The English cotton spinning industry, 1780–1840, as revealed in the columns of the *London Gazette*

by

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Thanks to the wonders of digitization, it is now much easier to mine the *London Gazette* for information on individual industries, even on individual firms. Since its foundation in 1665 the *Gazette* has been the official journal of record for England and Wales. Whilst it contains far less information on firms than do comparable publications in civil law countries, it does record in large numbers two sorts of information of interest to business and industrial historians.[1] One, which has already been exploited to a certain extent, is commissions and fiats of bankruptcy. The other, largely unexplored, concerns dissolutions of partnership. Here we see how such information from the *Gazette* can illuminate regional, temporal and structural change in cotton spinning in England and Wales in its early years of expansion.

In our period of interest, the *Gazette* contained much material other than notices concerning bankrupts and partnerships, which usually occupied only the last few pages of each issue. There were official notices of all sorts, dispatches from commanders on land and at sea and, of course, the *Gazette* prices of cereals so well known to economic historians.[2] In the late 1780s, when it was first paginated continuously, the *Gazette* ran 600 to 700 pages annually. During the following decades it took on a certain girth, so that by the late 1820s there were more than 2,500 pages per year.

Much of the early work on the *Gazette* involved counting bankruptcies to complement other indicators of business conditions. T. S. Ashton did so for the eighteenth century, and Norman Silberling constructed a quarterly series for the period from 1779 to 1850.[3] These scholars, working in the pre-computer era, made no attempt to break down the data by trade or location of activity.

The second generation of bankruptcy research using the *Gazette*, which took place in the era of main-frame computers, was more ambitious. In the 1960s, '70s and early '80s Ian Duffy and Julian Hoppit constructed large data sets that allowed them to study the incidence of bankruptcy by trade and region. Hoppit (1987) extracted data from the *Gazette* and the Docket Books in the Public Record Office on over 36,000 bankruptcies that took place from 1688 to 1800. He discusses patterns of change within the textile and clothing sector, which accounted for about a quarter of all bankruptcies in the eighteenth century, but does not take up cotton

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[1] See Handover (1965); Thomas (1982). By the late eighteenth century the *Gazette* had become much more staid than the late seventeenth-century *Gazette* described by Thomas. Official gazettes in France and Belgium record not only bankruptcies but also firm formations of many types.

[2] Other information on firms and individuals was also published in the *Gazette*: for example in reports of legal cases or in announcements for sales of bankrupts' property (less frequent and far less detailed than the advertisements in local newspapers). Similarly, lists of people imprisoned for debt and petitions from insolvent debtors were published, generally with an occupational designation. Such lists sometimes pose the problem, for example, of distinguishing an employer (a master 'cotton spinner') from an employee (an operative 'cotton spinner').

[3] Ashton (1955, p. 254; Silberling (1923, p. 251). Gayer, Rostow & Schwartz (1953) compiled monthly and annual bankruptcy statistics for 1790 to 1852, referring to these figures in their published volumes; the data series themselves, however, are available only in the microfilm supplement that accompanied the book.

spinning in particular (1987, pp. 57, 75–87). Ian Duffy (1985) worked through both the Docket Books and the *Gazette* from 1795 to 1826, accumulating information on 57,000 dockets struck, 50,000 commissions sealed and 39,000 commissions opened.[4]

In the last few years The Stationery Office has added to its website digital copies of the *London Gazette* from its first issue through the nineteenth century, although still with some gaps that should soon be filled.[5] We compiled our data on cotton spinners by searching in the *Gazette* for any of the words 'spinner', 'spinners', 'spinning', and 'twist'. The vast majority of the observations came from the first two. 'Spinning' picked up observations where the individual or individuals were described, for example, as 'in the business of cotton spinning'. 'Twist' brought in firms described as 'twist manufacturers'. This procedure and the search engine seemed to be quite accurate. Occasional cross checks, made by searching on 'cotton', turned up very few additional observations.

Altogether there are nearly 2,000 observations relating to cotton spinners: about 700 bankruptcies and 1,300 partnership dissolutions. Of course, many observations refer to the same mills. For example, the partnership operating Charlestown Mill at Whitfield in Derbyshire was George Roberts and John Kershaw to 1799, John and William Kershaw to 1819, John and James Kershaw to 1830, and John Wood and James Kershaw to 1833. Similarly, several persons could go bankrupt at the same mill over the years. At a rough estimate the *Gazette* data set refers to 1,400–1,600 different mills which would represent a fairly large share of the cotton spinning mills that operated in England and Wales during these years. In 1835, the stock of all cotton factories in England and Wales was 1,118, according to the Factory Inspectors, and at least 74 of these were weaving factories.[6]

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[4] Neither database was deposited in the UK data archive. Hoppit still holds a computer listing of his data (private communication from Julian Hoppit, 20 April 2008). In Scotland there was also a project in the 1980s to extract information on sequestrations, one form of bankruptcy in Scottish law. See Moss & Hume (1983) on this project, and Young (1991) for critique and further discussion of sequestration as a resolution of bankruptcy.

[5] <www.gazettes-online.co.uk> We are grateful to Mr Richard Gardner, managing director of The Stationery Office, for providing us with information about this project. For the years between 1780 and 1840, only the first half of 1820 was wanting. We used the bound volume, a straightforward but tedious process, and a reminder of why this sort of work has not been undertaken widely for individual industries.

[6] B. P. P. 1836 XLV (138); of the 1,118 mills, 43 were unoccupied. Only the report by Leonard Horner for the Northern District (pp. 90–93) listed separately the single-process weaving mills, of which there were 49 (all but one in Scotland) amongst the 173 cotton mills he found in his district (excluding northern Ireland). Lancashire and Cheshire alone in 1835 contained 73 powerloom-only factories (Lyons 1985, Table 1, p. 420; p. 423). The returns for 1839 (reprinted in B.P.P. 1843 LVI (494)) record 1691 mills, 88 empty, with the number of independent weaving mills not specified.

