The anatomy of Britain's inter-war super-rich: reconstructing the 1928/9 'millionaire' population

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This article examines the composition of Britain's `millionaire' population during the late 1920s – early 1930s, based on data for *living* millionaires (in contrast to previous studies, which have focused on wealth at death). Using tabulated data compiled by the Inland Revenue for all persons on incomes over £50,000 per annum, it explores the factor incomes of Britain's millionaire population and their main sources of income, by sector. It then analyses a unique individual-level data set of British millionaires, compiled by the Inland Revenue for the 1928/9 tax year, to show their sectoral and geographical composition. Most millionaires are shown to be `businesspeople' rather than rentiers, while landed millionaires represented only a small proportion of the total. Businesspeople millionaires are shown to be disproportionately active in a relatively narrow range of sectors, the common characteristic of which was the potential to generate abnormal profits, mainly through cartelisation or amalgamation. Thus, rather than revealing the sectors most important to national wealth, or competitive advantage, the clustering of millionaires primarily reflects rising barriers to competition in inter-war Britain and the abnormal profits they generated.

There has been considerable recent scholarship regarding long-term trends in wealth (and investment income) distribution, partly owing to sharply rising inequality from the 1980s.[i] However, we know less about the composition of economic elites than we do about their wealth and income shares. Britain has relatively good data on personal fortunes at death from 1858, based on centralised printed calendars of probates (documents required for a will to be executed and assets transferred). These have constituted the principal source for research into personal wealth since W.D. Rubinstein's ground-breaking 1975 study of nineteenth and early twentieth century British wealthy elites.[ii] However, there are a number of problems with probate, or estate duty, based estimates that infer the wealth of the living from that of the deceased, especially after 1914, when rising top estate duty rates boosted incentives for tax avoidance/evasion. Moreover, for the super-rich, death typically occurred some years after retirement, and wealth at death is therefore unlikely to accurately reflect peak fortunes.

This paper analyses data on *living* British millionaires, collected by the Inland Revenue (hereafter IR) from the late 1920s to the early 1930s, especially a unique individual-level dataset of millionaires for the 1928/9 tax year, based on an IR list of all incomes in excess of £50,000 – equivalent to a capitalised value of £1 million. In common with earlier studies, traditional landed wealth is found to be in decline. However, this study shows that by 1928 millionaire wealth was dominated not only by business incomes, but by "businesspeople" who played an active role in the management of their firms. Many of their enterprises had experienced rapid growth in sales, and, especially, profits since 1914, on account of cartelisation and/or amalgamation, together with high barriers to domestic competition and imports. Thus, rather than revealing the sectors most important to national wealth, or competitive advantage, as Rubinstein suggested,[iii] the sectoral and corporate clustering of Britain's millionaires primarily reflects abnormal profits, generated through the restriction of competition.

The paper first discusses the advantages of data on living millionaires and outlines the data generated by the IR, including the list of individual millionaires that forms the basis of the 1928/9 millionaire dataset presented in this article. This is followed by an examination of trends in millionaire numbers over time and the sources of their revenue, by factor incomes and sectors. The dataset is used to examine the sectoral and geographical distribution of Britain's 1928/9 millionaires. Businesspeople millionaires are then examined in greater detail. Their fortunes are shown to be concentrated in sectors providing abnormal profits through high entry barriers, while some also boosted their post-tax income and company profits via aggressive tax avoidance strategies.

I

Declared wealth at death (via probates and estate duty) is the dominant data source for estimates of the British wealth distribution.[iv] However, such data become progressively less representative of true wealth over the twentieth century, as rising top tax rates incentivised tax avoidance and evasion.[v] Some millionaires avoided estate duty altogether, by the simple expedient of moving overseas (usually after retirement), mainly to the Channel Islands, Isle of Man, and other British dependencies. For example, the ship-owner and Conservative MP Sir Robert Houston transferred his domicile and all his property to Jersey, thus avoiding a British probate on his death in 1926.[vi]

There are also more fundamental problems in inferring the wealth of a living population from probate data. Probates do not show peak wealth, instead recording the assets of deceased people, who may already have spent or distributed a good part of their fortunes.[vii] Moreover, evidence suggests that not only the aggregate wealth of the super-rich, but its composition (by source of wealth), may vary considerably between samples based on deceased and living populations. Entrepreneurs' incomes typically peak in their fifties, while fortunes based on inherited wealth have a substantially older age profile.[viii] The impacts of negative wealth shocks can also vary substantially by age cohort. For example, Thomas Piketty found that in France the adverse wealth impacts of the two world wars were typically much more persistent for older wealthy individuals than their younger counterparts.[ix]

The "estate multiplier" method of deriving wealth distribution from estate data is also more problematic for the super-rich. Differences between the wealth of deceased and living populations are taken into account by weighting each observation by the inverse of the mortality rate for its age cohort, while the data are also sometimes adjusted for mortality differences by social class.[x] However, such adjustments do not fully take account of the unusual longevity of the super-rich. For example, in 1931 life expectancy at birth was 58.7 for men and 62.9 for women in England and Wales. However, the average age of death for the 180 millionaires in the 1928/9 dataset whose ages are known was 72.0 years, with 77.8 percent living to 65 or over. Even the 76 millionaires in the sample who died over 1928-34 had average lifespans of 70.0. Typical survival beyond statutory retirement age also makes it more likely that millionaires would have planned for their deaths – by making *in vivo* gifts or using trusts, settlements, and overseas companies to keep their wealth from the taxman. For example, shortly before his death, Britain's richest man, Sir John Ellerman (1862-1933), transferred very large investments to Audley Estates Ltd, registered in Prince Edward Island, Canada; a company that, the IR believed, was owned by members of his family.[xi]

Recently-released IR files examine both the aggregate portfolios of the millionaire class and the distribution of their main sources of income. The data were generated by the IR's newly-formed Research Division, established mainly to monitor Britain's millionaires' incomes and tax avoidance strategies.[xii] These provide data on income sources for living millionaires and are restricted to this income threshold - constituting a "pre-defined" group, chosen by the IR because they accounted for around a quarter of the total surtax yield and were believed to be the most active tax-avoiders.[xiii] A survey of IR records indicates that no similar data are available for later years.

The IR defined "millionaires" as people with annual taxable income over £50,000 (roughly £3 million in 2018 prices), which the IR estimated - on the basis of correlation analysis of surtax and estate duty data for individuals in their year of death – to be roughly equal to the income produced by £1 million of capital (£60 million in 2018 prices).[xiv] Incomes were widely used as a proxy for top wealth during the early twentieth century and there has recently been renewed interest in using capitalised income tax data to estimate wealth inequality.[xv]

The IR examined national "populations" of millionaires, but used several definitions (all based on a minimum £50,000 income). The first involved voluntary declarations of incomes above this threshold (hereafter Mv), which was the basis of the 1928/9 listing of individual millionaires. The second, broader, definition, Mbc, includes Mv, plus people later shown to have the qualifying income through IR "back case" research into previous years' tax returns.[xvi] The longitudinal data on numbers of incomes in excess of £50,000, £75,000, and £100,000 are based on this definition. Finally, Ms, the broadest definition, includes people known to have incomes in excess of £50,000, plus those suspected of having such incomes in the absence of tax avoidance/evasion. This is the source of the cross-sectional data on the distribution of millionaire wealth by asset class in Tables 1 and 2. Fortunately, as Ms is only 5.3 percent greater than Mv for 1928/9, the different definitions do not greatly distort comparisons.

The 1928/9 millionaire list is unique among these sources in that it provides individual-level data on millionaire incomes – compiled to estimate how much a 40 per cent estate duty on them would raise.[xvii] Unfortunately, it has one major deficiency - to avoid unnecessarily compromising tax-payer confidentiality, names were omitted where dates of birth, or marriage, were known. The files do not note how these dates were identified, but it is likely that the compilers used standard biographical reference works such as *Burke's Peerage* and *Who's Who.* The list does not contain the names of any lords and very few of those named are on the *Who's Who and Who Was Who* database[xviii] (while those listed may have had a *Who's Who* entry only after 1928). Of the 438 people on the list, only 162 (37.0 percent) are named. Moreover, the proportion named falls from 42.1 percent for incomes under £100,000 to 29.5 percent for incomes of £100,000-£199,000, and 3.7 percent for incomes over £200,000, which would bias the sample. The major task of this project, therefore, was to increase the number of identified millionaires in a way that would not create sectoral or geographical bias (which might occur, for example, by focusing on high-profile sectors or firms).

Eight further names were identified using a supplementary list in the file.[xix] A further five names, for some of the richest persons on the list, had been identified (from their incomes and birth dates) by Rubinstein, for a *Telegraph* article by Ben Fenton regarding the list in 2006 (when it was first released).[xx] Three other sources were used to identify un-named people on the list (although it was not possible to match them with specific list entries). The first involved analysis of The National Archive's (herafter TNA) EM2 class ledgers – containing summaries of super-tax and, later, surtax appeals to the Special Commissioners of Income Tax, for tax years spanning 1920/21 to 1935/36. The ledgers for later years are still closed. These typically included the tax-payer's, and the IR's, assessment of taxable income, together with the final figure decided on, including any subsequent appeals to the courts. In using data typically for a single tax year, other than for 1928/9, "one-off" incomes (arising from unsuccessful taxpayer attempts to turn several years' income into capital gains, realised in a specific year) were rejected. Assessments for years prior to 1928/9 were checked to ensure that the person was still alive at the start of the 1928 tax year. Assessments after this year were also checked, to avoid fortunes inherited during or after 1928/9 (which might involve the same fortune being counted twice). This produced 24 additional names.

