**Risk, success, and failure: female entrepreneurship in late Victorian and Edwardian England**

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**Abstract:**

This paper analyses female entrepreneurship in late Victorian-Edwardian England. Traditional views on female entrepreneurship in 19th and 20th century England point towards a decline in number and relevance of women as business owners vis-a-vis the 18th century, and their retreat into a "separate sphere" away from the world of trade and production. Recent studies, however, have deeply challenged this view suggesting that women still played an important role as entrepreneurs also during industrialisation and after. Still, a number of questions are open as regard to the features of female entrepreneurship during these phases of British history, as issues such as scale of operation, attitude to risk, credit structure and managerial styles are still widely debated. Using original sources, this paper provides a novel view on these issues analysing female entrepreneurship from the perspective of bankruptcy. Analysing statistics on women's bankruptcy derived from Board of Trade reports, as well as a sample of archival cases, this paper argues that overall female business owners traded in ways similar to their male counterparts in terms of business size, risk-taking and, eventually, success.
Risk, success, and failure: female entrepreneurship in late Victorian and Edwardian England

In recent years, a growing historiography has systematically re-assessed the role of female entrepreneurs as investors and business owners in the urban economy throughout industrialisation. Examining factors such as the use of advertisements, business expansion, and the functioning of their credit networks, scholars have demonstrated how businesswomen did not disappear in the late eighteenth and early nineteenth centuries but remained an active and important component of the British urban economy.

This reassessment of the role of female entrepreneurship, however, did not fully extend to the late nineteenth and early twentieth centuries; in general, there has been little study of female business owners in this later period, with scholars instead examining women predominantly as paid employees or subjugated members of the middle classes.

The aim of this paper is to begin filling this gap in the literature by examining the experiences of late nineteenth century and early twentieth century businesswomen using a thus-far neglected perspective: that of bankruptcy. In recent years, historians of Britain have paid growing attention to bankruptcy and insolvency as a perspective from which to explore wider issues of business management and economic activity, and this paper follows that research trajectory.

For this paper, using the point of view of bankruptcy provides three added advantages. First, it adds new information to the relatively slim set of source material—trade directories, census returns,
advertisements and probate records—that are currently available to study women in business. This study uses three sources from the Board of Trade collection, mostly held at the National Archives at Kew but with some limited availability online: The Board of Trade *Annual Report on Bankruptcy*, the *Index to Search Registers of the High and County Courts*, and *Official Receiver’s Reports in the Bankruptcy Department (High Court) of the Board of Trade*. Second, the content of the source material itself offers an advantage. While the *Index to Search Registers of the High and County Courts* only gives the basic information of all bankruptcy cases heard before courts in England and Wales, the *Official Receiver’s Reports* often include the accounts of small firms and detailed questionnaires completed by the business owners themselves, thus representing a unique source that allows the voice of the businesswoman to be heard. Third, examining the actual functioning of the legal environment in which the businesswomen operated allows us to separate how women were supposed to have acted according to the letter of the law from what they actually did.

This paper is structured as follows. Section I provides a survey of the historiographies of female business ownership and bankruptcy, exposing the open issues and key points of debate that will be explored in the paper. Section II offers an overview of the legal system under which women operated, particularly bankruptcy law and its enforcement, as well as specific acts regulating the role of women in the economy. Sections III and IV address the points and debates highlighted the first and second sections using various statistics on female and male bankruptcies (section III) and other qualitative sources (section IV). Section V provides some concluding remarks.

I

The re-assessment of female engagement in the urban economy during the nineteenth century, conducted during the last decade, has moved our understanding of women’s economic agency

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5 Of these three sources, the first has been used to explore the nature of bankruptcy in nineteenth and twentieth century England (Lester, *Victorian insolvency*; Di Martino, ‘Approaching disasters’), but they have never been examined in conjunction with and from the perspective of the involvement of women in the economy. In this respect, they represent an entirely new body of evidence.

beyond Davidoff and Hall’s assertion that a middle class woman publicly engaging in business would have caused ‘opprobrium for herself and possible shame for those around her’.\textsuperscript{7} Instead, a series of studies into female economic agency demonstrate significant continuity of the female experience over the eighteenth and nineteenth centuries. Barker’s examination, for instance, revealed that rather than withdrawing from business as the nineteenth century dawned, women actually continued to own businesses in the same numbers as they had during the purported earlier ‘golden age’.\textsuperscript{8} These conclusions are largely supported by Kay’s research into female business owners of London who traded in the early to mid-nineteenth century. Like Barker, Kay argues that business ownership continued to be a ‘useful and possible avenue for women’.\textsuperscript{9} The picture from mid-nineteenth century London can be extended over time and space: data from the trade directories of Birmingham and Leeds between 1849 and 1901 indicates that the businesswomen of late nineteenth-century England continued to trade in the same numbers as they had in previous decades.\textsuperscript{10}

This new wave of studies not only establishes the existence of businesswomen in late nineteenth-century England but also analyses how women conducted their business affairs, looking at issues such as firms’ size, trading practices, credit structure, industries, and attitude towards risk. On these issues, however, there is much less agreement than on the fact that the number of female entrepreneurs did not substantially change over the eighteenth and nineteenth centuries. In particular, some authors only partially depart from the established idea that female businesses were not only smaller than male-owned ones but also traded in traditionally ‘feminine’ industries and in a semi-invisible way among family and friends, outside of the public marketplace.\textsuperscript{11} For example, by looking at female entrepreneurship in Edinburgh, Nenadic argues that women represented ten per cent of all commercial employers, yet they created economic success by displaying a ‘deliberately

\textsuperscript{7} Davidoff and Hall, \textit{Family fortunes}, p. 272.
\textsuperscript{8} Barker, \textit{Business of women}, p. 51.
\textsuperscript{10} Aston, \textit{Female business owners}, p. 75; Barker, \textit{Business of women}, pp. 50-1.
\textsuperscript{11} Davidoff and Hall, \textit{Family fortunes}. 
cultivated non-business-like behaviour’, relying instead on word of mouth and personal recommendations. Similarly, other authors still see female-owned businesses as small, operating at a level that supported a family (often comfortably) but essentially small-scale, treading a fine line between entrepreneurship and respectability. One key implication of this argument is that small size naturally led to informal business practices, particularly credit networks that were heavily reliant on local, verbal agreements and knowledge and often sourced through kinship networks.

