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Researching shareholding and investment in England and Wales: Approaches, sources and methods

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Abstract

There is considerable scope for increasing the understanding of the history of share ownership. Existing studies of shareholders in the UK are limited in the industries, time periods and shareholder populations they study. This article outlines the methods used by the authors in an ESRC-funded study of shareholders in companies in England and Wales from 1870 to 1930. Data were drawn from companies' shareholder records – the Form Es submitted annually to the Registrar of Companies and the share registers and ledgers maintained by companies. The article outlines the rationale for the industrial sectors selected for study, the choice of companies and the basis on which shareholder records were sampled. The resulting database contains details of over 29,000 individual shareholders who collectively had over 33,000 shareholdings, and is larger and more representative of the investor population than any previously compiled in the UK.

Keywords: *investor behaviour; shareholding; share ownership; share registers; sampling methodologies*

Introduction

Historical research into share ownership in England and Wales is expanding but is still restricted in scope. As a result, there are numerous possibilities for projects that can enhance understanding of the development of investment behaviour, personal wealth and corporate governance in the UK. This article provides a set of methods for examining a variety of issues in investment practice in England and Wales after the introduction of the limited liability company in the mid-nineteenth century. These methods have been developed in the course of a project that is briefly outlined below. We argue that it is possible for them to be usefully applied by researchers interested in other historical periods and in other investment issues. The article briefly outlines the extent of previous research on shareholders in England and Wales and the questions that remain to be answered about the behaviour of shareholders. It describes the resources that were used in the research, the basis on which the sample of companies and shareholders was determined and some of the problems that arose in the process.

Research project

The project, which has its methods outlined below – *Women Investors in England and Wales, 1870 to 1930* (Economic and Social Research Council [ESRC] Award reference RES-000-23-1435) – is an investigation into the relationships between gender and investment behaviour in the UK.¹ During this period, limited liability companies became fundamental to the development of British industry, and shareholding grew in response to the increased choice of companies for investment and the variety of share types available. There is a growing debate about the extent to which women, as well as men, took advantage of these investment opportunities to assemble portfolios of shares, drawing on safe securities such as railway shares but also on the wider range of industries and securities that was being opened up (see for example Green & Owens, 2003; Maltby & Rutterford, 2006; Rutterford & Maltby, 2006).

There is scope for discussion of the factors that influenced women's investment behaviour, and the differences between male and female choices. Such differences may include the industrial sectors and companies they selected, the location of companies' activities – home, empire, foreign and regional within the UK – company status, public or private, company performance, the value of investment and the types of security chosen, whether ordinary or preference shares or debentures. Factors potentially affecting choice may include age, occupation and

marital status, the amount of relevant knowledge about investments, and the extent of investors' discretion. Did women make independent decisions, or were choices made for them by male advisors, inside or outside the family? Were family connections important in determining the choice of investment? The period for which securities were held before disposal is potentially revealing – were women looking for a safe income and investing for the long term or did they also look for capital growth? Were they prepared to buy and sell rapidly where this looked advantageous? Is it possible that male and female behaviour did not in fact differ as markedly as stereotypical images might suggest, so that both men and women might in some cases be risk-avoiders and in others prepared to gamble in pursuit of high returns?

More research is needed to answer these questions, and also to understand changes over the period, including any differences in investing behaviour before and after the First World War as women's social and political status altered. The effect of investors' geographical location on their choice of companies also deserves further attention, particularly in relation to regional cultures of investing.

Drawing on a variety of archival sources, this project examines share and property ownership by men and women. The main elements of this research are a study of portfolios of wealth from 1870 to 1902, identifying the assets held by men and women on death;² a study of the composition of personal estates from 1870 to 1928;³ and a study of shareholding behaviour from 1870 to 1930. This last-named study, which considers national patterns of share ownership, is described in detail in the present article.⁴ The share ownership study has produced data for a total of over 29,000 shareholders using 223 sets of share records of 47 companies.

Previous research on shareholders

As the previous section indicates, research into shareholders has the potential for generating considerable information about investment choice. Outlined below are previous approaches to research based on shareholder records, followed by a summary of the new features of our approach, to be described in detail in the present article.

The size of the population

Several studies have attempted to estimate the size of the shareholder population, either for a particular industry or in total. Hargreaves Parkinson investigated the shareholders of the four major English railway companies (Parkinson, 1944) and of the companies in the FT30 share index (Parkinson, 1951). Both these studies involved sampling every tenth shareholder, out of a total of 1,137,000 for the railways and 1,112,970 for the FT30 companies. This methodology has also been used to study US shareholders. For example, work by Kimmel on shareholders in

all US companies listed on all US stock exchanges, carried out for the New York Stock Exchange, used a one in 10 sampling technique in order to estimate the numbers of shareholders involved. These researchers were interested in the number of shareholders in the population and were aware that the number of shareholdings was greater than the number of shareholders, as some shareholders held more than one type of security. For example, the Kimmel survey estimated a total of 20m shareholdings, but using income tax data for dividend income, reduced this to 6.5m shareholders (Kimmel, 1951).