Further names were identified from Rubinstein's list of probates over £1 million (for people dying after the start of the 1928 tax year) including his separate listings for female and "foreign" millionaires.[xxi] For the period 1928/9-1938/9 estates of over £1 million were added, again using checks to avoid double-counting of fortunes.[xxii] For later years allowances were made for inflation and cross-checking with other sources was used to ensure that they had made their fortunes before 1928.[xxiii] This provided 106 additional names. Finally, the TNA's IR class files regarding millionaire tax avoidance were surveyed; IR 40/4574 summarised various cases for persons with incomes well in excess of £50,000, providing 14 new names.[xxiv]

Overall, some 319 named individuals, equivalent to 72.8 percent of the number on the millionaire's list, were identified (See Appendix). This probably includes some millionaires who were not on the original list (given that the IR sometimes took several years to reach final tax assessments) but all would meet the minimum £50,000 income criterion on the basis of their final IR assessment for 1928/9. The names were then coded by sector, region, and other variables (such as probate values and vital dates) using sources such as the Oxford Dictionary of National Biography on-line; Whose Who and Who Was Who on-line; the *Dictionary of Business Biography*; the *Scottish Dictionary of Business Biography*; *The Directory of Directors;* the Gale Newsvault newspaper archive; Ancestry.co.uk births, marriages, deaths, military, and probate datasets; plus a variety of other sources found via Google searches.[xxv] However, 20 named individuals (all on the initial IR named list) proved untraceable. Some had common names, making nominal linkage impracticable, while it is also possible that some names were mis-transcribed when the list was compiled from IR registers (for example, in several cases the first part of a hyphenated surname was transcribed as a middle name).

The dataset (including untraceable names) included 291 men and 28 women (22 of whom were widows).[xxvi] However, in common with Rubinstein's analysis, we only found evidence for one woman being active in business – Annie Watson, a permanent director of the carrier firm Suttons & Co. Rather than implying a lack of British female entrepreneurship, this probably reflects social barriers to women's entry into the higher ranks of business. As Rubinstein noted, Britain had stronger formal and informal barriers than, for example, the USA, such as bars on entry to the Stock Exchange, certain business-related professions (prior to the Sex Disqualification (Removal) Act, 1919), and clubs that might be used for informal business discussions.[xxvii] Such barriers are likely to be stronger for larger companies.

II

There is a broad consensus that personal wealth, and income flowing from wealth, became substantially less concentrated in most western nations from the Edwardian era to the 1950s.[xxviii] A decline in top capital incomes has been identified as the main factor behind falling personal income inequality, driven by shocks (such as the two world wars and the 1929-32 depression) in conjunction with policy responses that acted to erode capital incomes.[xxix] Scott and Walker's analysis of top incomes over 1911-49 corroborates these findings for Britain. Super-tax and surtax (which replaced super-tax) data show a substantial long-term decline in the number of incomes over £50,000 after 1922, as shown in Figure 1, which charts numbers of incomes in excess of £50,000, £75,000, and £100,000. Similarly the income shares of the millionaire group fell from 12.35 of super-tax assessed income in 1922 to 9.56 percent in 1929; followed by a fall from 9.95 percent of sur-tax assessed income in 1929 to 7.75 percent in 1938; with income share falls evident for all three of these sub-groups. Tony Atkinson found similar falls for slightly broader groups (the top 0.01 – 0.1 percent of incomes).[xxx]

[Figure 1 near here]

The literature suggests that the First World War was a pivotal event in the distribution of wealth (and the income it generated).[xxxi] Neil Cummins estimated that Britain's economic elite suffered the highest proportional destruction of wealth in both World Wars, while the impact of the First World War was especially severe (57 percent of elite wealth being destroyed, while lower wealth groups became richer).[xxxii] There is also evidence that wealth destruction during the First World War and its aftermath disproportionately impacted the landed classes, while many businesspeople increased their wealth. John Turner's study of Northern Ireland found that falling wealth inequality was driven by a decline in the estates of top wealth owners, mainly from the titled classes.[xxxiii] Conversely, the wealth shares of merchants/industrialists rose substantially, relative to titled or professional people, between 1911 and 1922, reflecting the positive impact of the War on wealthy shipbuilders and linen manufacturers.[xxxiv]

Landed incomes had been falling from the 1880s, owing to rising food imports, though the incorporation of a section of the banking elite into the aristocracy, via marriage, had helped to alleviate the financial impact.[xxxv] However, their decline accelerated after 1914, largely owing to a steep fall in land values. While landed families diversified into other securities, land sales mainly occurred during 1919-21, or after, when land prices had already fallen substantially.[xxxvi] Meanwhile "new money" from expanding industrial and commercial sectors generally showed little interest in becoming major land-owners, preferring smaller holdings that could provide the lifestyle of the country aristocrat without the practical and financial chores of having to manage great estates.[xxxvii] The numbers of landed rich thus underwent a substantial decline, though the casualties were generally concentrated among the gentry and minor aristocracy, while the wealthiest landed families typically managed to stay within the highest tiers of the millionaire class, often assisted by having begun diversifying their portfolios into non-landed wealth from the nineteenth century.[xxxviii]

Rubinstein argued that the wealth of the greatest landowners exceeded that of the richest businessmen until 1914, if not later.[xxxix] However, by 1928 non-landed fortunes had pushed even the most wealthy aristocrats, the Dukes of Bedford and Westminster, into seventh and eighth place on the list of top incomes.[xl] Their taxable incomes, £360,000 and £336,000 respectively, were dwarfed by those of the richest businessmen, such as the shipping magnate Sir John Ellerman (the son of an immigrant corn broker, who died in 1871, leaving £600) with a 1928 income of £1,553,000, or James Williamson, the first Baron Ashton, who had pioneered the mass production of linoleum - second on the list, with £760,000.[xli]

The two IR analyses of aggregate millionaire incomes, discussed above, shed light on the relative importance of landed and business wealth. Table 1 shows the distribution of millionaire incomes from 1926-28 and Table 2 shows millionaire incomes for an identical sample of 468 IR millionaire cases, for the financial years 1931/2 and 1932/3, by main sources of income. Both show “tax units” (a single person, or a man and wife, which form the basis of IR personal income data).

[Tables 1 and 2 near here]

Table 1 examines all incomes over £50,000, plus incomes rising over 1926-28; incomes reaching over £50,000 for the first time in 1928; decreasing incomes; and incomes that fell to below £50,000 in 1928. Income from dividends and interest dominated millionaire portfolios in both years, rising from 63.5 percent of aggregate incomes over £50,000 in 1926 to 70.8 percent in 1928. Moreover, a high proportion of dividend and interest income appears to have been condusive to increasing or maintaining total income. In 1928 these accounted for 75.0 percent for rising incomes; 71.3 percent for new entrants; 70.8 percent for all millionaires; 64.2 percent for falling incomes and 57.9 percent for incomes falling below £50,000. Conversely, higher reliance on incomes from unincorporated businesses was negatively associated with income growth. This may reflect the tax avoidance and other benefits of incorporation.[xlii]

Table 2 shows millionaires' main sources of wealth, though each income could potentially be recorded two, or three, times, if main sources fell into roughly equal categories (increasing the number of observations from 468 to 522). The Table shows the number and percentage of tax units by asset class; the value and distribution of millionaire fortunes by class; and income per head (shown in full for each category they were included in). Some 64.4 percent of millionaires had incomes dominated by business sources, comprising: 52.5 percent shareholdings; 5.4 percent non-shareholding financial activities (such as partnerships in merchant banks); and 6.5 percent "private traders." In addition, the "professional" group (4.0 percent) and "miscellaneous" group (10.2 percent) probably mainly represented business incomes.

Both tables highlight the limited importance of landed wealth. The contribution of real property to millionaire fortunes fell from 8.1 percent in 1926 to 7.3 percent in 1928. Schedule B (farming) incomes are shown to be negative, though the IR indicated that losses were inflated by "fancy farming" (e.g. "hobby" keeping of pedigree herds, subsidised by their tax write-offs).[xliii] The contribution of landed wealth is probably underestimated in Table 1, as many landed families had transformed their estates into companies (owned by themselves) as a tax-avoidance device.[xliv] However Table 2, which includes such companies under landed estates, shows that only 8.2 percent of millionaires derived their main income from this source. Yet the income per head of landed millionaires in the table (£118,573) is almost 50 percent larger than the average, indicating that, while the proportion of primarily landed fortunes was small, the individuals involved were typically substantially richer than the average business millionaire.