This view, however, has been challenged from various perspectives. Aston’s research on Birmingham and Leeds, for example, has shown women advertising their enterprises with confidence and using their own names in trade directories and newspaper advertisements throughout the nineteenth century in much the same way as business women in Manchester, Leeds and Sheffield did in the late eighteenth and early nineteenth centuries. Perhaps more important is the strong evidence that women in Birmingham and Leeds deliberately cultivated public identities based on their position as business owners, thus challenging the idea of female-owned businesses as hidden, private, and informal concerns.

This historiographical debate also re-assessed the type of industries in which women operated (and their attitudes towards risk), ultimately concluding that women might have been much less conservative than previously claimed. Indeed, a significant minority of women in nineteenth-century England were engaged in so-called ‘masculine’ industries rather than being restricted solely to those ‘feminine’ trades previously viewed as an extension of their domestic skills, such as sewing and cooking. Sectors such as metalworking and shipbuilding, for example, witnessed substantial female participation. In part, this was due to inheritance policies that did not discriminate against widows (because of their prior involvement in the husband’s business), resulting in women

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13 Kay, Foundations of female entrepreneurship, pp. 11, 130.
14 This is a pivotal aspect of the separate sphere idea. See Davidoff and Hall, Family fortunes, and it is partly shared by subsequent studies too; for instance, Phillips, Women in business, p. 82.
15 Barker, Business of women, pp. 82-3.
17 Berg, ‘Women’s property’, pp. 235-7 for the former, and Doe, Enterprising women, for the latter.
engaging in a wide variety of trades following their husband’s death. However, widows often succeeded in such risky ‘male’ sectors and either traded entirely independently or only partially withdrew from those industries as a result of their husband’s departure.\(^{18}\)

This reassessment of women’s attitude to risk and engagement in male-dominated industries is in line with recent research on female investment behaviour, which shows that although women were typically more cautious than men, they were not as risk-averse as previously assumed. Whereas women did invest heavily in property and government bonds, both of which generated low but reliable returns, the examination of Inland Revenue documents by Green et al. has forced a reassessment of the content of their portfolios, not least because women represented one-third of the ownership of the risky, unlimited liability joint-stock banks.\(^{19}\) Moreover, the probate records of nineteenth century men and women suggest that the middle classes held a far more diversified range of investments than has previously been assumed.\(^{20}\) From this perspective, women’s substantial investment activity in the high-risk shipping industry is particularly revealing.\(^{21}\)

Parallel to the development of the historiography of the economic role of British women in the eighteenth and nineteenth centuries, a growing literature has also emerged in the study of bankruptcy and insolvency in historical perspectives. Pioneering studies by Duffy and Hoppit paved the way to the later comprehensive work by Lester, as well as a series of publications studying more specific issues such as debt and its enforcement, the functioning of different types of courts, and the impact of laws on class and entrepreneurship.\(^{22}\) Although the issue of gender does not feature predominantly in this historiography, some of the results of these studies are useful in framing the analysis of this paper. The first point relates to business size, particularly the evidence from

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\(^{19}\) Acheson and Turner, ‘Shareholder liability’, p. 226.


\(^{21}\) The risk of this activity is proved by the fact that between 1872 and 1878 about 20% of all ships insured by Lloyds were lost: Doe ‘Waiting for her ship’, p. 86.

Victorian Britain of smaller firms being more fragile and prone to failure, a point which echoes the arguments of economists commenting on the present day.\textsuperscript{23} The extent to which women actually operated smaller firms than men, which is often claimed by the historiography, thus has clear implications for our understanding of female business and insolvency.

The other important aspect emerging from the bankruptcy historiography is the level of risk of various industries. Using information from the censuses, Lester calculated the number of bankruptcies in relation to the number of employees in a selected number of professions, providing a general picture of the risk of individual industries (table 1).

\begin{center}
\textbf{[Table 1 here]}
\end{center}

The reading of this table reveals that, with the exception of building, all other trades had an extremely similar average number of cases of bankruptcies for employees. The total average varies between 0.34 per cent when all sectors are included to 0.32 per cent when ‘building’ on one extreme and ‘farming’ and ‘architecture’ on the other are not included. When such averages are compared to typically feminine sectors, the result is that no evidence seems to exist of women trading in particularly more or less risky industries: inn-keeping was around the average and commerce was relatively higher than manufacturing activity.\textsuperscript{24}

The only real outlier, building, deserves some extra consideration. This male-dominated sector no doubt exhibits a much higher level of bankruptcies per employees. This measure, in turn, probably underestimates the degree of risk in the industry given that most firms, unlike most retail, had at least a few employees; hence, the bankruptcy per number of businesses rather than number of employees would show an even higher tendency to fail in this sector. However, two lines of argument suggest that even after acknowledging this, our assessment would not change. First, the

\textsuperscript{23} Lester, \textit{Victorian insolvency}; Knaup and Piazza, ‘Business employment dynamics’.

\textsuperscript{24} A \textit{Friedman two-way ANOVA} statistical test run on data reported in table 1 confirms this result (see appendix).
construction industry was far from a male monopoly; trades in which women engaged, such as ‘painter and decorator’, fell under this sector. Moreover, the female shipping owners examined by Doe show that assuming women could not carry out a certain type of business because of the physical limitations of their sex ignores their potential ability as successful owner-managers. Second, according to Lester, building proved an extra risky activity not because of the higher inner exposure of the sector to macro shocks or other exogenous reasons but because in its functioning, the industry resembled speculation more than trading. The extra fragility was thus not the consequence of the assumption of extra entrepreneurial risk but the result of incompetence and adventurism, if not open fraud.

By looking at this evidence alongside some of the results of the revisionist historiography, the conclusion that we reach is that not only were women present in high risk industries but also the trades that absorbed the majority of female-owned firms did not show a different level of risk than the others.

II

Before moving to the analysis of bankruptcy among female entrepreneurs, it is necessary to provide an overview of the institutional and legal settings under which women operated and of the historiography that surrounds these issues. This analysis provides further points and aspects that will be investigated in the following sections of the paper. Attention therefore turns to both bankruptcy law and its enforcement in general and to legal acts specifically regulating the role of women in the economy.