A survey published by the *Financial Times*, on 1, 2 and 3 March 1949, involved a sample of 40 companies “of all types and all sizes” with 100 shareholders chosen from each:

From each register we took a number of shareholders, generally 100 using where possible different parts of the alphabet. We therefore had 4000 names which could be regarded as a fair sample. This is a representative sample not of any one two or three companies but of the investing public as a whole. (*Financial Times*, 2 March 1949).

By comparing these 4,000 names with the full shareholder lists of two large, unnamed companies, the FT survey derived an estimate of 1.25m shareholders of companies listed on the London Stock Exchange. The total number of shareholders in the UK for the period under review remains a matter for discussion.

Studies of share ownership

A variety of previous investigations of share ownership have been undertaken in the course of academic research, and Table 1 summarizes these in chronological order of the period investigated. The extent of previous research is limited and there is no systematic sampling, either of companies or of shareholders. Existing work on the history of shareholding has tended to follow three approaches. Some research has focused on individual companies, providing detailed analysis of changes in patterns of ownership over time (for example Maltby, 2009). Other scholars have focused on one or two sectors, such as canal and railway companies (Hudson, 2001) or banks (Acheson & Turner, 2006). Finally, a small number of studies have examined broader patterns of investment across a range of sectors, but typically at a particular point in time. Work by Davis and Huttenback (1987), which examines the relative importance of domestic, foreign and imperial investment in the late nineteenth century, is the main example of this approach, using data for records dated 1883 to 1907, but analysing the data cross-sectionally. In each case, the sampling framework and sample size is necessarily different. Only Acheson and Turner (2006), Davis and Huttenback (1987) and Freeman *et al.* (2006) have worked with large sets of UK shareholders. Most studies are based on 100 per cent sampling of shareholders: Davis and Huttenback, for example, sampled 100 per cent of records of 260 companies spanning a range of industries.

Table 1: Previous investigations of share ownership

Authors	Industries	Number of shareholders	Period	Basis of sample	Coverage
Freeman <i>et al.</i> (2006)	1) 86 stock companies for analysis of shareholders 2) 112 companies for analysis of shareholding capital	41,450 shareholders	1720–1844	Unsystematic choice of companies, based on whether data had been collected.	Not clear
Bowen (1989)	East India Company	Not stated	1756–91	Uses secondary data of others as well as own	10 or 20 % sample
Hudson (2001)	7 railway and 11 canal	6,000	1760–1850	Companies from West Midlands area	100%
Evans (1936)	Railway, canal and utility	Not stated	1775–1850	Not stated	100%
Newton and Cottrell (2006)	20 banks established 1827–1836	Not given	1827–64	Representative of different types of bank	100%
Newton (2004)	86 Sheffield industrial companies	3,668	1855–85	Companies formed 1855–1885	100%
Cottrell (1980)	London limited companies	Not given	1860 and 1885	10 % random sample from BT31	100%
Hickson and Turner (2003)	Ulster Banking Corporation	1,995	1868–79	N/A	100%
Acheson and Turner (2006)	Ulster Banking Corporation	1877 1,444 1892 3,914 1914 7,014	1877–1914	N/A	100%

Table 1: (continued)

Authors	Industries	Number of shareholders	Period	Basis of sample	Coverage
Davis and Huttenback (1987)	260 London listed companies in the period 1883–1907, including a wide range of industries	c.80,000	1883–1907	Representative industries and companies operating domestically, in the Empire and overseas, registers for years ending 3 and 7 chosen from Stock Exchange Year Book	100%
Dixon <i>et al.</i> (2004)	Sunderland Albion, Middlesbrough Ironopolis, Newcastle West End	237 shareholders	1889–92	Football clubs in the North-East of England	100%
Van Helten (1990)	London and West Australian Exploration Company Ltd	Not given	1896	N/A	100%
Franks <i>et al.</i> (2005)	40 companies listed on London Stock Exchange	Not given	1900	Chosen from 5 sectors- breweries, iron/ coal/ steel, shipping, mining, other commercial and industrial shareholders	Directors, families, plus largest shareholders – top 25% in companies selected a) 100% b) 30% sample
Maltby (2009)	a) Greenwood & Batley b) Hadfields Ltd	a) 770 b) 7,500	1900–30	a) Engineers b) Steel industry	

Our project, unlike those of Kimmel and Parkinson, does not attempt to offer an estimate of total numbers of shareholders, male and female, during the period under review. It is, instead, intended to identify characteristics of the shareholder population but, unlike the surveys included in Table 1, it attempts to investigate a representative population of industries over a period of more than 60 years. The surveys summarized in Table 1 are generally for specialized groups of companies and in many cases for shorter periods than that attempted in the current project.

