ECONOMIC HISTORY REVIEW

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ORIGINAL ARTICLE

The incidence and persistence of partnerships in a British industrial city: Glasgow, 1861–81

Graeme Acheson¹ | Eoin McLaughlin² | Gill Newton¹ | Linda Perriton³ |

Correspondence

Graeme Acheson
Email: graeme.acheson@strath.ac.uk

2 sentence summary

This paper examines the prevalence of business partnerships in a late-nineteenth-century British city and presents a detailed picture of partnership number and type, demographic characteristics of the entrepreneurs who ran them, and how these businesses persisted over time. We show that partnerships were a key business grouping in the city, the majority of partnerships were formed between individuals without family ties, and partnerships broadly matched corporate survival rate.

280 character tweet

This paper shows that business partnerships were a key business grouping in a late-nineteenth-century British city, the majority of partnerships were formed between individuals without family ties, and survival rates broadly matched that of corporates.

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Abstract

This paper examines the prevalence of business partnerships in a late-nineteenth-century British city, using individual-level data from post office directories and censuses. Focusing on Glasgow, we present a detailed picture of partnership number and type, demographic characteristics of the entrepreneurs who ran them, and how these businesses persisted over time. We show that partnerships were a key business grouping in the city and demonstrate that the partnership form was advantageous in manufacturing and that the majority of partnerships were formed between individuals without family ties. Furthermore, we offer new insight into business longevity, showing that partnership business survival broadly matched corporate survival rates in this period, with persistence data also suggesting that kinship partnerships were better able to deal with the perceived hold-up problems associated with the partnership form.

KEYWORDS

Britain, nineteenth century, partnerships

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¹University of Strathclyde

²Heriot Watt University

³University of Stirling

Our understanding of the drivers of the private partnership business form in economic development has been held back by a lack of large-scale data. This is particularly problematic in the British context, as observers have suggested that the private partnership was the representative firm in most industries and trades into the twentieth century. If Jefferys' estimate for 1885 suggests that the number of partnerships in Britain was then around 100 000, whilst limited liability companies only accounted for between 5 per cent and 10 per cent of the total number of business organizations. In 1919, Marshall argued that until 'not very long ago the representative firm across most of the [British] economy was the private partnership'. Even in the 1930s, Clapham suggested that craft 'masters' and partnerships were still viewed as the most numerous form of enterprise. Despite the availability of the joint-stock business form to all from the second half of the nineteenth century, there was no British rush to abandon the traditional partnership model. To entrepreneurs of the period, private partnership, based on professional and commercial skill and personal knowledge, offered many advantages.

Even if we accept the characterization of nineteenth-century capitalism as the accumulation and re-accumulation of wealth by entrepreneur(s), it should not lead us inevitably to the dominance of the corporate form in our understanding of economic development. Partnerships also provide access to additional talent, resources, and networks beyond that of the individual. In their simplest expression, two (or a small number of) persons combined in business for the pursuit of profit, with no requirement for written agreements, were sufficient to constitute legal partnership. In more complex cases, the contracting would have included formal written agreement that accommodated expansion and evolution of the firm through the addition or replacement of partners. Many partnerships, notably in manufacturing, grew their operations to a size and complexity that commanded all, or nearly all, of the economies of production associated with the most advanced methods at the time. Incorporation as a joint-stock company with limited liability was held to be necessary only in those cases when the scale of enterprise was so vast that private capital could not make up the need.

The lack of attention to the partnership form in the British economic historiography has largely been a function of the availability of data. Compared with the breadth and depth of historical sources for corporates, the quantification of – and therefore the understanding of the importance of – partnerships faces significant data availability challenges. The accessibility of corporate information has enabled research activity into corporates across a wide range of topics, including corporate prevalence, governance, performance, ownership, growth, and investor behaviour, to the point where corporates dominate the economic history literature. With no

¹ See Guinnane and Schneebacher, 'Enterprise form', and Guinnane et al., 'Ownership and control', for contemporary discussion.

² Jefferys, Business organisation, p. 105. This figure excludes sole traders and public utilities.

³ Bennett, 'Interpreting business partnerships', for more details, and Marshall, Industry and trade, p. 314.

⁴ Clapham, Economic history.

⁵ Payne, British entrepreneurship, p. 17.

⁶ Jefferys, Business organisation, p. 38, and Lamoreaux, 'Partnerships'.

⁷ Marshall, *Industry and trade*, pp. 314–5.

⁸ Lamoreaux, 'Partnerships'.

⁹ For example, Acheson et al., 'Rule Britannia!'; Acheson et al., 'Who financed'; Acheson et al., 'Private contracting'; Foreman-Peck and Hannah, 'Extreme divorce'; Grossman, 'New indices'; Rutterford et al., 'Who comprised'.

formal requirement to register any type of partnership in Britain in the nineteenth century, partnerships are not as well documented.

It is only recently, with large-scale digitization of population census returns, that there has been any attempt to systematically examine the prevalence of business partnerships during the nineteenth century in Britain. Bennett used 1881 census returns for England and Wales to estimate the total number of partnerships and build an understanding of the relationship between their owners. However, his identification of 2920 non-farming partnerships only, out of a total business population of approximately 240 000, runs counter to the observations of Marshall and Jefferys regarding the ubiquity of the partnership form. Bennett himself comments on the low frequency of partnerships in the conclusions to his paper, draws attention to the need for data supplementation of the census, and calls for further investigation. This paper responds to that need for further research. We use post office directories (PODs) for Glasgow in 1861 and 1881 to create a population of businesses for analysis and then cross-match that data to the census and thereby to business owners in the census identified in the British Business Census of Entrepreneurs (BBCE) dataset. We characterize our approach as 'POD plus', combining PODs, the census, and BBCE to triangulate partnership numbers, size by number of employees, and partner characteristics.

This paper seeks to improve our understanding of the drivers of private partnerships. Our analysis of the dataset leads to three main contributions to our understanding of partnership businesses. The first is the importance of partnerships (in terms of both number and size) to the late-nineteenth-century Glaswegian economy, a result that disputes relatively lower nationwide estimates derived from the census. In doing so, we demonstrate the importance of the partnership form in industries such as manufacturing. Secondly, through examining the relationship between partners, we show that the majority of partnerships were formed between individuals without family ties, which would have increased their ability to access capital and talent. The final contribution is the ability of the POD dataset to offer new insight into business persistence. The persistence data suggest that partnership business survival during this era was broadly comparable to corporations and that family partnerships were more likely to persist, with loyalty, trust, and altruism within family circles providing an explanation for that persistence.

The paper's structure is set out hereafter. In section I, we address the legal position of the partnership in the nineteenth century. Section II defines Glasgow city and details the creation of the POD plus partnerships dataset and its interlinkage with other sources. In section III, we examine partnership prevalence, that is, the number, type, and industry coverage of the partnership form. In section IV, we examine partner characteristics, that is, partners' relationship to each other, age, gender, and ethnicity. In section V, we examine persistence, that is, evidence of partnership businesses that survived and adapted. The conclusion forms section VI.

I | THE LEGAL POSITION

The legal position on private partnerships in Scotland and England during the second half of the nineteenth century was of different conventions with considerable common practice. ¹² Partnerships that were limited to a few individuals were, in Scottish and English legal convention, brought

¹⁰ See Bennett, 'Interpreting business partnerships'.

¹¹ See also Nenadic, 'Businessmen'; Nenadic, 'The small family firm', in regards to Glasgow and its economy.

¹² Clark, *Treatise*, p. 285, and the Mercantile Laws in the different parts of the United Kingdom of Great Britain and Ireland in *Second report of the commissioners*.

into being by the mere will of their members and were therefore dependent on the continuation of that will for the continuity of the business. ¹³ Partners embraced the character of both principal and agent, they had the power to act as if they were the sole owners of the enterprise, and they could enter into obligations that were binding on the firm without the consent of the other partner(s). ¹⁴ In these matters, private partnerships in Scotland and England resembled each other so closely that they were regarded by contemporaries as coincident. ¹⁵

An acknowledged difference between Scottish and English legal systems was the approach to settling disputes. English law held that the firm was not a separate distinct entity from the partners. Scots law, being based on continental law, followed the convention of the business holding a separate legal personality to that of the partners. In Scotland, this *quasi persona* status of the business meant that partners were agents and sureties not of each other but of the firm, and the obligations which the firm contracted by means of their agency bound them individually as its sureties. In Scotland, the *quasi persona* of the firm meant that the firm could sue partners, partners could sue the firm, and partners could sue each other. An ability of suing *inter se* through the courts of equity and common law – or to stipulate named persons as arbitrators in partnership agreements – was thought useful in conflict resolution, especially when compared with the complexity of dispute resolution in the Chancery court of England. However, contemporaries in the 1850s believed this comparative English disadvantage had limited impact on partnership formation. As testimony to the Select Committee on The Law of Partnership suggested, very few people forming partnerships would have considered the complexity of bringing a case to Chancery Court as a reason not to enter into a business relationship of this type.