Bankruptcies

The problems and pitfalls of working with bankruptcies and bankruptcy statistics are well known, relating to eligibility of an individual or firm to be subject to a commission of bankruptcy and to what could happen once the procedure was launched.[7]

A bankruptcy process required that a creditor petition the Lord Chancellor to open a Commission of Bankrupt, the creditor being required to post a bond of £200 to deter malicious actions. The Lord Chancellor directed the case to a group of commissioners who had to satisfy themselves that three conditions were met. The third, which need not detain us, was that the debtor had committed an 'act of bankruptcy' by, for example, taking flight or by refusing to see creditors ('keeping house'). The first two are more pertinent. To fall under the bankruptcy laws the debtor had to be a 'trader'. Although at first sight this might seem to rule out cotton spinners, those who bought raw materials and sold finished products had been included since the 1590s. Contract spinners, however, who simply worked up a client's raw materials, would have been excluded on this criterion, as were some others in the textile finishing trades for whom application of the criteria was 'characterised by reasoning of remarkable subtlety'.[8]

The other condition was that the debtor owed more than £100 to one creditor (or £150 to two creditors or £200 to three or more). In interpreting the trends in bankruptcy, Hoppit (1987, p. 46) worries that the inflation of the late eighteenth century and during the French wars may have brought more firms within the ambit of the bankruptcy laws, by reducing the real value of debt thresholds. This problem is unlikely to have been applicable to factory cotton spinners, as a consideration of their fixed and working capital requirements suggests.

Before the early 1790s spinning was conducted on powered water frames of Arkwright design, and on hand-operated jennies and mules, these last often spinning in small workshops using rovings purchased from firms employing powered carding engines and roving frames. A jenny- or mule-spinning firm could operate with very modest fixed capital requirements, since in the late 1780s a jenny with 60–80 spindles cost about £7 and a mule about £35. The early Arkwright mills were another story, as a small purpose-built mill with a thousand spindles was typically valued at £3,000–4,000 in the 1790s. Forty years later, following wartime price increases and the post-war deflation, 'small' spinning mills were several times larger than those of the 1790s and were being constructed and equipped at a cost of about £1 per spindle or less.[9] Clearly the fixed capital requirements of water- or steam-powered cotton mills of even modest size were in the several thousands of pounds, but it is unlikely much of this expenditure was based directly on bank or trade credit; rather, it was financed typically by partners' capital contributions.

Spinners were much more likely to owe money for raw materials to merchants, cotton brokers, or those who held their bills. Working capital was needed to finance raw cotton

[7] For bankruptcy matters, the following paragraphs draw primarily on Duffy (1985, ch. 1) and Hoppit (1987, chs 2-4), as well as on Duffy (1980) and Marriner (1980).
[8] Duffy (1980, pp. 295–7; quotation 295). For example, dyers (eligible) incorporated their 'drugs' with the fabric but bleachers (ineligible) merely removed 'adventitious colouring' (*ibid.*, p. 296).
[9] For machinery prices see Chapman & Butt (1988, p. 107); elsewhere Chapman (1970, p. 242) cites figures of £6 per jenny and £30 per mule for 1796. Mill valuations from Chapman (1971, pp. 61, 76–8).

purchases, goods in process, and yarn stocks on hand, aside from other material inputs and the wages bill. It seems that British cotton mills in the early nineteenth century tended to hold about 5 weeks' worth of raw cotton consumption, although with considerable variation over time and across firms. A spindle producing medium to coarse counts of yarn (say 40s to 16s) would consume 15 to 30 pounds of cotton in a year, so about ten per cent of a year's cotton consumption for a 1,000-spindle mill would be 1,500 to 3,000 pounds. At prices prevailing from the 1780s through the end of the French wars (16 to 24 d. and more per pound), the raw cotton stock in such a mill would have cost £100 to £300; after 1818 the prices of most types of cotton fell very sharply (to as low as 5.75 d. per pound in 1829), and credit granted for recent cotton purchases would have declined correspondingly, to as little as £50 to £100. However, since payment was usually made by three- to six-month bills, outstanding debt for cotton purchases alone for a small mill would have ranged from £150 to £600 even when cotton prices were low. [10] These considerations lead us to believe that most cotton spinning firms, other than those working on commission or the spinners hiring 'room and turning' in portions of mills, would have met the minimum criteria for formal bankruptcy proceedings over the entire period we consider.

If the bankruptcy commissioners found that a debtor fulfilled all three conditions, then that debtor would be notified by advertisement in the *London Gazette*. One should note that the *Gazette* announced fewer commissions than the number of cases put before the Lord Chancellor: some creditors would use the threat of bankruptcy proceedings to pressure debtors and did not proceed as the far as the commission stage; likewise the commissioners might find that the criteria were not met and abandon the case. Notification of a commission in the *Gazette* led to meetings of creditors to appoint assignees to take control of the bankrupt's property and to evaluate, realize and distribute the returns from the assets. At this stage, however, proceedings might be abandoned or superseded, and it was not uncommon for there to be several commissions taken out against the same individual over a period of years.

Of the several notices relating to a given case, we have recorded the first announcement to appear of the 'award' of a Commission of Bankrupt (or from 1831 a Fiat in Bankruptcy) against a particular individual or firm, specifying date and place for each of three occasions for the commissioners, bankrupts, and creditors to assemble. The third meeting was announced again, and for lengthy cases additional meetings might be called for payment of further dividends as assets were realized over time.