The tables also emphasise the very small contribution of "earned income" (professional fees, etc.) to millionaire wealth. This averages 3.5 percent for all cases in Table 1 and represents 4.02 percent of main sources of wealth in Table 2, but with an average *declared* income of under £50,000. Thus the earned component of millionaire incomes is shown to be insubstantial, strengthening the argument for using income as a means of deriving millionaire capital.

III

The 1928/9 dataset of individual millionaires (hereafter dataset) provides a more detailed picture of millionaires' income sources. Some 297 of the 438 individuals on the list could be classified by sector, compared with 153 probate millionaires identified by Rubinstein for the period 1920-1939. Rubinstein proposed three hypotheses, largely based on his analysis of millionaire probates: that a larger proportion of fortunes were based on commerce and finance rather than industry; that London was the centre of wealth-making in Britain; and that British industrial wealth was, in general, subordinated to commercial and financial wealth. Thus Britain was portrayed as a primarily financial and commercial nation, rather than the "workshop of the world". [xlv]

Table 3 compares 1928/9 millionaires who could be classified by sector with Rubinstein's 1920-39 millionaire probate data. Rubinstein's sectoral classifications are used, based on the Standard Industrial Classification but also including certain other categories of distinctive millionaire occupations such as "foreign merchants" and "newspapers." Rubinstein's procedure of assigning each millionaire to only one occupational category (even if they had interests spanning different sectors) is also followed, as his claim that the vast majority had their wealth principally in one sector, or in closely related fields, such as shipowning and shipbuilding, is confirmed by the analysis below and by the IR enquiry summarised in Table 2, which assigns only a small proportion of “main” fortunes to multiple categories.[xlvi]

Despite the substantially larger sample size, the sectoral pattern of the 1928/9 sample is not greatly different to Rubinstein’s. As would be expected for a sample including earlier fortunes (given that it is based on wealth at death, and includes people deceased before 1928), Rubinstein’s data have higher representation of staple industries such as cotton, iron and steel, and mining. Overall, however, the similarities between the two samples are strong for business sectors, given their different timeframes. The main difference concerns landed wealth, which accounts for 9.4 percent of millionaires in the 1928/9 dataset, compared to 15.9 percent in Rubinstein’s sample. Our figure is also much closer to that for the 1931/32 survey of main income sources summarised in Table 2 (8.2 percent). This may reflect problems inherent in probate data. Landed estates are typically passed from father to eldest son at death, thus being recorded in probate once per generation. Conversely, the time between becoming a business millionaire and death is typically longer.[xlvii] Thus probates are likely to over-estimate landed wealth relative to business wealth. It is also possible that Rubinstein’s methodology for addressing the exclusion of settled property from pre-1926 probates by adding “missing” landed millionaires (identified by using the acreage of their land to estimate its value) may have led to their over-representation.[xlviii]

Table 4 shows the 293 millionaires who could be classified by UK Standard Economic Region, (a further five claimed that their main residence was outside Britain: one in the Channel Islands; one in New York; one in the Irish Republic and two in continental Europe – probably mainly for tax reasons). Where individuals had more than one address, they are listed by primary address. However, with the exception of some aristocrats with geographically dispersed land-holdings, most multiple residences were in the same region (though London-based millionaires often had country residences in the rest of the South

East). The table also compares the regional distribution of millionaires with the distribution of 1931 population and regional GDP.

[Table 4 near here]

Table 4 corroborates Rubinstein's claim that millionaires, and especially those with fortunes based on services or land, were highly concentrated around Greater London. Almost 60 percent were based in the South East, with 45.4 percent in Greater London alone. London's concentration of millionaires is even higher than the table suggests, as four out of the five millionaires formally domiciled outside the UK either had a secondary address in London and/or had their business there. The concentration of millionaires in Greater London is not only large relative to the rest of Britain, but is twice as large as the concentration of London's relative GDP and 2.4 times the magnitude of London's relative population. Moreover, London's share of national GDP was unusually large in 1931, more than four percentage points higher than in 1921 or 1951, as the 1929-32 recession hit northern and western Britain disproportionately.[xlix] Conversely, the industrial heartlands of the North West, West Midlands, Yorkshire and Humberside, the Northern region, and Wales are substantially under-represented, as are East Anglia and Northern Ireland, both relative to GDP and population.

Table 5 examines the regional distribution of the 1928/9 dataset in terms of landed, industrial, and service sector incomes. Greater London is home to 61.5 percent of all service sector millionaires domiciled in the UK, while the entire South East comprises 75.6 percent of the UK total. The South East also has a majority of landed millionaires, with 57.1 percent of the national total, mainly in Greater London (46.4 percent). Industrialists had weaker concentration in the metropolis, but were still over-represented relative to population and

GDP, with Greater London comprising 27.3 percent of UK domiciled industrial millionaires and the "total South East" 42.2 percent.

[Table 5 near here]

IV

Some 90 percent of named 1928/9 millionaires had principally business incomes. However, they were not all "businesspeople". Piketty, Postel-Vinay, and Rosenthal found that Edwardian French top wealth holders were mainly *rentiers* (living off capital incomes), rather than active entrepreneurs.[l] Similarly, Acheson, Campell, and Turner's study of large British shareholders in Victorian public companies showed that the majority did not take any active governance role and were essentially rentiers.[li] Conversely, most 1928/9 business income millionaires were active in business; a result consistent with Acheson, Campell, and Turner's observation that a trend back towards more concentrated ownership occurred from the start of the twentieth century, which was again reversed at some point after 1950.[lii]

Businesspeople were identified via a three-stage process. First, the 1928 *Directory of Directors* was used to check if they had any directorships. Second, a similar check for the 1914 edition of the *Directory* was undertaken, for people not listed in the 1928 edition – to account for businesspeople who had retired before 1928. Finally, those not listed in either edition were examined using a variety of biographical sources to see if they were active in business. This final check proved very useful, given that some well-known businesspeople in the sample - for example Viscount Leverhulme and the linoleum multi-millionaire James Williamson - were not listed in the *Directory*.[liii] Some 75.0 percent of the 319 people in the sample were identified as taking an active role in business, as a director, partner, or executive. The proportion increases to 80.8 percent for males in the sample and 85.6 percent for non-landed males. These are probably under-estimates, as – for a large proportion of individuals not identified as businesspeople – there was very little, if any, biographical information.

While the *Directory* listings are incomplete, they are nevertheless useful in examining the range of millionaires' business interests. Table 6 examines the number of directorships held by businesspeople millionaires (excluding landed millionaires) by sector and the range and mean number of directorships held. The mean directorships per businessperson millionaire is 2.9. Few industrial sectors have mean directorships considerably above this, except where one or two individuals raise the mean substantially. Industrial sectors with individuals having eight or more directorships include: chemicals (Alfred Mond, 19 directorships; Edward Brotherton, 9); shipbuilding (Marmaduke Furness, 11); other textiles (George Bonar, 10); engineering (Davison Dalziel, 9) ; brewing (Gilbert Greenall, 8); and mining (George A. Eastwood, 8). Their importance as industrialists is signified by the fact that, with the exceptions of Eastwood and Bonar, all were granted peerages or baronets.

Mond's directorships were mainly in chemical-related sectors and industrial finance. Brotherton's were in chemical-related companies; Furness and Eastwood's directorships mainly involved the coal-iron-shipbuilding nexus; and Davison's (1914) directorships mainly involved transportation-related sectors. Conversely Bonor's directorships were in a range of sectors, including financial, land, and trust companies, while Greenall's directorships were mainly in sectors other than brewing.

The mean number of directorships was much higher in some non-industrial sectors, especially other finance; stockbroking; other professions; and shipowning. Three of the four `other finance' millionaires had directorships mainly in British firms operating overseas. The exception was the financier and property developer Philip Hill, whose interests encompassed pharmaceuticals, wholesale and retail chemists, hotels, food, and (after 1928) cinemas. Hill was a pioneer in mergers and acquisitions and operated in multiple sectors, seeking to raise profits by consolidation.[liv] Stockbrokers' directorships appear to have been mainly held in a professional capacity and `other professions' largely involved insurance professionals holding directorships in insurance-related companies.

Ship-owning had no fewer than four millionaires with eight or more directorships: William J. Tatem (20); Frank C. Strick (19) John Ellerman (11) and Robert Barr (8). These mainly involved shipping and related sectors, with the exception of Ellerman, who also had large investments in brewing, investment companies, property and (at one time) newspapers. Ellerman was essentially a financier (only becoming interested in shipping from age 29), who moved into long-established sectors offering lucrative opportunities for consolidation and restructuring.[lv] Ellerman and Hill (who both came from relatively low-income backgrounds) appear to be rare examples of businessmen who were happy to operate in very different sectors, the common feature of which was the potential to raise profits by merger and consolidation.

