes on Sampling and Testing*, 81–83.

123. *Ibid.*, 22–31.

124. Simpson, “Origin of Futures,” 186; Ellison, *Cotton Trade*, 177; Garside, *Cotton Goes to Market*, 79; Velkar, *Markets and Measurements*, 187–191. William Gosset pioneered the use of statistical tests while working at Guinness in the early nineteenth century. Ziliak and McCloskey, *Cult of Statistical Significance*, 18–20.

The centralization of such measurements with the Testing House, on the basis of which quality certificates were issued, limited the extent of measurements required to adjudicate disputes. It eliminated duplicative measurements and projected an aura of scientific testing in resolving disputes regarding quality standards. More important, the rulings of the Testing House were legally enforceable in the courts, as we show in the following section.

The Legacy of Merchant Intervention

The legacy of merchant intervention is best understood as an attempt at quality control within the supply chain. The Testing House and uniform contract established centralized facilities for the testing of quality. Although within a couple of decades other rival testing facilities would emerge to compete with the MCC's Testing House, the notion of centralized testing was definitively established within this industry. Concomitantly, the legality of the uniform contract was unequivocally established, both within the arbitration proceedings of the MCC and in the broader legal framework. The standards that the merchants sought to impose were upheld in the few, albeit landmark, legal cases that were decided following the introduction of the uniform contract in 1897. Further, the "internal" arbitration of disputes involving quality became more firmly established in this period.¹²⁵ The role of merchants in controlling this arbitration process remained contentious even in the early decades of the twentieth century. Such differences brought into sharper focus the questions: Who was ultimately responsible for the control of quality of the manufactured product? Was it the producers who spun the yarn or weaved the cloth or was it the merchants who owned the trademarks that were applied to these products? The producers had begun asserting greater control over quality, especially toward the end of our period, through research on cotton fibers (inputs) and on processes. Even so, the influence of merchants on what constituted marketable quality remained substantial, especially in export markets. Ultimately, notions of quality, standards

125. Arbitration of contracts in *cotton purchasing* in Liverpool or New York had emerged earlier, but there was no parallel system of arbitration of the contracts for the *manufactured* product such as yarn or cloth within the manufacturing industry in Lancashire. Simpson argues that regulation of cotton trading was "outside the regular law" and "traders organized and policed the system themselves." Simpson, "Origins of Futures," 207. Similarly, Leone Levi's proposals to establish the Liverpool Chamber of Commerce in 1849 contain explicit arguments for establishing a "local tribunal" to settle commercial disputes through the "judgement of commercial and practical men." Levi, *Chambers of Commerce*, 15. See also Ferguson, "Adjudication of Commercial Disputes."

to enforce it, and its control along the supply chain had to be reconstituted or reevaluated as the textile industry experienced structural shifts: exports of cloth became significantly more important as compared to yarn between 1895 and 1914. We examine these issues below.

The uniform contract received a mixed response from spinners: Oldham firms adopted them enthusiastically, as did the FMCSA. However, other spinners associations did not support the uniform contract rules. Burnley argued that its members would insist on “full and regular counts” without the assistance of uniform contracts; “every spinner and buyer could ignore the contract form and make any contract they chose.”¹²⁶ Bolton thought the sheer diversity of markets to which its yarns were sent would render a uniform contract worthless, as well as unnecessarily causing friction between buyer and seller.¹²⁷ The Blackburn Chamber of Commerce and the North and North East Lancashire Cotton Spinners’ Associations also declined to adopt uniform contracts.¹²⁸ The likely proportion of yarn covered by uniform contracts in this period was about 40 percent, being the proportion of spindles or spinning capacity covered by the FMCSA and the Oldham Master Cotton Spinners Association.¹²⁹