The legal system in both Scotland and England was permissive, not restrictive, in terms of partnership formation. The law presumed partnerships were formed with good faith and conducted for the common good with individual interests not placed before those of the firm. As such, the legal framework around partnerships in Scotland and England facilitated opportunities for entrepreneurs to pool capital and talent outside the context of the family. This is important, for example, in obtaining working capital in industries such as manufacturing, and afforded partnerships an advantage over sole proprietorships.²¹

Partnerships were constituted by verbal or written contract between the 'chosen persons'. The partnership ceased on death, sequestration, insanity, the retirement of any one of the partners or the marriage of a woman partner. Additional individuals could not be introduced into a partnership concern against the will of a single other member. As such, partnerships have been

¹³ Clark, *Treatise*, p. 31. Through a deed of copartnery, (in Scottish law) *un*incorporated joint-stock companies (copartneries) with many members also existed as ordinary partnerships. In practice, the multi-partner business enabled by deed of copartnery did not create a situation that was different in outcome to the position in England (or Wales and Ireland), whereby large multi-ownership businesses existed without government approval via a deed-of-settlement (See Hannah, 'Corporations', and Pearson et al., *History of the company*, for more details).

¹⁴ See Lamoreaux, 'Partnerships'.

¹⁵ Clark, *Treatise*, p. 3. See also Bennett, 'Interpreting business partnerships', for discussion on partnership law and not overstating the distinction between England and Scotland during this period.

¹⁶ Bennett, 'Interpreting business partnerships'.

¹⁷ Hardman, 'Reconceptualising'.

¹⁸ MacGregor, 'Partnerships', p. 255.

¹⁹ Hanley, 'Scottish laws', p. 213; Bell and McLaren, Commentaries, p. 538.

²⁰ See the Select Committee on The Law of Partnership, QQ. 545.

²¹ See Lamoreaux, 'Partnership form', p. 274, for broader discussion on the importance of raising capital in manufacturing.

considered vulnerable to hold-up problems as a business form, that is, the ability of partners to dissolve the firm at will or use the threat of dissolution to force the others to grant more favourable terms. Hold-up problems are assumed to impact firm survival and suggest that partnerships were likely to have short time horizons. This assumption, borne from the way in which the partnership was formed legally, can be tested by examining the data. Given that the legal environment was simultaneously permissive and simple to navigate in respect of partnership formation and, once formed, allowed for both complexity and continuity, we would expect to see partnerships prevalent across the economy and in numbers reflective of the observations of Marshall.

II | DEFINING THE CITY, DATA SOURCES AND METHODOLOGY

Glasgow, in the period under study, was renowned as the second city of the British Empire. The city had been a specialist outport of tobacco in the eighteenth century and sugar in the early nineteenth century. The merchant capital that arose from the Atlantic trade that provided sources of start-up finance within prominent families, along with credit sourced from individuals and banking institutions secured against landed estates and urban property, was driving a growing commercial economy and expanding city. Glasgow exerted a greater pull in terms of local population movement in Scotland than London did in England, drawing internal migrants primarily from populous adjacent counties to fill diverse employment opportunities. In 1881 the city had a municipal burgh population of approximately 511 000, compared with Liverpool borough's population of 553 000, Birmingham's 437 000, and Manchester's 462 000. Milst the existing economic historiography of Glasgow focuses mostly on its industrialization – specifically the development of its heavy industries of chemicals, textiles, iron, and shipbuilding – the city was also known after the 1850s as 'the great commercial emporium of Scotland'. Glasgow therefore provides ample opportunity to examine the partnership form across the many sectors represented in its economy.

In determining the definition of Glasgow used in this paper, we considered the city's spatial extent as represented by both common geographical units and the particulars of our sources. The lowest geographical unit of analysis for historical studies is often the parish. However, parish boundaries are a blunt and confusing tool for rapidly expanding urban areas, lagging behind the true physical extent of cities. This was especially true in the case of nineteenth-century Glasgow, which exemplified what Anderson refers to as the 'spatial and functional chaos' of Scottish civil parishes prior to the 1890s.²⁷ In other studies of Glasgow, such as those of Gibb, Maver, and Pacione, the city is defined by its municipal burgh boundaries or its ward subdivisions, which were completely redrawn between 1861 and 1881.²⁸ However, in 1881 an additional 162 680

²² See Lamoreaux, 'Partnerships'.

²³ Mackenzie, 'The second city of the Empire'.

²⁴ Mullen, The Glasgow Sugar Aristocracy, p. 26; Nenadic, 'Businessmen'.

²⁵ Briggs, Victorian Cities; Withers, 'Demographic history'.

²⁶ Glasgow municipal burgh population figures taken from *Census of Scotland*, *1881*, *Vol. I.* BPP 1882 LXXVI [C.3320], table III: pp. 127–55; 1881 English municipal borough populations taken from *Census of England and Wales 1891*, *Vol. I*, BPP 1893-4 CIV [C.6948], table VI, pp. xx–xxi.

²⁷ Anderson, *Scotland's populations*, p.43. Smaller *quoad sacra* parishes held no administrative function (unlike their English counterparts) and are largely irrelevant to our sources.

²⁸ See Gibb, Glasgow; Maver Glasgow; Pacione, Glasgow.

Glasgow inhabitants lived outside the municipal burgh. At this time the municipal burgh did not include Govan, the populous centre of the shipbuilding industry southwest of the River Clyde, or prosperous western suburbs such as Dowanhill and parts of Hillhead.²⁹

The PODs, our principal data source, were compiled by the post office from 1828. Trade directories, of which PODs are a specific type, were intended to be commercial directories of a town – helpful to the visitor (or resident of a larger conurbation) in identifying where they may find goods and services or peoples' places of residence listed in the directory.³⁰ The Glasgow PODs³¹ for 1861 and 1881 reflect the expansion of the city footprint through their street maps, surveyed and updated yearly. In 1861 the POD street map covered some 3300 ha - not quite extending to the full municipal burgh outline at that date - which is also coincident with 1861 census registration district (RD) boundaries. In 1881-2 the POD street map comprised 6100 ha, going beyond the municipal burgh boundary extended in 1872 and - important when it comes to capturing the population and business growth outside of the burgh – encompassing Govan town, Hillhead, Dowanhill, and more parts of Partick further west. Disregarding rural hinterland, the urban area outlined by the outer edges of the fourteen 1881 'Glasgow' RDs differed only slightly from the municipal burgh boundaries. However, the difference in population was about 50 000, one-tenth greater than the municipal total, with the additional Govan and Partick RDs contributing a further 90 000.³² From street addresses of businesses in the POD in both 1861 and 1881, we can determine that the POD covered an area larger than the official Glasgow municipal burgh boundary at either date. More than 97 per cent of the POD main listing primary business addresses for businesses in the vicinity of Glasgow (i.e. within 10 km of George Square) were inside the boundary of 1881 Census RDs 644.1-14 plus 646.1 and 646.2. We therefore decided to define 'Glasgow' as comprising these 16 RDs.33

In Scotland, information on individual businesses and addresses that appeared in its PODs were collected annually by post office delivery staff, with compilation and indexation managed by senior staff.³⁴ Entries were repeated in different formats in three directory sections: (1) general

²⁹ Included within this figure, the population of Govan town in 1881 (i.e. not including rural hinterland) was 50 372.

³⁰ Similar directories are available across most UK nineteenth-century cities. See Shaw and Tipper, British directories, for more detail. Scottish cities seemed unique in their involvement of the post office. We surmise from our close examination of the POD entries that letter carriers approached individuals in the businesses they delivered to and gathered information about the ownership of the business, plus any residential information that was volunteered.

³¹ See appendix 1 for details on data extraction from the POD.

³² In the 1881 Census Report, these 16 RDs are identified as Glasgow (644-1 to 644-14), Govan Church (646-1), and Partick (646-2).

³³ The POD maps for 1861 and 1882, showing the area within its purview, are available through the National Library of Scotland's (NLS) website (https://maps.nls.uk/towns/glasgow.html, accessed on 15 March 2024). Geographic Information System (GIS) boundary datasets of Glasgow 1881 RDs were created by amending RD boundaries shown on the 1901 Census of Glasgow map (NLS) using the 1881 POD alphabetical list of streets (see https://digital.nls.uk/directories/browse/ archive/84362415, accessed on 15 March 2024) for information on RD boundaries. Municipal burghs and wards for 1861 and 1881 were digitized from Ordnance Survey historical maps supplied by Digimap (https://digimap.edina.ac.uk/, accessed on 15 March 2024).