The basis of sampling also shows variations. The majority of Table 1 surveys are based on 100 per cent samples of shareholders while the works by Parkinson and by Kimmel represent a 1 in 10 sample of shareholders. The research discussed here used neither of these approaches. A 100 per cent sample would have been impossible in view of the length of the period and the intention of dealing with a representative sample of industries. Unless private companies only had been selected (that is, those with fewer than 50 shareholders), the sample would have been impracticably large. The 1 in 10 sample approach was considered, but was rejected for the same reason. Parkinson and Kimmel were both selecting a sample at a fixed point in time, whereas our project covers several decades. Moreover, the number of shares issued by companies grew steadily over the period for a variety of reasons and it was therefore important to develop a methodology that was sufficiently flexible to take account of these changes over time. Share values were reduced in an attempt to make shares more accessible and attractive, so that existing shares were split. Preference shares were increasingly issued as a means of attracting new shareholders. In a sample of more than 2,500 companies, Essex-Crosby (1938, p.31) found that preference shares rose from 12.2 per cent to 22.4 per cent of issued capital between 1885 and 1895 alone. Debenture finance also became more popular. The combination of the two “fixed charge securities” accounted for 75 per cent of new issues in Essex-Crosby’s sample by 1913 (Essex-Crosby, 1938, p.133). New issues of low value designed to appeal to the public – for example, 1 shilling shares – were also identified as a trend in the 1920s (*The Economist*, 1929, pp.691–2). The result of these strategies was to increase the number of shareholders over the period: hence a 1 in 10 sample selected in the 1870s would have rapidly grown in size as the nominal value of shares was reduced and the shareholder population grew. (For instance, one of the sampled companies, J. Lyons and Company Ltd, increased from 150 shareholders in 1894 to 20,000 in 1920). Hence, as discussed in more detail below, our sample is based on a sample size calculator with a maximum of 195 shareholders for each share record selected.⁵

Types of share record

The Companies Acts made it a requirement that companies should produce detailed annual returns of their shareholders which were to be submitted to the

Registrar of Companies (now Companies House) and were available for public consultation. This was an onerous requirement, as was bemoaned by the Chairman of the Judische Colonialbank in 1900:

To give you only one example, I may refer you to the fact that according to English law it is necessary to supply Somerset House within fourteen days of the General Meeting with an accurate list of all shareholders, their names, addresses, and occupations, and with any changes in the amount of their holdings. Imagine, Ladies and Gentlemen, what that means with over 120,000 shareholders! (Guildhall accounts file of Judische Colonialbank for 1900)

The record referred to by the Chairman of the Judische Colonialbank was the *Form E*, a document issued by the Registrar of Companies to be completed and returned annually. This was made a statutory requirement by the Companies Acts of 1856 and 1862 under which it was mandatory for companies to file an annual statement detailing their equity capital structure (authorized and issued) and a list of their shareholders (both ordinary and preferred). Names, addresses and occupations of shareholders were also required. Changes in the amount of holdings during the year were also given.⁶

Records of shareholders were kept by companies for a variety of purposes. For example, the *share register* was a list produced by a company which it transcribed into a Form E annually. It commonly took the form of a list of names and addresses and the number and type of shares held, but it was up to the individual company to decide how to arrange it and what further information, if any, to include. It was normally updated annually. The *share ledger* was a collection of accounts showing movements in each shareholder's investment, such as purchases, disposals and bonus issues. It was updated when alterations occurred in the account. The *subscription list* applied in the case of early limited companies where a small number of individuals agreed to subscribe to the shares of a new company. The *allotment list* was the list of subscribers to new capital, either of a new company or of new shares of an existing company.⁷ All companies were required to produce the Form E, and they might choose to maintain some or all of the other items listed, depending on their needs.

Share records for English and Welsh companies exist in the National Archives at Kew and in a variety of other archives.⁸ Company archives, to be found in local record offices and private/corporate collections, are the best source of share registers, share ledgers or subscription and allotment lists. The Access to Archives website (<http://www.nationalarchives.gov.uk/a2a>) describes itself as containing "catalogues describing archives held locally in England and Wales and dating from the eighth century to the present day" and is an excellent starting-point. For companies in England and Wales that have been wound up, Form Es are to be found at the National Archives in the BT31 series. Companies still in existence have lodged their records, including Form Es, with Companies House.

The Bank of England has its own archive of ledgers of government securities holders (included in this study alongside corporate shareholdings).⁹ There are some industry archives with share record collections: for example the National Gas Archive (<http://www.gasarchive.org>) has a number of share registers of gas companies.¹⁰

Although the quality of individual records will vary – some may be less detailed than others, or different secretaries of the same company may be more or less likely to add helpful notes – they still represent a rich source of data about investors.

Choice of sectors

For our research, the aim was to explore shareholdings across a broad sectoral mix spectrum, over a long time span – the 1870s to the 1930s – a period when there was major change in the investment opportunity set and hence in the types and importance of sectors in which investors could buy shares. Two key issues relating to the sampling framework that we adopted are the choice of sectors and the weighting of each sector chosen.

