The Spread of the Corporation in Asia and the West in 1910.[1]

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ABSTRACT

We present estimates for the numbers of companies in sixty countries in 1910, the first year for which a full US count is available. The "Anglosphere" (the US and the British Empire) then accounted for around three-quarters of all world corporations (joint-stock companies, *sociétés anonymes*, *kabushiki kaisha* etc.). This appears to support the view of La Porta and others that English common law and its transatlantic derivatives were superior to French or German civil law in promoting the development of the institution that now dominates global business. It also raises questions about the view advanced by Lamoreaux and Rosenthal that the corporate form was inflexible and that civil law countries benefitted from a wider choice of organizational forms.

Asian countries have not yet significantly featured in this debate. Colonies often followed the corporate law of their British, French, American, German, Dutch or Japanese imperial power; while independent nations, notably Siam, Japan and China, seeking advice from French or German legal experts, usually adopted civil law commercial codes. This paper provides extensive data on the adoption of the corporate form and more limited data on some other business forms. It suggests that common (rather than civil) law was one among several factors supporting the spread of the corporation and its probably favourable effect on economic growth. However, these outcomes depended also on being wealthy already and on policies to achieve this, such as good government, cheap company registration and the creation of human capital, conditions which (perhaps spuriously) in 1910 were correlated with common law systems and close historic/economic relations with the UK. Certainly Asian countries did not have much difficulty in adopting the corporate form in massive numbers, while retaining their civil law commercial codes, later in the twentieth century.

Many economists believe that legal institutions matter. La Porta, López de Silanes, Shleifer, Vishny and Djankov[2] argued - using large, contemporary, cross-country databases - that common law systems now provide a better business environment than civil law systems. They insist that common law systems are freer and more flexible than civil law and so more conducive to new entry and economic growth. American historians – notably Richard Sylla and Robert Wright – have

[1] This presentation is based on joint work with Professor James Foreman-Peck of the Cardiff Business School. I am grateful to him and many national experts for advice, but I am responsible for all errors.

[2] R La Porta, F Lopes-de-Silanes, A Shleifer and R Vishny, "Law and Finance," *Journal of Political Economy*, 106, no 6, 1998, pp. 1113-1155; S Djankov, R La Porta, F Lopes-de-Silanes et al, "Courts: The Lex Mundi Project," NBER Working paper, no 8890, 2002.

also argued that a major reason for the USA's successful nineteenth century growth performance was the financial revolution masterminded after independence by Alexander Hamilton, in which a major component was more enthusiastic encouragement of the corporate form of business organization than in Old England.[3] Also maintaining the significance of law, but less convinced of American superiority, Lamoreaux and Rosenthal (2005, 2005b) argue that the French *Code de Commerce* offered a more flexible contracting environment – especially limited partnerships[4] - than the American legal system. It was the French civil law system (or the German variant of it) which was widely adopted in the world outside the British Empire and the USA, notably in Japan and China. In this paper we develop a large data set for the year 1910, to assess the merits of the alternative views in this historical context.

Traditional individual proprietorships and simple partnerships (most with no more than two or three partners and generally lacking limited liability) in 1910 remained globally the most numerous business organizations and these options were still generally favoured by small and medium enterprises everywhere, as they still are. Even some of the largest businesses of 1910 - including Rothschild, Mitsui and J.P. Morgan - still used the partnership form, though they preferred the corporate form for most of the investments they controlled. In some countries, corporations already in 1910 accounted for most business assets, profits, output or employment, and in the twentieth century they were to become more dominant as an organizational form. It was probably only a year or two before 1910 that the number of extant corporations in the whole world first

[3] E.g.Richard Sylla, "Financial Systems and Economic Modernization," *Journal of Economic History*, 62, 2002, pp. 277-92; Robert Wright, *Corporation Nation* (online). Sylla has also argued that Finance Minister Masayoshi Matsukata was the "Japanese Hamilton," while the British and Canadians developed the corporate form slowly and reluctantly.

[4] Note that many Japanese in the Meiji period and later scholars (or their translators) describe such limited partnerships as corporations (all were *kaisha* in Japanese, and, indeed *sociétés* in French or *Gesellschaften* in German, *sociedades* in Spanish, *aktiebolag* in Swedish etc), some giving them the suffix "Inc." or "Ltd." This is not the practice in the US or UK (though the term "company" was still sometimes applied to partnerships in Victorian English, this usage is less common today) and is not followed here. We use the words "corporation" or "company" interchangeably and to refer only to joint stock corporations (which usually, but not always, had limited liability), and not to any other entities with limited liability.

exceeded half a million (less than 300 per million people),[5] while today a million corporations (about 142,000 per million people) are registered in Hong Kong alone, 1.5 million in Japan (at around 11,700 per million people well over a hundred times Japan's 1910 level), nearly three million in the UK (at around 43,000 per million people, thirty-eight times its 1910 level) and six million in the US (at over 19,000 per million people, approaching seven times America's exceptionally high 1910 level).[6]

Already in 1911, Nicholas Butler, president of Columbia University, famously asserted that "the limited liability corporation is the greatest single discovery of modern times…. Even steam and electricity are far less important than the limited liability corporation, and they would be reduced to comparative impotence without it."[7] The joint stock company has more recently been described by the editor of the *Economist* (with a nod acknowledging the possibly superior claim of the family) as "the most important organization in the world."[8] Yet the historical determinants of its differential spread have received little systematic attention. The next section summarises the availability of general access to incorporation around the world. This sets the scene for an account of the international spread of corporations by 1910 in section 2. The nature of corporatization varied between countries, in particular in the prevalence of private or close companies, as section 3 demonstrates. Section 4 discusses the possible determinants of the extent of corporatization. Some tentative econometric results follow in Section 5 and section 6 concludes.

1. The Legislative Rise of the Corporation

By 1910, all rich (and many developing) countries offered a procedure for registering joint stock limited liability companies administratively, with varying degrees of cheapness and simplicity,

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[5] We have so far counted just over 500,000 companies in 1910 with some (mainly African and probably relatively uncorporatized) countries still omitted. As the number of corporations in the leading countries was increasing at around 10% a year, the half million figure was probably attained only shortly before 1910.
[6] Hong Kong Companies Registry website: UK Companies House, *Annual Report 2012*; *Statistical Abstract of the US 2012, Japan Statistical Yearbook 2011.* Several different figures are reported in the Japanese source (one suggests 1.5m in 2006; another 2.8m in 2008)
[7] Butler, *Why*, p. 82
[8] J. Micklethwait and A. Wooldridge, *The Company*, Weidenfeld & Nicolson, London, 2003, p.2.

avoiding the arduous, costly and sometimes monopoly-enhancing intervention either of the legislature or of the policymaking executive branch of government in each individual case (as had earlier been the norm in some countries). Joint-stock companies, it is true, had often been formed (with or without government authorization) even before such enabling legislation,[9] but even companies of modest size had been made simpler, cheaper, less risky and legally unambiguous by such general incorporation laws. The location of the world's earliest truly general incorporation law is contested (Spain in 1829, Connecticut in 1837 and England in 1844 all have their supporters), but an assiduous generation of like-minded global legislators ensured that most Europeans and north Americans, if they were not among the modest numbers who could access general company registration procedures conferring limited liability in 1850, clearly could by 1870.[10]

Some developing nations, particularly in Asia, maintained autocratic control of incorporation for a generation or two longer. Italy's commercial code did not allow incorporation by simple registration until 1883 and Japan's not until 1899. The Qing imperial edict granting general incorporation in China dated only from 1904 and the "Young Turks'" Ottoman Law of Associations from 1909, while Siam's general law was promulgated in 1911.[11] In many developing countries governments still tried to "pick winners," in the manner of seventeenth century English kings or early nineteenth century American legislators. Like their predecessors, modernizing Asians hesitated before adopting broader modernizing enthusiasms, inclining them to general incorporation. In Korea (unlike in Japan proper) the Japanese military occupation of 1910 vetted all company applications (as had the Korean monarch they deposed) and refused many. In Russia all corporations still required the Tsar's authorization until his abdication in 1917, an anomaly that left his Eurasian Empire with a

[9] In Japan and China, Western-style companies were formed from the 1870s, though the commercial code offered no registration process until 1899 and 1904, respectively (or, in Japan, from 1876 for banks and from the 1893 commercial code for others by licence rather than registration). In England, too there were many unauthorized companies before 1844. In other countries - including many civil law countries and the US - sovereigns, legislatures and/or courts more jealously guarded the state's chartering monopoly and unauthorized companies were rare.

[10] The North German Federation belatedly made it in 1870; a year later its registration law was extended to the newly-founded German Empire. Laggards taking even longer included Italy, Russia, Rhode Island and California.

[11] Kirby, "China Unincorporated," pp. 43-8.

markedly lower level of corporatization than other seriously industrialising countries. In jurisdictions which routinely granted charters by simple registration, governments continued to charter some corporations individually, particularly where distinctively privileged rights were required.[12] Railroads - the classic large-scale (and often legally-privileged) corporations that before 1914 dominated stock markets - were in many countries registered under the general legislation, but in other cases operated under separate or supplementary legal forms appropriate to government ownership, control, subsidy, guarantee, lease or regulatory oversight.

At the opposite end of the corporate size spectrum, a German law of 1892 first formally differentiated the GmbH (the private, unquoted - and usually small - company or, in American parlance, close(d) corporation) from the more strictly regulated AG (the corporation with publicly tradable shares, usually larger and often officially listed on a stock exchange).[13] In 1896 Victoria and in 1901 Portugal enacted their own versions of the close company and in 1906 Austria also facilitated their formation, using identical terminology to Germany's. The next year the UK joined the bandwagon, giving legal precision to the long-familiar informal terms "public company" and "private company,"[14] and many British Empire countries soon copied the imperial metropolis. In 1919 Poland and Spain followed, in 1925 France, in 1933 Luxemburg, in 1934 Mexico,[15] in 1935

[12] Though in some US states there was a constitutional ban on such special charters, in reaction to political corruption and monopolies fostered by earlier state chartering.

[13] Much literature on corporate law translates GmbH as "limited liability company" and AG as "joint stock company." This is literally correct but misleading, since each had both stocks *and* limited liability, so we prefer the (still inexact) translation: private (close) or public company. We use the term "public company" to include AGs and their equivalents whose shares were in principle publicly trad*able*, though many jurisdictions did not formally define that. Moreover, not all such firms' shares were actually trad*ed*: when wishing to confine the meaning strictly to the latter we use the term "publicly-traded."

[14] A public company was usually one with more than 50 shareholders, freely transferable shares and able to appeal for capital to the general public. Unlike the differentiated German suffixes to corporate names (AG and GmbH), both public and private British companies originally identified themselves only as limited (using the common suffix "Ltd.") though many decades later *public* limited companies were given the now distinct "PLC" suffix. Both British and American English sometimes use confusingly different senses of the terms public and private when applied to corporations, to distinguish those owned by principals or investors ("private") from those owned by government ("public"). That usage is clearly not intended in this article.

[15] Mexico had technically been the first in 1884, but abandoned it before it was much used (in 1888).

Belgium and Palestine, in 1937 Switzerland, in 1940 Japan[16] and in 1942 Italy. However, even before such enactments, the close corporation could be "the creation of business men and their counsel rather than of the courts and the legislatures," as one American academic lawyer put it.[17] Most corporations in countries with even modestly flexible legal systems could *de facto* be private companies, cheaply constituted and with shares that were closely held and rarely (if ever) traded.