In the years before the structural reforms of the 1880s, English bankruptcy law changed repeatedly and erratically. However, something that remained constant over time was the fact that

25 Doe, *Enterprising women*.
26 Lester, *Victorian insolvency*, pp. 258-60.
27 For an overview of these changes, see Hoppit, *Risk and failure*; Lester, *Victorian insolvency*. 
the law did not differentiate between genders, although when combined with class, this dimension
does seem to have played a role in its enforcement.\textsuperscript{28}

Although bankruptcy law, at least in its letter, was gender-neutral, other aspects of British
commercial law were permeated by a constant attention towards women’s position and role. In
particular, there were continuous attempts at providing more favourable treatment for married
women compared to spinsters and widows. Before the Married Women’s Property Acts of 1870,
1882 and 1893, married women were formally subject to \textit{couverte}, which meant that they had no
independent legal status and therefore could not sue or be sued or declared bankrupt. Despite this
attempt at insulating women from the legal implications of commerce and industry and the
engagement with that world, there is little evidence that these limitations impacted the propensity of
women to run businesses. In fact, historians have claimed that women even used \textit{couverte} as an
active business strategy. Barker, for instance, has demonstrated that local customs and the wide
interpretation of regulations allowed by common law allowed female business owners in early
nineteenth-century England not only to trade but also to know that they had the option to seek legal
restitution in the event of a professional disagreement.\textsuperscript{29} Phillips also argues that women ostensibly
traded apart from their husbands and as separate individuals but relied on their husband’s
involvement to secure credit and then pleaded the protection of \textit{couverte} when their business
suffered financial difficulties.\textsuperscript{30}

The general legal conditions of married women radically changed as a consequence of the
passage of \textit{Married Women’s Property Acts} in 1882 and 1893, which recognised married women as
fully independent legal entities. This step, however, was counterbalanced by the fact that under the

\begin{footnotesize}
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\item The historiography of these aspects is wide, and its summary goes beyond the scope of this paper. For a detailed
analysis of these issues see, among others, Finn, \textit{Character of credit}; Johnson, ‘Class law’.
\item Barker, \textit{Business of women}, p. 127.
\item Phillips, \textit{Women in business}, p. 86. For an overview of the use of strategic use of 
\textit{couverte} in female bankruptcy, see also Pearlston ‘Married women bankrupts’. Other scholars, such as Kay, highlighted the
‘worst case scenario’, one where women were not even able to rely on the few legal options available to them. For example, this was the case with
milliner Mary Holl, who had all of her stock seized by her husband’s creditors after his firm failed and her femme sole
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new Bankruptcy Acts passed in 1883 and 1890, married women could not be declared bankrupt unless they traded independently from their husbands. Women informally operating a business alongside their husbands were thus exempt from bankruptcy, but this also extended to the case of formal partnerships. As argued by the Board of Trade, following the decision made in *Scott v. Morley* (20 QBD 120), a petition for bankruptcy made against a married woman trading in a partnership (or ‘under the name of a firm’ to use the technical jargon of the time) could be discharged on the grounds that she was not operating independently from her husband. In fact, the degree of protection was much wider; even when married women traded independently and had personal property, bankruptcy law applied only if other conditions were fulfilled, namely, if ‘in respect to her separate business she [was] free from the control of her husband’ and ‘that she actually conduct[ed] the business’. As noted by the Board of Trade, married women thus benefited from a state of ‘singular immunity’, a condition shared only with two other categories: lunatics and children.

In theory, this should have strongly limited the number of married women entering into business, as creditors would have feared the consequences of not being able to recover their money in case of insolvency. However, there is little, if any, evidence to suggest that the number of businesswomen changed after the legal reforms of the 1880s and 1890s. In fact, the legal system itself offered an easy way to bypass institutional restrictions via the *Deeds of Arrangement Act* of 1887 that explicitly recognised the use of pre-bankruptcy agreements as part of the official legislation. Debtors’ insolvency could thus lead to a formal bankruptcy procedure (itself leading either to liquidation or to a pre-bankruptcy agreement) regulated by bankruptcy acts or to deals between debtors and the totality of their creditors. These deals were official and registered in courts.

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31 When business partners operated together in an official concern, they were said to trade ‘under the firm name’. See, Bowstead and Scrutton, *Commercial laws of the world*, vol. II, p. 145.
35 Nenadic, ‘Social shaping’; Aston, ‘Female business owners’.
but were not formally part of bankruptcy law; thus, married women were eligible to use them. By law, such deals could take the form of liquidation, composition, or continuation of the business under the supervision of creditors.\textsuperscript{36}

The use of deeds of arrangement therefore represented an easy institutional way for married women to bypass the obstacles established by the Bankruptcy Acts. In fact, women did not suffer from any limitation due to the legal framework and even appear to have used it in a strategic way, similar to how the previous generations of businesswomen had manipulated their position under \textit{couverte}. Concerns about the fraudulent use of the special position of married women under English commercial law existed among both the Board of Trade and public opinion. On various occasions, the annual bankruptcy report published by the Board of Trade highlighted the risk of the strategic use of the opportunities offered by the Married Women’s Property Acts and the Bankruptcy Act. As a judge from the Northampton court argued in 1895, it appeared that ‘the combined operation of the Married Women’s Property Acts and the … Bankruptcy Act opened the door to a great deal of elaborate frauds’.\textsuperscript{37} There was a ‘considerable mass of evidence’\textsuperscript{38} that the combination of married women owning properties but being excluded from bankruptcy if not trading independently led to at least three common types of fraudulent behaviour. Firstly, a wife could act as guarantor of her husbands’ promissory notes knowing that she would not be subject to bankruptcy in case of the inability of her partner to pay back his debts. Secondly, husbands could invest business profits into the improvement of their wife’s properties (typically, buying furniture\textsuperscript{39}) as a way of diverting assets from creditors in case of imminent bankruptcy.\textsuperscript{40} Thirdly, undischarged bankrupt husbands could enjoy a ‘fresh start’ by taking the role of manager in a

\textsuperscript{36} In theory, bankruptcy could also be handled through an extra-judicial friendly agreement. We have little information on how common these agreements were, but it reasonable to assume that they represented a negligible share, considering the low cost of registering a deed of arrangement (£5) together with the guarantees that this offered to both debtors and creditors.

\textsuperscript{37} Board of Trade, \textit{Annual Report on Bankruptcy} (1895), p. 10.

\textsuperscript{38} Board of Trade, \textit{Annual Report on Bankruptcy} (1892), p. 10.

\textsuperscript{39} Board of Trade, \textit{Annual Report on Bankruptcy} (1905), p. 5.