Nonetheless, there was a rapid growth in centralized testing between 1899¹³⁰ and 1914: samples of yarns and textiles tested increased by threefold, whereas revenues from testing increased more than tenfold (see Table 2). Textile samples accounted for over 80 percent of the Testing House’s total activity. Testing of yarn amounted to between one-fifth and one-third of all samples tested. In fact, the high demand for the testing of cloth, in addition to the demand for yarn testing, surprised the MCC.¹³¹

It is apparent from Tables 1 and 2 that the growth in the activities of the Testing House was closely aligned to the industry’s international expansion in this period. This can be illustrated through the

126. GMCRO, MCC, M8/4/31, Minutes of the Yarn Section, 1890–1896, 21 November 1895.

127. General Standing Committee Report, 16 October 1896, FET/1/1/3, Bolton Master Cotton Spinners Association, Bolton Local Studies and Archives.

128. GMCRO, MCC, M8/4/31, Minutes of the Yarn Section, 1890–1896, 16 September 1896. Reports of Committee, 1896, 10, GB 133 OLD/6/8/6, OMCSA, JRL.

129. Our estimates are based on the total capacity for Lancashire reported by Mitchell, *Abstract of British Historical Statistics*, 372, and those reported by the OSMCA and the FMCSA for 1892. Reports of Committee, 1892, 6–7, OLD/6/8/2, OMCSA, JRL. This estimate corresponds closely with the proportion of spindlage reported by McIvor for the FMCSA (39.2 percent for 1892) that he calculates using various yearbooks, annual reports, and *Worrall’s Cotton Spinners Directories*. McIvor, *Organised Capital*, 63.

130. 1899 was the first year for which figures are available.

131. *Notes on Sampling and Testing*, 8.

problem of maximum permissible standards of moisture (regain) in textiles. The 1875 International Congress for the Establishment of Uniform System of Numbering Yarn, held in Turin, Italy, was the first to attempt to fix moisture standards for international trade in yarn. That congress specified that the maximum “regain” on cotton textiles was 8.5 percent. However, Manchester merchants did not accept this standard. Determining the true regain for yarn was problematic for a variety of reasons. The first issue was that the regain of 8.5 percent was misleading because it only applied if the yarn was “absolutely dry.” In addition, this regain was calculated using an “average condition of the air,” but in spinning mills, the amount of moisture varied between 3.5 percent and 7.5 percent.¹³² In these circumstances, the MCC considered it impossible to set a “true” standard, so consequently the activities of the Testing House were crucial to adjudicating on these differences.

Notwithstanding partial acceptance of the uniform contracting rules, the MCC could settle disputes involving quality of yarn or cloth on the basis of its testing facilities, particularly because its tribunal was a “properly constituted court” under the Arbitration Act of 1889.¹³³ In addition, the voluntary nature of the uniform contract did not prevent such contracts from being legally enforceable in arbitration or courts of law. The case of *Atkinson & Co. v. Emmott* is illustrative here because both parties transacted on the Manchester Royal Exchange. After the contract was signed, the market price of yarn declined and the defendant refused to take delivery of the yarn. As the terms of the contract were governed by the uniform contract rules, as stated in the contract, judgment was entered in favor of the plaintiffs. In *Pearl Mill Co. v. Smith & Forrest* (1907), Judge Bradbury stated, “The practical effect [of the case] on the evidence before him, was to fix on spinners the standard of moisture fixed by the Manchester Testing-house ... and if spinners desired to depart from [the standard] they must do so in their written contracts.”¹³⁴ The directors of the MCC received this judgment with considerable satisfaction.¹³⁵

The activities of the Testing House and the Tribunal of Arbitration were not immune from criticism. In 1905 a Manchester textile agent claimed “nobody in Manchester would take any notice of a Testing House Report; that the place consisted of a parcel of boys; and that the

132. *Ibid.*, 9–14.

133. Ellenbogen, “English Arbitration Practice,” 658; GMCRO, MCC, M8/4/28, Testing House Management Committee, 23 January 1908; *MCC Handbook* 1932, 69.