V

To what extent were millionaires disproportionately clustered in particular firms and sectors? Table 7 examines those firms that account for multiple millionaires in the dataset. These 71 incomes have a number of distinctive features. First, clustering within manufacturing does not correspond well to the ranking of Britain's largest firms. Of the ten British-based industrial companies in the table, four rank among the top 10 UK companies in terms of 1930 market value (according to Leslie Hannah's estimates); though a further four aren't even in the top 50.[lvi] Moreover, they are clustered in a narrow range of sectors - branded food, drink, and tobacco products, plus rayon. Meanwhile the non-manufacturing sectors are also strongly clustered, into internationally-orientated services such as merchants banks, overseas merchants, and shipping.

[Table 7 near here]

The table also disaggregates the 71 millionaires into executives and directors who were members of their firms' founding families (or families of firms they had merged with); other executives and directors for whom no family link could be identified; and people who did not take any active business role. Some 50 of the 63 "businesspeople millionaires" listed were "family" managers/directors. However, even most of the non-family executives/ directors held equity stakes in their firms. For example, the non-family merchant bank millionaires were typically partners, while the four Woolworths' executives benefited from a strong profit-sharing culture – involving not only profit-related pay, but substantial share allocations.[lvii] The last group – comprising eight people who took no role in running their firms - were all close relatives of previous owners/managers, rather than distantly related or unrelated rentiers. These findings stress the importance of family capitalism and fortunes often built up over several generations of family ownership. However, such relationships were evident for a large proportion of British firms. Another factor heighted in the table is the strong representation of a relatively narrow range of sectors; explored, for the full dataset, in Table 8.

[Table 8 near here]

The economics literature highlights regulation and lobbying (in addition to technical factors, such as scale economies, technological barriers, and large capital requirements) as important factors impacting on barriers to entry and competition.[lviii] Proxies for barriers to competition include profit margins, industrial concentration, investment (relative to profits and Q), labour share, and prices (in a cross-national context).[lix] However, such measures assume strong anti-trust environments and are much less appropriate for inter-war Britain, which had no effective anti-trust legislation. *Industry* profit margins and industrial concentration are likely to be lower if markets are controlled by cartels, rather than amalgamation. Some cartels had very wide spreads of cost ratios, owing to prices set sufficiently high to keep their weakest members in business.[lx]

In Table 8 we use two proxies for market control. Cartelisation – measured as the proportion of national output under control by the cartel - is our preferred proxy but (in common with most other potential measures) is only available for factory industries. We therefore also use a second measure, available for all sectors – sectoral shares of total profits for all UK enterprises (companies, partnerships, sole traders, etc). These were based on IR Schedule D assessments, which were later used for the official profits series, and have been evaluated as, "among the most reliable of economic data."[lxi] Landed millionaires are excluded, as their factor income was rent, rather than profit. The only sector for which this proxy is problematic is "foreign merchants." The profits data include concerns operating abroad (mainly land, utilities, plantations, mining ventures, etc.), but these are not clearly synonymous with the activities of foreign merchants. UK banks mainly operating overseas are included in the banking category.

Eight sectors had ratios of non-landed millionaire shares to total profit shares in excess of 2.5: tobacco (5.40); shipbuilding (4.79); merchant and other banking (3.42); foods (3.20); shipowning (3.02); other textiles (2.98); distilling (2.67); and brewing (2.59). These collectively comprise 42.4 percent of all 1928/9 millionaires, but only 15.5 percent of aggregate profits. Meanwhile, important sectors such as chemicals, cotton and woollen textiles, construction, and, particularly, distribution, are substantially under-represented. The over-represented manufacturing sectors also have very high rates of cartelisation; though in some cases, such as foods and other textiles, the cartels were strongest in certain sub-sectors where the millionaires were clustered.

The First World War saw a considerable increase in the scope, strength, and profitability of British cartels, accelerating a process that was already gaining pace during the Edwardian era. War-time government-industry relations were typically conducted on a sector-wide basis, often compelling non-member firms to join cartels in order to have a voice in the "advisory committees" that negotiated with government over contracts, prices, resources, shipping space, etc. Meanwhile Excess Profits Duty encouraged corporate acquisitions of unprofitable firms, using money otherwise payable as Duty.[lxii]

Cartelisation and integration intensified during the inter-war era, often generating considerable wealth both for those who orchestrated the restructuring and members of family firms that were swept up into the new trusts, holding companies, and amalgamations. While cartelisation had been a topic of heated controversy during the First World War and the early 1920s, being conflated with "profiteering," criticism had subsided by the mid-1920s, facilitating a laissez-faire approach on behalf of government and the courts.[lxiii] Analysis of the number of uses of the term "profiteers" in *The Times* and *Hansard* from 1914-38 shows that its frequency was highest during 1920-1922 (72.0 times per year in *The Times* and 111.3 in *Hansard*) but then fell to a low of 13.0 and 30.6 times per year respectively over 1930-38.[lxiv] High inflation during 1914-1920 had led to a search for culprits, in which the "profiteer" featured prominently, while the subsequent trend of falling prices depoliticised this issue. Meanwhile most commentators were either generally positive, or at least equivocal, regarding the benefits of what was often termed "rationalisation." Economists and business leaders justified amalgamations and trusts in terms of their efficiency and stability benefits, together with the need to create national champions to meet competition from countries that had adopted these practices earlier and more widely.[lxv] Similarly government enquiries and the Board of Trade tended to view the monopoly costs of trusts and amalgamations to be outweighed by their productivity and international competitiveness benefits.[lxvi]

Given that Britain had very limited tariffs, cartels and monopolies could only raise prices in sectors with other barriers to imports, principally "strategic assets": assets that sustain competitive advantage through being valuable, rare, inimitable, and imperfectly substitutable, such as patents (rayon); control of distribution (brewing and tobacco); strong brands (whiskey; branded packaged foods); reputational assets (merchant banking); or membership of international cartels that granted territorial monopolies (shipping; rayon).[lxvii]

Shipowning and shipbuilding can be examined jointly, given that two of the three shipbuilding millionaires also had significant shipping interests. It was in the shipowning sector that huge fortunes could be made – largely through the restriction of competition. International shipping was organised via the "shipping conference system," pioneered in 1875 for homeward trade from Calcutta. The system aimed to avoid ruinous competition and rate wars by apportioning traffic on particular routes to participating lines, through pools and conferences (similar to the system used by the railways). By 1914 there were 300 conferences, incentivising integration of firms that had quotas for the same routes. British lines had pole positions in some of the most important conference routes (typically chairing the conferences), making it easier to ensure that gains made through amalgamation were protected.[lxviii] For example, Ellerman built up his unprecedented fortune largely by acquiring old-established lines, to gain market share in the closely-regulated Atlantic and South Africa routes, together with a route to India. By April 1917 he owned one-eighth of British shipping tonnage over 1,000 tons and had a much stronger position for several key routes.[lxix]

Ellerman was also active in another strongly represented sector, brewing, owning shares in more than 70 breweries by 1918.[lxx] Brewing was also subject to strong barriers to competition, owing to earlier forward integration into the ownership of public houses (numbers of which in any vicinity were restricted by the licensing laws), that were tied to selling their beer, in an era when most beer was consumed on licensed premises. As new licenses became progressively restricted, these became increasingly important strategic assets. Mergers among some of the largest brewery groups created powerful business empires, consolidating both tied house and retail brand assets (though they typically failed to reap major scale economies).[lxxi]

Whiskey distilling experienced growing cartelisation and higher prices during the Edwardian era. A further series of mergers from 1915-1925 culminated with the Distillers Co. merger with the three main whiskey distillers – Dewar, Buchanan, and Walker (together with some gin and industrial distillers) bringing the most important internationally-recognised British brands under unified control.[lxxii] The industrial spirit market also witnessed an acceleration in cartelisation into a loose holding company - the Industrial Spirit Supply Association. This regulated output and sales, via a marketing monopoly that set common prices and allotted sales quotas.

Tobacco manufacturing accounted for 7.09 percent of the non-landed millionaire sample, but represented only 2.59 percent of 1930 net output and a mere 0.84 percent of manufacturing workers.[lxxiii] The industry was almost entirely controlled by Imperial Tobacco, a "national champion" formed partly to stop an American tobacco "invasion." Control over UK distribution protected its monopoly position, while access to foreign markets was also protected, with the formation of British and American Tobacco Co. (one-third owned by Imperial) to undertake the export trade.[lxxiv]

“Other textiles” is a more diverse sector, with strong barriers to competition for the sub-sectors generating millionaire fortunes. Courtaulds (five millionaires) was a key pioneer in rayon technology and maintained its technological advantage after the expiry of the basic patent in 1919, both through its own R&D and its strong position in the European rayon cartel.[lxxv] Sewing thread (three millionaires) had become concentrated into two rival combines, J. & P. Coats and the English Sewing Cotton Company, which subsequently developed a joint selling agency. By the early 1920s this agency covered the entire sector, apart from some specialised trade.[lxxvi]

Banking fortunes were dominated by merchant banking. The main barriers to entry represented intangible assets, based around reputation and networking, underpinned by a distinctive combination of economic, social, and political capital, which impacted on interpersonal and intercorporate relations.[lxxvii] A “City man” might be both a partner in a merchant bank and a head of a joint-stock bank, while also being a director of an insurance company and/or other financial companies.[lxxviii] In merchant banking corporate reputations were built over generations by a relatively small number of family firms, facilitated by strong locational clustering (within a relatively small area even of the Square Mile).[lxxix] Again, fortunes in this sector were greatly disproportionate to employment: the 1931 census of England and Wales recorded only 14,384 bankers and bank officials, while merchant bankers comprised a relatively small proportion of this total.[lxxx]