\textsuperscript{40} Board of Trade, \textit{Annual Report on Bankruptcy} (1892), p. 10.
business run under their wife’s name; ‘all that [wa]s required [wa]s to obtain the transfer of the
premises occupied and to delete the husband’s initial from the business record’.\(^{41}\) This operation
allowed bankrupt debtors who had failed to obtain debt discharge (or simply did not apply) to
avoid the ‘disagreeable necessity of informing those from whom credit … [wa]s obtained that he
[wa]s an undischarged bankrupt, or the alternative of running the risk of prosecution … for not
disclosing his status’.\(^{42}\) Concerned about the frequency of such behaviour, in 1896, the Board of
Trade started including dedicated statistics on the failure of women in its Annual Reports on
Bankruptcy because of ‘the positions of women under the laws as to recovery of debts and
insolvency’ and the fact that this had ‘been the subject of such frequent comments both in the …
reports and in the public press’.\(^{43}\)

After about twenty years of uneasy relationship with the Married Women Property Act, radical
changes to bankruptcy law were made in a new act passed in 1913 that established that ‘every
married woman who carries on a trade or business, whether separately from her husband or not,
should be subject to the bankruptcy law as if she were femme sole’.\(^{44}\)

### III

The analysis conducted in the previous two sections reveals a number of open issues and
debated points to be investigated: did women mainly or exclusively trade in traditional female
sectors with much smaller firms than men? Did they hide their presence in the economy by
operating in informal and private ways? Did legislation limit women’s ability to run businesses? Or,
on the contrary, did women use the nuances and grey areas of laws to their advantage?

To provide some answers these questions, we first analysed data from the Annual Reports on
Bankruptcy published by the Board of Trade. These contain information on the number of

\(^{41}\) Ibid..


\(^{44}\) Ringwood, *Principles of bankruptcy*, p.18 (italics in the original text).
bankrupted women, the level of their assets and liabilities, and which procedure they used (bankruptcy or deeds of arrangement). These data came from a total of 140 bankruptcy courts as well as the London High Court, which was by far the biggest individual court managing, on average, approximately 18 per cent of total cases (against a share of 2 to 3 per cent in courts based in cities such as Birmingham, Leeds, Bristol, or Manchester), although on aggregate, the large majority of cases were still handled outside the capital.

The first set of information that can be extracted from these reports is the number of cases for females and males (Figure 1) and of those bankruptcies, deeds of arrangement and total procedures for females as percentage of male and female for each procedure (Figure 2). Figure 1 provides the number of cases (disaggregated between bankruptcy procedures and deeds of arrangement) by year for both men and women.

[Fig. 1 here]

The most revealing aspect of these data is that, contrary to men, the number of deeds of arrangement for women was consistently higher than the number of bankruptcy procedures. This leads to two possible explanations, both connected to aspects discussed above. The first points towards the fact that married women could not be technically declared bankrupt and thus the use of deeds of arrangement could have been a way of bypassing such an institutional barrier. The second explanation, which does not exclude the previous one, regards business size and the nature of credit. Deeds of arrangement required an agreement among all creditors, thus the higher their number the more complicated the process of reaching a deal. Therefore, if female-owned businesses were small, local, and relied on only a few geographically close creditors (as stressed by some authors), they were naturally more suitable for deeds of arrangement than formal bankruptcy.

Before exploring these two points in more detail with the help of further data analysis, it is worth looking at the number of female bankruptcies and deeds represented as percentage of the totality of cases (figure 2).
The data plotted in figure 2 show that during the period under analysis, the share of female cases over the total of bankruptcy and deeds of arrangement was, on average, approximately 6 per cent, representing approximately 4 per cent of bankruptcies and 8 per cent of deeds of arrangement. In the context of the total number of female concerns, this analysis could allow us to determine whether female-owned businesses tended to fail relatively more or less frequently than the average. However, the scarcity of official documentation on female business owners has resulted in a situation in which it is virtually impossible to determine with absolute precision the number of women trading at any one time. That said, other sources allow at least an estimate of that number. Data collected from trade directories published in Sheffield, Leeds and Manchester between 1780 and 1830 and Birmingham and Leeds between 1849 and 1901 show that the types of firms owned by women and the percentage share of the market that they occupied remained broadly consistent throughout the late eighteenth and nineteenth centuries. Therefore, although it is not possible to give actual numbers of women trading, we can confidently hypothesise that approximately 6 per cent of business owners at the turn of the century were female, although this figure is likely to be a low estimate. In fact, the data from the 1901 census point towards approximately 10 per cent, and the data from Foster indicate that women made up approximately 13 per cent of all trade directory entries between 1836 and 1855. Although all these data are subject to a degree of uncertainty, a figure of 6 per cent represents a solid lower bound. This implies that, assuming a similar percentage of entrepreneurs among male and female bankruptcies (data indicate personal bankruptcy, hence business and non-business related circumstances), businesswomen did not show any higher tendency to enter bankruptcy proceedings than businessmen. 

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47 This calculation is subject to a degree of uncertainty for two reasons. Firstly, debtors whose jobs are known have that information indicated in their profession but not in their roles so, for example, a builder could have been a manual
seemed to be relatively less prone to bankruptcy than male ones.

Another set of relevant information obtained from the annual bankruptcy report is the disaggregation of female cases by marital status (figure 3).

[Fig. 3 here]

Figure 3 shows how relative proportions remained unchanged during the period with married women and widows representing approximately 40 per cent of total cases each and single women constituting the remaining 20 per cent. These aggregated data hide an interesting difference between bankruptcies and deeds of arrangement: married women represented (on average) 37 per cent of bankruptcy cases and widows 41 per cent, a proportion that almost exactly inverts when we look at deeds of arrangement (44 and 37 per cent, respectively). In fact, on average every year, more married women appeared in deeds of arrangement than in bankruptcy (114 vis-à-vis 66). This preference of married women for deeds of arrangement over bankruptcy supports the hypothesis that their use was a fully legitimate and legal way to circumvent the possible limitations of bankruptcy acts, as suggested by the Board of Trade.\(^48\)

In analysing the economic characteristics of the two groups of entrepreneurs (women and men), some interesting observations emerge from the relative size of bankruptcy cases. Figure 4 plots the average liability (in GBP) for women and men in both bankruptcy procedures and deeds of

In the case of bankrupt men, we also provide a ‘corrected’ average that excludes cases with liabilities above £20,000 of unsecured debts. The number of these cases, together with the amount of liabilities involved, was highlighted in every Annual Report on Bankruptcy by the Board of Trade. In the years covered in this paper, no women ever appear in this special category, and also for men, the number of this type of cases was generally very low, on average 34 per annum, equivalent to 0.9 per cent of the yearly total. However, the amount of liabilities involved was remarkable: on average every year, the total amount of liabilities of these cases was approximately £2 million, accounting for 34 per cent of total liabilities in all male bankruptcies. By excluding these cases, we thus provide an average size of male bankruptcies that is much closer to the reality of the standard cases.