There is no established historiographical protocol for the sectoral classification of different types of economic activity. Previous historians of finance and investment have frequently been constrained by the way that original source materials were compiled, particularly where analysis has been based on aggregate statistics collected by governments and other authorities. A further problem is that some sectors dramatically diminish in importance, while new sectors emerge. Accordingly, the problem is analytical as well as methodological and it is difficult to specify a scheme for sectoral breakdown that could be universally applied to different historical and geographical contexts.

Table 2 lists the sectors to which companies with securities listed on the London Stock Exchange were allocated in the *Stock Exchange Year Book (SEYB)* for 1 January of 1873, 1883, 28 December 1893, and 31 December 1903, 1913, 1923 and 1933. The relative importance of the sectors is shown in terms of their issued nominal capital (Morgan & Thomas, 1962, pp.282–3). From Table 2, it is clear that some sectors did not exist for the whole period under consideration. For example, new technologies such as electric lighting, and oil were added and new sub-sectors such as bicycle manufacture and motor car manufacture were included from the 1890s but hidden in the “Commercial, Industrial” sector. This sector grew in importance as new sub-sectors were added.

While the *SEYB* classification has the virtue of being a contemporary breakdown of different sectors, it was not considered entirely appropriate for this study. Its “Commercial, industrial” sector did not sufficiently differentiate manufacturing from other activities. We wanted to devise an all-inclusive set of sectors, avoiding

Table 2: Stock Exchange Year Book classifications of companies with securities listed on the London Stock Exchange

	1873	1883	1893	1903	1913	1920	1933
British funds	37.80%	23.90%	12.30%	10.60%	9.00%	32.70%	35.50%
Other UK corporation and public stocks		1.40%	1.40%	1.90%	2.50%	2.00%	2.30%
Foreign stocks, bonds	21.40%	26.80%	41.10%	37.00%	33.30%	18.70%	21.50%
Railways (UK)	16.50%	18.10%	13.00%	12.50%	10.80%	7.60%	6.10%
Railways (Other)	15.60%	22.40%	23.80%	22.40%	26.00%	23.50%	14.40%
Banks and discount companies	4.60%	1.50%	1.00%	2.30%	2.60%	2.40%	1.30%
Other shares	4.10%	5.90%	7.40%	13.40%	15.80%	13.20%	20.20%
Total value (£m)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Per cent increase	2,270.0	3,641.4	6,561.1	8,833.8	11,262.5	16,576.1	18,476.2
		60.4	80.2	34.6	27.5	47.2	11.5

the “miscellaneous” category that is a feature of some analyses (for example Wilkins, 1989). We used the sectoral classification below as a methodological basis for sampling companies. It should be noted, however, that our data have been coded such that a different sectoral breakdown of the data, in particular that adopted by Davis and Huttenback (1987) in their study of shareholders, can be undertaken for the purposes of analysis.

- Agricultural – including tea and coffee, rubber, tobacco
- Commercial and Breweries – including brewing, retail, hotels
- Extractive – including iron and coal, oil, gold
- Financial – including banks, insurance, investment trusts
- Manufacturing – including engineering, steel, food manufacturing, general manufacturing; for example bricks
- Transport and Communications – railways, tramways, telegraph, shipping
- Utilities – including gas, electric, water
- Government – including Consols

It is arguable that, given the importance of railway and Government securities with the majority of investors,¹¹ our sample should have been weighted in favour of these. However, had we followed this route, there would have been little scope to investigate shareholders in other sectors. To achieve coverage across a range of sectors we adopted a different approach which can best be described as a “disproportionate stratified sample”, that is, a (more or less) equal number of companies has been sampled in each sector irrespective of the overall importance of that sector as measured by capital value. Our sectoral analysis is intended to cover the full range of industrial/service sectors while allowing the identification of changes in behaviour and sectoral importance over the period that takes account of the growth of new sectors or sub-sectors of the economy. It is possible, starting from this basis, to devise classification methods that allow the researcher to trace other trends – for example, private versus public company investment or the geographical location of the companies investigated.

Choice of companies

Once the sectors and sub-sectors had been chosen, a company had to fulfil several criteria to warrant inclusion. The broad aim was to try to mirror the range of opportunities available to potential investors and to do so required paying attention to several criteria, as briefly described below.

Span of time

In order to accommodate the possibility of analysing change over time within companies as well as within sectors, we focused on companies for which there

were at least two share records spanning at least a 10-year period. We were also careful to choose companies with records in the early and later decades of our period.

Longevity

We included some companies that survived until recently and some that had been wound up due to liquidation, reconstruction or takeover. We also included some that had been in existence prior to 1870.

Date

Where there was a choice of record, we preferred years ending 1, 2 or 3 (for example 1891) to later years in the decade, in order to maximize the possibility of linking individual shareholders to Census enumerators' books, and thereby to explore the social and economic characteristics of individuals in more detail. (Under the 100 years' privacy rule, the last census for which such information is available is currently 1901).