134. *Manchester Guardian*, May 17, 1907, 11; May 31, 1907, 11; July 4, 1907, 4.

135. GMCRO, MCC, M8/4/32, Minutes of the Yarn Sectional Committee, 1896–1919, 13 June 1907.

Testing House could not test correctly, or within 20%.”¹³⁶ Similarly, an anonymous letter, penned under the pseudonym “Merchant,” was published in the *Manchester Guardian* that specifically criticized the competence of the Testing House to determine the true count of yarn from cloth samples: “I think it is nothing short of a public scandal that after an existence of fifteen years they have not yet discovered a reliable method of obtaining the counts of yarn in cloth.”¹³⁷ In the latter case, the complainant, Charles Duckworth, agreed to participate in a further trial in which the count of yarn would be determined prior to and after weaving. Three types of cloth were analyzed; it was reported that the average difference between the count prior to weaving and after its conversion into cloth was just 1.6 percent. The MCC reported that “no further action be taken, as the above mentioned test confirmed the reliability of the system of testing.”¹³⁸ Prior to 1914, we can find only one other reported complaint involving the determination of yarn counts from cloth, and the MCC was able to firmly rebuke the complaint because all yarns had slight natural variation.¹³⁹

The Tribunal of Arbitration, which was set up as a “merchant’s court,” also attracted some measure of criticism. With “merchants acting as judges,” some considered it a “dangerous experiment” to exclude legal assistance to parties involved in the dispute.¹⁴⁰ The absence of legal representation was not strictly true, as the MCC claimed that solicitors were allowed presence at tribunal hearings. The real issue was the secrecy surrounding its proceedings. A member of the MCC complained that even “ordinary information such as the number and nature of disputes and names of arbitrators, which should be on records of the Chamber is denied to its members.”¹⁴¹ The MCC responded to this complaint by stating, “[I]t would defeat the object for which the Tribunal of Arbitration was formed if greater publicity were given to the proceedings.”¹⁴²

Testing House reports formed a crucial part of the tribunal’s (and the MCC’s) efforts to minimize disputes arising from short reeling. When Elijah Helm wrote to the Bombay Chamber of Commerce about

136. GMCRO, MCC, M8/4/28, Testing House Management Committee, 26 July 1905. Strangely, the MCC decided not to pursue this libel case.

137. *Ibid.*, 27 April 1910.

138. *Ibid.*, 27 April 1910, 1 June 1910, 6 October 1910.

139. *Ibid.*, 6 October 1910. This final complaint originated from the renowned merchants Barnard Ellinger and Hugh Ellinger, which was published in their article “Japanese Competition.”

140. Letter dated 28 February 1910, *MCC Monthly Record* 1910, vol. 21, 41.

141. Letter by R. H. Patuck to MCC, 18 July 1910, *MCC Monthly Record* 1910, vol. 21, 257.

142. Reply to R. H. Patuck by MCC, 23 July 1910, *MCC Monthly Record* 1910, vol. 21, 257.

a sample of 20s count that turned out to be counts of 17.9s, he enclosed the Testing House “certificate of examination” as evidence. The test showed that the samples had lengths of 720 yards, 743 yards, 681 yards, and 712 yards, rather than the hank of 840 yards.¹⁴³ In 1910 the tribunal claimed that, as “usual, the most frequent class of cases [were those with] questions [regarding] whether goods supplied are or are not in accordance with the contract of sale, and whether they are to be rejected or accepted, with or without an allowance.”¹⁴⁴ Other representative results from reports issued by the Testing House are shown in Table 3. Even though by 1914 the tribunal reported that there were “fewer cases in which quality of condition of goods sold came into question,” this was more a reflection of the decline in the disputes referred to the tribunal for that year.¹⁴⁵