2. The International Spread of the Corporation in 1910

1910 is the first year in which we have comprehensive official figures for all extant US corporations, detailing their numbers and share capitals. Europe's (and Japan's) corporate statistics go back further, but in the US (where chartering corporations was the prerogative of individual states, not the federal government)[18] it was only in 1909 that the Internal Revenue Service (IRS) began assembling *national* statistics, following the introduction of a new federal excise tax on corporations. There is some ambiguity, particularly at the smaller end of the corporate spectrum, about whether a stillborn or failing corporation can reasonably be said to exist in any meaningful sense and different authorities may judge differently. The taxman is not only motivated to identify existence but also has a trigger (in non-payment) impelling verification of his judgment, though when that process was first applied in the US, the remaining margin of uncertainty was still around 10% of corporate numbers.[19] Such defects are immaterial to the general picture presented in Table 1: national figures do not differ by small percentages but by orders of magnitude.

Table 1. Numbers of Corporations in 1910: by continent (arranged in descending order of corporations per million people)

[16] Although Japan's 1899 law was based on German precedent, it did not include the GmbH until 1940, and even then the form was little used, whereas in Germany it soon dominated the numbers of corporations.
[17] Kramer, "Foreword," p. 433.
[18] Robert Wright has collected statistics of the flow of special incorporations between 1790 and 1860 nationwide, but it remains difficult reliably to estimate *stocks* of *all* US corporations before 1910.
[19] *Internal Revenue Reports, 1910-12*.

Country	No.	No. per million people
The Americas		
USA	270,202	2,913
Canada	14,607	2,032
Newfoundland	200	833
Uruguay	450	416
Mexico	2,800	187
Cuba	375	169
Chile	510	152
Peru	210	107
Argentina	577	84
Colombia	300	61
Venezuela	165	59
French America	23	54
Brazil	750	34
Asia-Pacific		
Australia	6,758	1,545
New Zealand	1,382	1,322
Straits Settlements	294	450
Fed. Malay States	427	427
French Oceania	21	259
Japan	5,026	101
Ceylon	350	75
Neths. E. Indies	2,200	46
Philippines (US)	321	36
French India	3	11
British India	2,251	7
Ottoman Empire	60	4

Country	No.	No per million people
Europe		
Norway	5,048	2,117
UK	55,747	1,241
Netherlands	6,874	1,161
Switzerland	4,031	1,079
Sweden	5,751	1,055
Denmark	2,876	998
Finland	2,489	850
Belgium	4,128	551
Germany	25,346	403
France	12,926	312
Hungary	3,638	175
Italy	2,836	78
Austria	1,843	65
Rumania	660	56
Bulgaria	86	19
Greece	85	16
Russia	1,700	14
Africa		
South Africa	5,651	942
Algeria (Fr)	179	68
Tunisia (Fr)	133	68
Fr. Indian Ocean	56	19
Somaliland (Fr)	4	19
Morocco	80	18
Egypt	201	17
N. Nigeria (UK)	100	11

Korea (J)	66	4	Fr. Equat. Africa	50	5
Indochina (Fr)	54	3	Fr. W. Africa	53	5
Siam	24	3	Ethiopia	4	0
China	600	1			
Afghanistan	0	0			

Sources: see Appendix, but note that this is ongoing work: some numbers are provisional.

The three major industrial powers of the day - the US, UK and Germany - had the largest numbers of corporations, but differed in their corporation-intensiveness. The US had 2,913 corporations per million people, the UK 1,241, and Germany a surprisingly low 403, ranking about the level of Uruguay, Malaya or Singapore on this measure. Corporatization had made even less progress in France, with 312 companies per million people, Japan with 101, Italy with 78, Brazil with 34, Russia with 14, India with 7, Korea with 4, Siam with 3 and China only 1. And of course there were some countries with no western-style companies at all, save perhaps the occasional foreign venture trespassing over their borders. These are substantial differences, not mere artefacts of the data, though, in view of variations in the reliability of the data and definitions of corporations (more fully discussed in the appendix), the lesser contrasts in Table 1 should not be over-interpreted.

We are also collecting data on the ratio of paid-up capital of corporations in these countries to national GDP in 1910, but do not present that here. There are difficulties in interpreting this figure, notably that there were enormous differences among countries in the ratio of market values to nominal (par) values of capital. Some countries are closer together by capital values than they are by numbers of companies (scale economies meant that some businesses like railways and steel mills tended to be large everywhere). At this time a major reason for low ratios of corporate capital to GDP was whether railways were nationalised or not: countries like the US or UK, where all railways were privately owned, had higher ratios than Japan or Germany, where the state had nationalised many railways.[20] The most significant change in ranking by capital values to GDP ratios is that the US falls and the UK and some of its colonies (notably South Africa and Canada) rise. Indeed, in 1910 the ratio of the UK's corporate share capital at market prices to GDP was at least double that of the US. This reflects the continuing higher level of corporatization (by capital) in the UK than the USA that we would expect from the profound and real differences between their economies. In particular, the UK had a tiny agricultural sector (farms were only rarely incorporated anywhere), while British businesses included a much larger quota of multinational corporations and "free-standing" companies operating overseas than, still overwhelmingly inward-looking, protectionist, capital-importing, pre-1914 "Fortress America."[21] Much of the proportionately greater capital in UK-headquartered companies was actually invested in continental Europe, north and south America, Asia, Africa and Oceania. Such cross-border investments everywhere were less likely than domestic businesses to be directly owned by individuals and partnerships and more likely to be intermediated by corporations.[22]

In 1910 the US had nearly twice Japan's population and nearly 17 times its GDP (at market exchange rates); it also had 54 times Japan's number of companies and their paid-up capital at par was 92 times Japan's. However, in proportional terms Japan was nearer the USA: the US had 29 times its number of companies per million people and Japan's ratio of paid-up corporate capital (at par) to national GDP was 31%, compared with the US's 170%, a differential of only five or six times. This latter differential would probably reduce to three or four if we made corrections for nationalised railways and the divergence of market prices from par.[23] There were big differences

[20] Since railway companies were generally large they have less influence on the *numbers* of corporations.
[21] Wilkins, Jones
[22] Worswick and Tipping (*Profits*, pp. 101, 116, 118) report that in 1909 5.1% of the UK's corporations assessed for tax and 13.3% of assessed profits were from "adventures outside the UK." UK companies with large home operations also had more extensive multinational investments than German or US equivalents.
[23] 32% of US corporate capital was in railways, but only 10% in Japan, following the 1905 nationalisation. Japanese share prices appear, from Hanabusa's report to The Hague Conference (see Statistical Appendix), to be above par in 1910 (though we have not found a comprehensive index showing this), while NYSE prices according to the Dow index were about 20% below par. The US had more "overcapitalised" firms, reflecting weaker capitalisation rules than in civil law countries, and this was reflected in market prices.

between Japan and the US, but, appropriately adjusted, Japan's corporate capital was proportionately nearer the USA's than appears in the crude differentials by numbers of corporations.

3. Private, or Close, Corporations

Another issue in interpreting the statistics in Table 1 is that they lump together public and private companies. Where there was a legal distinction, the contrasts were clear.[24] In Germany, the mean of the 19,650 GmbHs of 1910 had share capital of only M197,506 ($47,006), while the 5,296 AGs averaged fifteen times that size, with mean capital of M2,954,305 ($703,125). Thus 79% of German companies by *number* were in the closed company sector, but they accounted for only 20% of corporate *capital* (though adding AGs which were not listed on a stock exchange would increase that). For the UK in 1910, around 6,500 UK companies had securities traded on the London Stock Exchange; some of the remainder were technically classified as public but were in fact really private (not all firms had yet amended their status under the 1907 act), with securities that were never (or only occasionally) traded. This suggests that only about 23% of all UK corporate share capital at par was in the 90% of companies that were *de facto* private.[25] Thus a higher proportion of corporate capital was publicly traded in the UK than in Germany. The average share capital at par of the 6,500 publicly-traded UK companies of 1914 was £504,369 ($2.454m): thirty-four times the size of the 60,355 infrequently-traded and private ones, which averaged only £14,860 ($72,309) share capital. The UK had more public and more private companies than Germany (a country with 40% more people and much the same real GDP) and in both categories its companies were of higher average size, so it is hardly surprising that the ratio of corporate capital to GDP was three times higher in the UK than Germany. The latter remained pre-eminently a land of personal

[24] The differences were in whether shares were in principle tradable not whether they were actually traded. Some AGs (e.g. Krupp) issued only bonds (the stock was retained by the family), while others were subsidiaries or had merely chosen the AG form without yet issuing capital to the public.
[25] Hannah ,"The Maturing Of the London Market for Corporate Securities, 1884-1914," forthcoming; Hannah, "J. P. Morgan in London and New York before 1914," *Business History Review,* 85 (Spring 2011), pp. 113-50.

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proprietorships, family firms and private partnerships, though its corporations' modest aggregate numbers and capitals encompassed a dynamic capitalist sector in banking, shipping, chemicals, steel and electricals and it had more state-owned enterprises than the Anglosphere.[26]

In many other countries, no legal distinction between private and public companies was made until later. In France before 1925 private companies appear to have been inhibited by the relatively expensive and complex registration process imposed on the juridically undifferentiated company sector, essentially to protect public company shareholders.[27] Certainly Neymarck's estimate that in 1910 only 19% of France's corporate securities at par were not quoted on the Paris bourse, suggests that (especially after allowing for those quoted on regional exchanges), an exceptionally low portion of French corporate capital was in closed corporations.[28]In other European countries the norm was a little higher.

In the US, typical state regulatory requirements for most companies were minimal (and, even when the SEC tightened up quoted company regulation on a federal level in the 1930s, closed corporations were exempt),[29] so many closed corporations could exist unmolested by legal stringency, even though they were not legally differentiated as private rather than public. Moody offers the best estimate before 1914 of the share capital of companies that were quoted on any US stock exchange or traded informally, at auction, on the curb or over the counter. There were around 16,485 such companies and the ratio of their share capital at par values to GDP was, at most, 70% in

[26] Kocka and Siegrist (Die 100") show that in 1907 many of Germany's largest industrials were still owned by individuals and partnerships, not corporations (AGs, GmbHs or *Gewerkschaften*).
[27] However, Freedeman (p. 23) points out that French corporations that were *de facto* private were exempted from the publicity requirements, and suggests that the absence of a cheaper GmbH option explains why they were fewer than in Germany
[28] However, the unquoted portion may be lower than in our other estimates because Neymarck's calculation includes bonds which were more likely to be quoted than shares.
[29] Only 12 US states required companies to publish balance sheets before 1914 (Wright, "South Dakota," pp. 6-7); and many of even America's largest industrial companies failed to do so (Hannah, "Pioneering Modern Corporate Governance," *Enterprise and Society*, 2007, pp. 642-86.) This was less common in Europe and, even in the relatively laissez-faire UK, annual balance sheets had long been required by the LSE as a condition of new IPOs and were legally required from almost all statutory companies in the nineteenth century and for most registered ones from 1900 (the requirement being dropped for those registering as private companies from 1907).