Figure 4 shows how liabilities involved in female cases were consistently smaller than those for male-owned businesses, confirming the hypothesis that women operated, on average, smaller businesses than men. This has been widely assumed by historians, and the Board of Trade itself explicitly acknowledged this phenomenon. In the 1897 report, for example, they noted that ‘the average liabilities and assets per case were much less, as might naturally be expected, than the average case of all failures’. This evidence indicates that the high use of deeds of arrangement by female debtors might have been due not only to the appeal of this procedure to married women but also to its connection to smaller-sized businesses, the ones particularly suitable to deeds. In fact, these deals needed an agreement among creditors, implying that the coordination costs increased with the growing size of liabilities and, logically, the larger number of creditors.

However, this difference in size, especially when the ‘corrected’ average for men is used, does not appear to be large enough to support the idea of possible structural differences between average

\[\text{Fig. 4 here}\]

49 Results from data on assets provides the same picture; hence, for presentation sake, we only provide figures for liabilities.

50 Board of Trade, Annual Report on Bankruptcy (1897), p. 6.

51 A hypothesis supported by the evidence from figure 4 is that the amount of assets involved in deeds of arrangement was, on average, smaller than in bankruptcy for both men and women.
male- and female-owned firms, as stressed by some authors. In other words, when we focus on sole
ownerships and partnerships (the types of firms that used bankruptcy law), we can see how very
few male-owned businesses were of remarkable dimensions and how, although female-owned
enterprises appear on average smaller, there is little evidence to support the argument that male-
owned firms were large and formal, whereas female-owned firms were small, informal, and
frequently hidden.

Data on liabilities can also be used in conjunction with the data on assets to determine the
‘quality’ of male and female debtors at the moment of insolvency. The ratio assets/liabilities is a
standard measure of the level of firms’ relative quality, and if it differs among categories of
creditors, it furnishes us with further information about their relative entrepreneurial abilities.

[Fig. 5 here]

Data on the ratio assets/liabilities from figure 5 suggest that, overall, men and women went into
bankruptcy with a very similar proportion of debts that they were unable to face. The position of
widows deserves further attention, as they went into bankruptcy with distinctively higher ratios
between assets and liabilities. For example, in bankruptcy proceedings, the average ratio for married
and unmarried women was 37 per cent and 39 per cent for men, but it was 44 per cent for widows.

A similar picture can be derived from deeds of arrangement in which the average was 55 per cent
for other women and men, but 62 per cent for widows. To an extent, averages are massively
affected by exceptional years (1909 and 1910 for bankruptcy; 1903 for deeds of arrangement), but
in other years, it was also not uncommon for widows in some industries to have exceptionally high
ratios between assets and liabilities.\textsuperscript{52} One possible interpretation is that widows might have been
considered riskier debtors, hence it was more likely that they would be pushed into bankruptcy. In
this regard, a quote from the 1896 bankruptcy report is illuminating:

\begin{quote}
\textsuperscript{52} In fact, widows even have ratios above 100\%, meaning that assets were even bigger than liabilities. This is less surprising than it might seem, as assets were estimated by creditors at the beginning of the procedure, while liabilities by Official Receivers during it. This issue, however, applied to all cases, and there is no reason why such discrepancy must have been bigger in the case of widows.
\end{quote}
It is often the case that when the husband dies he leaves a business which cannot
be or is not immediately wound up or sold, and which is frequently carried on by
his widow. In some of these cases the business is in an insolvent condition when
the husband dies, and failure sooner or later is the inevitable sequel. In others the
widow, being unacquainted with business matter, either mismanages the business
or relies entirely upon others who do so for her, which results in her ultimate
failure.\textsuperscript{53}

\textbf{IV}

The results from section III leave some important questions open to further analysis, such as
the extent to which the picture from bankruptcy cases is truly representative of female
entrepreneurship. In theory, it is possible to claim that female firms using formal bankruptcy were
only the small tip of an iceberg made up of relatively larger businesses trading in a formal way,
while the vast majority of cases were small, local, and informal firms operating outside the
boundaries of the institutional environment. Another avenue of investigation is to analyse whether
women not only bypassed institutional obstacles by using the variety of solutions offered by law,
but also might even have gone a step further and actively used procedures to their advantage, as
their precursors did with \textit{coverture} and as contemporary commentators have suggested.\textsuperscript{54}

To answer these questions, data analysed in section III are complemented with the study of
qualitative cases from archival sources, specifically the Official Receiver’s reports held in the
Bankruptcy Department (High Court) of the Board of Trade. These reports were written by an
officer of the Bankruptcy Court, known as an Official Receiver, who was sent to investigate the
circumstances surrounding the person who had filed for bankruptcy or was the subject of a petition
launched by a creditor. The content of these reports vary from case to case, but the vast majority

\textsuperscript{53} Board of Trade, \textit{Annual Report on Bankruptcy} (1896), p. 8.
include a comprehensive breakdown of the bankrupt’s accounts at the time of their meeting with the creditors, a summary of the case with a final ‘deficiency’ of their assets, and a detailed list of monies owed, to whom and why. Many of the cases also included a questionnaire that consisted of either 47 or 33 questions depending on whether the potential bankrupt was viewed as a trading or non-trading case. Although 1,891 female bankruptcy cases were identified for the years 1889-1893 and 1904-1908, only 112 case files of female bankrupts have survived, all from London and dating from 1901 onwards. This poor survival rate is due to a selective preservation policy whereby only a representative sample were kept in addition to the case files of any particularly notorious or infamous cases. Before progressing into the analysis, it is therefore necessary to assess any possible bias introduced by such a policy, bearing in mind, as noticed in the previous section of this article, that overall, only a minority of cases were processed in London. To assess this possible bias, some of the sample’s characteristics are presented in Table 2 below and compared to national data.

[Table 2 here]

By glancing at marital status as the first aspect, it may appear that the sample is biased towards the inclusion of a relatively higher proportion of spinsters and a much lower proportion of married women, but the high percentage of cases in which marital status is unknown (as well as the very high variations of relative proportions across the years) makes it impossible to reach a precise conclusion. In this article, we therefore make no inference on this dimension based on the sample.