Overall, apart from some specific (and isolated) complaints involving the assessment of yarn counts in cloth, the activities of the Testing House were favorably received. *The Times* reported in 1913 that this institution had “admirably served the needs of the industry on the practical side,” and it acknowledged the “cutting-edge” analysis of the Testing House in determining yarn counts from cloth.¹⁴⁶ The MCC reported that cotton manufacturers were intending to establish a similar facility in Boston, Massachusetts.¹⁴⁷ American manufacturers claimed “analysis of testing of textile fibres is rapidly becoming more necessary,” and cited the activities of the Manchester Testing House as an example of “advances in scientific examination.”¹⁴⁸ It is also apparent that certificates issued by the Testing House attesting to the particular attributes of samples were deployed in the advertising strategies of firms (Figure 1). This practice was not condoned by the MCC because it could undermine its impartiality, and it remains uncertain whether the MCC had the legal power to prevent such advertisements.¹⁴⁹

The yarn spinners and other manufacturers had an uneasy relationship with the merchants on the issue of uniform contracting and the

143. Letter from Elijah Helm to Bombay Chamber of Commerce, 2 March 1900, *MCC Monthly Record* 1900, vol. 11, 67.

144. Annual Report of the Tribunal of Arbitration, 31 January 1910, *MCC Monthly Record* 1910, vol. 21, 6.

145. Annual Report of the Tribunal of Arbitration, 31 January 1914, *MCC Monthly Record* 1914, vol. 25, 9–10.

146. *The Times*, June 27, 1913, 32.

147. GMCRO, MCC, M8/4/28, Minutes of the Yarn Section, 12 July 1912.

148. McDowell, “Cotton Fibres,” 238–271. In our period, we did not come across any evidence of a similar institution operating in the United States, although several textile mills had independent testing rooms for yarn.

149. GMCRO, MCC, M8/4/28, Testing House Management Committee, 12 July 1912, 7 October 1912.

Table 3 Examples of cases investigated by the Manchester Testing House

Date	Merchant ^a	Spinner	Yarn type ^b	Reported count	Actual count	Shortfall (%) ^c
1897	Messrs Hiltermann Bros; George Fraser, Son & Co.	n.a.	Dyed	40s	31.93s	34.1
1898	n.a.	n.a. (Glasgow)	Dyed	40s	38.88s	32.5
				n.a.	n.a.	49.2
1898	Messrs. S & C Nordlinger	John Orr Ewing	Dyed	n.a.	n.a.	33.6
				n.a.	n.a.	32.8
1902	George Fraser, Son & Co.	n.a. (Bombay)	Grey	40s	37.9s	2.3
			Grey	40s	39.7s	0.36
			Grey	40s	38.6s	3.5
			Grey	10s	9.9s	3.0

Sources: GMCRO, MCC, M8/4/32, Minutes of the Yarn Section, 5 July 1897; M8/4/34, Minutes of the Yarn Conference held at Carlisle, 9 March 1898 (letter dated 25 April, 1899); M8/4/32, Minutes of the Yarn Section, 4 April 1898, 4 May 1898; M8/4/28, Testing House Management Committee, Joint Meeting of the Yarn and Testing House Sections, 26 February 1902.

Notes: a. Column 2 refers to the merchants who reported the fraud.

b. As discussed in the text, the “standard” hank for grey yarns was 840 yards; the maximum permissible “shrinkage” for dyed yarns was 2.5 percent of 840 yards, which equates to 819 yards.

c. Shortfall is expressed as the percentage difference between reported and actual length, in yards. In some cases, the actual length of yarn (not count) is reported.