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[10] The Liverpool cotton brokers began to collect information on raw cotton stocks in 1811, as reported in Ellison (1886, endpaper Table I for the data, pp. 179–80 for discussion). From that year it is possible to calculate annual cotton consumption in Britain. Year-end cotton stocks in the mills, 1811–1835, ranged from as little as 2.4 weeks' subsequent consumption to a high of 8.5, with a mean of 5.3 weeks. Consumption per spindle over the period was estimated by dividing cotton consumption (cotton net imports before 1811) (Mitchell & Deane 1962, p. 179) by Farnie's estimates of spindle numbers (2003, p. 724). A mule spindle producing 40s count, according to a statement by John Kennedy, of the Manchester fine spinners M'Connel & Kennedy, consumed 15 pounds per year in 1810 and 21 pounds in 1830 (calculated from table reproduced in Baines 1835, p. 353.) Cotton prices from Mitchell & Deane (1962, pp. 490-1). Payment terms in the trade are discussed in Ishizu (2008, pp. 4–12, esp. p. 11). See also Hall (2001, pp. 67, 77), for James Lees, Son & Co. of Oldham, who in 1805 bought cotton costing more than £9,000 in 48 transactions, mostly on credit terms of four to six months. Their mill, one of the largest in Oldham, held 8,000 spindles in 1811 (Crompton spindle survey); these figures seem consonant with our estimates above for a smaller mill.

Commissions of bankrupt could be issued against more than one person. Sometimes they included all of the partners in an enterprise, although it was also not uncommon for separate commissions to be sought against individual partners. (Occasionally the bankruptcy notice against an individual indicated parenthetically that he or she was in partnership with others.) Table 1 shows the distribution of the number of individuals cited directly in the commissions we have recorded. Commissions against individuals predominate, accounting for about 70 per cent of the cases. This might be taken as an upper bound for the share of single proprietorships in the industry. No noticeable changes over time in these distributions are evident.

Table 1
Number of persons cited in bankruptcy commissions, 1780–1840

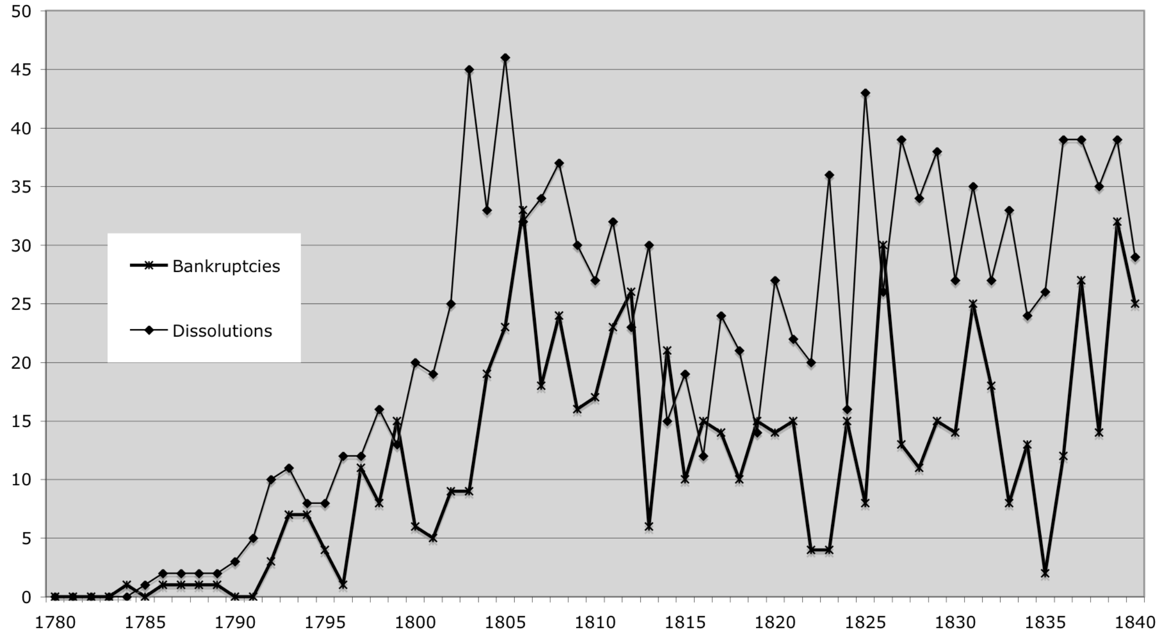
Number of persons cited	Number of cases	Percentages
1	485	69
2	160	23
3	41	6
4	10	1
5	2	
6	1	
Total	699	99

Source: *London Gazette*

The time path of cotton spinners' bankruptcies is shown in Figure 1. During the early years of powered spinning there were very few bankruptcies: the first was recorded in 1784, and until 1792 there was no more than one per year. Some idea of the rate at which bankruptcy occurred can be had by reference to Colquhoun's census of Arkwright-type mills in 1788. As revised by Chapman, there were at least 182 of these mills in England and Wales.[11] The bankruptcy rate was thus well below one per cent per annum in the late 1780s, though this does not take into account jenny or mule shops incapable of incurring large enough debts to qualify for bankruptcy procedures.

[11] Chapman (1981–82, p. 8) revised Colquhoun's count from 124 mills to 182. The number of firms is smaller, since some firms operated multiple mills: *e.g.*, Richard Arkwright owned seven mills in three counties. Colquhoun's original list is reproduced in Aspin (2003, Appendix A, pp. 469–474).

Figure 1
Cotton Spinners in the London Gazette, 1780-1840



Sources: Bankruptcies and dissolutions: *London Gazette*

By the late 1790s and early 1800s bankruptcies had increased to just under ten per year. Then from 1804 to 1806 there was a sudden jump in number, reaching a peak of 32 in 1806. Bankruptcies continued to be numerous into the early 1810s. Samuel Crompton's survey in 1811 came up with a count of 573 mills within 60 miles of Bolton. There would have been few mills outside this radius, but Crompton, whose interest was in showing the widespread use of his mule, may have under-enumerated mills using only water frames. Supposing that the true number of firms at risk was closer to 700 or 800 would suggest a fairly high bankruptcy rate of around 3.5 per cent annually.