The second aspect is that the cases preserved in the archive are consistently bigger in terms of size, which remains true even when two outlier cases from 1902 are not considered. These two cases had assets of £12,650 and £45,800, making them approximately 50 to 200 times bigger than the national average. Clearly, the files of these two cases have been kept because of their exceptional nature, but even when they are not included (the ‘corrected’ average is between
parentheses in the above table), the overall picture does not change significantly.\footnote{A Kolmogorov-Smirnov test performed on the assets variable suggests that the archival sample and the entire population have the same statistical distribution (see appendix).}

Although the archival sample appears to be biased towards relatively bigger cases, the Official Receiver’s reports of female traders who appeared before the Bankruptcy Courts in the early twentieth century also include a substantial proportion of women who had a very limited amount of assets and/or liabilities and only a handful of creditors. For the cases for which this information is available, in five instances, the total liabilities involved were smaller than £200, while the percentage of businesswomen with less than 5 creditors is approximately 10 per cent (20 per cent with less than 10). Yet significantly, despite these factors, these women still used the official bankruptcy system, a piece of evidence that offers a correction to the historiographical assumption that small (or smaller) sized female businesses automatically went hand-in-hand with informal practices and a detachment from formal procedure and open and public engagement. The same consideration applies to the issue of creditors’ location and their personal connections to the debtor. In general, borrowing through familial and friendship networks remained the favoured option for business owners, male and female alike,\footnote{Casson, Entrepreneurship, p. 86. This is in line with the fact that in England and Wales, the percentage of cases passing via deeds of arrangement was very high in absolute terms as well as in comparative perspective. Di Martino and Hautcoeur, ‘Functioning of bankruptcy’, pp. 593-94.} but even assuming that women entrepreneurs tended to rely relatively more than men on local and informal networks, the evidence shows that having only a few locally based creditors was in no way a guarantee that insolvency would have been handled outside the remits of formal procedures. For example, both the boarding house keeper Eleanor Bosito and the hotelier Esther Brandon were declared bankrupt despite having very few creditors (five in the former case, six in the latter) who all lived within five miles from the businesses of the two women.\footnote{TNA, BT 226/425, Official Receiver’s Report of Eleanor Bosito; TNA, BT 226/69, Official Receiver’s Report of Esther Brandon.} The example that best highlights how business that were small in scale and used local credit networks still turned to the use of formal bankruptcy procedure is the case of Agnes Esther Relf, an unmarried dressmaker trading from Earls Court, London, who faced bankruptcy...
proceedings in 1904 on the petition of her creditors.\textsuperscript{58} Agnes’s case is particularly interesting because with unsecured debts of £160 9s 8d, a figure that was later reduced to £126 13s 11d following gifts from her father and friends, she owed the least of all the women examined. Examination of the Official Receiver’s Report shows that the person who filed the petition and brought the proceedings against Agnes was Mrs. Jane Davis, a widow who lived less than half a mile from Agnes’s home and had lent her the sum of £5. Jane Davies was one of only three creditors whose claim was for ‘Monies Lent’ in the Official Receiver’s Report; the other two creditors were Agnes’s father Richard, a police inspector, and mother Mahala, who had lent their daughter £35 and £15, respectively. The rest of the creditors were either trade suppliers or debts that were explained as part of everyday living expenses. Regardless of why Agnes owed them money, each of her creditors was located within a few miles of her home and business premises at Earls Court, and the value of the amounts were relatively small; the biggest debt, for example, was £40 that was owed to a draper’s firm on High Street Kensington, and the rest of the debts (excluding the £35 owed to her father which was written off as a gift) were all sums under £20. Jane’s position as chief instigator in the case is further emphasised by the fact that Agnes’s only other creditors actually gifted her money to help her financial situation. Yet despite the local nature of her debts and the relatively small value of the monies owed, Agnes’s creditor Jane Davies still chose to utilise official bankruptcy proceedings.

While the detailed analysis of the small businesses above confirms that formal procedures attracted all sorts of firms, other cases provide evidence that encourages a reassessment of the scope and scale of female business ownership in late nineteenth-century Britain, challenging the historiographical image of exclusively or predominantly small, semi-private firms. The Official Receiver’s Report that details upholsterer and warehouseman Elizabeth Goodchild’s financial

\textsuperscript{58} TNA, BT/1296, Official Receiver’s Report of Agnes Esther Relf.
difficulties shows that her business and finances were far removed from a small, private firm. One of the most striking features of Elizabeth’s report is the long list of creditors—71 in total—but even more interesting than this is the vast geographic span of the individuals and organisations seeking payment on debts owed by Elizabeth. In addition to the trading relationship that Elizabeth had with suppliers in and around her home city of London, she also sourced goods and services from Manchester, Birmingham, Bradford, Derby, Yeovil, Macclesfield, Belfast and Scotland, creating a trade network that stretched over four hundred miles. However, this network formed only part of her business; the Official Receiver’s Report shows that Elizabeth was also exchanging products and services with business owners on the continent, with creditors from Saxony, Belgium, Austria, France and Holland all registering their interest in the estate. The total deficiency of Elizabeth’s accounts is given as £1469 16s 6d, but from the reported details of her assets, we can see that although she had a significant amount of stock-in-trade, she had very little in the way of assets. The networks detailed in Elizabeth’s Official Receiver’s Report reflect those of lace merchant and milliner Jane Clarke, who traded from her shop in London in the mid-1800s. Her trade links spread across Britain, Ireland and the continent, and although she was ultimately very successful, she did run into trouble at the end of her career and was perhaps lucky to find a buyer so swiftly. Both Elizabeth and Jane were trading on a scale that equalled, and in many cases surpassed, other male business owners, demonstrating the behaviours of ambitious business owners seeking to maximise their profits.