Size

Our sample included a range of companies by size, both of issued nominal capital and also number of shareholders per list. There was also variation over time, with some company records increasing from hundreds to thousands of shareholders during the period under review.

Geographical variation

We selected companies which had domestic, empire and foreign activities, and also looked for a regional mix of operation in England and Wales.

Type of share capital

We aimed to include companies with more than one type of share capital (ordinary, preference, etc.) and, if possible, some with records of holders of fixed interest securities (see above). This enabled us to look at investor attitudes to risk.

Public and private companies

The majority of the companies we chose were public companies, in that they had at least one security publicly quoted on the London or on a provincial Stock Exchange and therefore had an entry in the SEYB. We also included some companies in the sample (for example Aspley Guise and Bestwood), which were not listed/quoted – they had fewer than 50 shareholders and had not issued a prospectus to the public. They were therefore private companies according to the *Companies Act 1907* (see Storrar & Pratt, 2000, p.282).

Personal papers

We were also interested in finding additional information about the companies in our sample. We therefore searched first on A2A for company records in local

archives, including mentions of share records as well as board papers and correspondence relating to the company, which would help to throw additional light on its relationship with its shareholders.

With these criteria in mind, we searched the A2A database using the keywords “share”, “stocks” “share holders” “debentures” and “share register” This produced a listing of over 1000 companies with some extant records relating to shares. These companies were then matched against the alphabetical listing of papers available in the BT31 series or in Companies House. This yielded an initial sample of 98 companies. To this group were added some companies that appeared in other archives only. These included Cunard,¹² which provided a major continuity case study with a rich set of related papers. We also added some companies that were in BT31 and Companies House but not in A2A to complete our sector and sub-sector quotas. The companies chosen are shown in Table 3.

Given the constraints imposed by the survival of source material, it was not possible to ensure systematic inclusion within the companies selected for each sector and for all the criteria identified above. These criteria therefore guided rather than dictated the choice of companies. The size of companies and the number of shareholders of different categories also rose significantly during our period, limiting the number of companies we were able to sample. However, the methodology we describe below allows additional records or additional companies to be added to the national database we have established.

Working with share records

Evidence on individual shareholders came primarily from Form Es and some company archive share records. For Companies House, there was little difficulty in finding the past Form Es for a desired year for a particular company, but there were limitations elsewhere. Most of the records held at the Guildhall Library in London were not complete enough to be of use. The National Archive BT31 collection suffers from the fact that only a fraction of the company records are still available. Records for individual companies have been saved for only every fifth year. Also, for “small firms”, the National Archive retained only a five per cent sample of firms registered (Davis & Huttenback, 1987, pp.355–6), and only a random sample of companies dissolved after 1932 have been kept (Franks *et al.*, 2005, p.7). One factor that also had to be taken into account was name changes. For example British Petroleum was previously listed as Anglo-Persian Oil Company, Limited (1909) and then as Anglo-Iranian Oil Company, Limited (1935), and A. Darracq and Company (1905), Limited changed its name in 1920 to STD Motors, Limited. It was important to be aware of these in order to ensure continuity in following the sample from one decade to another.

Table 3: List of companies

Name of company	Sector	Operations
A. Darracq and Company (1905), Limited	Manufacturing	Domestic
Anglo-Persian Oil Company, Limited	Extractive	Foreign
Argentine Great Western Railway Company, Limited	Transport and Communications	Foreign
Ashby's Cobham Brewery Company, Limited	Commercial, and breweries	Domestic
Aspley Guise and Woburn Sands Gas Company, Limited	Utilities	Domestic
Bank of England	Government Stock	Domestic
Barclay and Company, Limited	Financial	Domestic
Bestwood Coal and Iron Company, Limited	Extractive	Domestic
Bon Marche (Brixton), Limited	Commercial, and breweries	Domestic
Boots Pure Drug Company, Limited	Commercial, and breweries	Domestic
British Columbia Fruit Lands, Limited	Agriculture	Empire
Burlington Hotels Company, Limited, The	Commercial, and breweries	Domestic
Ceylon Cocoa and Rubber Company, Limited	Agriculture	Empire
China Navigation Company, Limited, The	Transport and Communications	Foreign
City of Ely Gas Company, Limited, The	Utilities	Domestic
Cuba Submarine Telegraph Company, Limited	Transport and Communications	Foreign
Dumont Coffee Company, Limited	Agriculture	Foreign
Foreign and Colonial Government Trust Company, Limited	Financial	Foreign
Gas, Water and General Investment Trust, Limited	Financial	Domestic
Great Grimsby Water Works, Limited, The	Utilities	Domestic
Halifax and Huddersfield Union Banking Company, Limited	Financial	Domestic
Hallamshire Steel and File Company, Limited, The	Manufacturing	Domestic
Havana Cigar and Tobacco Factories, Limited	Agriculture	Foreign
Havana Oil Company, Limited	Extractive	Foreign
Henry Tate and Sons (1903), Limited	Manufacturing	Domestic
Imperial Tramways Company, Limited	Transport and Communications	Domestic
Indian Tea Company of Cachar, Limited	Agriculture	Empire
J. Lyons and Company, Limited	Commercial, and breweries	Domestic
J.S. Fry and Sons, Limited	Manufacturing	Domestic