After about 1812 the number of bankruptcies fell off markedly. In the late 1810s and early 1820s there were only 10 to 15 per year, although this is thought to have been a difficult period for the industry. A decline in bankruptcies during the early nineteenth century was not unique to the cotton spinning industry. From the mid-1810s total bankruptcies in England and Wales showed a modest downward trend through the 1820s and '30s, occurring despite economic growth and the extension of the bankruptcy statutes to activities previously excluded. In fact, counting cotton spinning failures separately (*i.e.*, abstracting from compositional effects) suggests just how marked was the move away from the use of bankruptcy procedures in English commercial life.[12]

During this transitional period from the 1810s the number of bankruptcies may well be an inadequate indicator of overall macroeconomic conditions as well as those affecting cotton spinning. Certainly the defects of the bankruptcy system led to strenuous calls for reform,

[12] The same decline, though with somewhat different timing, was true for flax spinners. The number of bankruptcies was much smaller in this industry but the general movement is clear. From 1802 to 1818 there were about three bankruptcies per year; thereafter there were either no bankruptcies among flax spinners, or only one or two per year to the later 1830s.

resulting in establishment of a Parliamentary Select Committee in 1818, and slowly in numerous statutory changes, the construction in London of a courthouse in 1820, founding a proper Bankruptcy Court in 1831 and abolition of the long-standing although malleable distinction between traders and non-traders in 1861. Bankruptcy procedures were costly, bureaucratic and time-consuming, and in the period of deflation after 1815 creditors' actions may have been deterred by declining nominal debt levels even when the debtor was legitimately subject to the Bankrupt Law.[13]

For cotton spinning, however, there is a problem of timing. Although the number of bankruptcies fell off sharply after 1812, margins between yarn and cotton prices did not decrease markedly until after 1818. Aside from the peaks in 1826 and 1831, the number of bankruptcies continued at around ten per year during the 1820s and early 1830s. With roughly 1,000 mills engaged in spinning in 1835, and around ten bankruptcies per year, the rate of bankruptcy was just under one per cent annually, but both bankruptcies and firms at risk increased in the later 1830s, yielding a somewhat higher rate of about 1.5 percent.

The spatial distribution of cotton spinning in England and Wales can be examined using bankruptcy data, but with some caution. Where a bankrupt resided may have differed from the location of the relevant spinning mill. For instance, several bankrupt 'Manchester' spinners were proprietors of country mills. Further, when several individuals were cited in the same commission, in some cases their places of residence differed, and no information was provided about where the spinning took place.

The spatial distribution of bankruptcies is given in Appendix Table 1 for the entire period and for two sub-periods, 1780–1814 and 1815–40. We have coded the data at the district level for the major cotton spinning counties, Lancashire, Yorkshire, Cheshire and Derbyshire. These districts often follow parish boundaries but their limits are only approximate. The ones for Lancashire correspond more or less to the districts in Crompton's 1811 survey of cotton mills. Those for Yorkshire are based on the presentation in Ingle's *Yorkshire Cotton* (1997, pp. 103–242).

Summary results of this exercise are shown in Table 2. The first frame addresses the representativeness of the *Gazette* data by comparing the bankruptcy distribution across the major counties with the distribution of mills in the 1838 factory statistics. It turns out that Yorkshire is somewhat overrepresented in bankruptcies whilst Cheshire is underrepresented. The second frame of the table looks at differences between the heartland of the industry, in southern Lancashire with adjacent parts of Yorkshire, Cheshire and Derbyshire, and the peripheral areas.

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[13] See Duffy 1985, chs. I, V, esp. pp. 44–47. The other possibility, not entirely rejected above for cotton spinning, is that a small trader could be treated according to the rather more Draconian insolvency statutes, which did not allow for discharge of debts on partial payment and did allow for imprisonment (and, until, 1820, execution).

Table 2
Spatial Patterns of Bankruptcies, 1780–1835

Representativeness of Bankruptcy Data

	Bankruptcies 1836–40 (firms) %	Factory Inspectors' Statistics 1838 (mills) %
Lancashire	69	70
Yorkshire	16	10
Cheshire	7	10
Derbyshire	7	6
Remainder	5	4

Broad Patterns of Change

	1780–1815	1816–40	1780–1840
Total	316	383	699
Periphery	95	72	167
Centre	221	311	532
Centre less Manchester & Salford	152	244	396
Manchester & Salford	69	67	136

Sources: *London Gazette* and B. P. P. 1839, XLII (41)

Here it is clear that in the early years of the industry, up to 1814, the peripheral areas figure more prominently than they do in the subsequent 26 years. Bankruptcies in the periphery fell by 24 per cent, from about 30 to 19 per cent of the total, whilst in the centre they increased by 40 per cent, with share rising correspondingly. The decline in business failure in the periphery indicates to us that the population of firms at risk of bankruptcy in that area was falling relative to the centre. That is, there were centripetal, rather than centrifugal, tendencies operating in the industry. Such a pattern is consistent with the changing pattern of power supply to the mills over time. The first mills were powered by water (with a few turned by horse capstans) and were dispersed about the countryside, although there were 'urban' mills powered by falls of water. As the industry grew, new water-powered sites continued to be developed into the 1830s, but they were overtaken by steam-powered mills that could be sited in towns with ready access to workers and to inexpensive coal, so that the distribution of mills (and their owners at risk of becoming bankrupt) became more concentrated in towns on or very near the coalfields.[14] Within the industry's heartland there is also an interesting difference between the experience of Manchester and Salford and the rest of the region. Cotton spinning bankruptcies fell by 3 per cent in the Manchester area (from one-third to one-fifth of

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[14] On water and steam power see, *inter alia*, Chapman (1987, pp. 18–19) and sources cited therein. The *rates* at which cotton spinners in various regions became bankrupt cannot yet be determined because periodic counts of mills in operation by district are incomplete. Nonetheless, it seems likely that bankrupt firms (and obsolete mills) were more readily replaced in the 'centre' than in the 'periphery'.

the totals for the centre), but increased by 61 per cent elsewhere. Again this pattern is consistent with the industry's more rapid expansion in the neighbourhood of Manchester and Salford.