³⁴ Norton states that – in contrast to the contentious ownership arrangements of the London Post Office Directory, later Kelly's Directory - Glasgow and Edinburgh's PODs were 'produced and owned' by the letter carriers. Assuming the methodology was the same as in London's post office directory, letter carriers not only recorded names and addresses on their rounds but also collected subscriptions and charges for extra insertions and advertisements and distributed copies of the directories, when printed, for sale and for delivery to subscribers. An account of the payments in connection to the PODs of Edinburgh, Glasgow, and Dublin were made to the House of Commons between 1837 and 1852, but no strong objections were made in respect of the arrangements.

alphabetical by name, (2) alphabetical by street, and (3) alphabetical by trade. Our analysis focuses on the explicit reference to a partnership business in the POD. 35 We used the general alphabetical listing since this is the longest and most detailed and contains fewer duplicate business listings than the trades section more commonly used. We employed a two-stage approach in identifying partnership business numbers in the POD. We first examined the basic business listing and naming convention as a means of establishing business numbers, consolidating any duplicate partnership listings by appending unique identifiers to each firm. The naming convention of businesses in this period was such that a business should be carried on under the firm name A, B, and C, where A, B, and C are the names of the partners.³⁶ If partners were more numerous and it would be cumbersome to include them all, then the names of the two best known or most influential would be appended with the term '& Co.'. A descriptive name, for example, The Dunblane Boot Company, was generally accepted to denote a copartnery or corporation, and in the case of putative corporations, supplemental information usually proved the case.³⁷ Bennett, however, warns that the business name alone is not an infallible means of identifying a partnership. He expresses a concern that businesses operating as '& Co.' could be a deliberate obfuscation by sole traders who wanted to 'sound large' or that a name was being maintained long after partners had moved on or died.³⁸ Drawing comparisons between the trades section of trade directories for two small sub-samples and census returns, Bennett notes that, although the census almost certainly underestimated partnership numbers, there was the potential that trade directories overestimated numbers.

Secondly, we reviewed the general name-alphabetized personal listings within the Glasgow POD for references specific to a firm. By defining themselves as a 'partner' in the directory, for example, A. Smith *of* Smith and Jones, individuals were 'holding themselves out' and publicly declaring they were currently in an active business partnership trading relationship.³⁹ We sifted the 1861 and 1881 POD data to extract all 7483 such individuals who were partners and then linked them to their uniquely identified firm of origin, except in the very small proportion of cases per sample year that proved ambiguous (0.1–0.4 per cent) or unmatchable to any firm (0.6–0.8 per cent). In the following data, figures are presented for successive sifts: all partnerships (identified solely by business name format), partnerships where one individual partner is listed in the POD, and partnerships where at least two individual partners are listed in the POD. Although the third measure is the most robust in terms of excluding all likely 'false' partnerships and satisfies the obfuscation concern, it is equally likely to be an underrepresentation of actual active partnerships. Finally, in matching POD individuals who were partners to the census, we limited our searches to the counties of Lanark and Renfrew immediately surrounding Glasgow, on the assumption that, for most people, business in Glasgow required a nearby residence.⁴⁰

³⁵ As such, we do not supplement our estimates with de facto partnerships established through other sources, for example, establishing partnership through common occupational census returns within family units.

³⁶ Clark, Treatise.

³⁷We therefore exclude businesses with descriptive names from our partnership estimates.

³⁸ See Bennett, 'Interpreting business partnerships', and Statements to the 1872 Select committee on Trade Partnerships (P.P. 1872), Q.2714; see also QQ.17, 1820, 2162, 2268, 2371, 2535, 2576.

³⁹ See appendix 2 for an example of the association made between individuals and the firm. Other individuals identified as 'at' a firm were excluded. A much lower proportion of these were eponymous with the firm, that is, had a family name featuring in the partnership name, usually junior family members, and occupational descriptors such as 'foreman' or 'cashier' suggested employee status.

⁴⁰ In BBCE data based on censuses, Glasgow Burgh is not precisely the municipal burgh at that date but rather an approximation defined through census parish/RD parts. Specific to cross-referencing sources, information for the PODs used in

TABLE 1 Glasgow business activity in 1861 and 1881

	All busin	ess activity	
Year	1861	1881	
	$oldsymbol{N}$	$oldsymbol{N}$	Per cent growth
Corporations (all)	138	467	238
Unincorporated companies/Scottish copartneries (all)	148	312	111
Partnerships (all)	2847	4918	78
&	1193	1853	66
& Bro(s)/Bro(s) & Co	60	213	255
& Son(s)/Son(s) & Co	340	738	117
& Co (excluding Son, Bro)	1254	2114	68
Female only ^a	115	141	
Mixed gender ^a	3	7	
Sole proprietorship (all)	9943	14 037	41
Associations (all)	32	52	63
Businesses (all)	13 108	19 786	
Business (all), excluding agent represented	12 798	18 983	

Notes: (1) Total '& Co.' partnerships including Son and Bro: 1270 in 1861 and 2184 in 1881; excluding agent-represented businesses, 1183 in 1861 and 1925 in 1881. (2) Corporations include limited and unlimited companies – see text. (3) Directories cannot be considered a complete census. With listing fees associated with many directories, there is the potential that owners of micro, temporary, and marginally profitable businesses choose not to list (See Barker, The business of women, p. 54, and Aston, Female entrepreneurship p. 8, for concerns regarding the quantification of women sole proprietors in the historical records in this respect). In terms of our primary focus, as a partnership is created through a 'pooling of resources', with a joint commitment to the concern that is intended to be long-term, we believe the absence of temporary and precarious firms in the POD had limited impact on our partnership estimates. However, it makes estimating the total business population and drawing comparisons between partnership and sole proprietorship businesses more challenging. (4) 'Agents' and agencies should be viewed differently from local managers with premises. They were a place people could purchase the products or services of a firm, but the products would have been most likely sold on a commission basis (or similar) and potentially alongside a selection of alternatives.

^aIdentified from forenames/titles of partnership or individual partners. Underrepresents the true number since frequently only the initials of forenames are known. *Source*: Post Office Directory dataset.

III | PARTNERSHIP PREVALENCE

This section examines the prevalence, sector distribution, and size of partnerships in Glasgow in 1861 and 1881. Table 1 provides a breakdown of all business activity in the POD by business form in both sample years. The total number of businesses in Glasgow in the POD grew substantially between our two sample points, with 13 108 and 19 786 businesses in 1861 and 1881, respectively.

our analysis was collected by the post office in the Spring of 1861 and 1881. Although we might expect some movement of residence, the collection aligns well with the census date of end of March and falls before tenants typically moved residence (flitting day). See Morgan and Daunton 'Landlords in Glasgow', p. 276, for more detail on residential movement in Scotland during this period. One possibility is that residence might have been updated to align with flitting day movement at the end of May. However, movement of tenants was not high (See Morgan and Daunton, 'Landlords in Glasgow', p. 276), and concerns that the directory could not accurately reflect flitting movements was voiced in the local press, 'to have the new issue almost on flitting day, is incompatible with even an ordinary degree of accuracy', *The Glasgow Daily Herald*, 4 June 1861.

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Based on naming convention criteria, partnerships were clearly a substantial proportion of total businesses. Totalling 2847 in 1861 and 4918 in 1881, they made up approximately 20–25 per cent of all identified businesses in the POD. The majority of these businesses, 80–86 per cent, comprised 'A & B'-named firms or '& Co.' firms, with only a minority being family-described, that is, using an '& Bro(s)' or '& Son(s)' descriptor. In respect of female descriptors (most commonly 'Misses'), 115 and 141 partnerships in 1861 and 1881, respectively, can be identified as women-only partnerships. However, we believe this underrepresents the true incidence of businesses owned and operated solely by women, as frequently only the initials of forenames were reported.⁴¹

Partnerships were fewer in number than sole proprietorships but more common than both corporations and unincorporated companies. Perhaps unsurprisingly, given the passage of the Companies Acts, we did see growth in corporate activity between our two sample points. Much of this growth was amongst newly established companies, registered under the Companies Acts, rather than businesses moving to a more formal corporate status. These newly formed companies were not necessarily large nor had significant capital needs. Of the 467 corporations in 1881, only 231 had a Stock Exchange Yearbook listing, suggesting the rest were small and not known to the capital market. Unincorporated companies/copartneries were predominantly found in the iron, coal, and steel industry or shipping. Compared with sole proprietorship, partnership growth rates are considerably higher over our sample period, 73 per cent versus 41 per cent. This is similar to the trend in the United States noted by Lamoreaux, who has examined relative growth of partnerships and sole proprietorship in both Boston and the wider United States.

As outlined above, we took seriously the possible concerns associated with the identification of partnerships by naming convention alone. In table 2, therefore, we present the breakdown of partnership firms listed in the POD matched with individuals identified with the same firm (e.g. A. Smith *of* Smith and Jones). Partners in the POD are most often found in the form of separate listings of named individuals related to a partnership business listing. But some partnerships listings, while having no associated separate partner entries, were nonetheless given both a business address and a home address, prefixed with 'house' or 'residence'. In such cases we take these home addresses to belong to one or more partners in the firm. Personal names of these 'deducible partners' were taken from the business name (e.g. 'John Morrison' from 'John Morrison & Sons'), allowing them to be identified in other sources as with the separately listed partners.