1907.[30] For the NYSE alone, Pratt reports the value of stocks at par by 1911 as $11.684b (34% of GDP) for around three hundred listed corporations.[31] The USA's leading metropolitan exchange thus accounted for less than 2% of traded company numbers but around half the par values of their shares: it specialized in creating a large liquid market for corporate giants (notably railroads and, since 1890, selected large industrials). Medium-sized companies' shares - many in Europe traded on major bourses - changed hands in the USA on smaller (and usually less transparent) markets, such as the NY curb, regional exchanges, over the counter, by auction or privately.[32]

Comparison with the figures for *all* 270,202 US corporations, whose share capital at par amounted in 1910 to 173% of GDP, suggest that well over 90% of American corporations, accounting for as much as 60% of all US corporate capital at par, were close companies or were too infrequently or obscurely traded to be noticed by Moody. The modal US corporation was not widely-held but was rather a cloak for the family firm, the crypto-partnership, the individual proprietor seeking limitation of liability, or the small local utility or bank with shares parked privately by directors among a limited number of their families and favoured acquaintances and rarely traded.[33] This proportion (around three-fifths) of US corporate capital in close companies is far above the figures (typically around a fifth) recorded in Europe. Nor was this US exceptionalism a common characteristic shared by all settler economies, compared with the traditional societies of Europe: in Australasia only 17% of corporate capital was in private companies, though Canada was probably nearer the US model.[34] In Asia and Latin America, private companies appear to have accounted for only a modest proportion

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[30] Authors' calculation from *Moody's Manual*, 1907.

[31] S.S. Pratt, *The Work of Wall Street*, Appleton, NY, 1920, p. 53).

[32] The St Petersburg stock exchange had a formal minimum of R500,000 ($251,965) for listings and the practical limit on London and other major European exchanges was not much lower, though provincial and smaller national exchanges went lower: Belgrade had a formal minimum of F100,000 ($19,293) . On the NYSE, IPOs below $5m were rare and such companies usually preferred private placements and less formal trading venues.

[33] Taussig and Barker ("American Corporations") for some survey evidence of the pre-1914 period of such closed companies compared with those in which executive management was more divorced from control.

[34] Although perhaps less than half of corporate capital was quoted on Toronto and Montreal around 1910, it is not clear how much more was traded informally.

of corporate capital.[35] 52% of Japanese corporate capital was in the 2% of corporations that were quoted on the Tokyo Stock Exchange in 1910,[36] and if we added companies whose shares were traded on the many other regional exchanges, Japan would probably be nearer to the European (80%) than to the US (40%) proportion of corporate capital that was publicly traded.

Table 2 shows the average size of companies in a selection of countries, distinguishing where possible our proxies (with varying definitions) for "public" and "private." The average share capital of the 306 NYSE-listed companies (not shown) was $38.183m at par,[37] while the many thousands of traded companies listed in Moody were a fraction of that size at $1,398,969. The residual majority of (overwhelmingly closely-held) companies averaged less than a tenth the size of quoted American companies, with $137,257 capital. Within the Anglosphere, British corporations were the largest by a considerable margin, especially at market prices rather than par values. This is driven partly by a compositional effect (the UK's corporations were more concentrated in sectors like industrials and utilities in which corporations were generally larger than in distribution and professional services) and partly by larger corporations within particular sectors, including mining and manufacturing, but, more particularly, in railways and banks.

Some of the mean figures in column 1 of Table 2 seem odd: we will search the business history literature in vain for explanations of the below-average size of US corporations, of why Argentina and Egypt had the largest companies in the world, or of why Italian companies were twice the size of German ones. Such paradoxes are easily resolved: the literature highlights conspicuous examples in the numerator, while these averages are driven by the denominator (the means tend to be higher where the corporate form had penetrated least in numerical terms). Austria appears to have bigger companies than Germany (to take two countries with identical legal definitions), but this is simply because Germany had nearly six times as many companies per million people and naturally

[35]See Appendix. In 1921, 27% of the paid-up capital of Burmese companies was in private rather than public companies (Cabell, *Annual Report*, p. 12).
[36] See Appendix. Despite the existence of around 48 Japanese stock exchanges, these figures imply that the TSE was already more dominant within Japan than was the NYSE within the US.
[37] Davis and Cull (*International Capital Markets*, p. 63) report 306 listed corporations in 1910; we have divided this figure into Pratt's 1911 figure for listed corporate stocks at par.

some of that excess consisted of smaller enterprises, mainly GmbHs, bringing the mean size down. Norway had smaller companies than any other country for which we have data but it was also the only European country with more than two thousand companies per million people. Russia had Europe's highest mean corporate sizes because many small partnerships and proprietorships were not incorporated there which in Norway would have been. Laggards in Table 1 are naturally "leaders" in Table 2: Egypt and Russia had less than a few dozen companies per million people. Note, however, that this explanation does not appear to apply to the Asia-Pacific region. These countries (Australasia apart) often had relatively few companies per million people, but they still had relatively small corporations.

Table 2. The Sizes of "Public" and "Private" Corporations ca 1910.

Country	Mean Share Capital (US$)			
A. The West				
	All Companies at par	Public Companies at market[38]	Public Companies at par	Private Companies at par
Argentina	5,917,106			
Austria[39]	340,355	1,687,256	942,601	62,408
Canada	241,034		8,250,000[40]	
Egypt	1,265,805			
Finland	69,142			
France	333,239			
Germany[41]	190,065[42]	1,400,000	703,215	47,006

[38] We have converted the par values to market by the 1910 premia/discounts in various sources. The indexes used generally relate to less than the full population of public companies shown in column 3.
[39] Public companies are AGs; closed ones GmbHs.
[40] 1913 figure for all publicly-traded companies
[41] Excludes *Gewerkschaften*. Public companies are AGs, closed ones GmbHs (not quite the same definition as for the US and UK)
[42] This low figure is substantially explained by the fact that German railways were state-owned (Austria also had some state railways but many remained in the private sector).

Italy	358,054	2,818,218	2,202,063	191,449
Mexico	1,445,410			
Norway	33,938			
Russia	712,875	1,824,440[43]		
US	214,234	1,119,175	1,398,969	137,257
UK	290,543	5,908,000	2,454,000	72,309
B. Asia-Pacific				
Australia	**1**49,887		248,912	46,610
China	479,973[44]			
India	91,891[45]			
Japan	125,819		2,766,402[46]	
Korea	71,344			
New Zealand	120,361			
Philippines	86,231			
Straits Settlements	138,678			

Sources: Appendix. (We are still working on this table and some figures are provisional)

This clarifies that, in order to explain the very large *numbers* of companies in the USA, the focus should be on the determinants of *corporatization* (the numbers of companies and the amount of their capital, whether publicly-traded *or* closely-held and however small) rather than the narrower issue of *securitization* (publicly-traded shares of generally larger companies). Indeed the

[43] "Public" are only companies quoted on St Petersburg. A key determinant of this high mean was that in Russia the St Petersburg Exchange accounted for about 1 in 6 Russian companies, while the NYSE accounted for one in 900 US companies.
[44] New Chinese corporations registered 1904-08 only (foreign companies operating in China, which were bigger, excluded)
[45] Excludes Indian railways quoted in London
[46] Tokyo Stock Exchange companies only.

US was well ahead in the former at a time when it was only a modest practitioner of the latter.[47] There were more companies listed on the Berlin bourse or the LSE in 1875 than were listed on the NYSE forty years later.[48] Around 1914, there were ten times as many companies traded on eight major European exchanges (London, Paris, Berlin, Amsterdam, Brussels, Vienna, Milan and St Petersburg) combined than the 970 traded on ten leading US exchanges (the NYSE, the NY curb, Boston, Philadelphia, Chicago, Baltimore, Cincinnatti, Cleveland, New Orleans and Pittsburgh) combined, though the many companies traded off major exchanges may have raised the totals to the same ballpark numbers (relative to their economic size) for both continents.[49]

Surprisingly, or at least contrary to a common misconception encouraged by uncritical readings and imaginative backward extrapolations of Berle and Means' classic work of the 1930s,[50] an extensive population of small *un*quoted companies was the distinctive characteristic of "the modern corporation and private property" in the USA. On the other hand, a corporate economy in which the great bulk of incorporated capital was publicly tradable was the distinctive characteristic of *early* twentieth-century Europe (and Japan).[51] The "managerial revolution" – creating an economy with shares traded on major stock exchanges with ownership somewhat (though in markedly varying degrees)[52] divorced from control - is sometimes presented as a *late* twentieth century phenomenon, with corporate Europe only hesitatingly copying the USA. Yet the

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47 As noted by Rajan and Zingales "Great Reversals"; Hannah, "London as the Global Market for Corporate Securities before 1914," in Y. Cassis and L. Quennuoëlle-Corre, eds., *Financial Centres and International Capital Flows in the Nineteenth and Twentieth Centuries*, (Oxford, 2011).

48 For 1875 see Engel (*Die erwerbsthätigen juristischen Personen*, p. 84) for the Berlin Exchange and the *Course of the Exchange* for the LSE; for the NYSE in 1915 see O'Sullivan, *Bonding and Sharing*.

49 Hannah, "London," p. 130; Burhop, "Initial," p. 10; Borodkin, p. 106; Eigner, "In the Centre," p. 33; Giuseppe De Luca (ed.), *Le società quotate alla Borsa valori di Milano dan 1861 al 2000,* Milano, Centro per la cultura d'impresa :Libri Scheiwiller, 2002, Tab. 1, p. 34; O'Sullivan, "Expansion," p. 523.

50 Berle and Means, *Modern Corporation and Private Property*.

51 Hannah, "Maturing," Neymarck; Table 2 above. An article by Foreman-Peck and Hannah ("Extreme Divorce." in the current issue of the *Economic History Review*) shows that the board directors of large British companies in 1911 already owned less capital than the level Berle, Means and others reported for the USA a quarter century later.

52 Morck, ed. *History of Corporate Governance around the World*; Faccio and Lang, "Ultimate Ownership."

majority of the corporate capital of Europe (but not the US) was already quoted in the pre-1914 period, a proportion which later declined. Moreover, it is the early US approach of abundantly developing the private (often personally- or family-owned) company sector that can more accurately be described as "modern."[53] By 1989 the *Harvard Business Review* was forecasting the "eclipse of the public corporation," with the further rise of private equity control over mismanaged, once publicly-traded, bureaucratic corporations.[54] Today unquoted companies typically account for half or more of corporate assets in the richer nations, while, at least among the countries for which we can make reasonable estimates, only in the USA do we clearly observe this dominance of personal corporate capitalism before 1914.[55] American companies were not only more numerous and more closed, but also the least resilient, as measured by their low life expectancy.[56] Competitive assortment of a myriad of small corporate foundations driving Schumpeterian creative destruction - multiple innovations and widespread bankruptcies - is a distinctive feature of American corporatization. The small size of corporations in most of Asia-Pacific (compared with the large size of corporations in Latin America, Africa, Russia and, within Asia, China, which were more driven by western-led enclave developments) is also worth noting. Such small-scale diversity in encouraging risk-taking may have encouraged greater corporatization later and enhanced future performance in

[53] The widespread contrary view that family-owned closed corporations are "unprofessional" and "un-modern" is rooted in Weberian and Chandlerian conceptions of bureaucratization and corporatization and assumes they were increasing their share in the twentieth century. For a critique of such views see Hannah, "Strategic Games, Scale and Efficiency, or Chandler goes to Hollywood," in R. Coopey and P. Lyth, eds, *Business in Britain in the Twentieth Century*, (Oxford 2009).