Dissolutions of Partnership

As far as we can determine, ours is the first quantitative analysis of partnership dissolutions; hence the results must be taken as experimental. The *Gazette* announced large numbers of dissolutions, but there was no legal requirement to do so. Still, it seems to have been the major vehicle, if not the only one, for such announcements. Table 3 compares the announcements in the *Gazette* with those in the *Manchester Mercury* during the early years of the nineteenth century. For dissolutions in Lancashire the *Gazette* carried roughly three times as many announcements as did the *Mercury*. But a third of the dissolutions reported in the *Mercury* did not appear in the *Gazette*. On a rough reckoning the *Gazette* might thus understate the total number of dissolutions by about 10 per cent.

Table 3
Reporting of Dissolutions of Partnership, 1800–1806

London Gazette	
Total	222
Lancashire	125
Lancashire, Cheshire and Derbyshire	158
Manchester Mercury	
Total	56
Lancashire	41
Lancashire, Cheshire and Derbyshire	52
Same as in the Gazette	37
Did not appear in the Gazette	19

Sources: *London Gazette*, *Manchester Mercury*

Making the dissolution of a partnership a matter of public record was useful in notifying the partnership's debtors and creditors, and in establishing an end to joint liability for debts. Other past partners would not normally be responsible for debts contracted by one partner after the announcement had been made. The dissolution of a partnership usually did not mean the end of the business; rather, its continuation was stated or intimated, as in this typical advertisement:

> Notice is hereby given, that the Partnership Concern heretofore carried on by John Shaw of Lower Mill, within the Parish of Glossop, in the County of Derby, and John Cooke of Milltown Mill, within Glossop aforesaid, Cotton-Spinners, carried on at Lower Mill and Milltown Mill aforesaid, under the firm of Shaw and Cooke, was this Day dissolved by mutual Consent; and all Debts due and owing to or by the said Partnership Concern will be received and paid by the said John Cooke.—Witness our Hands this 14th Day of July 1810
>
> John Shaw
> John Cooke[15]

[15] *London Gazette*, 21 July 1810, p. 1085.

Partnerships were dissolved for numerous reasons, and in a few cases it is clear from the notice that a partner had died or retired, requiring the partnership to be terminated or reformed. But in most cases the advertisements are silent about cause. Partners could withdraw for financial reasons; they may have been unable to continue working together amicably; other ventures may have beckoned. Some partnership agreements specified a fixed term of years so that dissolution was automatic unless renewed. The business may have become large enough to split into two or more enterprises, as could occur when the offspring of the founder went their separate ways.[16] We may have missed the dissolutions of some cotton spinning partnerships, since occasionally an announcement would not state the nature of the business. Also, despite a well-established industry practice of using the term 'cotton manufacturer' to specify a firm producing and selling woven fabric, it is possible that some spinners were denoted 'manufacturer' in the legal notice.[17]

Figure 2 shows the distribution of the number of partners per firm. For want of systematic evidence on partnerships in other industries, we can compare the distributions only over time and across regions. There were noticeably fewer firms (dissolved) with five or more partners after the wars, perhaps indicating that as the industry matured fewer partners were needed to establish or sustain a spinning concern. These large partnerships were also somewhat more prevalent outside the industry's heartland.[18] That said, it is worth noting that the two partnerships with twelve partners involved the prominent and prolific Peel family.

Comparing the size distributions of partnerships dissolved and of the thirty per cent of bankruptcies involving partnerships (see Table 1) reveals an intriguing contrast, since there were no cotton bankruptcies of partnerships larger than four, whilst about ten per cent of the dissolution notices were for five partners or more. The different patterns suggest two possibilities: larger partnerships may have been more resilient than smaller ones in the face of financial vicissitudes, or dealing with large partnerships in bankruptcy proceedings was too complex, leading in some instances to proceedings against partners as individuals.

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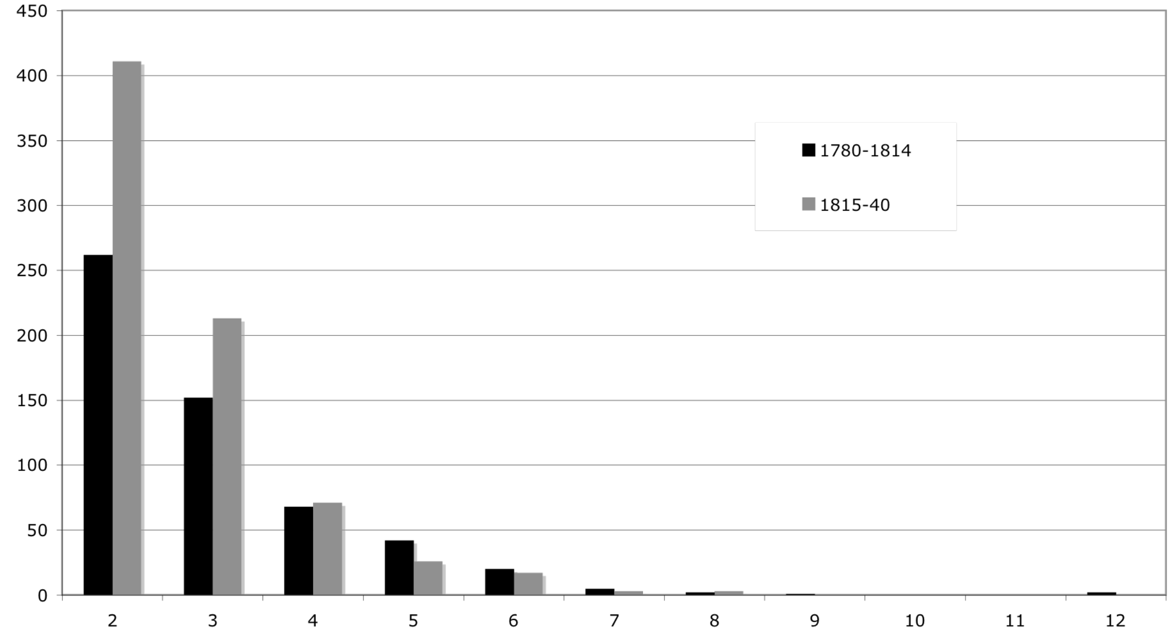
[16] See the case of Samuel Greg & Co. The elder Greg had taken four of his sons into partnership as they came of age and they continued the firm as partners after Samuel Greg died in 1834. At the end of 1841 this firm became four separate firms (Rose 1986, pp. 49, 63–65; *London Gazette*, 22 July 1842, p. 2029).