Millionaire fortunes in food products represented specific sub-sectors producing branded, differentiated, products such as biscuits – four fortunes (for a sub-sector representing less than 0.7 percent of 1930 manufacturing net output and employment); Alfred Bird & Sons (custard, three fortunes); Tate and Lyle, Colman’s mustard, and A. Wander Ltd (Oveltine) (each with two fortunes); Horlicks; Typhoo Tea; Angus Watson & Co. (canned fish); and Joseph Rank Ltd (flour). The sector witnessed growing cartelisation. For example, war-time materials and labour cost pressures led to the development of a biscuit trade association in 1918, rapidly followed by negotiations that led to the merger of the two biggest firms, Huntley & Palmers and Peek Frean, into a holding company, Associated Biscuits, in 1921.[lxxxi]

A 1927 study found that while British cartels typically raised prices above free competition levels, their focus on long-term stability deterred them from aggressive price hikes that might attract government intervention or new competitors. Some highly-cartelised sectors, such as distilling and tobacco, generated considerable profits, especially for their dominant companies. Meanwhile in sectors facing post-war over-capacity, market control protected established fortunes; for example, shipping lines with concentrated ownership managed to stay profitable over 1920-25 despite a slump in freight traffic.[lxxxii]

VI

Another mechanism for boosting wealth during this era was the use of aggressive tax avoidance and/or evasion. The First World War and its aftermath raised the interest on Britain's internal debt from the equivalent of 9.6 percent of budget receipts in 1913/14 to 22.4 percent in 1920/21 and 36.4 percent in 1925/6, while doubling the ratio of government expenditure to GNP from 1913-1924, to 24 percent.[lxxxiii] Innovative tax avoidance/evasion methods increased millionaire tax avoiders' post-tax incomes both directly and indirectly (by constituting a personal and firm-level competitive advantage).

Tax avoidance was commonplace among Britain's economic elite by the late 1920s, but a small proportion of business millionaires developed it to a level where they could avoid a large proportion of their tax liability, mainly via transmuting income into capital gains (which were not subject to income tax) and/or creating excessive depreciation allowances.[lxxxiv] Ellerman used the first method to avoid much of the taxation liabilities for himself and his companies. For example, in March 1927 Ellerman Lines Ltd returned 80 percent of the amount paid up on its deferred ordinary shares, capitalised £1,600,000 of its undivided profits, then called up the shares again - applying the capitalised profits in payment of the call (all on the same day). This manoeuvre – essentially distributing profits to shareholders as capital gains - netted £1,443,520 of tax-free income for Ellerman personally, while an October 1929 use of the same device provided a further £500,000 (with Ellerman personally receiving £390,000). Ellerman's Wilson Line also used this ruse to distribute £1,900,000 in 1925, £1,140,000 in 1927, and £150,000 in 1929 tax-free. The 1929 Companies Act required such payments to be sanctioned by the courts, but in February 1933 Ellerman Lines Ltd had no difficulty gaining court sanction for further capital repayments of £3,270,000. [lxxxv]

Woolworths UK's senior executives also used this technique, to capitalise £8,600,000 of accumulated profits over the 1925/6 – 1932/3 financial years (in addition to additional avoidance of around £1 million via other methods).[lxxxvi] The clothing millionaire Montague Burton employed a similar strategy, filing negative super-tax returns up to 1927/28 through building up undistributed profits. Then, on the liquidation of his company (to turn it into a public company), Burton received almost the whole undistributed profits of £1,607,239 as tax-free capital assets.[lxxxvii] Lord Nuffield similarly avoided an estimated £2,127,000 over 1928/9 to 1932/3 using this method.[lxxxviii]

The second strategy involved exploiting companies' rights to retain income as a reserve against depreciation. Inflated depreciation allowances could be created by transferring assets to a company at excessive prices, effectively creating a loan from the taxpayer, which could then be transformed into tax-free capital repayments. Meanwhile the necessity for further reserves against depreciation could be used as an excuse for not declaring a dividend.[lxxxix] William and Edmund Vestey avoided a substantial proportion of tax liability for their Union Cold Storage Co. group via this method.[xc] Allowances for "wear and tear" of plant and machinery were exploited via a complex procedure of sales of plant from the Vesteys to Union Cold Storage (or from the company to one of its subsidiaries) at excessive prices. Moreover, as Union Cold Storage recorded less depreciation in its accounts than it claimed as taxable "wear and tear allowances," its distributable profits exceeded its taxable profits – effectively enabling the Vestys to draw capital out of the company.[xci]

VII

This paper has presented a unique dataset for a pre-determined living population of the richest people in Britain, with incomes equivalent to a capitalised value of £1 million or more in 1928/9. It would have been useful to extend the analysis to broader income groups, though unfortunately the nature of the data (extracted from confidential tax returns by the IR) makes this impossible. The data show that by the late 1920s the millionaire class was strongly dominated by business incomes, to an even greater extent than Rubinstein found, with landed wealth accounting for less than 10 percent of all British millionaires. Meanwhile the overwhelming majority of business incomes (85.6 percent for non-landed males) represented "businesspeople" - directors, partners, or executives – rather than rentiers.

Although aggregate numbers of millionaires fell after 1922, in certain sectors millionaires flourished. Sectors where 1928/9 business millionaires were over-represented (relative to the sectoral distribution of profits) were characterised by cartels or monopolies, underpinned by strategic assets that acted as barriers to entry or imports. Conversely, there is very little evidence of "technical" barriers such as L-shaped cost curves that could have offset the welfare costs of industrial combination/concentration. Indeed the sector-level evidence discussed above suggests that amalgamation or cartelisation were typically followed by rising real prices.

Business millionaires were clustered in expanding sectors such as branded, packaged, food, drink, and tobacco; shipping; and merchant banking. However (with the exception of rayon) these could not be said to involve technologies at the leading edge of the second industrial revolution. Engineering was not significantly over-represented and there was a notable absence of high-tech sub-sectors such as electrical/electronic goods. Meanwhile the chemicals sector was substantially under-represented. Most millionaires operated within one sector (or several closely associated sectors) with only a very few, such as John Ellerman and Philip Hill, pursuing strategies of moving into multiple industries that offered potential abnormal profits through consolidation. Sophisticated tax avoidance/evasion strategies also boosted the competitive advantage of some very successful inter-war millionaires, though this was still confined to a small (though significant) proportion of millionaires in the 1920s.

These findings imply that the composition of economic elites should not be simply conflated with "wealth-creation" or prosperity (except for those elites), especially where their incomes include a substantial element of rent-seeking. Erecting or defending barriers to competition (through cartels, mergers, and strategic assets) may increase the number of very wealthy people, but is much less likely to have a positive influence on national economic growth and living standards, unless accompanied by rationalisation to substantially lower costs. In this respect typical inter-war business millionaires had strong commonalities with earlier, landed, British elites, in that they sustained their wealth through creating, and then perpetuating, scarcity in the markets for the goods and services they controlled.

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Table 1: Analysis of "millionaire cases" for 1926 and 1928, including all cases, those with increasing incomes, new entrants in 1928, all decreases, and cases where income had fallen below £50,000 in 1928.

	All cases over £50,000		Increases in 1928		New entrants (1928)		Decreases		Fell below £50,000 in 1928	
	1926	1928	1926	1928	1926	1928	1926	1928	1926	1928
Average gross income (£)	106,666	105,610	97,612	113,025	36,895	69,358	110,634	82,098	70,962	37,231
Number of tax units	536	461	201	201	95	95	295	295	130	130
Percent of gross income:										
Unincorporated business income	20.9	13.9	9.4	10.1	14.2	12.9	29.9	20.2	40.6	26.1
Professional fees etc.	3.4	3.6	3.4	3.0	15.2	10.5	3.5	3.0	7.1	7.9
Schedule B	-0.4	-0.4	-0.5	-0.4	-0.8	-0.5	-0.3	-0.7	-0.6	-2.1
Property	8.1	7.3	6.5	5.6	4.2	2.5	9.2	10.2	5.4	6.9
Income from securities	63.5	70.8	73.8	75.0	63.2	71.3	55.0	64.2	43.7	57.9
Wife's income	4.5	4.8	7.4	6.7	4.0	3.3	2.8	3.1	3.9	3.4
Total	100	100	100.0	100.0	100	100	100	100	100	100

Source: TNA, IR 64/51, memorandum comparing tax assessments over £50,000, unsigned, August 1930.

Notes: see text.

Table 2: Finalised Inland Revenue “millionaire” cases for 1931/2 and 1932/3, classified by main sources of income.