Relatively large size, risk-taking, and expansion outside the boundaries of the firm’s main location all support the claims of authors including Aston, Barker and Doe about the diverse nature of the world of late nineteenth-century female entrepreneurship. In fact, evidence points in the direction of some female business owners not only being higher risk-takers than often believed but

59 TNA, BT226/2459, Official Receiver’s Report of Elizabeth Goodchild,.
60 Hemingway, Millinery and old lace.
61 Ibid., p. 217.
62 Ibid., p. 213.
also doing so by bending of formal procedures to their advantage, as the Board of Trade suspected. One revealing example of these strategies was in fact provided by the Board of Trade itself in the 1899 bankruptcy report. The case referred to a receiving order filed against a spinster who managed to delay the bankruptcy procedure long enough to get married before its end and then have it discharged due to her new marital position. Further evidence of the strategic use of bankruptcy law can be found in the surviving archival sources. The case of Laura Jones and her husband from Dolgoch Farm, Brunguy, North Wales, highlights the way that married couples could use the woman’s legal position to shore up a precarious economic situation. While Laura’s husband continued to run their farm in Wales, Laura moved to Caledonian Road, Kings Cross, London where she traded on her own account as a Dairy and Provision Dealer. However, Laura had been trading for only three years before her business ran into trouble, mostly due to her overextending herself financially and then the illness of both herself and her husband John. Recognising that her business could not survive, Laura petitioned for bankruptcy in March 1904, but when the Official Receiver inspected Laura’s business records, they found that the business had virtually no assets and that the only item of any value was her household furniture. Unfortunately for Laura’s creditors, she stated that although the household furniture had once belonged to her, she had recently sold it to her husband and therefore her creditors could have no claim over it, as it was not part of her separate estate. It seems that Laura and John tried to diversify their primary business but had taken the precautions necessary to avoid literally losing the farm if it failed.

The way the law was manipulated echoes what some authors such as Phillips suggested happened under coverture; it appears that the world of nineteenth century female entrepreneurship shows continuity with previous phases not only in terms of the relative size and importance of female-owned enterprises but also in terms of business practices, including a deliberately strategic attitude towards the ‘rules of the game’.

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64 TNA, BT 226/1380, Official Receiver's File of Laura Jones.
This paper is an attempt to unveil a world — one of female entrepreneurship in the late nineteenth and early twentieth century Britain — that to a large extent, still remains unexplored. A recent wave of revisionist historiography had showed that female entrepreneurs had not disappeared from the urban economy after the alleged golden age of the eighteenth century, but substantial disagreements still exist on the nature and extent of this phenomenon, especially after 1850. Two broad questions in particular remain to be explored. The first one is how women in this historical phase traded as compared to the previous century and half. The second question is whether female business ownership and management behaviours differed significantly from those of men. Using data and qualitative evidence on bankruptcy, this paper provides some answers to both questions.

The picture of female businesses as small in size and local in scope and trading in semi-informal and almost hidden ways that was first proposed by the separate sphere literature and still supported by some revisionist historians stands at odds with two main pieces of evidence derived from the analysis of bankruptcy cases. Firstly, female businesses dealing with illiquidity and bankruptcy were not necessarily very small and local. Archival sources also show the existence of female firms with a long list of geographically scattered creditors and substantial assets and liabilities. Although these might have been exceptions, their relevance becomes clearer when we consider that in terms of average size, the alleged difference between male and female concerns appears smaller than expected. Sole ownerships and partnerships in ‘common trade and occupations’, such as those represented in bankruptcy cases, were likely to be quite similar whether they were managed and owned by a man or a woman.

Secondly, even when their concerns were local and small-scale, female business owners still dealt with bankruptcy using formal procedures, revealing an open and explicit engagement with the

economy of time rather than the inhabiting of a sheltered and somehow disguised dimension. In fact, engagement with such procedures could also have been strategic and geared towards risk-taking in a fashion that closely resembles similar strategies adopted under *coverture*. Ironically, constant attempts by law-makers to protect married women in the economic arena (and perhaps also to limit their role) ended up producing the opposite result. As Doe argues, ‘Common Law, with apparent restrictions for married women, did not restrict those men or women who were capable of using other forms of law to suit their purpose’.  

This consideration leads to another point—the relative degree of success of these two categories. In business literature, entrepreneurial ‘success’ is often measured by looking at the ability to remain solvent and avoid bankruptcy. In absolute terms, this measure is, indeed, very crude. Limiting the definition of success in business to the mere ability to survive hides the fact that entrepreneurs often aim at much more complex goals; for instance, they might want to see their business expand and reach a given share of the market, maximise the return on their investment, or enjoy a particular lifestyle thanks to the profits generated. In relative terms, however, bankruptcy represents a straightforward and unbiased proxy to assess the comparative performance of different populations of entrepreneurs. Once a group of economic agents who are otherwise homogenous is disaggregated according to a given characteristic (such as age, gender, or race), whether the two populations show a similar ability to survive over time provides useful initial information on their relative entrepreneurial quality.

For the period under consideration, once the different types of bankruptcy procedures are considered together, the proportion of female failures is in line with the share of female business owners in the marketplace. However, it is important to note that women arrived at the moment of the declaration of bankruptcy with ratios between assets and liabilities (a first-hand indicator of

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67 Among many others, Carter and Van Auken, ‘Small firm bankruptcy’.
debtor’s quality) similar to men, if not slightly higher. If we consider this alongside the evidence discussed in section II that showed that women did not operate in substantially less risky industries, then the result that emerges from this paper is, overall, of female entrepreneurs who were at least as successful as their male counterparts. This conclusion, by definition, is limited to the world of sole ownerships and partnerships in ordinary trades, and nothing can be said about entrepreneurship taking place in limited companies, which were most likely monopolised by men.

Finally, the evidence from bankruptcy cases also allows the investigation of the role of widows, their strategies, and their social acceptance as entrepreneurs. Whereas ordinary female entrepreneurs faced no particular treatment from creditors, widows appear to have been perceived as riskier debtors and were more likely to be pushed into bankruptcy than other women or men. Although widows might have had a role in their husband’s firm before his departure and were often left in charge of the family business by choice rather than accident, they were still perceived as less reliable than their husbands.

These findings contribute a further layer of rich detail in the ever-developing picture of female entrepreneurship whilst also highlighting the need for further research into the engagement of women in the urban economy of nineteenth-century Britain.