Table 3: (continued)

Name of company	Sector	Operations
Klanang Produce Company, Limited	Agriculture	Empire
London and Tilbury Lighterage Company, Limited	Transport and Communications	Domestic
London Electric Supply Corporation, Limited	Utilities	Domestic
London, Brighton and South Coast Railway Company, Limited	Transport and Communications	Domestic
Luipaard's Vlei Estate and Gold Mining Company, Limited	Extractive	Empire
Magadi Soda Company, Limited	Extractive	Empire
New Peterborough Brick Company, Limited	Manufacturing	Domestic
Palatine Insurance Company, Limited	Financial	Domestic
Pease and Partners, Limited	Extractive	Domestic
Prudential Assurance Company, Limited	Financial	Domestic
Reckitt and Sons, Limited	Manufacturing	Domestic
Samuel Allsopp and Sons, Limited	Commercial, and breweries	Domestic
Sheffield District Railway	Transport and Communications	Domestic
Sir W.G. Armstrong and Company, Limited	Manufacturing	Domestic
Southern Mahratta Railway Company, Limited	Transport and Communications	Empire
Staley Mill Company, Limited	Manufacturing	Domestic
Tempeh (Java) Rubber Plantations, Limited	Agriculture	Foreign
Wantage Tramway Company, Limited	Transport and Communications	Domestic
West Gloucestershire Power Company, Limited	Utilities	Domestic

Working with different types of share record

The major difference between the Form E and a company's share records is that the former is required to be submitted annually and shows the shares held at a particular point in time – a date within 28 days of the company's financial year end – whereas company records are maintained over a period of time. The company record will begin to be maintained when the company makes its first issue of shares, with an entry for each shareholder. These entries will be updated to show additions, transfers and disposals by shareholders, including purchases of shares on the open market, purchase of rights issues, the take-up of bonus issues, increases/reductions in the number of shares held due to share splits/consolidations, sales

and gifts of shares and the disposal of shareholders' estates on death. These movements will increase, reduce or eliminate holdings by shareholders. In addition, new shareholders will be added to the company's records because they have bought, been given or inherited shares.

It is difficult using company ledgers to calculate the number of shares held at a particular date, unless the opening date or the closing date of the ledger is chosen, because the ledger account may not be very clearly balanced off annually. If a shareholder has engaged in transactions, it will be necessary to use the entries in the ledger to calculate the balance in hand at a particular date. However, share ledgers are of use for studies of continuity of shareholding, because of the evidence they give about the behaviour that has produced a particular shareholding – for example has the individual engaged in regular purchases of shares over a period; is s/he liquidating a shareholding to release funds? Are shares being sold on the open market or are they being transferred to family members? The detailed information provided by the ledger is useful in evaluating behaviour. The share register will often show only a balance of shares held, with alterations to the total when additions, disposals etc take place. It is usually annotated by the clerk maintaining it to explain reasons for changes, and it will often include information about the shareholder's marital status and occupation. These characteristics normally make it easier to follow than the ledger, and more informative than the Form E because it explains the reason for changes in shareholdings.

The order in which shareholders were listed was of prime importance to the project. Unfortunately, there is no generally accepted method for entering shareholders in a record. Since Form Es were often based on share records, particularly registers, the different approaches between companies for records also applied to Form Es. The approach could also change over time for a particular company, especially if the number of shareholders increased substantially and as shareholder lists went from being handwritten to being typed. However, often company secretaries got into bad habits when they started and found it difficult to change the system they had put in place. As the author of an 1862 treatise on share registers remarked:

Some companies keep, not only a Register in which the particulars required by the Companies Act are stated,¹³ but a Ledger in which the same particulars are restated in a slightly different manner, thus making a double expenditure of time and stationery without any beneficial result. Others, not content with this, keep a Numerical Register, in which every share is specified separately in numerical order; the name, address, and occupation of the holder, and the amounts paid, date of entry, &c., being written against each, so that if a man holds a thousand shares all the particulars have to be entered a thousand times. This immense but useless labour is undertaken from a mistaken interpretation of the words of the Act: "A statement of the shares held by each member *distinguishing each share by its number*". (Lewis, 1862, p.12, emphasis in original)

Several problems were encountered when using registers/ledgers. Companies would use a bound volume with a number of pages for each letter of the alphabet. They would normally begin by entering shareholders, giving each individual a separate page or half a page. When the original (half) page was full, the balance would have to be carried over to a fresh page.¹⁴ The factors determining the order of entry were some sort of alphabetical order, and within that the order in which share certificates were numbered – so that, for example, if Mr Brown were issued with Share No.1 and Mrs Bates with Share No.2, both would appear under B, but “Brown” would precede “Bates”. Where a new page was needed for an existing shareholder, the alphabetical order was liable to be further impaired, as the entry would have to be fitted in where space allowed. Similarly, the arrival of new shareholders would mean that space had to be found, possibly out of alphabetical order, for these additional entries. In addition, companies might need to record more than one type of share – for example, ordinary and preference – which were issued at different times. Shareholders of the two categories might differ, and so might be recorded quite separately.