[54] Jensen, "Eclipse." See also Harris et al, "Private Equity."

[55] Private companies (defined to include unquoted "public" companies as in the 1914 data for the UK) accounted for more than two-thirds of all UK corporate assets by 1993-2003 (Brav, "Access," p. 264). The decline of listed companies has been particularly noticeable recently: since 1997, when their number in the US peaked at 7,888, it has declined by 38% (and by 48% in the UK) as the regulatory burden on them has increased (*Economist*, 19 May 2012, pp. 12, 24).

[56] only about a quarter of US companies established before 1914 survived to that year; in Europe the proportion was nearer a half.

these regions (though much contemporary and later discussion rather emphasised the importance of economies of scale in large quoted corporations).[57]

Desirable as it might be to measure the net benefits of this complex Schumpeterian process of creation and destruction, it is difficult with the available corporate data: we cannot easily measure the additional investment induced by limited liability;[58] the role of limited liability in disciplining monopoly;[59] the benefits of risky experimentation that would have been avoided by full liability partnerships,[60] against the large toll of creditors' and shareholders' losses from the unpaid debts of corporations relative to principals with full liability (a downside which played a large role in initial opposition to the granting of limited liability). Many of these nations struggled hard (and often ineffectually) with corporate transparency laws, prospectus regulation and bankruptcy laws to magnify the positives and limit the negatives, but, as the world has recently been painfully reminded by "dishonesty magnificent in its proportions,"[61] the problems of corporate governance and corporate fraud -from Enron and Lehman Brothers, through Parmalat and Northern Rock to Olympus Camera - remain substantially unresolved today worldwide. However, it may be that the higher pre-1914 corporate failure rates in the US were merely a consequence of the spread of the corporate form to firms which would have remained simple partnerships in other jurisdictions. Such multi-owner firms elsewhere no doubt had a similarly high failure rate, albeit in bankruptcies that enforced greater liability on principals and paid greater respect to the property rights of creditors.[62]

4. Determinants of Corporatization

[57] Though some of the small size of companies in Asia-Pacific is explained by the exclusion of railways, eiher because they were largely foreign-owned (China, India, Korea and the Philippines) or because they were nationalised (Australia, Japan, New Zealand, Straits Settlements).
[58] But see Foreman-Peck, "1856," p. 42.
[59] John et al, "Limited Liability." This advantage, for example, is likely to have been greater in a protectionist, geographically-dispersed, economy like the US than in an open, geographically-concentrated, economy like the UK.
[60] In principle something might be done with corporate and non-corporate patent statistics but we are not aware of that having been systematically attempted
[61] This description of our present discontents is actually from an acute observer of Victorian skulduggery (Trollope, *Autobiography*, 1962 ed, p. 274).
[62] See, for example, Phillippe Jobert and Jean-Claude Chevalier, "La démographie des entreprises en France au XIXe siècle," *Histoire, économie et société*, 5, 2, 1986, pp. 233-64.

The US by 1910 led the whole world in the *numbers* of corporations, while the UK led in corporate capital *values* (at market as a proportion of GDP). Small northwest European nations (Norway, Sweden, Denmark, the Netherlands and Switzerland) with strong trading and investment links with Britain and an apparently similarly flexible legal system also rank among the leaders, by the number of corporations per million people. This suggests that some shared characteristic - perhaps the common law tradition of the "Anglosphere" and commercial links with it - may be an important driver of corporatization.[63] Recent experience within the European Union suggests this is plausible. Historically there was always some cross-border incorporation among European countries (for example, dozens of Scandinavian and Benelux companies and some from all large European countries were registered and/or quoted in Britain before 1914),[64] but this trend was decisively reversed in the conflict-driven tide of national particularism of 1914-1945 and the peaceful reintegration of Europe after its long drawn-out "civil war" was painfully slow. However, recent European Court of Justice rulings have given cross-border registrations a renewed green light. Under pressure from Brussels for greater harmonization, corporate laws within Europe have become more standardised and nearer the Anglosphere's model, yet thousands of European firms now again choose to incorporate outside their home jurisdiction. Britain has again become Europe's "Delaware,"[65] notably many German firms now choose to incorporate under UK law, aided by specialist intermediaries helping them overcome the language and legal barriers.[66]

Such indicators of the attraction of the Anglosphere's corporate law to businesspersons in other cultures would be strengthened if more distant and varied countries sharing its common law tradition - Australia, Canada, India, New Zealand, South Africa and some smaller colonies - showed

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[63] A well-established hypothesis in much related literature.

[64] When war broke out in 1914, most of Germany's critical explosives factories were owned by Nobel Dynamite Trust, a British-registered company, listed on eight German and British stock exchanges. For other examples, from Germany and elsewhere, see *Stock Exchange Official Intelligence*, passim.

[65] Although before 1910 New Jersey had an advantage, Delaware was rapidly becoming (and remains today) the registration state of choice for US corporations because of its combination of modest requirements and experienced non-populist judges.

[66] Becht et al, "Where."

unusually high propensities to incorporate domestic companies over a long historical period. Table 1 seems to confirm that British colonies had exceptionally high rates of corporatization. Some, it is true, had less companies per million people than the UK, but this was likely because the international division of labour sensibly directed them to sectors (like agriculture) with a low propensity to incorporate or because native traditions, local culture, colonial inequalities or developments in world trade inhibited the formation of human capital, conducive to a modern corporate economy.[67] Thus India's population was dominated by its poor rural peasantry in 1910 and its numbers of corporations per head were low. Australia was richer (actually richer than even the US and UK in terms of per capita real GDP) and, with abundant land and little more than a century of post-hunter-gatherer rural development, depended substantially on profitable specialization in sheep and cattle stations, feeding Britain's demand for meat and wool. More than a third of Australian GDP was in the agricultural sector, which hosted few corporations anywhere (and only a modest number even in Australia), yet Australia still had more corporations per million people than the mother country. Elsewhere in the Empire, levels of corporatization were often lower than in the UK, but, where a literate local bourgeoisie developed, incorporation under the common law was used as enthusiastically by natives as by white settlers.[68] Thus many British Asian colonies (notably Hong Kong, Malaya and Singapore, with tiny portions of white settlers) had levels of corporate development well above that of independent Japan, while other countries' colonies generally did not. At market prices, South Africa's and Canada's ratios of corporate capital to GDP (as well as Britain's) may have exceeded even the USA's, as indeed did Egypt's. Although the latter was not technically a colony, it, too, had experienced many decades of British and French direct investment (and political and legislative influence). But the corporate statistics of small and poor economies can

[67] A major problem for any conventional institutional analysis of Indian divergence (as opposed to China's) is that British India distinctively had an advanced corporate law, free trade, secure property rights, fixed exchange rates, and western-style banks and stock exchanges. For a possible resolution related to trade patterns with the "North," see O'Rourke et al, "Trade."

[68] As is shown, for example, by the corporate names registered in India and Hong Kong, where white settlers formed a tiny percentage of the population.

be misleading. One company (Suez) accounted for around half of Egypt's corporate capital at market, as did Le Nickel in the French Pacific colony of New Caledonia.

English common law was not only attractively malleable by numerous corporate innovators relative to French or German civil law systems,[69] but also incorporation was often cheaper and more readily available in the Anglosphere. Recent economic analyses of the determinants of the levels of corporate registration and of "forum-shopping" (that is choosing to register in a jurisdiction other than that in which the firm operates) have emphasised the cost of registration and its ease (measured, for example, by the speed with which registration can be completed).[70] Unfortunately the historical data on these variables are less readily available and harder to interpret. We may take as a benchmark New Jersey, the winner in the inter-state charter-mongering competition within the US at the end of the nineteenth century. In the early twentieth century it offered registration for as little as $35 for a $5,000 corporation and $1,010 for a $5m corporation, while in New York the costs were $17.50/$2,515 and in Rhode Island $100/$5,000.[71] Corporations did not necessarily go for the absolutely cheapest option: South Dakota's attempts to beat New Jersey by charging even less foundered on its reputation as immature, volatile and with an anti-business political and judicial infrastructure, though Delaware was later to succeed in replacing New Jersey in what was famously castigated as a "race to the bottom" in regulatory standards.[72] In British Columbia, costs were near to New Jersey's: $25 for any corporation with up to $10,000 capital and $1,325 for a $5m corporation, while in New South Wales (though the structure was not reported) fees were even lower, averaging only £8.71 (about $42) per £1m capital.[73] Hong Kong and

[69] For example, preference shares were widely used in the Anglosphere in the nineteenth century, as a result of corporate innovation, but were only legalised in France from 1902; detailed state regulation of bourses in Germany and France had few counterparts in the Anglosphere before 1914.
[70] Becht et al., op. cit.
[71] Idem, p. 8; Borgmeyer, ed., *American Corporation*, pp.19-547; Lough, *Corporation Finance*, 1914, p. 53.

[73] Theedham, *Limited Companies*, p. 11. In another Canadian province the charges were more for small corporations (with a $30 minimum for $5,000 or less), but among the cheapest in America for $5m corporations ($650), see *Official Year Book of New Brunswick 1910*, Fredericton, 1911, p. 268. For corporations of only $10,000 capital Prince Edward Island was the cheapest ($20) and Ottawa and Ontario the most

Singapore also offered cheap registration.[74] Britain was more expensive. Basic registration fees were low (a minimum of £2 and maximum of £50), but stamp duties (a tax on the necessary documentation) significantly inflated this: the combined cost for a £100 company by the early twentieth century was £4.25 but for a £1m (about $5m) company as much as £2,552 (0.26%, $12,418), plus £50 for a provisional order conferring eminent domain rights if they were required.[75] Although it was not everywhere required, many businesses, including those in Britain, voluntarily incurred additional costs by employing lawyers to help them incorporate, but lawyers' fees were generally competitive, especially when company registration agents offered an alternative.[76]

What of post-registration costs?[77] Apart from (trivial and largely cost-related) fees for periodic re-registration and recording changes, politicians introduced additional discriminatory *annual* taxes on corporate capital. John Stuart Mill early argued that joint stock companies ("permanent income" or passive investment, as he - over-optimistically - conceived it) should be taxed at a higher rate than partnerships ("impermanent income" or active risk-taking).[78] From 1888, the UK introduced an annual stamp tax of 0.1% on all corporate capital, increased to 0.25% in 1899 (and to 1% in World War One). Some US states experimented with such annual taxes decades

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expensive ($100), see *Heaton's Annual*, 17th year, 1921, pp. 66-8. NSW 1909-13 average from Trivett, *Official*, p421. The costs in South Africa, at least by the early 1920s, appear to be higher (Harrison, *Trade*, p. 31).

[74] Registration in Singapore under the 1889 Companies Ordinance specified a S$20 fee for companies with up to $10,000 capital, rising to a maximum of S$500 for companies with S$1.085m (just over $0.6m) or more capital (*Straits Settlements Blue Book* 1911, p. A5). The 1911 Hong Kong Companies Ordinance (*Hong Kong Government Gazette*, 15 December 191, pp. 696-7) specified a minimum fee of HK$50 for companies with up to HK$10,000 capital, with a maximum of only HK$300 for companies with HK$2m (less than US$1m) or more capital.

[75] Gore-Brown and Jordan, *Handbook*, pp. 601-2.