Category	Tax units		Income (average 1931/2-1932/3)		
	Number	%	Value (£)	%	per head (£)
Landed estates (including those transferred to companies)	43	8.24	5,098,647	12.16	118,573
Professionals (including directors without large holdings)	21	4.02	1,044,423	2.49	49,734
Fixed interest-bearing securities	69	13.22	4,813,374	11.48	69,759
Miscellaneous	53	10.15	3,213,839	7.67	60,638
Shareholdings (including directors with large holdings)	274	52.49	24,484,140	58.40	89,358
Commercial and industrial	125	23.95	9,869,451	23.54	78,956
Breweries, hotels, allied trades, and catering	35	6.70	4,543,842	10.84	129,824
Cotton	6	1.15	312,470	0.75	52,078
Wool	2	0.38	92,258	0.22	46,129
Metal and engineering	18	3.45	1,183,483	2.82	65,749
Financial, banks, trust companies	26	4.98	3,013,283	7.19	115,896
Gas, electricity, and water	1	0.19	27,885	0.07	27,885
Miscellaneous textiles and clothing	16	3.07	998,684	2.38	62,418
Insurance	5	0.96	226,248	0.54	45,250
Road transport	1	0.19	28,023	0.07	28,023
Land, buildings, and allied trades	5	0.96	507,517	1.21	101,503
Mines and quarries	5	0.96	293,116	0.70	58,623
Leather	3	0.57	185,470	0.44	61,823
Oil (including distribution)	6	1.15	609,330	1.45	101,555
Plantation and rubber (tea, coffee, tobacco, etc.)	3	0.57	183,625	0.44	61,208
Railways	0	0.00	0	0.00	0
Shipping, canals, and docks	15	2.87	2,302,651	5.49	153,510
Telegraph, telephone, wireless	2	0.38	106,807	0.25	53,404
Financial activities	28	5.36	1,446,885	3.45	51,674
Private traders	34	6.51	1,822,898	4.35	53,615
Total (includes double-counting)	522	100.00	41,924,204	100.00	80,315
Total (without double counting)	468	n.a.	33,355,866	n.a.	n.a.

Source: TNA, IR64/51, memorandum for Mr Oliver, signed W.E.B. 14 April 1934.

Notes: The sampling frame is identical for both years. In cases where a taxpayer's income falls roughly equally into two or three categories, he/she was placed in each, thus the unadjusted total shows 54 more observations than there are cases.

Table 3: Sectoral distribution of Rubinstein's 1920-39 probate sample, and the sample of living millionaires in 1928/9.

Code	Sector	Probate millionaires 1920-1939		Living millionaires 1928-9	
		No.	%	No.	%
1	Coal mining	4	2.20	5	1.68
2	Other minerals	2	1.10	3	1.01
3	Iron and steel	3	1.65	3	1.01
4	Shipbuilding	1	0.55	3	1.01
5	Engineering	7	3.85	12	4.04
6	Chemicals	6	3.30	6	2.02
7	Cotton manufacture	7	3.85	3	1.01
8	Woollen manufacture	1	0.55	1	0.34
9	Other textiles	6	3.30	17	5.72
10	Construction	1	0.55	4	1.35
11	Other manufacturing	6	3.30	7	2.36
12	Brewing	13	7.14	20	6.73
13	Distilling	4	2.20	4	1.35
14	Tobacco	11	6.04	19	6.40
15	Foods	12	6.59	24	8.08
16	Banking	5	2.75	4	1.35
17	Merchant banking	6	3.30	21	7.07
18	Other finance	9	4.95	6	2.02
19	Foreign merchants	4	2.20	16	5.39
20	Retailing	6	3.30	15	5.05
21	Other merchants	9	4.95	11	3.70
22	Insurance	4	2.20	5	1.68
23	Stockbroking	2	1.10	4	1.35
24	Shipowning	15	8.24	24	8.08
25	Other commerce	1	0.55	6	2.02
26	Newspapers	6	3.30	5	1.68
27	Publishing	0	0.00	3	1.01
28	Other miscellaneous	0	0.00	2	0.67
29	Professionals - law	1	0.55	1	0.34
30	Other professions	0	0.00	9	3.03
32	Others	1	0.55	6	2.02
1-32	All business	153	84.07	269	90.57
33	Landed	29	15.93	28	9.43
	Total	182	100.00	297	100.00

Sources: columns 3-4, D. Rubinstein, *Men of Property*, pp. 60 & 62-63; columns 5-6, dataset.

Table 4: The regional distribution of millionaires in the 1928/9 dataset, compared to the regional distribution of UK population and GDP for 1931

Standard Economic	Millionaires	Millionaires	Population	GDP
Region	No.	-------- % of Uk total-----------		
Greater London*	133	45.39	18.84	22.8
Rest of South East*	41	13.99	10.30	15.4
Total South East	174	59.39	29.14	38.3
South West	15	5.12	6.21	5.8
East Anglia	2	0.68	2.57	2.1
East Midlands	17	5.80	6.56	5.3
West Midlands	14	4.78	8.14	7.9
Yorkshire & Humberside	15	5.12	8.53	7.9
North West	20	6.83	13.33	11.9
Northern	4	1.37	6.62	4.3
Scotland	25	8.53	10.54	10.0
Wales	6	2.05	5.64	4.6
Northern Ireland	1	0.34	2.71	1.9
Total UK	293	100.00	100.00	100.0

Sources and notes: Millionaire data: dataset. Population distribution: Great Britain, Lee, *British Regional Employment Statistics*, Part III; Northern Ireland, Office for National Statistics, https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/adhocs/004362northernirelandpopulationestimates1872to2014 (accessed 14th August 2019). * Data for Greater London are for 1937, UK, *Royal Commission on the Distribution of the Industrial Population*, p. 161 (representing an area approximating Greater London). Rest of South East is calculated by subtracting this from the South East. Regional GDP data: Geary and Stark, `150 years of regional GDP', p. 336.

Table 5: Millionaires in the 1928/9 dataset, categorised by region and sector.

	Landed	Industry	Services	Total
Greater London	13	35	83	131
Rest of South East	3	19	19	41
Total South East	16	54	102	172
South West	1	11	3	15
East Anglia	1	1	0	2
East Midlands	3	13	1	17
West Midlands	1	10	3	14
Yorkshire and Humberside	0	7	8	15
North West	2	11	7	20
Northern	0	2	2	4
Scotland	3	16	6	25
Wales	1	2	3	6
Northern Ireland	0	1	0	1
Total UK	28	128	135	291
Overseas	0	3	2	5
Grand total	28	131	137	296

Source: Dataset.

Notes: Regional classifications, see Table 4. Publishing and newspapers are classified as services.

Table 6: Sectoral classification of 1928/9 millionaire businesspeople, classified by their directorships (range and average)

Sector and code		Millionaires	Directorships	
		(No.)	Range	Average
Coal mining/minerals	1-2	7	0-8	3.3
Iron and steel	3	2	0	0.0
Shipbuilding	4	3	0-11	5.3
Engineering	5	11	0-9	2.7
Chemicals	6	5	0-19	7.4
Cotton & wool	7-8	4	0-3	1.3
Other textiles	9	12	0-10	2.3
Construction	10	2	1-3	2.0
Other manufacturing	11	5	0-4	1.8
Brewing	12	17	0-8	1.9
Distilling	13	4	0-4	2.5
Tobacco	14	13	0-3	1.5
Foods	15	23	0-3	1.1
Banking	16	4	1-2	1.5
Merchant banking	17	19	0-9	3.3
Other finance	18	4	3-35	14.8
Foreign merchants	19	14	0-10	3.9
Retailing	20	14	0-2	0.3
Other merchants	21	10	0-5	1.9
Insurance	22	4	1-5	2.5
Stockbroking	23	3	4-12	7.7
Shipowning	24	22	0-20	4.7
Other commerce	25	3	1-2	1.7
Newspapers	26	5	0-7	2.0
Publishing	27	3	0-6	2.0
Other miscellaneous	28	2	2-3	2.5
Other professions	30	7	1-14	4.9
Others	32	4	1-4	2.0
Total non-landed	1-32	226	0-35	2.9

Source: dataset.

Table 7: Firms will multiple millionaire incomes, 1928/9

Company	Millionaires	Sector	Manufacturing firm ranking	Executive/director who is:		Not in trade
	(No.)		1930	Family	Other/not known	
Imperial Tobacco	12	Tobacco	2	6	2	4
Courtaulds	5	Rayon and silk	4	4	0	1
Bass, Ratcliff & Gretton Ltd	4	Brewer	18	2	1	1
Woolworths	4	Retailer	n.a.	0	4	0
Alfred Bird & Sons Ltd	3	Custard	Below 50	3	0	0
Kleinworts	3	Merchant banking	n.a.	3	0	0
William Brandt's Sons & Co.	3	Merchant banking	n.a.	3	0	0
I. M. Singer & Co.	2	Sewing machines	n.a.	1	0	1
J. & P. Coats Ltd	2	Sewing thread	5	2	0	0
Arthur Guinness, Son & Co.	2	Brewer	7	2	0	0
Carreras	2	Tobacco	25	2	0	0
A. Wander Ltd	2	Medicinal foods	Below 50	1	1	0
J. & J. Colman Ltd	2	Mustard	Below 50	2	0	0
Associated Biscuits	3	Biscuits	Below 50	3	0	0
Baring Brothers	2	Merchant banking	n.a.	2	0	0
Morgan Grenfell & Co.	2	Merchant banking	n.a.	0	2	0
Robert Fleming & Co.	2	Merchant banking	n.a.	2	0	0
Barnato Brothers	2	South African diamonds	n.a.	1	0	1
James Finlay & Co. Ltd	2	Foreign merchants etc.	n.a.	2	0	0
Walter Duncan & Co.	2	East India Merchants	n.a.	1	1	0
C&A	2	Retailer	n.a.	2	0	0
Christian Salveson & Co.	2	Shipping	n.a.	2	0	0
Stephenson Clarke & Co.	2	Shipping	n.a.	2	0	0
Thomas Cook & Co.	2	Travel agent	n.a.	2	0	0
Lloyds of London	2	Insurance brokers	n.a.	0	2	0
Total	71		n.a.	50	13	8

Source: Firm ranking, Hannah, *Rise of the Corporate Economy*, pp. 102-3; other data, dataset.