[17] See, *e.g.*, Parliamentary testimony of a 'spinner' who objected to being called a 'manufacturer'; quoted in Crouzet (1985, p. 3).

[18] Whilst only 7 per cent of all partnerships were located outside Lancashire, Yorkshire, Cheshire and Derbyshire, 15 per cent of the firms with five or more partners were in those peripheral counties.

Figure 2
Numbers of Partners in Cotton Spinning Firms, 1780-1840



Source: *London Gazette*

The time path of dissolutions was, surprisingly, not all that different from that of bankruptcies (see Figure 1). The first dissolution of a cotton spinning partnership in England and Wales was recorded in 1785, though a dissolution on the Isle of Bute in Scotland was announced in 1778. (The *London Gazette* includes some Scottish and Irish bankruptcies and dissolutions of partnership, but these generally would have been published in the *Edinburgh Gazette* after 1792, and in the *Dublin Gazette* [1705–1922].) As with bankruptcies, the incidence of dissolutions was low in the late 1780s, with only a couple each year, a rate of about one per cent annually given the augmented mill census of Colquhoun. The number of dissolutions attained a peak of 45 in 1803, somewhat earlier than the bankruptcies (indeed, before the end of the French wars dissolutions seem to have been a leading indicator for bankruptcies). There was steady decline over the late 1800s and early 1810s until dissolutions were running at only 15–25 per year in the mid- to late 1810s. About 1811, the date of Crompton's survey, there were around 30 dissolutions per year, a rate of four per cent or so annually.

The reasons for the drop in the number of cotton spinners' dissolutions reported in the *Gazette* after the mid-1800s are not clear. The number of firms in the industry is not likely to have fallen – rather the number probably continued to increase. Perhaps the *Gazette* ceased to be the best venue for announcing dissolutions as the industry continued to concentrate near Manchester, and as the number of local newspapers grew. The *Manchester Mercury and Harrop's General Advertiser* was published from 1752 through the 1820s, and was joined by *Cowdroy's Manchester Gazette* in 1796, with several others established over the next 25 years.[19]

[19] Both the Harrop (1752–1828?) and Cowdroy (1796–1827) papers operated with various titles over their lives; those cited are of the longest duration. Additional local newspapers were the *British Volunteer and Manchester Weekly Express* (1804–1825) which merged in 1825 with, and was absorbed in 1828 by, the *Manchester Guardian* (1821–); the *Exchange Herald* (1809–1826), also with various titles; the *Courier* (1817-65); and the *Manchester Observer* (1818–1821?).

In any case the number of reported dissolutions did increase again from the early 1820s to reach a level of 35–40 per year in the mid- to late 1820s, declining in the early 1830s and rising to the previous level after 1835. Taking the Factory Inspectors' mill enumerations for 1835 and 1839 as denominators, the annual rate of dissolution was about three per cent in the early 1830s, rising to about four percent at the end of the decade.

Cotton spinning was not necessarily the sole activity of the 'spinners'; it was often combined with other processes, largely weaving (by handloom almost exclusively until about 1818), and in a few cases with bleaching, dyeing or other finishing trades, as well as merchanting by some of the largest firms. It is useful to distinguish pure 'spinners', who sold their output in domestic and foreign yarn markets, from firms called 'spinners and manufacturers', who worked up their yarn into fabric and sold usually in the 'grey cloth' market, since price movements in these two sets of markets were not fully synchronized. Table 4 shows the share of the firms in bankruptcies and dissolutions of partnership that were described as 'spinners and manufacturers'. What one observes is a fairly steady rise in the share of integrated firms, but they seem to be underrepresented seriously in the bankruptcy data.[20]

Table 4
Vertical Integration in the Cotton Industry, 1780–1839:
Share of Individuals or Firms Described as Spinners and Manufacturers
(%)

	Bankruptcies	Dissolutions
1780–9	0	0
1790–9	9	4
1800–9	3	16
1810–9	11	23
1820–9	14	29
1830–9	27	38

Source: *London Gazette*

As with bankruptcies, dissolutions can be used to look at the distribution of cotton spinning over time and space, but the same *caveat*s as for bankruptcies apply relating to location of the enterprise. Often it is not stated explicitly and the site of the mill in some cases differed from the residences of the partners. In a few instances information from the bankruptcy list aided in locating the partnership's place of business. Overall, few ambiguities remain, most of which pertain to locations within a particular county or district.

The distribution of dissolutions by district and county is given in Appendix Table 2. Table 5, constructed along the same lines as that for bankruptcies, gives the main results. The top frame shows that the distribution of dissolutions across the major counties is quite similar to that in the Factory Inspectors' 1838 mill statistics, except that Lancashire is somewhat overrepresented and Cheshire, Derbyshire and other counties underrepresented.