[76] For the US see Borgmeyer and other contemporary guides for the competitive nature of the market. Thomas Conyngton (*Corporate Organization and Management*, Ronald Press, NY, 1919, p. 56) suggested registration agencies would do the work for $25-50, while lawyers charged $50 up. In some civil law jurisdictions, however, higher notarial fees (often a profession with a government-mandated monopoly) were involved. In Algeria (which followed the French model) notarial fees were proportional to capital (which clearly would not have been the case in a competitive market) and amounted to as much as F11,580 for a F5m company (Messerschmitt, *Precis,* p. 30), though Delvaux and Reiffers 1933, p. 73 say that notaries voluntarily reduced the legal fee in the case of very large firms.

[77] We are concerned only with costs that distinctively fell on corporations, and not on other business forms. Thus taxes such as the French *patente* (a license for using real estate for business which varied by industry, not by business form) and the British income tax or the American one from 1913 (paid by individuals as well as corporations) are not additional costs for corporations.

[78] Taylor, *Creating*, p. 160.

earlier, but they had generally been reduced: New Jersey charged annual "franchise" fees of only $5 (0.1%) for a $5,000 corporation and $4,000 (0.08%) for a $5m corporation; New York's annual fees for such corporations were respectively $7.50 and $7,500 (both 0.15%). From 1909 the *federal* imposition of an additional discriminatory annual tax on corporations approximately doubled such charges (though small corporations were initially exempt), bringing them closer to the post-1899 British level.[79] For businesses in the Anglosphere, such initial and annual fees were a tolerable irritant, in return for the benefits of incorporation and limited liability that were now more legally certain and widely accepted than in the eighteenth century.

The structure of incorporation costs showed some variety in continental Europe, but costs generally remained higher there in the early twentieth century. In Germany, the basic registration fee for any AG (public company) was M12,500 ($2,928, including a compulsory audit) but in addition there was a 3.5% Imperial levy (and more from constituent states: 1.5% in the case of Prussia) on the capital, resulting in total set-up fees of $252,928 (5.1% of the capital) for a $5m Prussian company.[80] This was 250 times the contemporary New Jersey rate and twenty times the British rate for registering such a company, indeed as high as some American fees in the early nineteenth century. However, GmbHs (the, usually smaller, private companies) were exempt from the additional capital duty[81] and there was no annual franchise fee for either corporate form.[82] This front-loading constituted a stronger initial disincentive, especially for small private companies and for all publicly tradable ones, despite lower on-going costs than the Anglosphere's norm.

In France, incorporation fees applied to all companies (before 1925 there was no relief for private companies) but lay between German and British public company fees, with a stamp duty

[79] The tax was 1% of net income above $5,000, but as a percentage on capital was only a fraction of that. For the complexities of interstate variations in corporate taxation, see Stimson, *American Statute Law*, p. 145.
[80] Carsten Burhop, email to the author, 26 September 2011; compare Burhop, "Initial," p. 7 for slightly variant figures. From 1913 there was a combined 5% standard Reich charge.
[81] We have not yet found evidence on their costs, nor on the costs in the, impressively corporatized, Scandinavian economies.
[82] German companies were taxed, but in much the same way as partnerships or individuals, so this cannot be interpreted as an additional impost on the corporate form.

of 0.6% of the capital if paid up front. It was also possible in France to avoid the front-loading and spread the cost and risk by paying one-tenth annually (0.06%) instead and most companies opted for that.[83] In other cases, like Russia, the nominal cost of registration (only $25) appears trivial, but corruption, delay and refusals by the Tsarist bureaucracy meant the real cost was higher.[84] In China the registration fee for joint stock companies fixed in 1904 was $50 (0.5%) for a $10,000 company, then progressively cheaper per additional unit of capital, with a $300 maximum for companies above $830,000. Thus a $5m company paid less (0.0006% of capital, as opposed to 0.002%) in China than in New Jersey, though only in principle: China had few large companies.[85] Would-be incorporators from New Jersey or Paris did not stampede to Peking, rather the reverse: some native Chinese entrepreneurs on the mainland preferred the similar expense and more certain legal protections of incorporating in (British) Hong Kong.[86] (I do not know what the cost of incorporation was in Japan: the relevant law does not mention fees and I presume they were fixed by the government bureaucracy, but a few Japanese companies also incorporated in Hong Kong).

More generally, honest registration officials, the speed, ease and responsiveness of their service - and the intervals at which re-registration and additional information was required (probably exceptionally lax in the US)[87] - likely enhanced the propensity to incorporate. Although in principle a further search would reveal such data and also fees for more countries, this survey already shows that they were heterogeneous and not easy to combine into a single variable for our econometric exercise. In principle a composite variable (e.g. the discounted present cost of incorporating a

[83] Priez (*Manuel-Guide*, p.125), the *Commissaire-Censeur des Sociétés Anonymes*, reported that most chose the option of annual payment. There were also taxes on share transfers and corporate dividends.
[84] Borgmeyer, ed., *American Corporation*, p. 589. “Tips” and unofficial payments were also allegedly expected by some state incorporation officials in the US (Steffens, “New Jersey,” pp. 41-4).
[85] Williams, *Recent Chinese Legislation*, p. 142.
[86] a practice revived in the last two decades, when some mainland Chinese businessmen redirect their financing via Hong Kong, considering the common law court protections in the Hong Kong enclave superior to the mainland’s.
[87] South Dakota attempted to win more incorporation business in the early twentieth century by approving 95% of applications within 10 hours and requiring no on-going renewal payment, so this was apparently already perceived as an advantage (Wright, “South Dakota,” p. 5). On the other hand, in Canada, it took more than a month to obtain royal letters patent. Today, weak economies take months or years to approve company registrations, strong ones hours or days.

private company of modal size – say, with $30,000 or ¥60,000 capital - for ten years) could be devised for a limited number of countries. But for the moment - having demonstrated its complexity and probable conditional relevance - we leave this variable aside, so its effect is only captured in any unexplained residual. We also do not consider investment bank fees, which were much higher in the US than Europe, since these are more relevant to securitization than our present concern with corporatization.[88]

Legal tradition has been seen as promoting stock market development and, through that, or directly, advancing corporatization. The general presumption has been that common law systems are most favourable to both developments and French civil law the least. We take non-European (e.g. Islamic law) and mixed systems[89] as the base case and use four separate dummies for Scandinavian, French and German civil law systems and common law systems. However, factors that influence securitization (such as the common law rights of shareholders or the anti-director rights index) may have ambiguous effects on corporatization, particularly as measured by the numbers of companies. Weak disclosure requirements or shareholder rights may inhibit stock market IPOs but encourage use of the closed corporation, especially in countries where private companies were not exempted from stringent public company regulations.[90]

Finally it has been suggested that alternative methods of finance may explain the slow take-up of the corporate form, for example because some societies are more bank-orientated than stock-exchange-orientated. Banks lend to non-corporate business forms, so a particularly well-developed banking network might also inhibit even unquoted businesses from adopting the corporate form, by making it unnecessary to bring in additional shareholders in a closely-held business. We were unable to standardize measures of bank loans to GDP for most countries in our

[88] The exceptionally high fees charged by US investment bankers for NYSE listing may be part of the explanation for the preference of many companies in the US to have their shares traded elsewhere or remain private (the reverse of the claim in De Long, "Did J. P. Morgan's men").
[89] Though where one form is dominant we classify the country by that: for example, the US and Canada are counted as a common law systems, though each had one state or province using French civil law.
[90] For example in Germany AGs were required to appoint an *Aufsichtsrat* (supervisory board) and publish accounts, but GmbHs were exempt from these requirements (Krüger, *Das Reichgesetz*, pp. 20-3).

database, so have not yet been able to incorporate this variable. For equations explaining differences within the US, we were able to measure the sum of *all* corporate debt (bonds, bank loans, trade credits etc), relative to corporate share capital, by state, using standardized IRS data.

In the case of small incorporated businesses, one of the clear indications from the entrepreneurship literature is that entrepreneurs are liquidity-constrained. Such constraints will be less if there is no lower limit on the size of a corporation (though this is probably already captured in the civil law variable: common law jurisdictions did not generally specify any limit), and also if bankers are generally willing to lend on reputation, credit history, personal guarantee or credit insurance rather than physical collateral (though information on the changing incidence of such bank policies is difficult to codify and compare internationally, over time or as between partnerships and corporations).[91]

It has also been argued that alternative multi-owner business forms offer a better range of contracting alternatives than some systems of corporate law; in particular many contemporaries and some modern analysts like Lamoreaux and Rosenthal have found superior merit in the partially limited liability partnership.[92] For example, in the *société en commandite par actions*[93] the *gérants* or *commandités* (managers or general partners) had unlimited liability, but the *commanditaires* (sleeping/silent partners or shareholders) had limited liability. John Stuart Mill, and many others, felt this provided a better incentive structure, accurately corresponding to real responsibility, than either large unlimited partnerships or fully limited companies. A problem with this view is that when this

[91] Casagrande and Spallone, "Relaxing Liquidity Constraints."

[92] T.R. Guinnane, T, R. Harris, N. Lamoreaux and J-L Rosenthal ("Putting the Corporation in its Place," *Enterprise and Society*, 8, September 2007, pp. 687-729) favour the French menu of alternatives over the American. Yet the downward managerial risk in bankruptcy and the upward incentives could be replicated variously by contracts, guarantees, bonuses and deferred shares (similar to the continental *Tantiemen* and their like). UK law also permitted all kinds of limitations on corporate lifespan and share transferability similar to those in partnership agreements.

[93] *Kommanditgesellschaft* in German, *tovarishchestvo* in Russian, limited partnership in British and American English (though, this translation fails to capture the fact that, in the *commandite* form often then adopted, managing partners were unlimited).

option was offered its take-up generally proved very low,[94] and this cannot be explained away by the hypothesis that in such cases it was only offered inflexibly or with excessive risk of the veil of limited liability being pierced by creditors for minor infractions of its terms.[95] Even where - as in France and Belgium - the form was historically popular, new registrations were from the later nineteenth century more likely to be in the form of *sociétés anonymes* than of *sociétés en commandite par actions*. The reason, we suspect, is that the corporate form was sufficiently flexible for very similar arrangements to achieve the same contractual outcomes as the various alternatives preserving some form of partnership structure, even where the law on the latter was particularly richly articulated.[96] For example, it was possible in Britain from 1867 to have a partially limited company, in which the directors had unlimited liability and the shareholders had fully limited liability (though few actually exercised that option). However, even where such a corporate charter was unavailable (as in some American states) or not chosen by a company, the same effect could be achieved practically by contract: for example, lending banks could - and for small corporations often did - require a personal guarantee for a loan from one or more directors, but not from the shareholders.

[94] For example, an 1865 law in the UK was (wrongly) interpreted by some as allowing limited partnerships, an 1867 law explicitly allowed *companies* with unlimited liability directors and limited liability shareholders, though only the 1907 law clearly allowed partnerships with limited and unlimited partners. None of these were much used. The Empire sometimes led metropolitan Britain in this respect: limited partnerships were legal in Ireland from 1782, Canada from 1849 and New South Wales from 1892.