Testing House facilities. In 1916 the wartime government approached the Lancashire manufacturers with a proposal to set up a research and testing facility independent of the MCC, and many prominent manufacturers supported this initiative, including J. W. McConnel, H. P. Greg, W. Lawrence Balls, and Kenneth Lee. The discussions culminated in the establishment of the British Cotton Industry Research Association in 1919, rechristened shortly thereafter as the Shirley Institute. It offered yarn-testing facilities to rival those of the MCC’s Testing House.¹⁵⁰ This development was of great concern to the merchants, and in later years the MCC reported that the work of the Shirley Institute “was affecting the progress and position of the Testing House,” and that it needed to “watch with care any developments which might prove detrimental to the progress and position of the Testing House.”¹⁵¹ Even though this competing facility set up by the manufacturers was some years in the future, the MCC had recognized this threat as early as 1907. The Testing House Report for 1906 stated that the decrease in the number of yarn tests was because “certain firms have found it worthwhile to establish their own testing departments, and thus to withdraw some of their

150. *Shirley Memoirs*, vol. 1, 1922, 63, OLD 6/2/1, OMCSA, JRL. Sawbridge, *Story of Shirley*.

151. GMCRO, MCC, M8/4/29, Minutes of Sub-Committee of Testing House, 23 July 1923.

xii [SUPPLEMENT.] THE DRAPERS' RECORD. [Feb. 3, 1912.]

"SUNRESISTA."
No. 15.

SUNRESISTA

Please read the following.

UNIQUE REPORT.

*Manchester Chamber of Commerce,
Testing House and Laboratory,
Royal Exchange,
Manchester.
January 23, 1912.*

Gentlemen,

We have tested a number of patterns comprising 29 shades of cloth marked "Sunresista" S 1 to S 29, and in all cases we find the dye of the patterns to be fast when subjected to the action of

- Boiling Water.
- Boiling Soap Solution.
- Boiling Soda Solution.

Yours faithfully,
(Signed) FRED. W. BARWICK,
Manager.

The following London Wholesale Houses can supply "SUNRESISTA" :-
Messrs. SPENCER, TURNER & BOLDERO, Ltd., Lisson Grove, N.W.
Messrs. BRADBURY, GREATOREX & CO., Ltd., Aldermanbury, E.C.
Messrs. THE FORE STREET WAREHOUSE CO., Ltd., Fore St., E.C.

Any Wholesale or Retail Buyer of these Fabrics can examine above tests by arrangement with the BRITISH TEXTILE SYNDICATE, 92, Market Street, Manchester, from whom also may be obtained the names of Provincial Houses stocking "Sunresista."

Figure 1 Sunresista advertisement.

© The British Library Board. LOU.LD 167.

support from the Testing House."¹⁵² Greg and Co. had a well-established testing room by the 1920s, wherein they would conduct their own

152. Annual Report of the Tribunal of Arbitration, 31 January 1917, *MCC Monthly Record* 1907, vol. 28, 14.

tests on yarn bought from specialized spinning firms, a legacy of their decision to discontinue spinning their own yarn in 1894.¹⁵³

Conclusions

The case of merchant intervention in the Lancashire textile industry has broader significance beyond contributing to the considerable literature on this industry. This significance relates to how historians should study standards, law, institutions, and historical markets. Philip Scranton and Patrick Fridenson have stressed the importance to business historians of investigating standards in which we not only glimpse the agency of historical actors but also the outcome of contending interests at play.¹⁵⁴ This article has examined the efforts of Manchester merchants to enforce their standards along the supply chain to regulate what they considered to be the nefarious practice of short measurements in yarn and cloth products. That they were only partially successful in our period does not diminish the significance of their influence on the textile industry. They sought to control product quality through standardization in an industry that had already gained a reputation for extreme product specialization. Merchant intervention acted as an integrating influence within an industry made of disintegrated modes of production and distribution; Peter Gibbon terms this as “loosely filamented relationships lacking integration and hierarchy.”¹⁵⁵ Our case study demonstrates how such “merchant-driven” supply chains were historically able to enforce quality standards, which, although challenging, were achievable without vertical integration. Existing historical studies have hitherto explored such issues in primary products. We contribute to the literature by exposing how this was true in important manufacturing sectors, such as textiles, as well.