The first point to note is that the total population of partnerships in each sample year drops by approximately 5–10 per cent when compared with table 1. This is because we excluded partnerships that did not appear to have their own individual premises in Glasgow (they had a business presence only through agent representation in the city). For partnerships with a business premises in Glasgow, approximately 28–29 per cent of the total choose not to list any of the principals 'of' the firm. We have tried not to assign motive to the absence of a partner listing – it is possible that the individual providing the directory information did not have full knowledge of partner details such as home addresses or the partners did not consider it important at that time. Between sample years we did see instances of surviving partnerships that did not return partner names in one return but did in the second, and vice versa. It is possible that partners lived closer to other business premises beyond Glasgow, and their personal listing was therefore not likely to be found in

⁴¹ See Aston and Di Martino, 'Female entrepreneurship', for further discussion of female entrepreneurship in Victorian Britain.

⁴² See Bain, 'Perth Steam Packet', for discussion on the legal position of steam packet companies, and Birch, British iron and steel industry.

⁴³ Lamoreaux, 'Partnership form'.

Year		1861		1881	Source
		Percentage		Percentage	
	N	(%)	N	(%)	
Glasgow POD partnerships	2708	100.0	4478	100.0	POD
No partners matched	794	29.3	1251	27.9	POD
1 partner matched	1079	39.8	1753	39.1	POD
2 partners matched	666	24.6	1167	26.1	POD
3 partners matched	130	4.8	242	5.4	POD
4 partners matched	29	1.1	49	1.1	POD
5 partners matched	6	0.2	12	0.3	POD
>5 partners matched	4	0.1	4	0.1	POD
Census partnerships excluding agriculture and fishing					
England and Wales	NA		2656		а
England and Wales	735		2725		BBCE
Scotland	214		337		BBCE
Glasgow burgh	35		51		BBCE
Census partners excluding agric	ulture and fis	shing			
England and Wales	908		4779		BBCE
Scotland	294		447		BBCE
Glasgow burgh	49		69		BBCE

Note: (1) '1 partner matched' includes 364 partnerships (1861) and 545 partnerships (1881) with deducible partners. For a definition of deducible partners, see text. (2) Figures sourced from POD exclude businesses represented by agents and Scottish copartneries. (3) BBCE figures exclude EA17 code 1: Farming, but include no EA17 code, which is a significant proportion of the 1861 England and Wales total (>150 partnerships). (4) Farming constitutes about half of census partnerships nationwide in 1881, but only one in Glasgow 1861 and zero in 1881. (5) Glasgow burgh is almost identical to RDs 644.1–14 and 646.1–2 (67 partners and 49 partnerships in 1881). (6) Approximately half of the partnerships in the analysis of England and Wales from Bennett (2016) 1881 were de facto. Specific to Glasgow in 1881, 7 of the 51 BBCE Glasgow burgh partnerships were de facto. These partnerships have been chiefly identified through individuals who described their business identically in the census return. Probing (for example) family structures of POD sole proprietors in the census might have yielded additional de facto (i.e. latent) partnerships beyond the seven already established by the BBCE through the interrogation of the census alone. Such connections are more likely to be drawn in family settings and establish additional kinship partnerships at the expense of sole proprietorship businesses. Sources: BBCE, British Business Census of Entrepreneurs dataset; POD, Post Office Directory dataset (2020; doi: /10.5255/UKDA-SN-8600-2); a, Bennett (2016) tab. 1, minus 264 "Landowners together".

the Glasgow directory.⁴⁴ Finally, as some partnerships were run by professional management, the principals may not have felt it necessary to identify themselves through such a listing.

The largest category is where we saw one partner listed. Where one partner was listed, there is the possibility that another had existed but was deceased at the time of recording, the POD informant included details of the senior partner only, or perhaps omitted the presence of a sleeping

⁴⁴ For example, in 1881, excluding agent relationships, 393 partnerships referenced businesses premises in locations beyond Glasgow in over 152 unique locations (within Scotland/England/Wales). Directories do exist for many of these locations, but not all. It is also known that the method of recording information was different depending on the directory provider, and we therefore cannot be sure that partners would have been referenced in the same way that we find them in the Glasgow directory. This unfortunately ruled out systematic additional analysis beyond Glasgow.

partner or latent partner or a partner that resided outside of the city. 45 Another possibility – as Bennett highlights – is the sole trader that wished to appear more substantial a concern.

For two matched partners (or greater), we were able to establish a clear connection between at least two partners and a specific partnership. Even after the application of this stricter test of a minimum of two matched partners, the POD-derived data returned 835 and 1474 partnerships in 1861 and 1881. Relatively few partnerships had three, four, or more partners. This is consistent with our expectations that most partnerships would be small, as to introduce larger numbers of partners would see an increase in possible hold-up costs and other problems. Comparing against Bennett and the broader BBCE database, our POD estimates of Glasgow partnerships based on the stricter matching criteria were approximately 30 times higher for 1881 at 1474 than estimates derived from the census alone.

We examine industry representation of partnerships in our POD database in table 3, using the same economic activity (EA) 17 categorization as BBCE to allow for comparison. The categorization is loosely based on census classifications developed by Booth and Armstrong. 46 In our analysis we present both the wider sample of 'partnerships (all)' and confirmed 'partnerships 2+' where we could establish two (or more) listed partners. Reviewing all partnerships, we found that almost 50 per cent of our partnerships (in both sample years) can be classified within the construction, manufacturing, or maker-dealer sectors. We found similar rates of industry representation over our two sample points, with broadly the same distribution of activity by industry in 1861 as 1881. 47 The one exception to this was finance and commerce, which experienced a 50 per cent drop in representation between the two sample years. Our results are similar to Guinnane and Schneebacher, who show the partnership form appeared across all spectrums of economic activity in Germany in 1895 and 1907 - even in sectors characterized by large firms with substantial fixed capital need, and Bennett, who demonstrates diverse sector representation in his analysis of England and Wales in 1881. 48 The high weighting (30 per cent +) of manufacturing-type companies in our results suggests that partnership was the organizational form of choice for skill- and capitalintensive production. This preference for partnership is consistent with the sectoral analysis of sole proprietorship business in table 3, which showed manufacturing businesses only accounted for 13.5 per cent and 11.7 per cent of all sole proprietorships in 1861 and 1881, respectively. 49

There was little difference in industry representation between the 'partnership (all)' figure and the confirmed '2+' partners category for the majority of sectors, suggesting that the distribution

⁴⁵A 'sleeping' or 'dormant' partner was passive in respect of the management of the firm and had no power to bind it but were entitled to a share in the profits, as they were liable for its obligations. Latent partners, generally speaking, would have been as much involved in the conduct of the business as a named partner and shared in the profits but would not necessarily have been known to the world. On both see Clark, Treatise, p. 55. This makes them unlikely to identify themselves as a partner in a directory listing.

⁴⁶ See Booth, 'Occupations', and Armstrong 'Information about occupation'.

⁴⁷The similarity in sector representation between 'partnerships (all)' and confirmed 'partnerships 2+' suggests that the '2+' cohort reflects the wider population of partnerships in our sample.

⁴⁸ Guinnane and Schneebacher, 'Enterprise form'.

⁴⁹ In terms of the representativeness of the Glasgow POD, sole proprietorship of businesses in sectors associated with lower socio-economic groupings might be underestimated (see notes to table 1). It is likely such businesses are to be found in higher numbers in sectors such as food sales and maker dealers, which we perceive as lower-entry-cost enterprises. This assumption aligns well with broader BBCE estimates of sector distribution (see Bennett et al., 'Changes in Victorian entrepreneurship'). Any underestimation of sole proprietorship businesses in these sectors (within the POD) adds weight to our contention that partnerships were well placed to support manufacturing, as it would further extend the proportional difference in partnership versus sole proprietorship manufacturing businesses we note.

TABLE 3 Sectoral distribution of partnerships.