Appendix: results of statistical tests

Appendix tables 1 and 2 here

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Figure 1: Number of female and male bankruptcies and deeds of arrangement (1895-1913)

Source: Board of Trade, *Annual reports on bankruptcy*, 1895-1913
Figure 2: bankruptcies, deeds of arrangement and total procedures for females as percentage of male and female for each procedure (1895-1913)

Source: Board of Trade, *Annual reports on bankruptcy*, 1895-1913
Figure 3: Marital status of women in bankruptcies and deeds of arrangement, 1895-1913 (%)

Source: Board of Trade, *Annual reports on bankruptcy*, 1895-1913
Figure 4: Average liabilities in various procedures (1895-1913)

Source: Board of Trade, *Annual reports on bankruptcy*, 1895-1913
Figure 5: ratio assets/liabilities in various procedures

Source: Board of Trade, *Annual Reports on bankruptcy*, 1895-1913
Table 1: bankruptcies in selected occupations, total number and as percentage of people employed in each profession.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1891</th>
<th>1901</th>
<th>1911</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of employed</td>
<td>Number of cases</td>
<td>% of employed</td>
<td>Number of cases</td>
</tr>
<tr>
<td>Builders</td>
<td>1.04</td>
<td>195</td>
<td>1.14</td>
<td>286</td>
</tr>
<tr>
<td>Wine and spirit merchants</td>
<td>0.63</td>
<td>33</td>
<td>0.37</td>
<td>18</td>
</tr>
<tr>
<td>Tobacconists</td>
<td>0.00</td>
<td>29</td>
<td>0.46</td>
<td>47</td>
</tr>
<tr>
<td>Furniture dealers and makers</td>
<td>34</td>
<td>0.54</td>
<td>50</td>
<td>0.37</td>
</tr>
<tr>
<td>Jewellers</td>
<td>0.31</td>
<td>42</td>
<td>0.35</td>
<td>39</td>
</tr>
<tr>
<td>Butchers</td>
<td>0.34</td>
<td>116</td>
<td>0.37</td>
<td>136</td>
</tr>
<tr>
<td>Publicans</td>
<td>267</td>
<td>0.37</td>
<td>286</td>
<td>0.37</td>
</tr>
<tr>
<td>Fishmongers</td>
<td>0.26</td>
<td>36</td>
<td>0.34</td>
<td>55</td>
</tr>
<tr>
<td>Drapers and haberdashers</td>
<td>0.35</td>
<td>104</td>
<td>0.31</td>
<td>95</td>
</tr>
<tr>
<td>Grocers</td>
<td>0.31</td>
<td>202</td>
<td>0.21</td>
<td>305</td>
</tr>
<tr>
<td>Tailors</td>
<td>0.22</td>
<td>83</td>
<td>0.23</td>
<td>89</td>
</tr>
<tr>
<td>Bakers</td>
<td>94</td>
<td>0.21</td>
<td>98</td>
<td>0.24</td>
</tr>
<tr>
<td>Boot and shoe manufacturers and dealers</td>
<td>0.25</td>
<td>137</td>
<td>0.22</td>
<td>115</td>
</tr>
<tr>
<td>Architects and surveyors</td>
<td>0.23</td>
<td>16</td>
<td>0.14</td>
<td>10</td>
</tr>
<tr>
<td>Farmers</td>
<td>0.09</td>
<td>187</td>
<td>0.08</td>
<td>167</td>
</tr>
<tr>
<td>Total in selected occupations</td>
<td>1575</td>
<td></td>
<td>1796</td>
<td></td>
</tr>
<tr>
<td>Total bankruptcies</td>
<td>4216</td>
<td></td>
<td>4244</td>
<td></td>
</tr>
<tr>
<td>Share of bankruptcies in selected occupation as % of total bankruptcies cases</td>
<td>37%</td>
<td>42%</td>
<td>39%</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td>0.34</td>
</tr>
<tr>
<td>Average (without building)</td>
<td></td>
<td></td>
<td></td>
<td>0.29</td>
</tr>
</tbody>
</table>

Source: Number of cases: Board of Trade, *Annual Report on Bankruptcy* (1892, 1902, and 1912); percentage of employed: authors’ elaboration from Lester, *Victorian insolvency*, Table 7.3.
Table 2: selected characteristics of the cases included in the archival sample (marital condition; size) and comparison to national data (1901-1908)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of cases</th>
<th>Marital status (%)</th>
<th>Size</th>
<th>Average assets per case (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Married</td>
<td>Widows</td>
<td>Spinsters</td>
</tr>
<tr>
<td>1901</td>
<td>National data</td>
<td>200</td>
<td>37</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>16</td>
<td>13</td>
<td>31</td>
</tr>
<tr>
<td>1902</td>
<td>National data</td>
<td>177</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>8</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>1903</td>
<td>National data</td>
<td>182</td>
<td>38</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>14</td>
<td>21</td>
<td>36</td>
</tr>
<tr>
<td>1904</td>
<td>National data</td>
<td>177</td>
<td>37</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>17</td>
<td>6</td>
<td>41</td>
</tr>
<tr>
<td>1905</td>
<td>National data</td>
<td>209</td>
<td>47</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>21</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td>1906</td>
<td>National data</td>
<td>186</td>
<td>37</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>17</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>1907</td>
<td>National data</td>
<td>173</td>
<td>26</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>7</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>1908</td>
<td>National data</td>
<td>178</td>
<td>44</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>12</td>
<td>8</td>
<td>42</td>
</tr>
<tr>
<td>Total</td>
<td>National data</td>
<td>1482</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Archival sample</td>
<td>112</td>
<td>17</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: See text.

* = Average excluding two exceptional cases (see text).
Test 1: Results of Friedman two-way ANOVA test performed on data from table 1

<table>
<thead>
<tr>
<th>Source</th>
<th>Partial SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Prob&gt;F</th>
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</thead>
<tbody>
<tr>
<td>Model</td>
<td>.22414667</td>
<td>11</td>
<td>.02037697</td>
<td>1.63</td>
<td>0.1730</td>
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<tr>
<td>sectorcat</td>
<td>.22012</td>
<td>9</td>
<td>.02445778</td>
<td>1.95</td>
<td>0.1082</td>
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<tr>
<td>yearcat</td>
<td>.00402667</td>
<td>2</td>
<td>.00201333</td>
<td>0.16</td>
<td>0.8526</td>
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<tr>
<td>Residual</td>
<td>.22524</td>
<td>18</td>
<td>.01251333</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.44938666</td>
<td>29</td>
<td>.01549609</td>
<td></td>
<td></td>
</tr>
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</table>

Number of obs = 30
R-squared = 0.4988
Root MSE = .111863
Adj R-squared = 0.1925
Test 2: Results of Kolmogorov-Smirnov test performed on the variable “assets” reported in table 2

<table>
<thead>
<tr>
<th>Most Extreme Differences</th>
<th>Absolute</th>
<th>.625</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td></td>
<td>.125</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td>-.625</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td></td>
<td>1.250</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td></td>
<td>.088</td>
</tr>
</tbody>
</table>
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