[95] N Lamoreaux ("Partnerships, Corporations and the Theory of the Firm," *American Economic Review*, 88 (2), May 1998, p. 69n4) argues that French limited partnerships were more favoured than in the US because they could be organised for longer periods of time and with general partners precluded from dissolving the partnership, but this was possible under English legal alternatives too, without entrepreneurs finding them attractive. The heyday of *commandites* in France was 1807-67 when around 7,100 were formed compared with only 642 corporations (*societes anonymes*), and by 1867 the survivors were around 800 *commandites* and 200 corporations (Freedeman 2, p. 8), but thereafter corporations outnumbered the formation of *commandites* and by 1898 there were 5,100 extant corporations and only around 700 extant *commandites par actions* (Freedeman, pp. 12-18). This does not include the *commandites simples* (without shares) which remained as numerous as corporations in France

[96] See Gomez, Musacchio. Hilt shows 773 limited partnerships were formed in NY in 1822-53 and 236 operating in the latter year, more per capita than in France. At least 3,000 were formed in NY in the 19th century (and a few in Boston, 142 in NJ). The US manufacturing census (vol 8, p. 143) shows 2,879 manufacturing establishments operated by limited partnerships in 1910 accounting for 1.1% of all establishments and 0.5% of the value of products: greatest number in NY, greatest proportion in Oregon.

When countries introduced the private company option (and most had, *de facto* if not *de jure,* by 1910), it usually rapidly dominated the limited partnership form.[97] On the other hand, the limited partnership seems to have especially prospered mainly where the corporate form was less freely available, as in France before 1867. In Russia, where incorporation was still in 1910 not possible by simple registration, but limited partnership was, the latter form was very common.[98] More recently the exotic early 21st century growth of limited liability partnerships and other forms has been driven by tax privileged status, which may not be optimal,[99] but that was not generally on offer before 1914. Japan seems to be an exception to the rule that limited partnerships rapidly disappeared when simple corporate forms were available. Both limited companies and limited partnerships had been available by simple registration from 1899, but there were in 1910 almost as many limited partnerships as corporations (though they were much smaller), perhaps reflecting familiarity with partnership forms in earlier pre-western Japanese business practice and a preference for secrecy.[100] Despite the argument of Lamoreaux and Rosenthal that the form prospered in civil law countries, the US may in fact have had more limited partnerships than any

[97] Guinnane and Rodriguez, "For every law," p. 25 for Spain. They suggest the same happened in France but that this was not the case in Germany. Yet there were only 98 *Kommanditgesellschaften auf Aktien* in Germany by 1909, compared with 5,124 AGs and 16,508 GmbHs (*Statistisches Jahrbuch 1914*, pp. 398, 404), and Kocka and Siegrist ("Die100", p. 81) find only one KG (a textile firm) among the hundred largest German industrials in 1907 (though there were 7 ordinary partnerships and sole proprietorships, 77 AGs, 10 *Gewerkschaften*, and 5 GmbHs). The 1907 census (*Statistiches Jahrbuch 1911*, pp. 64-5) shows 1,636 German plants were owned by KGs (simple *commandite* partnerships) 340 by KGaAs (*commandite* partnerships limited by shares), 9,832 by AGs (public companies) and 11,001 by GmbHs (private companies), though partnerships were perhaps more common in commerce.

[98] Owen, *Corporation*, p. 11).

[99] *Economist*, 19 March 2012, p. 25. Modern US limited partnerships, like nineteenth century *commandites*, can be traded on stock exchanges, but do not pay double taxes on corporate profits and dividends and have other tax privileges.

[100] There were 5,026 corporations (*kabushiki kaisha*, with ¥1,244m capital) and 4,783 limited partnerships (*goshi kaisha*, with ¥96m capital) in 1910 (Anon, *Financial and Economic Annual*, pp. 80-1). Uniquely, Japan's limited partnerships out-numbered its 2,499 ordinary (unlimited) partnerships (*gomei kaisha*), though the latter had more capital (¥141m). Perhaps this anomaly (unlimited partnerships outnumbered limited ones in all known countries except Japan and Korea) was because some traditional unlimited partnerships did not bother to register (?). Some large enterprises were still organised as partnerships: Mitsui was a group of unlimited partnerships (with ¥110m capital in 1910/11) and Mitsubishi a limited partnership (with ¥15m capital). Note that, although Japanese corporate law was modelled on Germany's, the choices of multi-ownership organizational forms actually made by Japanese businesspersons were very different from those shown for Germany in note 97 above.

country except France in 1910.[101] However, the US's corporations probably outnumbered its limited partnerships by at least fifty times, and the latter accounted for a tiny portion of output.[102]

We have found it difficult to measure the number of all partnerships or of limited partnerships (with and without shares) in many jurisdictions,[103] but not many countries (Japan, Russia and France were exceptional) had limited partnerships accounting for more than 10% of the number of corporations and, since most limited partnerships were small, they also typically accounted for a small proportion of such multi-owned capital or of national output.[104]

5. **Results**

In another paper,[105] we analyse the variation in corporatization within the USA, using corporations per capita and capital values per capita as the dependent variables. We have better information on some of the independent variables within the USA than we do internationally: we can, for example, measure the rate of return on the par value of capital by state on a comparable basis; corporate leverage by state; as well as the variables we use for the global study, such as legal status (though all states except Louisiana, with its French civil law heritage, had common law

[101] Japan had the largest number of limited partnerships of those countries for which we have so far found full enumerations, with 4,783 in 1910 (34% of which were "industrial," including mining, utilities and manufacturing; *Financial and Economic Annual of Japan 1911*, pp. 80-1), though it is likely that the number in France was perhaps three or four times that. The 1910 US *manufacturing* census reported 2,879 establishments owned by limited partnerships (and it seems likely the number of partnerships owning multiple establishments, under the generous US census definition which counted as one establishment all factories under common ownership in the same city or county, would have been small). Hilt & O'Banion ("Limited Partnership," p. 630) show that in 1853 only 24% of NY limited partnerships were in manufacturing. By 1910 NY still accounted for more limited partnerships than any other state, though they were then widespread throughout the US. If around a quarter of limited partnerships were in manufacturing (a figure compatible with the 1910 Japanese or 1853 NY ratios), the total number of limited partnerships in all sectors in 1910 would have exceeded 10,000, amounting to about 4% of the number of US corporations at that date.
[102] 1910 manufacturing census. The proportion may have been higher in mercantile businesses which dominated NY limited partnerships in 1853.
[103] While some civil law countries required the registration of partnerships, national statistics are sometimes lacking. Registration was not generally required in the Anglosphere, though later US IRS returns included as corporations some entities (limited partnerships and some mutuals and trusts) which we have generally attempted to exclude, see IRS, *Regulation no 33. The Tax on Income of Individuals, Corporations, Joint Stock Associations and Insurance Companies*, GPO, Washington, 1914.
[104] In 1910 some continental European *commandites par actions* were large enough to be quoted on stock exchanges, but this appears not to have happened in the Anglosphere until recent years.
[105] Foreman-Peck and Hannah, forthcoming.

systems) or income levels. Our results show that US states with higher incomes had more corporations (both manufacturing and total) even after controlling for the effects of corporations in enhancing state incomes. US states requiring more detailed and onerous reports from their corporations tended to deter corporatization. States with higher returns on capital had fewer corporations: consistent with entry barriers maintaining the returns. If partnerships were an alternative to corporations a higher proportion would be associated with a lower proportion of corporations. This is what we find for both limited and general partnerships in US manufacturing. But limited partnerships and corporations are positively correlated in the US economy more broadly, which suggests complementarity.

For the wider world we used corporations per million people as the dependent variable, but have yet to incorporate some recently collected data into the equations (which are, for now, based on a subset of 35 countries). To control for endogeneity of GDP per capita or GDP we chose the PolityIV democracy-autocracy index as an instrumental variable for GDP.[106] Table 3 below then uses democracy as an (excluded) instrument for GDP per head, and Common and Scandinavian law as instruments for corporations per head. The diagnostics are satisfactory and the numbers of (extra) corporations per million population (640 and 680) attributable to the two legal systems are not much altered from the untabulated OLS coefficients. Possibly common law effects are conflated with one of the benefits of membership of the British Empire, with which it is highly correlated in this sample (the exception is the US). The Scandinavian law coefficient, however, is not open to this objection.

The GDP per capita elasticity in equation 1 Table 3 is even higher than the (untabulated) OLS estimate and much bigger than that of the US. Conceivably this is related to the greater range of

[106] We classified colonies on the scale as -6 for Finland, Dutch East Indies, Hong Kong, Nigeria, Straits Settlements, and the Malay Federation.

variation in the world data where New Zealand has 10 times the GDP per capita of China compared to a maximum ratio of four for the US state data. Also unlike the US manufacturing sector, corporations do not seem to cause GDP (equations 3 and 4); it appears that GDP can be treated as exogenous to corporations for the world. Perhaps this reflects that some other growth ingredient, such as human capital, was missing in the wider world but not in the US. The democracy-autocracy index is a good predictor of GDP; unlike more corporatized economies, more democratic countries were richer.

Table 3 World companies 1910: IV Regressions

	(1)	(2)	(3)	(4)
	log Corp pc	Corp. pc	GDP pc	log GDP pc
	GMM	GMM	GMM	GMM
log gdp pc	**2.667*** **			
	(3.93)			
commonlaw	2.115**	640.5***		
	(3.18)	(4.02)		
scandilaw	2.301***	681.1*		
	(4.21)	(2.05)		
gdppcmaddison		**0.444*** **		
		(5.19)		
Corp. pc			**0.442**	
			(1.07)	
Polity-demo-auto			124.1**	0.0602***
			(3.17)	(3.42)
log corp. pc				**0.0826**
				(1.25)
_cons	-30.15***	-709.2***	2050.9***	8.188***
	(-5.53)	(-3.79)	(6.76)	(13.79)
N	35	35	35	35
r2_a	0.49	0.626	0.528	0.497
aic	168.5	536	589.8	70.96
Shea R2	0.36	0.49	0.48	0.2

KPrkLM(p)	0.0006	0.0005	0.0003	0.02
HJ(p)	n.a.	n.a.	0.73	0.19
excl. instr.	polity	Polity	slaw, claw	slaw, claw
t statistics in parentheses				
="* p<0.05	** p<0.01	*** p<0.001"		

6. Conclusion

Around 1910 (when Europe's real GDP was more than twice the USA's) *ten* times more firms traded on the LSE and seven other major European stock exchanges than the 970 traded on the NYSE and nine other US exchanges.[107] On the other hand, the US had many more *close* companies, narrowly held and rarely, if ever, traded, accounting for three-fifths of its corporate share capital at par, compared with the European norm of around one-fifth. Many businesses that were incorporated in America were in Europe largely owned by individuals and ordinary partnerships, usually personally responsible for their debts "down to the last cufflink." The corporate form offered clearer business identity separate from persons and encouraged risk-taking in societies that (for better or worse) saw bankruptcy as being driven as much by bad luck as by bad morals or bad judgment. The US had 270,202 mainly small corporations: about the same number as *all* the rest of the world, which then accounted for five-sixths of global real GDP. Asia and Africa had notably few companies, the majority of these in committed modernizers (notably Japan and some rapidly-growing British colonies). In Europe, France, Germany and Italy had proportionately fewer companies than the smaller and more open economies of the relatively prosperous northwest.