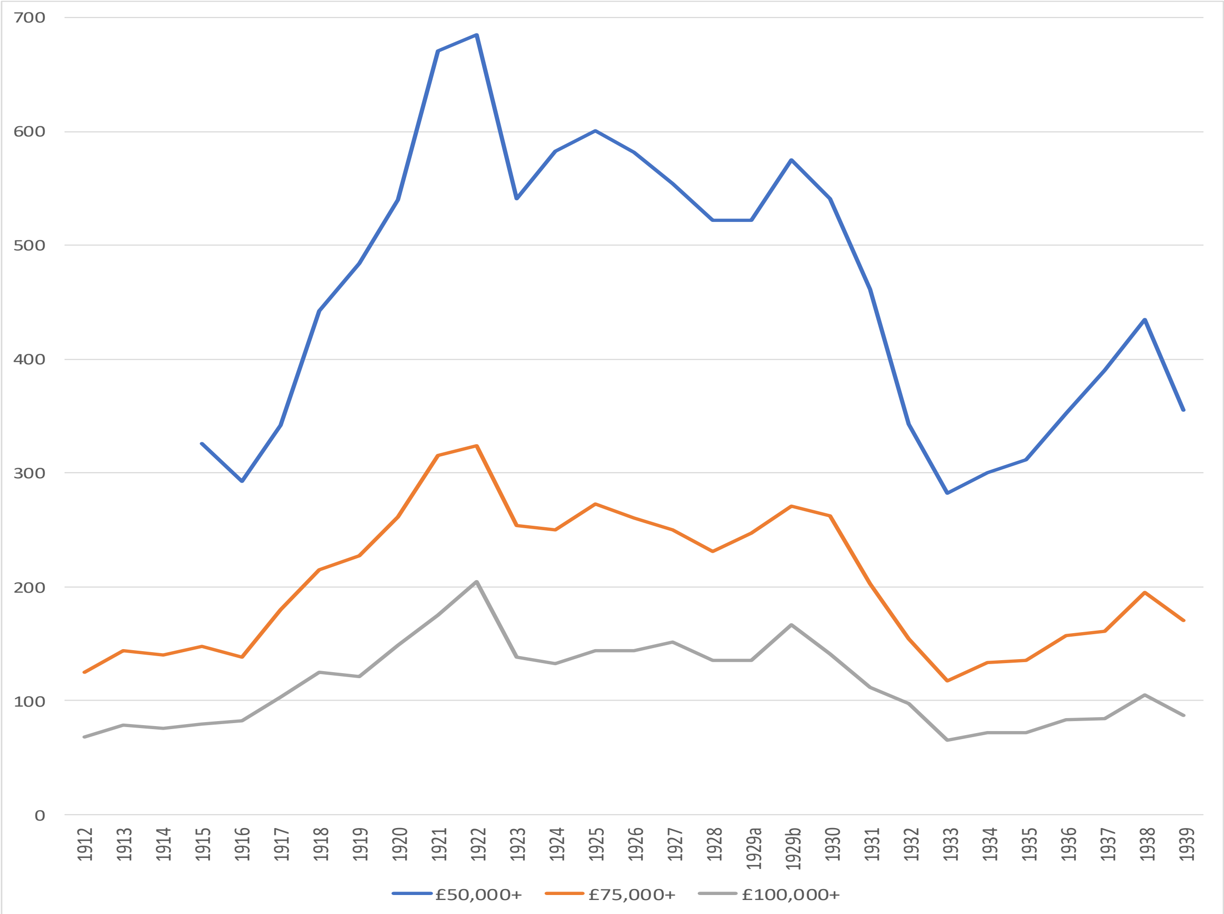
Table 8: 1928/9 non-landed millionaires by sector, sectoral profit shares, and cartelisation rates.

Code	Sector	Millionaires		Profit shares	Col. 4 / Col. 5	Cartel-isation [c]
		No.	%	%	Ratio	%
1	Coal mining	5	1.86	1.88	0.99	
2	Other minerals	3	1.12	0.57	1.95	
3	Iron and steel	3	1.12	1.01	1.11	68
4	Shipbuilding	3	1.12	0.23	4.79	100
5	Engineering	12	4.46	4.40	1.01	22
6	Chemicals	6	2.23	2.88	0.78	21
7	Cotton manufacture	3	1.12	1.54	0.73	(
8	Woollen manufacture	1	0.37	1.08	0.34	(26.25
9	Other textiles	17	6.32	2.12	2.98	(
10	Construction	4	1.49	2.30	0.65	
11	Other manufacturing	7	2.60	7.75	0.34	29
12	Brewing	20	7.43	2.87	2.59	
13	Distilling	4	1.49	0.56	2.67	98
14	Tobacco	19	7.06	1.31	5.40	95
15	Foods [a]	24	8.92	2.79	3.20	14
16	Banking	4	1.49	(2.72	3.42	
17	Merchant banking	21	7.81	(		
18	Other finance	6	2.23	3.03	0.74	
19	Foreign merchants	16	5.95	n.a.	n.a.	
20	Retailing	15	5.58	26.30	0.21	
21	Other merchants	11	4.09	10.90	0.38	
22	Insurance	5	1.86	1.45	1.28	
23	Stockbroking [b]	4	1.49	1.73	0.86	
24	Shipowning	24	8.92	2.95	3.02	
25	Other commerce	6	2.23	9.14	0.24	
26	Newspapers	5	1.86	(1.64	1.81	
27	Publishing	3	1.12	(		16
28	Other miscellaneous	2	0.74	3.25	0.23	
29	Professionals - law	1	0.37	1.95	0.19	
30	Other professions	9	3.35	1.66	2.01	
32	Others	6	2.23	n.a.	n.a.	
1-32	Total non-landed	269	100.00	100.00	1.00	

Sources: profit shares, TNA, IR 64/283, Inland Revenue, Statistics and Intelligence Division, `Income Tax Schedule D, 1928-29,' May 1931. Cartelisation, Mercer, `Evolution of British government policy', Appendix II. Other data, dataset.

Notes: [a] For wealth shares, foods also include “mineral waters, British wines, ciders, and bottling.” [b] Wealth shares are for “stock and share jobbers and brokers.” [c] Proportion of national output controlled by the cartel; only covers factory trades.

Figure 1: Numbers of taxable incomes in excess of £50,000, £75,000 and £100,000 (1912-1939)



Source: based on Inland Revenue annual reports for year to 31st March 1912 - 31st March 1940, tables of super-tax/sur-tax classification of incomes.

Notes: data for 1912-1929a are based on super-tax returns and 1929b–1940 are based on surtax returns. Values for the £50,000+ category are only available from 1915, as earlier data were not classified at the £50,000 interval.

[i] Scott and Walker, `The comfortable, the rich, and the super-rich;'. Cummins, `Hidden wealth;' Saez and Zucman, `Wealth inequality'; Volscho and Kelly, `Rise of the super-rich'; Turner, `Wealth concentration'; Piketty et. al, `Wealth creation.'

[ii] Rubinstein, `Men Of property'; idem, *Men of property*; Cummins, `Where is the middle class?'; idem, `Hidden wealth.'

[iii] Rubinstein, *Capitalism, culture and decline*, p. 25.

[iv] See, for example, Atkinson and Harrison, `Analysis of trends over time; Lindert, `Unequal English wealth; Atkinson, Gordon, and Harrison, `Trends in the shares of top wealth-holders.

[v] See Cummins, `Hidden wealth'; Scott, `Fiscal constitutional crisis.'

[vi] TNA, IR 40/3747, Report to Chairman on legal evasion of death duties by change of domicile and transfer of property abroad, n.d., c. October 1926.

[vii] Rubinstein, *Men of property*, p. 12.

[viii] Piketty, Postel-Vinay, and Rosenthal, `Wealth creation,' p. 239.

[ix] Piketty, *Capital in the twenty-first century*, pp. 396-7.

[x] Piketty, Postel-Vinay, and Rosenthal, `Wealth creation', pp. 250-251; Atkinson and Harrison, `Analysis of trends over time'.