[20] Lyons (1985, p. 420, Table 1) reports for Lancashire and Cheshire in 1824–1825 that about 40 per cent of firms engaged in spinning were also manufacturers, and only a slightly smaller proportion of mills in 1850.

The bottom frame of Table 5 shows that the pattern of change over time for dissolutions is similar to those for bankruptcies. The heartland of the industry gained at the expense of the periphery. Whilst dissolutions in the periphery were reduced by 38 per cent, those in the centre increased 73 per cent. Within the heartland the outlying districts gained at the expense of Manchester and Salford. Dissolutions declined 3 per cent in the metropolis (from about 33 to 18 per cent of the total), but increased by 109 per cent in the rest of greater Lancashire.

Table 5
Spatial Distribution of Dissolutions of Partnership, 1780–1835

Representativeness of Gazette Data

	Dissolutions 1836–40 (firms) %	Factory Inspectors Statistics, 1838 (mills) %
Lancashire	75	70
Yorkshire, West Riding	10	10
Cheshire	7	10
Derbyshire, High Peak	3	6
Remainder	2	4

Broad Patterns of Change

	1780–1814	1815–40	1780–1840
Total	555	744	1299
Periphery	194	121	315
Centre	361	623	984
Centre less Manchester & Salford	243	508	751
Manchester & Salford	118	115	233

Sources: same as for Table 2

What one can learn from the *Gazette* data

Cotton goods production was pre-eminent amongst the British staple industries that expanded mightily in the late eighteenth- and nineteenth centuries, its mills powerful symbols of the myriad changes occurring in the 'First Industrial Nation'. By 1812 it had probably outstripped the ancient woollen manufactory. By the 1840s it accounted for 40 to 50 percent of the value of British exports and may have contributed as much as five per cent to British national income (Deane & Cole 1967, pp. 295, 182–188; includes finishing trades). The industry has generated a vast literature based on a wide variety of source material, yet for the early years we discuss representative information is difficult to come by. The first comprehensive survey of 'factories' undertaken under the new Factory Act occurred in 1835, near the end of our period (B. P. P. 1836 XLV (138)). The few business records that are available, through foresight, generosity, or good fortune, typically come from successful or large firms, and while informative may or may not be typical.

The *Gazette* can provide information about the fortunes (or more to the point, misfortunes) of the industry, albeit for a limited range of issues, but systematically and nearly comprehensively, and can augment and link with what else is known. Of course, the reasons for the dissolution or failure of a particular firm cannot be found in a one-paragraph announcement. These must be sought in correspondence or other business records, or in the files of a Commission of Bankrupt, though, like the sparse records of enterprises, documents from only one in 20 bankruptcy commissions survive, and those surviving vary considerably in the information that they provide.[21] But at the level of the industry, counting bankruptcies by date, location and specific business activity can be revealing.

Factory cotton spinning accounts for a bit more than one per cent of the 60,000 or so bankruptcies reported in the *Gazette* from 1791 through 1840, almost uniformly by decade, excepting the first decade of the nineteenth century, when the proportion almost doubled to 1.8 per cent.[22] 'Cotton manufacturers' were more numerous, and as enterprises typically smaller; it is likely (we have not tabulated this group) that bankruptcies amongst this part of the industry matched those in spinning. That is, an industry generating, say, four per cent of national income produced about two per cent of business failures. Whether the lower incidence of bankruptcy was due to larger than average firm size or lower susceptibility to financial difficulties is a question requiring further investigation. The larger than usual share of cotton spinners among total bankruptcies in the first decade of the nineteenth century resulted perhaps from reliance of the cotton industry on export markets during years disrupted by war.[23] The number of bankruptcies in cotton spinning also varied considerably over the years but from time to time achieved alarmingly high rates. If our estimates of the number of firms at risk at various times are near the mark, then having a twentieth to thirtieth of one's near neighbours failing in a given year would be a cautionary event unlike the more normal one annual failure per hundred.

The spatial pattern of bankruptcies (and dissolutions) that we observe is broadly consistent with the known regional distributions of cotton spinning over time – a wide dispersion in the early years followed by progressive concentration in the region close to Manchester. What it adds is that Manchester itself was not beneficiary of this concentration. After the wars the growth of the spinning industry took place in the smaller towns surrounding Cottonopolis. The question remains of the extent of differential failure rates by location, requiring for an answer the linkage of bankruptcies with local populations of firms at risk. Similarly, whether a spinner was also a manufacturer may have some bearing on failure rates, since we have noted that integrated firms were bankrupt in lower numbers than their share in the 'cotton spinning' industry. This may be support for the long-standing idea that integration of spinning with weaving was a surer route to success in the early nineteenth century than reliance on a single process.[24]

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[21] Marriner (1980, p. 361), for 1780–1842, the period with the highest number of surviving files of commissioners' proceedings.

[22] Decade totals of bankruptcies overall are compared to decade totals for spinners. For 1791–1800 three sources for the totals are used: Silberling (1923, pp. 251–252), Ashton (1955, p. 254), and Hoppit (1987, p. 183); their annual figures differ, but for the decade as a whole are similar. For 1801–1840 we use Silberling's figures.

[23] In 1805–07, spinners' failures alone were about three per cent of all bankruptcies; in the more general financial crisis of late 1825 through 1826, a peak period for bankruptcies in the cotton industry, spinners account for less than two per cent of the total.