Business	SS:		Partnerships	cships			Partnerships	ships			Sole proprietorship	etorship	
sector			(all)	(1			(2+)	<u> </u>			(all)	<u> </u>	
	ı	18	1861	17	1881	18	1861	1	1881	18	1861	18	1881
	1		Percentage		Percentage		Percentage		Percentage		Percentage		Percentage
		Ν	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
EA1	Farming/estate work	21	0.7	29	1.4	6	1.1	20	1.4	134	1.3	175	1.2
EA2	Mining and quarrying	31	1.1	59	1.2	5	9.0	14	6.0	43	0.4	92	0.5
EA3	Construction	173	6.1	397	8.1	52	6.5	114	7.7	625	6.3	1149	8.2
EA4	Manufacture	904	31.8	1512	30.7	268	32.1	440	29.9	1325	13.3	1664	11.9
EA5	Maker-dealer	343	12.0	523	10.6	49	5.9	103	7.0	1275	12.8	1904	13.6
EA6	Retail	244	8.6	521	10.6	77	9.2	162	11.0	814	8.2	1344	9.6
EA7	Transport	25	6.0	49	1.0	7	8.0	12	8.0	149	1.5	202	1.4
EA8	Professional and business	135	4.7	294	0.9	77	9.2	180	12.2	524	5.3	929	9.9
	services												
EA9	Personal services	46	1.6	61	1.2	2	0.2	∞	0.5	801	8.1	1181	8.4
EA10	Agricultural produce	142	5.0	234	4.8	35	4.2	64	4.3	168	1.7	188	1.3
	processing and dealing												
EA11	Food sales	188	9.9	375	7.6	43	5.2	108	7.3	1944	19.6	2708	19.3
EA12	Refreshment	69	2.4	196	4.0	13	1.6	35	2.4	1427	14.4	1342	9.6
EA13	Finance and commerce	497	17.5	290	12.0	192	23.0	209	14.2	714	7.2	1161	8.3
EA14	Public administration,	7	0.2	9	0.1	3	0.4	1	0.1	0	0	1	0
	military, clergy												
EA15	Domestic service	0	0	0	0	0	0	0	0	0	0	0	0
EA16	Undefined general and	0	0	0	0	0	0	0	0	0	0	0	0
	lactory labourers												
EA17	Persons of property	0	0	0	0	0	0	0	0	0	0	0	0
ı	Unknown	22	8.0	34	0.7	0	0	4	0.3	0	0	13	0.1
	All sectors	2847			4918	834		1474		9943		14 037	
3		:											

Note: (1) Table excludes businesses represented by agents and Scottish copartneries. (2) Multiple sector businesses coded to first mention or longest/principal entry where the firm is listed more than once. (3) Unknown sector businesses have no occupational description nor a company name or place of business from which the sector can be unambiguously inferred. Sources: Post Office Directory dataset.

	BBCE Glasgow burgh all firms of known size	Glasgow POD r	partnerships (all)
Size (total employees)	n	n	Percentage (%)
1861			
All sizes	2616	429	16.4
1–49	2401	307	48.4
50-249	153	74	77.4
250-499	29	21	72.4
500+	33	27	81.8
1881			
All sizes	3502	707	20.2
1-49	3212	522	16.3
50-249	228	138	60.5
250-499	34	24	70.6
500+	28	23	82.1

Note: (1) Where different employee counts were reported by several partners, a mean value is used. (2) Glasgow POD based on partners found in censuses, including deducible partners, reported in table 6. Source has been supplemented with all possible matches for BBCE Glasgow burgh firms of 250+ employees, which adds seven directory partnerships not previously matched to an employee declaration in 1861 and four in 1881. The number of BBCE firms of size recovered from these supplemental matches is 12 in 1861 and 5 in 1881. See also note 3. (3) The PODs and BBCE may count the same individual partners differently at the firm level. In the census and therefore BBCE, the firm is seldom stated, meaning that partnerships are liable to be double-counted if more than one partner returned an employee declaration that was non-identical to the other partner(s). In the directory, all partners are assigned to a firm, so we are able to count distinct firms more accurately. (4) Of the 62 BBCE firms in 1861 with over 250 employees, 47 are represented among directory partnerships. The remaining 15 comprise: 7 with no listing found, 5 sole traders, 2 copartnerships, and 1 worker. (5) Of the 62 BBCE firms in 1881 with over 250 employees, 44 are represented among directory partnerships. The remining 18 comprise: 3 with no listing found, 11 sole traders, 2 copartnerships, 1 corporate, and 1 worker. (6) Some directory partners resided outside Glasgow burgh. Taking out these would reduce the overall number of directory partnerships from 429 to 411 in 1861 (removing 2 from the largest size category and 1 from the penultimate category) and from 707 to 627 in 1881 (removing 4 from each of the largest two size categories). Source: All firm sizes from British Business Census of Entrepreneurs (BBCE). Post Office Directory dataset; see also note 2.

in confirmed '2+'-partner firms is distributed proportionately across our industry classifications. The only two sectors where we saw higher proportional representation were finance and commerce and professional business services. Many businesses in both these sectors would have traded heavily on the reputation of the business owners and (if reputable) thus gain advantage from making sure all individuals associated with the business were fully identified.

Table 4 cross-references our POD partnerships with the BBCE dataset that revealed the number of Glasgow business owners, and thereby businesses, that returned employees in the census. Between 1861 and 1881, the number of all Glasgow businesses in the census who employed staff increased by just over one-third. We have been able to confirm as partnerships 16.4 per cent of such businesses in 1861 per cent and 20.2 per cent in 1881. Adding POD partnerships into analysis significantly improved on census-only estimates. BBCE identifies partnership through individuals enumerated at home for the census, principally those who followed the instruction to declare their lead partner status in their occupation, but evidently many failed to do so. Upon cross-referencing all BBCE firms with our POD partnerships, we increased the number of Glasgow partnerships whose employee size was known from 18 to 429 for 1861 and from 12 to 707 for 1881, also reversing

apparently shrinking numbers of partnerships to growth roughly in line with the increase in all BBCE firm types.⁵⁰

We believe our analysis still underestimates the number of partnerships of known employee size, as some relationships would have been undisclosed or not returned in a way that we can trace to a firm name. In part, the assumption that we are understating the partnership numbers in smaller firms is suggested by our higher matching rates amongst the 250-499 and 500+ cohorts. For this group of larger employers, since additional historical firm profiles exist, we reviewed all unmatched businesses. ⁵¹ For 1861 and 1881 we identified 48 and 47 businesses, respectively, with over 250 employees as partnerships, meaning that the majority of the largest employers in Glasgow at this time were partnerships. These businesses were operating on a scale that defies the assumption that incorporation was a necessary pre-condition of large, complex business undertakings. Furthermore, our analysis suggests that these Glasgow businesses made up a sizable percentage of the total number of '250+' employee businesses found in large cities across Britain. 52

PARTNER CHARACTERISTICS IV

We now turn to an examination of partner characteristics, an individual's connection to their business and partners' relationships to each other, to better understand how - and between whom - businesses were formed. Panel A in table 5 shows the relationship between partners and the naming of their businesses. Reviewing the '2+' sample, we found that partners' names were reflected in the name of the business 84 per cent (704 of 834) and 81 per cent (1196 of 1474) of times in 1861 and 1881, respectively. Only in the minority of cases did a partner present with a family name that was not reflected in the firm name, and only in approximately 5 per cent of cases were none of the partner family names associated with the business name. Business names therefore overwhelmingly identified the principals associated with the firm and reflected the guidance on naming convention outlined by Clark.

Examining family relationships between partners and using a narrow definition of kinship, that is, a shared family name as an indication of being related, Panel B shows that approximately one-third of business partners had a kinship tie.⁵³ This is a higher proportion of matched family relationships than found by Lamoreaux, who finds a 20 per cent match in Boston using the same criteria, but lower than Hilt and O'Banion - also researching the United States context - who show the majority of partners in ordinary (unlimited) partnerships in New York in the 1850s were related (by marriage or consanguinity).⁵⁴ In the UK context, our figure is lower than Bennett's, who draws family connections in 76 per cent of partnerships in England and Wales. Bennett's use

⁵⁰ Through supplementation, BBCE data have been enhanced to offer more accurate analysis of large business. Hannah and Bennett, 'Large-scale Victorian manufacturers', suggest census returns only account for 37 per cent for large manufacturers, and it is likely to be less for other sectors. Both Hannah and Bennett, 'Large-scale Victorian manufacturers', and Hannah and Foreman-Peck, 'Business forms', corroborate our findings in Glasgow - partnerships dominated large business in this period.

⁵¹ See, for example, Slaven et al., Dictionary of Scottish business biography.

⁵² The following numbers are derived from the BBCE dataset. London, Manchester, Liverpool, and Birmingham had 29, 35, 5, and 7 251+ businesses in 1861. In 1881 they had 96, 37, 16, and 40, respectively.

⁵³ Not all family connections are traceable. We accept that married aunts and uncles enlarged family networks and therefore the size of the potential pool of family connections and partnerships. See Davidoff, Thicker than water, pp. 178-9.

⁵⁴ Hilt and O'Banion, 'Limited partnership in New York'.