Significantly, the article brings into focus the issue of how conflicting interests shape the standards and notions of quality that eventually dominate an industry. The state-of-the-art understanding of standard recognizes that standardization is a political process.¹⁵⁶ Our case study especially highlights how the competition for control of the supply

153. *Spinning Suppliers Book* (uncatalogued), Quarry Bank Mill Archive.

154. Scranton and Fridenson, *Reimagining Business History*, 160.

155. Gibbon, “Upgrading Primary Production,” 351; Gereffi et al., “Governance of Global Value Chains,” 79–81; Ponte and Gibbon, “Quality Standards,” 6.

156. The literature on this subject of standards and how they are established is extensive. The following texts are only illustrative of the diverse ways in which standardization has been examined: Murphy and Yates, *International Organization for Standardization*; Farrell and Saloner, “Coordination through Committees”; Weiss and Sirbu, “Technological Choice”; Austin and Milner, “Strategies”; David, “Clio and Economics of QWERTY”; Barzel, “Measurement Cost,” 30–31.

chains was an integral aspect of establishing standards.¹⁵⁷ Disentangling the standardization process requires closer attention to competing interests vying for control of the supply chain: competition not just between firms in a horizontal relationship but also between firms in a vertical relationship within supply chains. In our case study, merchants invested considerable resources in imposing standards, as it gave them control over product quality. Simultaneously, manufacturers attempted to retain flexibility in production—and thereby control over quality—by not enforcing too rigid a standard for yarn or cloth length. At stake was the choice of (1) a restrictive but easy-to-monitor and “one-size-fits-all” standard that potentially stifled innovation, or (2) multiple “competing” standards that potentially increased the costs of monitoring and compliance but provided manufacturers with the flexibility required in a highly competitive environment. The Lancashire textile industry grappled with such issues during the latter half of the nineteenth century.¹⁵⁸ This issue was substantially, but not conclusively, resolved by the end of our period.

The article further highlights the institutional conflicts surrounding standardization. Standards exhibit characteristics of public goods, which does not preclude their origins as privately set standards; conversely, the adoption of publicly set standards need not imply mandatory compliance.¹⁵⁹ Are publicly set but compulsory standards more effective in controlling product quality, as compared to standards that are privately set but whose adoption is voluntary and depends on customs prevalent within the trade? Merchants grappled with these issues throughout the period we study. Differences in accepted norms within the trade generated discord between textile firms in terms of what constituted illegal deviation from product standards. This is evidenced by the conflict between Manchester merchants and producer firms in Lancashire, Glasgow, and elsewhere in Europe and India. Such conflicting notions of acceptable (or de facto) standards show the limitations of national statutes to resolve the specific problems affecting the yarn trade. The national and international legislative environment governing misleading trade descriptions was insufficient to maintain confidence in market transactions. The fundamental disjuncture between legislation and accepted trade use of terms was

157. Rivalry to control quality standards is evident in other produce and manufacturing sectors as well. Velkar, “Transactions, Standardisation and Competition”; Pirrong, “Efficient Scope.”

158. *Manchester Guardian*, December 11, 1903, 8.

159. Kindelberger, “Standards,” 380; Henson and Humphrey, “Understanding the Complexity of Private Standards,” 1630; Brunsson and Jacobsson, “Contemporary Expansion of Standardisation,” 3.

an important reason for this. The problems of obtaining sufficient evidence to satisfy the specific requirements of the Merchandise Marks Act of 1887 meant prosecutions were limited. Charles Bailey, who was employed by Ralli Brothers, claimed that the nominal damages awarded in successful litigation deterred many from instituting legal action.¹⁶⁰ As we have shown, such instances exposed the limitations of state legislation.