The following section describes the method we adopted to deal with these problems in extracting a sample of shareholders.

Sampling the share records

As noted earlier, given the size of many of the records, particularly after 1900, it would have been impracticably time-consuming to cover 100 per cent of entries. Consequently a sample of shareholders had to be taken from each record, which had to be representative of the shareholder population for that company as a whole.

Systematic or random sampling?

Two main approaches could have been adopted to allow us to sample shareholders for our companies. One possible approach was to sample every *n*th shareholder in each list. This was the approach taken by Kimmel (1951) and Parkinson (1944, 1951), discussed earlier. However, although they were sampling large numbers of shareholders overall, as we were, they limited the information they collected. We were also collecting personal details, including name, address, marital status and occupation. Given that we had varying sizes of shareholder lists, sampling every tenth shareholder would have meant sampling, for instance five shareholders for a small company and 3,000 for a large one. The detail we were collecting made this approach impracticable. Other reasons also made such systematic sampling inappropriate. For instance, if every *n*th shareholder was taken, it would almost certainly have precluded the possibility of identifying family groups based on common surnames.

An alternative approach would have been to take a random sample of shareholders from each shareholder list, numbering each shareholder from one

to n , depending on the total number, and then picking numbers randomly from that range. This approach has the advantage that each shareholder has an equal chance of being picked. However, there were practical reasons for not adopting this approach. First, it would have required counting precisely the total number of shareholders in each share record. Given the size and complexity of the records, this would have been an almost impossible task. Second, even had this been possible, we would then have had to identify in the records each shareholder by their allotted random number, and again this would have been very time consuming.

We therefore chose a method that combined elements of both random and systematic sampling. First we estimated the total number of shareholders in each record by averaging out the number contained on five pages in the record and then multiplying this average by the number of pages in the record. Then we identified the number of shareholders we wished to sample based on a 95 per cent confidence level and a seven per cent confidence interval. This interval was chosen since the sample size required to obtain higher confidence intervals increases significantly after this point, which would have made collection of data across our sectors impractical in the time available for the research. We decided to make no assumptions as to the percentage of women investors and so assumed a 50/50 split between men and women shareholders by number. This led to a sample size per record of up to a maximum of 195 shareholders, with an average of around 150.

We also needed to deal with the issue of companies that had two or more different types of shares. In this case, there were different possibilities for the recording method they had used and hence for the sampling approach that we took. The company might keep a separate record for each type of share, for example, for ordinary and preference shares. In this case we took a separate sample for each share type, the size being dependent on the population in each record. Alternatively there might be a joint record for two or more types of security. In this case we took one sample based on the size of the record, including shareholders owning one or both types of security. Or there might be two (or more) records with more than one type of security in each. Each record was sampled according to size but all holdings of all types of security in it were noted for each selected holder.¹⁵

Once we had determined our sample size, we generated a random number for each letter of the alphabet. A minimum of three letters per share record were sampled in order to avoid family or regional bias of names. Within each randomly chosen letter, a random number start page was determined. This was to avoid the problem that might arise from starting at the beginning where only the original shareholders might be listed, or at the end where solely new shareholders might appear. If a chosen letter did not contain the appropriate number of shareholders, then another letter was added to the list, until the requisite number of shareholders had been sampled.

Letter-cluster sampling

A second aim of the project was to track the same shareholders over time to see for how long they held shares. The natural method for this would be letter-cluster sampling (Phillips, 1979; Richardson, 1994), which would have entailed choosing a set of surnames beginning with the same letters and following these from one share record to another. This continuity tracking proved impossible given the fact that many share records were not compiled in strictly alphabetical order, and the number of companies whose shareholders increased by a factor of 10 or 100 over time. Thus, shareholders with surnames beginning C, for example, might number under 10 in an early record but 2000 by 1930. Letter-cluster sampling would therefore have restricted the number of companies that we could analyse to an unacceptably small number given our sector spread requirements. It is worth noting that Kimmel (1951) used a letter-cluster approach to analyse the gender and addresses of shareholders in more detail. However, by doing this across companies rather than across different dates, he was not faced with the problem of change over time.