Corporatization in 1910 was positively correlated with high living standards, common law (or Scandinavian civil law), small agricultural sectors, cheap registration and minimal reporting requirements for private companies. Increased corporatization appears to cause higher incomes among US states, but there were other factors holding incomes back, even with legal conditions

[107] And on both continents more traded on minor exchanges as well as over-the-counter.

favourable to corporatization, in the world at large. Did corporatization really matter? Or is our focus on the distinct corporate form merely "form-fetishism,"[108] which abstracts from the numerous alternative ways in which different societies preferred to organise both collective and personally-owned businesses? The notion that economic growth in the Anglosphere was driven by a few heroic institutional pioneers of the corporate form like Alexander Hamilton whose innovations gave the US a commanding economic lead, while, say, Latin America and France suffered from a legal institutional pathology denying them similar corporatization and growth appears overly simplistic. Nonetheless our American equations do confirm the view of Rousseau and Sylla (based on Granger causality analysis of nineteenth century data) that the direction of causation ran partly from corporations to growth (as well as vice-versa). The world-wide perspective that we add provides more robust tests and makes clear that, even where cheap incorporation and flexible corporate laws were as readily available, other factors - perhaps various mixes of poor human capital endowments, inequalities inhibiting entrepreneurship, and baneful state, cultural or trade influences - slowed down the symbiotic growth of both corporatization and living standards. In the twentieth century, it was sometimes changes in these other variables, rather than in corporate laws, which enabled societies like the Asian tigers (which began the twentieth century with only low numbers of distinctively small corporations) to reverse the divergence of their living standards from those in the west; and at the same time to adopt the corporate form more wholeheartedly. Legal form is only part of the story.

Appendix: Note on Sources.

The full data appendix is more than 100 pages long. Here we show the entries for a few countries to give the reader an idea of the varying quality of our sources. This is very much a work in progress. We would especially welcome corrections of our estimates from national experts and details are available from the author for other countries.

Generally we have taken figures reported in national yearbooks, statistical abstracts and similar sources for calendar 1910 (with a bias toward the end of the year if there are multiple spot

[108] We owe this phrase to Viv Nelles in his comments on an earlier version of this paper at the EBHA conference in Paris, August 2012. The point is also implicit in the Lamoreaux and Rosenthal hypothesis.

observations) or the financial year 1910/11, but for some countries we have estimated data from earlier or later years. We have tried to include all for-profit corporate enterprises in the definition of corporation, while excluding mutuals, non-profit universities, municipalities and other non-capitalist corporate forms. Some countries' statistics group *sociétés en commandite par actions* (often large partnerships which, like public companies, could be quoted on stock exchanges) with corporations; but *sociétés en commandite simple* (more like ordinary partnerships but with partially limited liability) are usually not included. Countries are listed alphabetically.

Afghanistan

The country appears to have had no corporations or corporate law.

China.

Wellington K.K. Chan (*Merchants, Mandarins, and Modern Enterprises in Late Ch'ing China*, pp.181-2, 270, n. 12) suggests that the Companies Registration Bureau set up to administer the Qing edict of 1904 did not report on registrations after 1908, but reported as registered in 1904-08 153 limited joint-stock companies with Taels 127,440,445 authorized capital and 5 unlimited joint-stock companies with Taels 258,000; giving an average size of Taels 806,585. However, one company alone (the Kwantung Canton-Hangkow Railway) accounted for more than a third of this authorized capital (and actually only a third of that was paid-up)and the figures in the table appear inconsistent with those on p. 180 and in Feuerwerker (*China's Early Industrialization*, pp.3-7) and Kirby ("China Unincorporated," p. 48), the latter partly explained by the inclusion of limited and unlimited liability *partnerships* and sole proprietorships(which could also register under the 1904 legislation) not just joint-stock corporations, which were generally larger.[109] Feuerwerker also notes other companies existing under earlier dispensations (including 3 banks and a shipping company which together had Taels30m capital, suggesting larger average size). It is plausible that perhaps eighty further corporations were formed in 1909-10 (the annual numbers had remained fairly stable in each of the years 1904/08, though the collapse of the financial bubble of 1910 may have limited new formations).[110] A British consular report of 1910 noted that "most of the companies now being formed to establish waterworks, electric light, telephone and tramway systems consist of groups of officials and merchants who have obtained a concession or permit from the government" and took a dim view of their managerial competence and accounting standards.[111]

The Shanghai Stock Exchange quoted 68 companies with Taels 108m share capital in 1900 (already approaching the authorized capital of 1904-8 incorporations) and 96 companies with Taels 368m by 1920. The number traded may have been even higher in the speculative boom of 1910, but many of these were rubber ventures promoted in Singapore: this stock exchange was dominated by expatriate brokers and foreign companies, not by native Chinese enterprise.[112] Some Chinese railways were registered as European or Japanese companies and other foreign companies had been established in the treaty ports before 1895; thereafter foreigners had developed ventures in China proper. Some major Chinese entrepreneurs (such as Nanyang Brothers Tobacco and Wing On department store) as well as foreign ones operating in China (such as Hongkong & Shanghai Banking Corporation) preferred to register in Hong Kong (where registration cost much the same as under

[109] Chan p. 180 reports 272 "companies" (including partnerships etc) with Taels 100m or C$133m authorized capital, less than the figure in his table on p. 181 for joint-stock companies alone; Feuerwerker and Kirby also give lower figures.
[110] Neymarck (1915, p. 449) estimates new corporate issues in China in 1910 at F13m (US$2.6m), less than in Serbia or Greece.
[111] *Diplomatic and Consular Report on the Trade of China in 1910*, no 4751, Cmd 5465-144, HMSO, London, 1911, p. 25.
[112] Thomas, *Western Capitalism in China*, pp. 72-3 and passim.

the Qing decree)[113] and others (e.g. BAT, Pekin Syndicate, China Engineering & Mining) in London (which was more expensive). The Hong Kong & Shanghai Bank was heavily involved in lending to both Chinese and foreign companies (for example, in 1911 it had $3.1m advanced to local public companies in Shanghai). Japan's, government-backed, colonizing venture, the South Manchurian Railway Company, with a share capital of ¥120m (US$60m), was registered in Japan (and those of its securities not held by the Japanese government traded there and in Europe) but operated in China and alone was about the same size as all the 158 Chinese corporations registered under the Qing decree in 1904-08.[114]

The boundaries between traditional Chinese partnerships and new companies were not always clear and they were evolving. In banking, for example, it is estimated that in 1894, only 15% of China's paid-up bank capital was in foreign corporate banks (*yin hang* in Chinese, which had been established there since 1845 and by the end of the nineteenth century had 45 branches in the treaty ports, using about $35m of their parents' capital), while 32 national Shanxi *piaohao* (with 475 branches and national networks) had 19% of China's banking share capital and ten thousand or so local *quinzhuang* had the rest (65%) (Cheng, *Banking*, pp. 2-19). These Chinese financial institutions were unincorporated (individual owners and partners had unlimited liability as in private western banks, which we also exclude) and so many thousands of them are excluded from our figures. Both the foreign banks and the first Chinese-owned, western-style *yin hang* (the Imperial Bank of China, incorporated by special imperial decree in 1897 and raising its paid-up capital from C$3.5m in 1897 to C$10m in 1899, *did* have limited liability and shareholders) had a symbiotic relationship with traditional bankers and moneylenders: such "modern" banks specialised more in international transactions and financing infrastructure projects, but lent to some Chinese financiers and also relied on them to intermediate some local loans. In 1910 HSBC was heavily involved in bailing out Chinese banks and their borrowers during the financial crisis (King in Bovykin and Cameron volume). Cheng (pp. 41-2) suggest that 17 Chinese western-style banks were founded in the 16 years to 1911 and that the survivors' capital in 1912 was $27m, noting that, after the revolution which replaced the emperor, the number of western-style banks rapidly accelerated.

There is thus a good deal of leeway in assessing the total numbers and capital of "banks" or of other "companies" in mainland China in 1910. Moreover (and as at an earlier stage in the west), companies with *de facto* if not *de jure* limited liability had been and still could be set up outside Qing decrees (both before and after 1904), if privileged individuals running them had the support of local warlords, officials and/or gentry for doing so. It might even be argued that family lineage trusts and similar traditional forms had some corporate features (Zelin, "Critique"), but such an approach would take us well beyond statistical feasibility or the conventions we have adopted for other countries.

None of the standard works in English estimate comprehensive totals even for all formal Chinese corporations in China for our target date of 1910. We have, somewhat arbitrarily, estimated the total corporations in that year as 500-700, using the mean of 600 (about four times the number known to have been formed in 1904-08 under the Qing decree)[115]in the table. We have not attempted to measure their total paid-up capital. This should be considered a ballpark estimate for all joint-stock corporations in China, excluding (even registered, limited) partnerships, but including all foreign-registered corporations with significant operations in mainland China (but not companies

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[113] A habit which has been revived after many decades of communism. Under the "one country, two systems" privileges of Hong Kong today, many mainland Chinese businesses invest in the mainland via Hong Kong companies, to gain the protections of Hong Kong common law and more independent and knowledgeable commercial courts, in preference to mainland civil law.

[114] Somewhat above or below depending on which of the alternative figures reported is correct.

[115] Though, of course, if Chinese firms were like those elsewhere many of these would not have survived their first few years.

operating mainly in Hong Kong), enabling us to place China very approximately in comparative perspective with other countries.

Formosa

We have been unable to identify any sources for colonial Taiwanese companies in 1910, but it is clear they were quite numerous in sugar, banking and utilities. Any advice welcome!

Germany.

We use Woytinsky's figures (*Welt*, p. 333) for both AGs and GmbHs, which, comparisons with other sources suggest, relate to the end of 1910. He added M180m capital to the officially published figures to include the Reichsbank (then an investor-owned utility) as an AG, making a total of 5,296 AGs[116] with M15,646.3m capital and 19,650 GmbHs with M3,880.7m capital.

These statistics omit a medieval form of multi-owner mining enterprises, similar to the virtually defunct English "cost book" companies, which remained more important in Germany, partly because they enabled coal, iron and steel enterprises to achieve corporate form while evading the publicity requirements imposed on AGs. In 1907 ten of the hundred largest German industrials still used this corporate form, accounting for 32% of the 229,993 employees in all 510 plants (*Betriebe*) of *Gewerkschaften* (Kocka and Siegrist, "Die 100;" *Statistisches Jahrbuch 1911*, pp. 68-9). Applying the ratio of employment to capital of the ten largest to the known total employment in the 510 plants would suggest their *Kuxe* (the equivalent of *Aktien* in an AG) had a par value of M736.3m in 1907. *Gewerkschaften* were steadily converting to newer legal forms, or disappearing as small mines were exhausted, while others, like *Gewerkschaft Deutscher Kaiser* (Thyssen), owned multiple plants and were expanding. We estimate that 400 separate *Gewerkschaften* (some multi-plant) still existed in 1910 with a par value capital of M735m, which brings the German total to 25,346 corporations of all kinds, with M20,262m capital. The *Statistisches Jahrbuch* suggests that authorized and paid-up capital were identical in Germany, so we omit the asterisk (indicated by Woytinsky's description) in Table 1.

Rajan and Zingales' (2003) figures of 1,819 domestic corporations listed on German bourses in 1913 suggest most AGs were not listed.