TABLE 5 Partner relationship to firm name (kinship)

	186	1 partners	hips	188	1 partnersl	nips
	(2+)	(1)	0	(2+)	(1)	0
Panel A						
Partnerships with partners 'of' (all)	834	715	1156	1474	1208	1796
Eponymous family (2+)	704	-	-	1196	-	-
Eponymous family (1)	100	634	_	196	1042	_
Other partners only (1+)	30	81	_	82	166	_
Panel B						
Every partner, same surname 'of' (all)	287	_	_	543	_	_
Eponymous family (2+)	281	_	_	526	_	_
Other partners only (2+)	6	-	-	17	-	-
Panel C						
Census matched = 2 partnerships with differing surnames				294		
Number of partners with wives (in 1881)				385		
Wife of one partner has common family name with other partner				10		

Note: (1) Table excludes businesses represented by agents and Scottish copartneries. (2) All counts represent distinct partnerships, not partners. (3) Eponymous family are persons with surnames that match part of the firm name. (4) Numbers in brackets indicate partnership size category in terms of number of partners listed in POD. The table excludes deducible partners recoverable from partnership home addresses. (5) All 404 married partners have been searched against wives first name in the 1855–81 register of marriages to assess whether her original family name was the same as the other partner. (6) For individuals over 43 years of age in 1881, we have also searched for the potential they had been married before 1855 in pre-1855 registers. (7) 'Eponymous family' indicates partnership with partners who have one of the surnames found in the business name. If a partner has a surname used in the partnership name, the partnership qualifies for Panel A. Additionally, since partners may have different surnames to each other, Panel B looks at multiple partners sharing the same surname, and whether this surname is in the partnership name or not. Sources: Post Office Directory dataset.

of the census, enumerated by household, increases the propensity to find family connections. To better understand family connections not captured by common family names, we broadened our analysis to review marriage relationships between partners in 1881 (Panel C).⁵⁵ In 294 partnerships where partners had different family names, we first checked the census to identify partners in our '2+' partner sample who were married persons. We then cross-referenced marriage records to check the pre-marriage family name of 385 wives. In doing so, we only found a marriage link to the other partner's family name in 2.6 per cent of occasions.⁵⁶ This does not materially change our estimates above, and our evidence suggests that partnership formation was not excessively constrained by any hold-up problems associated with the business form.

What, then, brought together people who did not have family ties into partnership? One possibility is that, for established businesses, internal promotion of foremen, superintendents, and skilled engineers was possible, despite – or even because of – the informal personnel management arrangements that characterized most businesses in the nineteenth century.⁵⁷ However, a second

 $^{^{55}}$ This allows us to capture potential brother-in-law and son-in-law relationships.

⁵⁶ Riddell concluded in his study that marriage ties did not lead to partnership but did increase access to capital and finance networks. For discussion see Riddell, 'Expatriate merchants'.

⁵⁷ Lee, 'Commerce and culture'; Licht, Getting work; Sundstrom, 'Internal labor markets'.

possibility was to look externally. It is not possible to use POD data to determine motive or route into partnership, so we examined classified advertisements placed in the *Glasgow Herald*, one of the city's prominent daily newspapers, as they offer contemporaneous insight into partnership formation. Such advertisements were not unique to Glasgow. We have found similar in daily newspapers in the early 1870s in Birmingham, Bradford, Liverpool, Middlesbrough, and Sheffield. For Glasgow, we have reviewed a day of listings, once every 6 months between 1861 and 1870, noting details of the offer, industry, reasons, and capital requirements, in a total of 84 advertisements.

The advertisements covered a range of business types, with 'engineering', 'manufacturing', and 'mercantile' opportunities being the most common. In 72 of the advertisements, there was a direct reference made to a capital requirement, with necessary capital ranging from a few hundred pounds to £10 000. Most advertisements (63) were placed by existing businesses seeking a new partner. The reasons provided were either to expand the business or to replace a current partner who was retiring. A small number of advertisements (five) mentioned the desire for a sleeping partner, but the clear inference in the remainder was that the partner would be active in the business. The emphasis on capital suggests that, for some businesses, there were limited alternative sources of cash injection and that the introduction of a new partner was a viable source of capital and/or facilitated a retiring partner cashing out. On six occasions an individual placed the advertisement seeking a partnership opportunity and referencing the capital, or skills, they would be contributing. Existing businesses also sought specific skills – in 10 of the classified advertisements reference was made to the need for accounting skills or the requirement to be able to manage a counting house, and on five occasions 'good connections' were also part of the ask.

The evidence that the advertisements provide is of businesses willing – and needing – to bring new people into an existing concern. There was an element of discretion in publicizing the need for a new partner (e.g. many advertisements were anonymous with (i) the *Herald* office being able to provide further specifics or (ii) application via a referenced third-party accountant or solicitor), but the bargain being struck was clear to both parties. The use of accountants and solicitors as intermediaries does suggest – for some – there was a level of additional caution in the coming together of hitherto unknown parties, but the evidence of the advertisements shows that business-people approached the adaptation of partnership in good faith and with pragmatism. Given the number of partnership businesses that we have established, this makes sense. It would be unrealistic to assume that friendship and kinship ties were the only means by which people formed partnership businesses – common interests, complementary skills, and the offer of capital was also capable of bringing strangers together in the search for mutual gain.

Census matching allows us to profile individuals who identified themselves as partners in the POD. Table 6 provides the details of partner age, marital status, and birthplace and whether they lived with related children. We include the wider population data for all Glasgow males over 20 years of age. We found that partners were by majority in their 30s and 40s, and approximately 5 years older than the average adult male in both 1861 and 1881; more likely to be married; and also more likely to be living with related children. An average partner age in the 30s to 40s is in line with data on entrepreneur start-up of small businesses in modern studies and is consistent with the view of the private capital needs of entrepreneurial partnerships, which point to younger people having less access to financial support.⁵⁹

⁵⁸ See Cottrell, Industrial finance, pp. 252–3.

⁵⁹ Azoulay et al., 'Age and high-growth', note that the average mean age for starting a small business is late 30s to 40s, and Lévesque and Minniti, 'Age matters', find that older individuals are more likely to have an accumulation of wealth that would allow them to set up a business.

TABLE 6 Demographic characteristics of partners compared with general population

		1861		1881			1861		1881
		Percentage		Percentage	Glasgow male		Percentage		Percentage
	n	(%)	и	(%)	20+ population	и	(%)	и	(%)
POD partners 'of' found in census	1566		2845						
Percentage of all POD partners 'of'		0.09		62.3					
Deducible ^a POD partners found in census	344		466						
Total	1910		3311						
Of which female	52	2.7	88	2.7					
Age (years)									
Mean	40.89		41.69			36.81		36.78	
Standard deviation	12.36		12.62			13.27		13.35	
14–19	28	1.5	27	0.8					
20–29	347	18.2	582	17.6		38 460	36.6	65 454	37.6
30–39	582	30.5	1002	30.3		27 257	25.9	45 308	26.0
40-49	501	26.2	808	24.4		19 812	18.9	31 433	18.0
50–59	279	14.6	534	16.1		11 581	11.0	18 733	10.7
69-09	143	7.5	301	9.1		5972	5.7	9707	5.6
70+	30	1.6	99	1.7		1993	1.9	3654	2.1
Family									
Married	1163	61.0	1945	58.7		59 173	56.3	89 932	51.6
Related children	1084	56.8	1707	51.6		45 690	43.5	707 89	39.4
Birthplace									
Glasgow	632	33.1	1306	39.4		25 631	24.4	48 089	27.6
R. Scotland	1147	60.1	1740	52.6		49 638	47.2	77 521	44.5
R. British Isles including Ireland	102	5.3	195	5.9		29 043	27.6	46 380	26.6
R. Europe	20	1.0	47	1.4		392	0.4	1095	9.0
R. World	6	0.5	23	0.7		371	0.4	1204	0.7

Notes: (1) Table excludes agent-represented partnerships, Scottish copartneries, and POD partners who could not be linked to a POD partnership. (2) Married excludes the separate category married, spouse absent? Related children means in same household and with a relationship to head of household from which kinship to a person who is a partner can be deduced. ¹For a definition of deducible partners, please see section III, paragraph 3. Source: Post Office Directory dataset and I-CeM Version 2.

TABLE 7 Demographic differences between partners in two-partner partnerships in Glasgow

Partnerships (= 2)		1861		1881
		Percentage		Percentage
	n	(%)	n	(%)
Census-linked POD sample summary				
POD = 2 partnerships (both partners matched)	284		508	
Representing per cent of all POD partnerships		42.7		43.5
Age difference (years)				
Mean	11.62		11.59	
Standard deviation	10.31		10.5	
0–9	161	56.7	277	54.5
10–19	64	22.5	125	24.6
20–29	34	12.0	63	12.4
30+	25	8.8	43	8.5
Birthplace				
Both Glasgow	48	16.9	101	19.9
One Glasgow	94	33.1	178	35.0
Both R. Scotland	116	40.8	168	33.1
One beyond Scotland	19	6.7	45	8.9
Both beyond Scotland	7	2.5	16	3.1

Source: Post Office Directory dataset and I-CeM Version 2.

Partnerships do not appear to be dominated by 'Glasgow born' residents. The majority of partners are first-generation arrivals to the city from the rest of Scotland. This is not dissimilar to the labour movement patterns associated with the wider population, as this grouping was the largest classification in the general male over 20 analyses. However, arrivals from the rest of British Isles were clearly more likely to find themselves employed than be involved in partnership. Our evidence suggests that this group was attracted to paid employment rather than entrepreneurial opportunities and therefore less likely to establish businesses in the first generation. Those escaping intolerable living conditions, for example, the Irish who came over following the Famine, were focused on survival. Similar to challenges immigrants face today, it is unlikely this group had the capital needed to start their own business – even if they wished to – and were also not (yet) able to access local financing opportunities.