Database

Using this sampling approach, information on shareholders and their holdings has been obtained over a period of some 18 months and entered into a specially designed relational database using Microsoft Access 2003 software.¹⁶ As well as information on individual shareholders (name, address, occupation, marital status, etc.), the database records data on company financial structure, size, profitability and history. It has also been designed to handle a number of more complex share ownership permutations, such as joint and trustee holdings. Additionally, there is a facility in the database for adding information on shareholders derived from census enumerators' books. The database has been designed so that further companies might be added to the samples in the future. We are now drawing on the very rich store of information compiled in order to gain an understanding of men's and women's investment behaviour in the later nineteenth and early twentieth centuries. Further articles will outline our findings.

Conclusion

The study of shareholders starting from share records offers a wide variety of insights into areas that are potentially valuable for business and accounting historians. As discussed earlier, it has the potential to answer a range of questions about male and female investment behaviour, including attitudes towards risk. An understanding of shareholder behaviour also has an impact on the history of corporate governance, for instance in relation to the argument about the transition from personal to managerial capitalism. How rapidly did share ownership become diffused? Did companies encourage diffusion while founders retained control, by

marketing shares that did not have voting rights attached? How significant was the promotion of share ownership by employees?

We have here described the methods we used to compile a database of a representative sample of shareholders, covering UK companies from all economic sectors. We have outlined some of the issues and challenges that face historians in identifying appropriate source material and in devising suitable sampling strategies. Through careful consideration of these issues and critical analysis of other empirical studies of investment, we would argue that our project has generated the most rigorous dataset currently available for researching patterns of shareholding in England and Wales in the late nineteenth and early twentieth centuries. Providing an extensive, sectorally representative sample, and incorporating companies of varying sizes, ages, capital structures and profitability rates, operating in geographical locations within and beyond England and Wales, the data offer a unique opportunity to investigate a neglected aspect of the country's financial and social history. As well as casting light on the growing significance of investment wealth in the population as a whole, the data set allows us to investigate with confidence the significance of gender in understanding patterns of shareholding and, in turn, how this was shaped by wider legal, financial and cultural change. The specification of this methodology along with the construction of a major database for capturing historical data on investment (lodged with the ESRC data archive at the end of the project in 2008), will also provide a platform for the research to be extended chronologically and geographically in the future, and a data set that historians of investment in other countries can use as a test against their own findings.

Notes

1. We would like to thank our research assistants Steve Ainscough, Alison Kay, Carry van Lieshout, Carien van Mourik and Claire Swan.
2. This was based on legacy, succession and estate duty records (the IR19 and IR26 series at the National Archives) for a sample of 1446 individuals in England and Wales.
3. This also used Inland Revenue Annual Reports for the period 1898 to 1928, excluding 1916–19.
4. Two further studies deal with regional ownership, using a detailed study of companies in the Sheffield/South Yorkshire area, and with continuity of share ownership, based on the shareholder records of the major Liverpool shipping company, Cunard Ltd.
5. For details see <http://www.surveysystem.com/sscalc.htm>
6. This is a particularly useful source of data produced in the UK. In other countries, such as the United States, there was no such national requirement for listing shareholdings at a particular point in time, on an annual basis.

7. This could relate to a public issue of shares or to a list of investors whose shares were replaced by shares of a new type, in the event of a reconstruction or take-over. An allotment list might not relate to all shareholders of a particular type of share.
8. A similar function is served for Scotland by the National Archives of Scotland and for Northern Ireland by the Public Record Office of Northern Ireland
9. Access to these is limited by a 100 year disclosure rule.
10. An alternative source of share records is to be found in the London Guildhall Library records of the London Stock Exchange, in Applications for Listing files, MS18000 (<http://onlinecatalogue.cityoflondon.gov.uk/TalisPrism/>). These are catalogued by company name and then chronologically by issue of shares. They begin from 1860 although the early years have only a small number of files remaining. In some files there are allotment lists.
11. For instance, Clapham (1938) suggests that out of 1 million UK shareholders in 1914, 900,000 held railway shares. This does not imply that their investment was confined to railways, given the prevalence of multiple ownership, but it does emphasise the popularity of railways.
12. Held in the University of Liverpool archives.
13. “Every Company under this Act shall cause to be kept in one or more books a register of its members, and there shall be entered therein the following particulars:
 - 1) the names and addresses, and the occupations, if any, of the members of the Company, with the addition, in the case of a Company having a capital divided into shares, of a statement of the shares held by each member, distinguishing each share by its number and of the amount paid or agreed to be considered as paid on the shares of each member; 2) the date at which the name of any person was entered in the register as a member; 3) the date at which any person has ceased to be a member”.
14. In some cases, the page underwent no change – the individual retained the original shareholding until death.
15. Individual companies might also change the types of record they kept over time. For example, they might start with a single record for ordinary shares and later have joint or separate records for ordinary and preference shares.
16. The database was designed by Marian Nicolson from King’s College London. We would like to thank our research assistants for their essential contribution to the compilation of the database and Owen Glynn for assistance with the analysis of the data.

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