India

Government statistics show 2,251 companies in 1910/11 with £42.5m capital, but this seems to include joint-stock companies only, not statutory and chartered. Rungta confirms these statistics include Burma and banks, railways, tea, though many of latter were registered in UK. Rungta p. 302 says capital (but it is for most not for all extant companies) was 371m rupees in 1900 On p.175 capital expended on railways alone by then 2,942m rupees (£196m), most in British companies p. 54 says mar 1901 £25m rupee capital (but p. 296 says 31.7m rupees in 18 rail and tram companies and rupee only 16d and p. 260 makes clear £25m is370m rupees all industry total and only 8.6% in railways and 56% in jute, cotton and tea companies and 12.4% in banks) in Indian railway companies, so British residual £171m. At the end of 1910 the LSE officially listed £151m of Indian railway securities (though they included bonds as well as stocks (*SEOI 1911*). *Joint Stock Companies in British India* is definitive (Ray), but we have not yet checked it. Sen says English enterprise in railways, banks, coal and other mining tea and coffee plantations and mercantile establishments, but Indians

[116] The *Statistisches Jahrbuch* data include KGaAs (*commandite* partnerships with shares) as AGs, and make it clear there were 98 of them in 1909 (less than 0.4% of our estimates of total corporate numbers in 1910). In the absence of information on the amount of their capital to deduct, we have followed Woytinsky and left them in the AG totals.

dominated cotton and steel. Rajan and Zingales (2003) report 249 domestic companies listed on Indian stock exchanges in 1914.

Japan.

Financial and Economic Annual of Japan 1914, pp. 80-1 reports 5,026 companies with ¥1244.5m paid-up share capital in 1910, an average size of ¥247,612 ($125,819). That is the statistic we use.

Historical Statistics of Japan (p. 162, based on a later Ministry of Finance study) reports 5,277 companies in December 1910, but includes some companies "in suspension of business;" and also (p. 170, based on a Ministry of Commerce and Industry publication) reports 5,025 companies with ¥1,244.492m "paid-up or subscribed capital" at the end of December, noting that this includes some partnerships limited by shares. Röhl (*History of Law in Japan*, p. 359) shows that that such partnerships were akin to the German KGaA, introduced to Japan in 1899 and abolished in 1950, but that only 50 were formed, and we ignore their presence in our estimates for companies.

The report of Naosaburo Hanabusa (the director of the Japanese government statistical bureau) to the *Congrès International des Valeurs Mobilières* at The Hague in 1911 said that Japanese company shares had a par value of ¥1,358.858m at the end of 1910 (and showed market values of many shares were somewhat higher). He does not show numbers of companies, but the following table compares the figures we use and Hanabusa's by sector:

	Financial and Economic Annual of Japan		Hanabusa
	Number	Paid-up Shares (¥m)	Paid-up shares (¥m)
Agriculture	172	11.335	2.849
Industry	1296	456.606	462.847
Commercial	3195	585.082	264.635
Banks	(included in Commercial, above)		496.058
Transport	363	191.469	not shown
Railways	(included in Transport, above)		132.471
Total	5026	1244.492	1358.858

The discrepancies are puzzling, but Hanabusa's excess appears to be largely in the figures for "Commercial" (including banking): it may be that he included some state and quasi-state banks (whose securities were widely held by the public) for the purposes of addressing a largely European audience interested in securities markets and that these were excluded from Japan's ordinary statistics for joint-stock companies. Comparison of the *Financial and Economic Annual*'s figures by sector show that the discrepancies cannot be explained by Hanabusa including limited partnerships (which totalled ¥96m capital).

Rajan and Zingales (2003) report 389 domestic companies quoted on Japanese stock exchanges in 1913, one of the largest numbers of the 22 countries they report, though behind the US, UK, Germany, France, Belgium and the Netherlands (though it is unclear whether they included all the several dozen stock exchanges then operating in Japan). The Tokyo Stock Exchange Year Book for 1910 alone lists 119 companies with ¥647.8718m capital, so just over 2% of companies account for

52% of the capital of the 5,026 known companies in that year.[117] Of course, including the shares quoted on other stock exchanges would be likely to reduce the proportion of capital in unquoted (private) companies to a significantly lower figure than the remaining 48%.

All these figures appear to exclude companies registered in Hong Kong, Europe and the USA (but operating in Japan), whose share quotations were sometimes published in the Tokyo English language press and apparently traded in Yokohama by expatriate brokers.

Korea

By 1910 the Japanese colonial occupation of Korea was complete. Some companies - like the Oriental Development Company (established in 1908 to redistribute Korean land to Japanese settlers), the Bank of Korea (created in 1909 as a central bank but based on the Seoul branch of Japan's Daichi Kokuritsu Gingko established in 1878) – were part of this drive, while others - like Seoul Electric (jointly owned by the Korean Emperor and a group of Americans led by Henry Collbran since 1898) – had existed earlier. The Government-General of Chosen, *Annual Report on Reforms and Progress in Chosen (Korea) 1910-11*, p.101, reports on the effect of the new Japanese-imposed company law (Sirei of December 1910, implemented in January 1911). This applied much tougher company registration requirements in the colony, especially for native Koreans, than in mainland Japan (in the period to the end of March 1912, 45% of all company applications were turned down, though controls were later relaxed).

In the law's first three months (i.e. by the end of March 1911) 52 joint stock companies had been registered with ¥18,373,525 authorized and ¥5,472,192 paid-up capital, many of which had been operating earlier. In addition 12 foreign (including Japanese) companies operating in Korea with ¥44,950,000 authorized and ¥41,811,562 paid-up capital were registered (and 15 unlimited and 50 limited partnerships, which were smaller). These figures appear to exclude banks of which there were three Korean with ¥1,300,000 authorized and ¥325,000 paid-up capital and five similar foreign banks operating in Korea with ¥19,300,000 authorized capital and ¥15,706,250 paid-up capital (these are referred to as "ordinary" banks: we exclude the government-owned central bank, as well as the government-supported agricultural and industrial banks and people's banks and directly-owned government enterprises). Excluding foreign enterprises (because of the difficulty of allocating a portion of the capital to their Korean activities) would suggest a figure for all Korean joint-stock companies (including ordinary banks) of 55, with ¥5,797,192 paid-up capital at the end of fiscal 1910/11 (a mean of ¥105,403 or $52,702), about the same level per million people as China (though Korea had no stock exchange). However, this somewhat understates the relative degree of corporate development in Korea because of the importance of foreign enterprises in both countries (which are included only in the Chinese totals).

The *Financial and Economic Annual of Japan 1912* (p. 173) gives alternative figures for Korea, going back to 1906, and since these are likely to be on a similar basis to our Japanese figures those are the ones we use. By this count there were 66 joint-stock companies in Korea in 1910, with ¥31,799,725 authorized and ¥9,266,710 paid-up capital, the latter an average of ¥140,405 per company. As in Japan there were almost as many limited partnerships (49 with ¥1,579,088 paid-up capital) as corporations.

Netherlands East Indies.

[117] I cannot read the *Eigyo Houkokusyo* but I am assuming that the very helpful Japanese student who translated for me was accurate. I included all listed companies (even though ¥38m of their capital appears to have been listed but not traded during 1910). It is unclear whether this is paid-up capital (as is the case for the data on all limited companies), but in making the comparison I assume it is. I am also unclear whether the TSE figures included the state banks included by Hanabusa but not by us.

The *Handboek voor cultuur- en handels-ondernemingen in Nederlandsche-Indie* (De Bussy, Amsterdam, vol 26, 1914, pp. pp. 588-1224) lists companies (both Dutch and foreign) operating in the East Indies colonies (Sumatra, Java, Borneo etc) in 1913, with their foundation dates. Many were founded in the last three years but we counted 2,125 which were definitely in existence in 1910. There were 29 others listed with no foundation date specified, other companies may have existed in 1910 but been liquidated during 1911-13, and some international shipping and banking companies had branches which appear to be omitted, so we round up the total to 2,200.

Norway.

At the end of 1910 Norway had 5,048 companies with Kr641,140,921 paid-up capital and Kr 773,798,048 authorized capital (*Yearbook 1913*, p. 130). Dupuichault says article 2 of 1910 law said Bank of Norway, maritime companies and railways with state participation were excluded from its provisions (are they in statistics?). Rajan and Zingales (2003) report that only 82 companies were listed on Norwegian stock exchanges in 1913.

Philippines.

The Statistical Bulletin no 1 (Manila, Bureau of Printing, 1918, pp. 72-5) published details of 1,386 domestic corporations registered from the first registration of 30 March 1906 to the time of publication, 53% of them in Manila. We presume that pre-1898 colonial Spanish companies or any established during the war of occupation were required to re-register under the American corporate law after pacification. Some 321 companies with P55,360,204 capital are shown as registering by the end of 1910 and that is the figure we use.

This source also notes that 12 additional companies were registered and disappeared by 1918: some of these may have been extant in 1910. It also notes that many foreign companies also registered to operate in the Philippines and their authorized capital in their home economies was much larger (P2,634m, 61% of it British, 21% American, 7% German and 5% Japanese). However, no figures for numbers of foreign companies are given and most of their capital was employed outside the Philippines.

Siam

The company registration process in Siam (Thailand) dates from a 1911 law which took effect in 1912 but, even then, the number of companies registered in 1912-33 averaged less than eight per year. Before that, 21 Siamese companies in industries like banking and transport received royal charters between 1888 and 1912 and at least 9 (and almost certainly more) were in existence in 1910 (Suehiro, *Capital Accumulation*, pp. 95, 99, 101-2). There were also at least six European companies producing consumer products and tin (*idem*, pp. 39, 67) and foreign banks had branches in Bangkok. We estimate the national total in 1910 as 24.

Straits Settlements

At the end of 1916 (the first year in which the reporting requirements of the 1915 Companies Ordinance took effect) there were 223 extant locally-registered companies, with S$54,511,771 capital (41 new companies with S$13,116,400 capital having been formed in that year and 46 with unstated capital liquidated). In addition there were 374 overseas-registered companies (307 of them British) which had registered local operations with the colonial registrar. A significant but unknown number of these 587 companies already existed in 1910. The Malay peninsula – with a mix of directly-ruled British colonies (the Straits Settlements, including Penang and Singapore) and protectorates with native rulers (including Johore and the Federated Malay States) - was then enjoying a rubber boom, combining massive immigration of Tamil and Chinese labour with mainly

European-owned plantations, applying the R & D of the Kew and Singapore botanical gardens to provide much of the world's rubber. Sheppard (1909 and 1910) lists 71 British rubber companies with sterling capital in the Federated Malay States, 9 in Johore and 15 in the Straits Settlements between October 1909 and February 1910 and there were more local rubber companies established and traded in Singapore with Straits dollar capital (Zorn and Leigh-Hunt 1909). Many more companies were set up during 1910: the Straits Times (*Dollar Share Values*) reported 189 Malay rubber companies with sterling capital (£17.728m) in September 1910, and a further 42 with Straits dollar capital ($18.457m), with numbers still expanding rapidly in the following months. There were also banks, insurers, long-established tin concessions, tin dredgers, electrical utilities, tramways, and other companies in the peninsula, though railways and the main docks were state-run. We have estimated that 294 companies, half the 1916 total, existed at the end of 1910, or 450 per million people on the basis of the 1910 *Colonial Report*'s (p. 27) figure for the then population in the Straits Settlements of 653,853 (the 1911 census was to show 714,000, 305,400 of them in Singapore).

USA.

Our figures are from *Annual Report of the Commissioner of Internal Revenue for the fiscal year ending 30 June 1911* (GPO, Washington, 1912), pp. 75, 81.

Bibliography (a full bibliography is in preparation)