Finally, our data – presented in table 7 – allow us to assess differences between partner characteristics within the same partnership, using partnerships where there are exactly two confirmed partners ($^{\circ}$ = 2 $^{\circ}$). We were able to trace information through record linkage of both partners for 284 and 508 of the $^{\circ}$ = 2 $^{\circ}$ partnerships in 1861 and 1881, respectively, and this represents 40 per cent of the total number of this subset. A number of findings are of note. Firstly, on average, there was a mean age difference between partners of just under 12 years, with the majority of relationships having a difference of less than 10 years and only 20 per cent of businesses having partners having an age difference of over 20 years. Further analysis of this subset with a larger age gap suggests the majority of these were intergenerational family businesses. Of partners in the businesses

⁶⁰ Maver, Glasgow, p. 84.

⁶¹ Dabić et al., 'Immigrant entrepreneurship', for discussion on immigrant access to finance.

TABLE 8 Survival of Glasgow partnerships

Survival period			Following disappea	arance (bef	ore 10 years)
		Percentage			Percentage
	N	(%)		N	(%)
1881 partnerships					
1 year	7	2.8	New partnership	18	30.5
2–5 years	22	8.8	Sole trade activity	23	39.0
6–9 years	30	12.0	Disappeared	18	30.5
10+ years	191	76.4			
Total	250			59	
1881 partnerships (new)					
1 year	7	21.2	New partnership	8	44.4
2–5 years	8	24.2	Sole trade activity	4	22.2
6–9 years	3	9.1	Disappeared	6	33.3
10+ years	15	45.5			
Total	33			18	

Note: See section V, paragraph 2, or detail on how year-to-year review of these businesses was completed. Source: A random sample of 250 partnerships was generated from our ' = 2' 1881 Glasgow partnerships in the Post Office Directory dataset.

with a 20-year-plus age gap, 54 per cent and 60 per cent in 1861 and 1881 businesses, respectively, shared the same family name. Secondly, birthplace appears to have had limited influence on partner choice. Our results indicate diverse backgrounds when forming partnerships, with the new Scottish-born residents of Glasgow mixing with second-generation residents, and almost 1 in 10 partnerships having an individual from beyond Scotland in partnership with someone born in Scotland.

PARTNERSHIP PERSISTENCE

This section examines the persistence of partnerships over time to help improve our understanding of business survival rates and the characteristics that might be associated with longevity. To this end, we have employed two methods. Firstly, as reported in table 8, we looked at the continuation of business activity for a random sample of 250 '= 2' partnerships in existence in 1881. This analysis helps us understand short-term failure rates, continuity in ownership, and adaptation after dissolution. Secondly, we looked longer term, examining continuation between our main sample points (see tables 9 and 10) to better understand how the characteristics of a business in 1861 influenced its long-term chances of survival.

To assess survival in the '= 2' sub-sample for 1881, we checked the 1871 and 1891 PODs for each business and its partners to see whether the firm survived a minimum of 10 years, and if not, then we worked forwards and backwards from 1881 to establish in what year the business first appeared and disappeared. Where either or both partners did not declare involvement in the business in the directory, or the business disappeared, we assumed dissolution. 62 In doing so, we

⁶² This definition of continuation with both named partners is strict but in line with a legal definition of partnership continuity.

 ${\bf TABLE~9} \quad {\bf Sectoral~distribution~of~Glasgow~partnerships~that~survived~long~term}$

Business s	ector	Partnersh	ips (all) 1861	Surviv	ving 1861–81
			Percentage		Percentage
		N	(%)	N	(%)
Industry					
EA1	Farming/estate work	21	0.7	8	38.1
EA2	Mining and quarrying	31	1.1	10	32.3
EA3	Construction	173	6.1	51	29.5
EA4	Manufacture	904	31.8	308	34.1
EA5	Maker-dealer	343	12.0	74	21.6
EA6	Retail	244	8.6	80	32.8
EA7	Transport	25	0.9	8	32.0
EA8	Professional and business services	135	4.7	37	27.4
EA9	Personal services	46	1.6	8	17.4
EA10	Agricultural produce processing and dealing	142	5.0	63	44.4
EA11	Food sales	188	6.6	59	31.4
EA12	Refreshment	69	2.4	23	33.3
EA13	Finance and commerce	497	17.5	138	27.8
EA14	Public administration, military, clergy	7	0.2	0	0
_	Unknown	22	0.8	2	9.1
	All sectors	2847		869	30.5
Portion with	h confirmed partners (by number o	f partners)			
	0 or 1	1872		477	25.5
	2+	834		348	41.7

Source: See section V, paragraph 4.

captured whether the business dissolved over a short- to medium-term horizon. We also reviewed the POD for the year where the '= 2' partnership was not listed for the first time to see whether we can identify spin-off activity. Our analysis allows for (at the boundaries) potential confirmation of 10-year survival between 1871 and 1881, or 1881–91. We believe this approach better reflects the lifecycle effects associated with businesses in an economy.

Upon assessing partnership survival over a 10-year horizon, we found three things of note. Firstly, using the above strict definition of dissolution, we observed a high level of partnership survival. A total of 191 of 250 businesses (76 per cent) in our sample existed for a minimum duration of 10 years. Only 7 businesses (3 per cent) lasted just a single year. The majority of partnerships therefore appear to have been long-standing, with identified partners remaining committed for a decade. Secondly, amongst those that did not last 10 years, we found that approximately 30 per cent continued in partnership form but under new or partially new ownership, that 40 per cent continued business in sole proprietorship in the hands of one of the original partners, and that only 30 per cent disappeared without trace. With 70 per cent continuation in activity, many of our 1881 partnerships seemed able to adjust and change to factors that were influencing them.

TABLE 10 Determinants of long-term partnership survival (logistic regression)

	1	2	8	4	S	9	7	∞	6
Sample		All partners			Kinship		2	Census matched	q
Partners (>1)	0.16***	0.15***	0.15***						
	(8.21)	(7.70)	(7.25)						
Kinship partners				0.15***	0.14***	0.13***		*60.0	*60.0
				(4.26)	(4.10)	(3.83)		(1.82)	(1.78)
Number of premises (>1)		0.18***	0.16***		0.10**	0.10**			0.12*
		(00.9)	(5.41)		(2.26)	(2.22)			(1.89)
Premises beyond Glasgow		0.18***	0.17***		0.12	0.11			0.25
		(4.04)	(3.67)		(1.41)	(1.26)			(1.59)
Central business district			0.04**			0.04			80.0
			(2.03)			(1.07)			(1.47)
Age							0.00	0.00	0.00
							(1.57)	(1.41)	(1.13)
Glasgow-born partners							0.13**	0.10	0.10
							(2.01)	(1.55)	(1.45)
Industry FE	No	No	Yes	No	No	Yes	No	No	No
Observations	2708	2708	2702	834	834	831	385	385	385
Pseudo-R ²	0.0212	0.0384	0.0464	0.0159	0.0221	0.0341	0.012	0.0183	0.0326
Chi-squared	70.86***	123.84***	146.66***	17.85***	24.52***	36.25***	6.35**	9.65**	17.21***
Log pseudolikelihood	-1623.83	-1595.19	-1579.87	-556.93	-553.44	-545.06	-260.56	-258.91	-255.13

Notes: The Y variable in this model is partnership survival - 1 being survive and 0 otherwise. 'Partners (>1)' is a dummy variable where the variable is 1 if the number of confirmed partners is greater than 1. Deducible partners were omitted. 'Kinship partners' is a dummy variable where the variable is 1 if the number of partners sharing the same surmame is at least two (generated as same = 1). Deducible partners were omitted. 'Number of premises' is a dummy variable where the variable is equal to 1 if there is more than one business address associated with the business within Glasgow (in 1861). 'Premises beyond Glasgow' is a dummy variable which controls for additional business premises existing beyond Glasgow, where the variable is equal to 1 if the business has premises beyond Glasgow. The Blythswood Registration District has also been used as a dummy variable to control for a central business location within the city. 'Glasgow-born partners' is a dummy variable where the variable is equal to 1 if all partners were born in Glasgow (generated as allWeeg = 1). Marginal effects for dummies are the change of moving from 0 to 1. Robust z-statistics in parentheses.

Abbreviations: FE, fixed effects.

p < 0.1.

 $^{^{**}}p < 0.05$.

 $^{^{***}}p < 0.01.$

Finally, looking at 1881 start-ups as a subset, of the 33 partnerships noted in the POD for the first time that year, 46 per cent lasted the horizon of at least 10 years, and of those that did not survive, the majority adapted and continued in business.

In table 9, we focus on business survival as opposed to partnership survival and the continuation of specific partners' involvement with the business. In this sample we looked at partnerships identified for 1861 that also appear under a sufficiently similar business name and occupation in the 1881 POD. Examining differences across sectors, we saw little variation around the mean 20-year survival rate of 30.5 per cent, which represents a minimum value since cases where disambiguation between common firm names was not possible were omitted. Amongst the larger sectors of 1861, the largest differences around the mean were that agricultural processing and refreshment businesses were more likely to survive and that maker-dealer and finance were less so. Payne reports corporate survival rates in 1883 of companies registered in 1856-65 for England and Scotland as 32 per cent and 44 per cent, respectively.⁶³ With an overall survival rate of 41.7 per cent for partnerships with at least two confirmed partners at our initial observation date, although not a perfect comparison, there is strong evidence that partnerships were able to overcome potential hold-up problems of the business form and broadly matched corporate survival rates in this period.