[24] As has been argued by contemporaries and more recent scholars: *e.g.*, the Parliamentary testimony of G. Smith in 1833, who stated that 'half the calico manufacturers who had not

The more novel portion of our investigation concerns partnerships and their dissolution, about which we have garnered information little revealed elsewhere. Absent documentary evidence in partnership agreements or periodic stock-taking ledgers, much is concealed by the style "& Co" as it is found in newspaper articles and commercial directories. The number of partners and whether the partners may be related is apparent only in a legal document or notice, and the announcements in the *Gazette* meet that criterion in a single venue. Again it is not clear how representative is the pattern in the *Gazette*'s notices; firms failing or dissolving may differ systematically from the structure of the base population, but a first approximation is that, before the age of limited liability, about 70 percent of the spinning firms in the English and Welsh cotton industry were single proprietorships (from the bankruptcy data), and that well over half the partnerships consisted of only two people (from bankruptcy and dissolution data). There is, however, a suggestion in these data that the larger partnerships may have had the wherewithal (or the complexity) to stave off the financial difficulties that led to a Commission or Fiat of bankruptcy.

As with any single source, what one can learn from the *London Gazette* is limited, yet it has the advantage of being more comprehensive than any other source of which we are aware, particularly for this early period of industrial history. In this venture we have started and captured a few hares – ones perhaps small and slow – but the patterns we have uncovered have started some more robust and elusive hares that have yet to be caught. For that larger venture the *Gazette* alone is inadequate, but when deployed in conjunction with a range of others it will be a valuable source.

become also factory spinners had failed since 1812' (quoted, Crouzet 1985, p. 194, n. 65). An obverse case that spinners' fortunes were bolstered by the addition of weaving has also been made; see Matthews (1954, ch. *ix*), Lee (1980) and the objections to their arguments in Lyons (1985).

Appendix Table 1
Spatial Distribution of Bankruptcies, 1780–1840
(number)

		1780–1814	1815–1840	1780–1840
Lancashire				
North	North Lancs	30	2	5
Northeast	Blackburn	3	8	11
	Burnley	5	12	17
	Clitheroe	1	2	3
	Colne	1	4	5
	Rossendale	1	7	8
Central	Chorley	4	6	10
	Preston	9	6	15
Southeast	Ashton	10	11	21
	Bolton	10	10	20
	Bury	6	20	26
	Manchester	63	59	122
	Oldham	13	34	47
	Rochdale	4	19	23
	Salford	6	8	14
	Stayley Bridge	6	2	8
Southwest	Leigh	4	3	7
	Liverpool	2	0	0
	Warrington	5	1	6
	Wigan	5	10	15
Yorkshire				
	East Yorks	1	0	1
	Bradford	5	3	8
	Craven	0	0	0
	Dales	10	3	13
	Halifax	20	15	35
	Huddersfield	4	3	7
	Keighley	7	2	9
	Leeds	1	2	3
	Saddleworth	3	1	4
	Skipton	0	0	0
	South Yorks	2	1	3
Cheshire				
Northeast	Dukinfield	1	5	6
	Hyde	3	5	8
	Longendale	3	4	7
	Stockport	35	42	77
	Wilmslow	2	3	5
Other	Congleton	2	0	2
	Macclesfield	8	9	17
	Nantwich	0	0	0
Derbyshire				
West	Buxton	1	4	5
	Glossop	5	20	25
	New Mills	5	9	14
East	Derby	2	0	2
	Matlock	6	4	10

	1780–1814	1815–1840	1780–1840
Lancs	161	224	385
Yorks	53	30	83
Ches	54	68	122
Derby	19	37	56
Cumb	1	3	4
Flints	0	2	2
Herts	1	0	1
Leics	3	2	5
Lincs	1	0	1
Middlesex	1	1	2
Notts	5	3	8
Pemb	1	0	1
Staffs	6	7	13
Warw	0	1	1
Westmor	3	0	3
Unclassified	7	5	12
Total	316	383	699

Source: *London Gazette*

Appendix Table 2
Spatial Distribution of Dissolutions of Partnership, 1780–1840
(number)

		1780–1814	1815–1840	1780–1840
Lancashire				
North	North Lancs	7	9	16
Northeast	Blackburn	3	29	32
	Burnley	9	17	26
	Clitheroe	3	2	5
	Colne	0	2	2
	Rossendale	9	14	23
Central	Chorley	8	8	16
	Preston	17	32	49
Southeast	Ashton	7	39	46
	Bolton	25	37	62
	Bury	24	39	63
	Manchester	114	105	219
	Oldham	13	107	120
	Rochdale	15	41	56
	Salford	4	10	14
	Staley Bridge	6	9	15
Southwest	Leigh	6	4	10
	Liverpool	1	1	2
	Warrington	4	9	13
	Wigan	11	17	28
Yorkshire				
	East Yorks	2	0	2
	Bradford	9	7	16
	Craven	1	1	2
	Dales	30	4	34
	Halifax	30	30	60
	Huddersfield	6	4	10
	Keighley	11	3	14
	Leeds	7	1	8
	Saddleworth	7	18	25
	Skipton	4	2	6
	South Yorks	5	1	6
Cheshire				
Northeast	Dukinfield	1	14	15
	Hyde	5	4	9
	Longendale	4	5	9
	Stockport	26	31	57
	Wilmslow	1	1	2
Other	Chester	1	0	1
	Congleton	2	2	4
	Macclesfield	7	2	9
	Nantwich	3	2	5
Derbyshire				
West	Buxton	3	5	8
	Glossop	6	13	19
	New Mills	5	11	16
East	Derby	5	6	11
	Matlock	10	4	14

	1780–1814	1815–1840	1780–1840
Lancs	286	531	817
Yorks	112	71	183
Ches	50	61	111
Derby	29	39	68
Bedford	0	1	1
Bucks	2	0	2
Cumb	7	6	13
Devon	2	0	2
Durham	0	1	1
Flint	4	0	4
Gloucester	1	0	1
Herts	1	0	1
Leics	1	0	1
Northants	1	0	1
Northumb	1	0	1
Notts	16	10	26
Salop	1	0	1
Somerset	1	1	2
Staffs	8	4	12
Westmor	3	0	3
Unclassified	29	19	48
Total	555	744	1299

Source: *London Gazette*

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