Merchant intervention in the form of uniform contracts and centralized testing facilities aided the arbitration of disputes and mitigated the limitations of state legislation. This system effectively introduced a “private legal system” that allowed the merchants to “internalize” the governance and control of product quality.¹⁶¹ The emergence of such a quasi-legal system was not unique to the trade in textile manufactures, but it was very unusual for a manufactured commodity—usually these institutions are evident in markets involving primary commodities in this period. Our contribution to the state-of-the-art is to substantially highlight the significance of such private legal systems in Britain, and the manner in which such institutions operated at the boundary of civic and state society. Study of such institutions will allow historians to further develop a more nuanced and grounded understanding of commercial and economic institutions, rather than just the binary of “absence or presence” of legal institutions to promote governance.

This article additionally addresses more fundamental questions about the evolution of capitalism and market governance during the Victorian period. Paul Johnson has argued, “The ways in which market structures were constructed in Victorian Britain is only indistinctly glimpsed in the literature.”¹⁶² He further stressed that economists have tended to reify and simplify the market, assuming away the contestable and conditional nature of economic exchange. For example, the transaction-cost view describing market exchanges relegates the issue of quality, standardization, and contract enforcement to “market-based governance”; that is, repeated transactions in a competitive setting.¹⁶³ Historians, too, have largely ignored the institutional processes by which market structures were created in nineteenth-century Britain.¹⁶⁴

160. *Report from the Select Committee on Merchandise Marks*, P.P. 1897, vol.11, QQ. 2782–2783.

161. Bernstein, “Private Commercial Law.”

162. Johnson, *Making the Market*, 3.

163. Williamson, “Transaction-Cost Economics”; Leunig, “British Industrial Success Story”; Broadberry and Marrison, “External Economies.”

164. Beckert recognizes the political power of the merchants but does not acknowledge how they used it to shape the rules of the market. Beckert, *Empire of Cotton*.

The lack of both economic and historical understanding of markets as social spaces in which groups with diverse interests contend with each other to specify the rules of exchange has resulted in a lopsided understanding of how market governance functioned.

In this article, we have responded to Paul Johnson's call to pay greater attention to the institutional process through which rules of market exchange develop. We glimpse the conditional and contestable nature of market exchange and how rival groups sought more direct means to govern it. We see how they attempted to develop solutions to transactional issues—standardizing product quality—internally within the industry and to overcome the limitations of state legislation (e.g., the Merchandise Marks Acts). However, competition was also accompanied by cooperation between firms that fiercely competed for markets and resources: competition and cooperation are two sides of the same industrial coin. Competition threatened quality debasement, which necessitated some degree of cooperation on quality standards. As Robin Pearson has noted, in commercial relations trust has to be laboriously constructed, even if it is innately present in the culture of contracting parties or in which a legal framework exists to encourage it.¹⁶⁵ People not only rely on the general concepts of trust and reputation but also on specific dealings with other individuals.¹⁶⁶ In other words, market governance is based not only on *general* institutional arrangements (e.g., standards, legislation) but also on *specific* organizational arrangements (e.g., quality testing, dispute resolution mechanisms) that characterize an industry. In the Lancashire industry, generic notions of trust, reputation, and repeated interaction could no longer achieve governance. Arthur Redford shows how merchants claimed that methods to “shame the fraudulent” remained largely unsuccessful after around 1860.¹⁶⁷ Institutions such as the MCC dealt with both strategic manipulations by dishonest firms and honest disputes that arose in the course of exchange. Such institutions were key organizational forms in an industry where the “visible hand” of vertically integrated organizations accounted for a small percentage of capacity. They were “gap-filling” in a highly specialized industry, just as business groups or integrated firms were when markets were thin.¹⁶⁸ Many nineteenth-century firms in Lancashire spun yarns while some others “spun a yarn.” The market functioned because this industry was able to agree on standards and institutions to overcome the weaknesses of market-based exchange that state legislation could not.

165. Pearson, “Moral Hazard,” 3.

166. Granovetter, “Economic Action”; Carnevali, “Social Capital.”

167. Redford, *Manchester Merchants*, 144.

168. Langlois, “Economic institutions.”

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