Although we saw little variation by industry, separating businesses by the number of confirmed partners matched in the POD, table 9 shows the survival rate amongst businesses with zero partners or only one confirmed partner were lower than those for which we had two confirmed partners or more. If we accept that a proportion of the firms with one confirmed partner only might already reflect a partnership that has suffered the loss of an original named principal, the loss of a second partner and consequent demise of the business is not unexpected. Taking our analysis one stage further, we reviewed confirmed partner status amongst surviving businesses to understand more about partner declaration in the directory. We found that 94 of the surviving 348 businesses that originally had '2+' status now listed only one partner. Again, this pattern is suggestive of a business that experienced the death or exit of a partner but retained the original name. Conversely, we found 135 businesses that had originally listed either zero or one partners but now listed a minimum of two. We suggested in a previous section that the decision not to list partners and their home addresses was as likely to be accidental as it was strategic. In these 135 cases we can perhaps see a growing strategic recognition over time that it was beneficial to have greater visible connection of the partners to the business.

Unsurprisingly, over a 20-year horizon, many businesses were subject to adjustments in ownership. Of the 869 businesses to survive to 1881, where we had information on at least one partner at both sample points, in only 36 per cent of instances did we see the introduction of a family name that we were not able to connect to the business in 1861. In the remaining 64 per cent of occasions, ownership appeared to remain in the hands of the original owners or other family members, or had at least been partially passed to other family members. It is difficult within this 64 per cent to assess whether the business was being held by the original family member, as differentiating between original partners and 'sons of' can be difficult. A common scenario was where a George 'junior' who was not perpetually called 'junior' took over a business on the death of his father. However, even if uncertain, this finding does point to the potential influence of family in business survival, and we explore this concept further in table 10.

Table 10 presents marginal effects for a series of logit regressions that chiefly examine how the number of partners connected to the business, and kinship relationships between partners, might

⁶³ Payne, Early Scottish limited companies.

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have influenced partnership survival. The regressions give us an insight into factors that potentially had an influence on partnership survival between 1861 and 1881. Our analysis controlled for factors that would indicate the business was well-established (number of premises within the city and locations beyond), the age and birthplace of the partners, the location (1881 RD) of the business in the city, and industry sector. Reviewing regressions 1-3, perhaps unsurprisingly and similar to our findings presented in table 9, we found the number of listed partners matters. The probability of survival amongst firms that we were able to attach '2+' partners increased by 15 per cent points. This finding remained strongly significant even when controlling for number of premises and the introduction of a Central Business District dummy, and industry fixed effects. Regressions 4–6 examine the '2+' subset of firms to assess whether a kinship relationship between partners influenced the likelihood of survival. We found that kinship matters, and the probability of survival increased by approximately 14 percentage points amongst partnerships that had kinship relationships. This is not to say that non-kinship partnerships had excessively short life expectancy - in absolute terms, amongst the 1861 cohort of businesses for which we have been able to establish 2+ partners, 35 per cent of these non-kinship businesses survived to 1881. Our last subgroup of regressions (7-9) introduce additional census variables. Although being Glasgow born seemed to offer an advantage to business owners, the significance of this variable disappeared when we controlled for kinship ties and other factors. As with regressions 4-6, this set of regressions also suggests that kinship matters.

In her study of 1840s Boston, Lamoreaux found that family partnerships were in the minority but notes improved survival rates amongst kinship partnerships. Our results, as with those of Lamoreaux, highlight better survival rates amongst kinship partnerships. Family businesses might have been better able to survive into the long run (our 20-year period of analysis) as a consequence of the combination of loyalty, trust, and altruism associated with family circles. It is probable in these businesses there was a strong incentive amongst partners to create a business that would support future generations. As a consequence, these entrepreneurs would be less likely to remove capital and potentially dissolve the business – such agreement therefore helping ameliorate hold-up problems. The reluctance to dissolve businesses is evidenced by the intergenerational nature of many partnerships (where there was a large age difference between partners with similar family names) and the introduction of new partners with the same family name.

VI | CONCLUSION

Our intention in this paper was to improve our understanding of the drivers of private partnerships in Britain in the nineteenth century. We have suggested that some of the neglect of the partnership form is a result of the paucity of data for private partnerships as compared with the breadth and depth of historical sources extant for corporates. It has only been relatively recently, with the advent of large-scale digitization of historical census returns, that there has been an attempt to examine systematically the extent of business partnerships in the nineteenth-century British economy – principally Bennett's use of the 1881 census returns for England and Wales to estimate the total number of partnerships. The finding of 2920 non-farming partnerships out of

 $^{^{64}\,\}mathrm{Lamoreaux},$ 'Partnership form'.

⁶⁵ Nenadic, 'The small family firm'.

a total business population of approximately 240 000 suggested that this method was likely to underrepresent partnership numbers – as Bennett himself conceded and we have confirmed.⁶⁶

The methodology used in this study has been one of 'POD plus', that is, a combination of data drawn from the 1861 and 1881 Glasgow PODs and/or the census and/or the BBCE and/or other relevant sources such as marriage registers. By using the PODs, supplemented in this way, we have been able to establish a greater number of partnerships, identify principals, and determine employee numbers. Establishing plausible partnership numbers for a large industrial city is the first contribution of this study. We have shown that partnerships were a key business grouping in Glasgow, as they almost certainly were in other major cities. In terms of raw numbers of partnerships, our data aligns well with the contemporary view of the frequency and importance of private partnerships in the nineteenth-century economy. Our 'POD plus' approach has enabled us to cross-reference employee returns in the census to partnerships listed in the POD and to establish that most of Glasgow's large employers were not corporates but partnerships. Furthermore, considering the sectoral distribution of sole proprietorship businesses, the higher proportionality of adoption of the partnership form in manufacturing businesses suggests that partnership was particularly appealing (and perhaps advantageous) in industrial activity.

The second contribution of the study comes from its ability to establish partner demographic characteristics and, using that data, to establish an individual's connection to a business and their relationship to the other partner(s). We saw evidence of kinship ties between partners (i.e. all partners sharing the same family name) in only one-third of the sample, and using marriage registers, we can exclude inter-marriage between families as a key driver for partnership formation. With the majority of partnership business being formed between individuals without family ties, our evidence indicates that partnership formation was not excessively constrained by hold-up problems associated with the business form. If that were the case, it would be reasonable to expect family partnership to be more numerous than we found. Family structures are considered more capable of creating a system of governance that places a high value on loyalty, trust, and altruism⁶⁷ and help ameliorate against potential agency issues. Partnerships between non-family members and family members alike appeared to be formed on the basis of trust. Partnerships provided an advantage over sole proprietorship – they created the opportunity to pool capital and talent more widely, and even to shape incentive alignment.

The third and final contribution of the paper is its ability to add new insights into our understanding of business persistence among private partnerships. Based on an 1881 sample, we established that, for over 75 per cent of businesses, the same partners remained committed to the business for at least 10 years. However, amongst those businesses where we did not find evidence of such partner commitment, we still saw continuity of activity amongst the vast majority. We also tracked business continuity between our 1861 and 1881 sample points, showing that 30.5 per cent of our 1861 partnerships businesses survived in similar name form to the 1881 sample point, and amongst partnerships where we connected 2+ individuals, this figure rose to 41.7 per cent. This figure is comparable to corporate survival rates in Britain during this period. By assessing the relationship between partners, we establish that family partnerships were more likely to persist – drawing on the previously mentioned system of family governance and reluctance to dissolve intergenerational businesses as an explanation for persistence.

The incidence and persistence of partnerships in Glasgow should encourage further examination of the importance of the partnership form to the British economy during the nineteenth

 $^{^{66}}$ Bennett, 'Interpreting business partnerships'.

⁶⁷ Nenadic 'The small family firm'.

century. The importance of the partnership in Glasgow strongly argues the case for refocusing the historiography of entrepreneurship away from corporations and the underlying twenty-first century narrative of entrepreneurship as an expression of individual risk.⁶⁸ Whilst the lone, risk-taking entrepreneur certainly existed in the overall business mix, they are an insufficient explanation of how businesses were formed and grow. We call on historians of past economies to look more carefully to partnerships as a model for entrepreneurial vigour and longevity in future research.

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DATA AVAILABILITY STATEMENT

We are working on a data deposit with the UK Data Service (UKDS). This will be available in due course. Therefore, currently data are available on request.

ORCID

Graeme Acheson https://orcid.org/0000-0001-7531-2082 Gill Newton https://orcid.org/0000-0003-0386-8166 Linda Perriton https://orcid.org/0000-0002-9109-5767

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⁶⁸ Block, 'What would Karl say?'.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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