[xi] TNA, IR40/4813, report on avoidance of estate duty through the medium of companies, O.W. Godwin, 5th Jan. 1935.

[xii] TNA, IR64/51, memorandum for Mr Oliver, signed W.E.B. 14 April 1934.

[xiii] TNA, IR 81/64, `Legal avoidance in the case of large estates', memorandum by N. V. Crawford, 2 July 1931; Smith, `Land ownership', p. 768.

[xiv] TNA, IR 64/58, note, signed A.W.B., 9th June 1933. The IR used the formula: capital =£4,300 + 20 x investment income.

[xv] Saez and Zucman, `Wealth inequality.'

[xvi] See Scott: `Fiscal constitutional crisis.'

[xvii] TNA, IR 64/75, list of incomes of £50,000 and over, 1928/9 tax year, 7th June 1929.

[xviii] https://www.ukwhoswho.com/

[xix] The supplementary list included 13 named millionaires currently undergoing tax assessments. This added to the list of names, but probably did not increase the overall number listed (five of these were already named in the main list, a higher proportion than all named individuals on the list).

[xx] Fenton, `Was this the richest (and most secretive) British tycoon.'

[xxi] Rubinstein, `British millionaires'. The four "foreign" millionaires were all South African merchants/financiers. At least two of them appear to have been British citizens.

[xxii] For example, Wyndham Portal was excluded because, even though he become managing director of his family's paper manufacturing firm in 1919, his father, the chairman, did not die until 1931, and presumably bequeathed him most or all his stake in the firm. Anon, `Portal'.

[xxiii] A minimum probate £1.5 million was required for deaths from 1940-1942 and over £2 million for 1943-49.

[xxiv] TNA, IR 40/4574, memorandum prepared for Board of Trade's Committee on Evasion of income tax and sur-tax, Sept. 1933.

[xxv] https://www.oxforddnb.com/; https://www.ukwhoswho.com/; Jeremy, *Dictionary of business biography*; Slaven and Checkland, *Dictionary of Scottish business biography*; Thomas Skinner, *Directory of directors*; lib-gale-newsvault.aspx; https://www.ancestry.co.uk/

[xxvi] Women were probably over-represented, as names were only given in the original list when dates of birth or marriage were not known and directories such as *Burke's Peerage* did not usually list women's ages.

[xxvii] Rubinstein, *Men of property*, p. 251.

[xxviii] Turner, `Wealth concentration'. There is some variation in starting dates; for example, the USA's long-term decline starts from 1929; Saez and Zucman, `Wealth inequality'; Atkinson, ` Distribution of top incomes', pp. 141-142.

[xxix] Piketty, Postel-Vinay, and Rosenthal, `Wealth creation', pp.237-9.

[xxx] Atkinson, "Distribution of top incomes' pp. 141-142.

[xxxi] Scott and Walker, The comfortable, the rich'; Atkinson, `Top incomes,' pp. 335-6;

[xxxii] See Cummins, `Hidden wealth,' p. 17.

[xxxiii] Turner, `Wealth concentration'.

[xxxiv] Ibid, pp. 634-7.

[xxxv] Daunton, `"Gentlemanly capitalism"', p. 123; Cassis, `Bankers in English society.' Chapman, `Aristocracy and meritocracy', argues that this process was limited to a section of the merchant banking community.

[xxxvi] Mandler, *Rise and fall*, p. 228.

[xxxvii] Thompson, `English landed society in the twentieth century II', pp. 17-18.

[xxxviii] Rubinstein, *Men of property*, p. 196.

[xxxix] Thompson, `English landed society in the twentieth century I', p. 12; Rubinstein, *Men of property*, p. 196.

[xl] Rubinstein, *Men of property*, p. 196.

[xli] Rubinstein, `Ellerman'; Anon, `Williamson'; Nicholas, Wealth making', p. 24.

[xlii] TNA, IR 64/51, memorandum to chairman, signed C. J. G., 5 Nov. 1930.

[xliii] TNA , IR 64/51, memorandum comparing tax assessments exceeding £50,000, unsigned, August 1930.

[xliv] Scott, `Fiscal constitutional crisis'.

[xlv] Nicholas, `Wealth making'; Rubinstein, *Capitalism, culture and decline*, pp .1-44.

[xlvi] Rubinstein, *Men of property*, pp. 58-59.

[xlvii] Piketty, Postel-Vinay, and Rosenthal, `Wealth creation,' pp. 239.

[xlviii] See Morgan and Moss, `Listing the wealthy', pp. 189-195; Rubinstein, '"Gentlemanly capitalism."' pp. 128-130.

[xlix] Geary and Stark, "What happened to regional inequality', p. 220.

[l] Piketty, Postel-Vinay, and Rosenthal, `Wealth creation', pp. 239.

[li] Acheson, Campbell, and Turner, `Active controllers or wealthy rentiers?'.

[lii] Ibid, p. 691.

[liii] Omissions may have been due to the person in question not sending in their details, being in business in other than a director capacity (e.g. a partner or sole trader), or errors on the part of the compilers.

[liv] Corley, `Hill, Philip Ernest.

[lv] Rubinstein, `Ellerman; Taylor, *Ellermans.*

[lvi] Hannah, *Rise of the corporate economy*, pp. 102-3.

[lvii] TNA, IR 40/4574, memorandum prepared for Board of Trade's Committee on Evasion of income tax and sur-tax, Sept. 1933.

[lviii] Gutierrez and Philippon, `How EU markets became more competitive'; Grullon, Larkin, and Michaely, `Are US industries becoming more concentrated?', p. 698.

[lix] Gutierrez and Philippon, `How EU markets became more competitive', pp. 2-7.

[lx] Broadberry and Crafts, `Britain's productivity gap', p. 546.

[lxi] Hart, *Studies in profit*, p. 14; TNA, IR 64/283, Statistics and Intelligence Division, "Income tax Schedule D, 1928-29," May 1931.

[lxii] Rees, *Trusts in British industry*, pp. 27-32; Levy, *Monopolies*, pp. 177-180.

[lxiii] Gregory, *Last War*, pp. 136-142; Hannah, *Rise of the corporate economy*, pp. 41-53.

[lxiv] Sources: The Times Digital Archive, https://go.gale.com/ps/start.do?p=TTDA&u=rdg; Procite UK Parliamentary Papers, https://parlipapers.proquest.com/parlipapers "Profiteers" was used rather than "trusts" as the latter term was widely used in other contexts.

[lxv] Hannah, *Rise of the Corporate Economy*, pp. 32-37; 45-48; Marshall, *Industry and Trade*, pp. 579-580; Levy, *Monopolies;* Florence, *Logic of Industrial Organisation*; UK, Board of Trade, `Combination in industry and trade.'

[lxvi] UK, Parliament, Committee on Commercial and Industrial Policy, *Final Report.*

[lxvii] Barney, `Firm resources'; Levy, *Monopolies*, pp. 199-200; 289-90.

[lxviii] Miller, *Europe and the maritime world*, pp. 180-185.

[lxix] Rubinstein, "Ellerman'.

[lxx] Ibid.

[lxxi] See Knox, `Development of the tied house system; Clark, `Manners.'

[lxxii] Levy, *Monopolies*, pp. 234-237; Weir, `Dewar'.

[lxxiii] UK, Business Statistics Office, *Historical record*, p. 11.

[lxxiv] Rees, *Trusts in British industry*, pp. 200-201.

[lxxv] See Cerrentano, 'European cartels'.

[lxxvi] Levy, *Monopolies*, pp. 251-253.

[lxxvii] For a review of this literature, see Cassis, `Financial elites revisited,' p. 77.

[lxxviii] Cassis, `Bankers in English society', p. 226.

[lxxix] Lisle-Williams, "Merchant banking dynasties', p. 335.

[lxxx] http://www.visionofbritain.org.uk/census/table/EW1931OCC_M16

[lxxxi] Corley, *Quaker enterprise* pp. 199-206.

[lxxxii] Ibid, pp. 136-8; 142-151; 169-175; 200-214.

[lxxxiii] Daunton, `How to Pay for the War,' p. 883.

[lxxxiv] TNA, IR 40/3476, "Large estates. Legal avoidance of sur-tax," n.d., c. 1933.

[lxxxv] TNA, IR40/4576, memo for Mr Verity, IR, 5 July 1933; IR 40/4574, memo prepared for Board of Trade's Committee on Evasion of income tax and sur-tax, Sept. 1933.

[lxxxvi] TNA, IR40/4576, memo for Mr Verity, IR, 5 July 1933, Appendix D.

[lxxxvii] TNA, IR 40/3476, `Large estates. Legal avoidance of sur-tax, n.d., c. 1933.

[lxxxviii] TNA, IR 64/51, report for Mr Oliver, signed W.E.B., 14 April 1934.

[lxxxix] TNA, IR 40/4574, memo prepared for Board of Trade's Committee on Evasion of income tax and sur-tax, Sept. 1933.

[xc] Hollis, `Union Cold Storage'.

[xci] Ibid, pp. 6-8.