Geoffrey Jones and Frances Bostock

U.S. Multinationals in British Manufacturing before 1962

This article presents a new database on U.S. multinationals active in British manufacturing between 1907 and 1962. Britain was the largest European host economy for U.S. direct investment in manufacturing and the second largest host worldwide. This article identifies the industrial distribution and mode of entry of U.S. investors, and offers explanations for the time trends which are shown. It goes on to trace the evolution of U.S. subsidiaries, and shows that rates of divestment were substantial. An examination of the characteristics of U.S. subsidiaries, including the substantial investments in R & D and high export propensity, is followed by a survey of British public policy, which made Britain an attractive host but did little to shape the form of U.S. investment.

U.S. companies began to establish both distribution and production facilities in Britain in the 1850s, and by the 1900s U.S.-owned companies were already important in a number of sectors.

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The role of U.S. affiliates in British manufacturing grew in size and significance as the twentieth century progressed. They were clustered in products involving either high technological content or advanced marketing skills, and in which their market share was very high. By the mid-1960s, U.S. affiliates were estimated to account for over 50 percent of the British market for automobiles, vacuum cleaners, electric shavers, razor blades, breakfast cereals, potato chips, sewing machines, custard powder, typewriters and a considerable range of other products. They held between 30 and 50 percent of the market for computers, rubber tires, soaps and detergents, instant coffee, watches, refrigerators and washing machines.[1] U.S.-owned firms accounted for 49 percent of the value of prescriptions to Britain's National Health Service, compared to the 27 percent share held by British-owned firms.[2] Individual U.S. companies controlled large market shares in particular products. In the mid-1960s, Kodak produced over 90 percent of the film sold; Heinz accounted for 87 percent of baby foods and 62 percent of soups and baked beans sold in Britain; Kraft and Swift accounted for 75 percent of the processed cheese market; and IBM accounted for 40 percent of computer sales.[3] In the years following World War II, U.S.-owned companies were or appeared to be paragons of efficiency compared to their British-owned counterparts. In 1954, the labor productivity of U.S. affiliates in Britain was estimated to be almost 33 percent higher than that of all British manufacturing industry.[4]

Britain was an extremely important location for U.S. manufacturing multinational enterprises (MNEs). Before the Second World War, Canada was the largest host for U.S. foreign direct investment (FDI) in manufacturing, but the United Kingdom was the second largest host economy. By 1929, U.S. FDI in British manufacturing had reached $268.2 million—more than that invested in Germany, France, Italy and Spain combined. By 1940, it had only grown marginally to $275.3 million, compared to a rapid growth of U.S. FDI in Germany from $138.9 million to $206.3 million, but Britain remained the largest host in Europe. Overall, the U.K. hosted

[1] Derek F. Channon, *The Strategy and Structure of British Enterprise* (London, 1973), 28.

[2] Report of the Committee of Enquiry into the Relationship of the Pharmaceutical Industry with the NHS, 1965–67, Cmnd 3410.

[3] Unpublished paper by Economist Advisory Group, "The Growth of Foreign Investment in the United Kingdom and the Attitudes and Policies which have Resulted" (1967).

[4] John H. Dunning, *American Investment in British Manufacturing Industry* (London, 1958), 181.

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approximately 15 percent of the total U.S. manufacturing direct investment in 1940.[5] For U.S. manufacturers, Britain retained its position as the second largest host after Canada, and the largest European host, through the 1950s, and in 1962 accounted for 19 percent of U.S. outward FDI worldwide.[6]

There were multiple reasons why Britain was such an attractive location for U.S. companies. Investment was market-oriented rather than resource-seeking. Britain was a high income market—in 1950 U.K. GDP per head remained well ahead of that of almost every European country apart from the small neutral states of Switzerland and Sweden—with many similarities to the United States. It was the center of the Sterling currency area, a major world trading currency into the 1950s. In addition, Britain's similar language and culture to the United States reduced the information costs and uncertainty faced by U.S. investors. As a result, U.S. MNEs often used Britain, like Canada, in the first stage of their foreign expansion before proceeding to markets with higher uncertainty levels.[7] This preference for either physically close or culturally similar investment locations, which Mira Wilkins has termed the "nearby factor," is a widely observed feature in the history of international business.[8]

The history of U.S.-owned businesses in the United Kingdom has been discussed in a number of important studies. From the pioneering work of Frank A. Southard, through the magisterial surveys of the history of U.S. MNEs by Mira Wilkins, and more recently in Alfred D. Chandler, Jr.'s *Scale and Scope*, historians of the international growth of U.S. business have examined U.S. investments in Britain.[9] Given the long-term role of the United States as the largest source of inward foreign direct investment into Britain, British scholars have also been interested in this subject. In particular, John H. Dunning published a path-breaking study of U.S. direct investment

[5] Mira Wilkins, *The Maturing of Multinational Enterprise* (Cambridge, Mass., 1974) 56, 182–5.

[6] Ibid, 331.

[7] William H. Davidson, "The Location of Foreign Direct Investment Activity: Country Characteristics and Experience Effects," *Journal of International Business Studies* 11 (Fall 1980): 9–22.

[8] Wilkins, *Emergence*, 113; Wilkins, "European and North American Multinationals, 1870–1914: Comparisons and Contrasts," *Business History*, 30 (1988): 24; Harm G. Schröter, *Aufstieg der Kleinen* (Berlin, 1993), 59ff.; Geoffrey Jones, *The Evolution of International Business* (London, 1996), 39.

[9] Frank A. Southard, *American Industry in Europe* (Boston, 1931); Mira Wilkins, *The Emergence of Multinational Enterprise* (Cambridge, Mass., 1970) and Wilkins, *Maturing*; Alfred D. Chandler, Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, Mass., 1990).

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in British manufacturing industry as early as 1958, and this research has been updated in a series of studies.[10]

This article presents a new database on the quantitative dimensions of U.S. MNE activity in Britain before 1962. Its most important contribution is to provide new insights into the distribution and form of U.S. operations, but it also offers some tentative interpretations of the key trends which are identified.

Counting Multinationals

The history of MNEs can be approached in a number of ways. Case study research on companies is the only means to ascertain the reasons behind individual investment decisions. It is especially valuable in illustrating the complexities of international business. However, case study research encounters the familiar problem of "how many cases make a case." It is difficult to achieve meaningful generalizations about trends over time on the basis of aggregating a limited number of company case studies.[11] Aggregate or cumulative measures are useful in providing an overall framework in which individual corporate studies can be placed.

MNE activity can be aggregated in one of two ways. The most widely used measure is direct investment. MNEs are defined as enterprises engaged in foreign direct investment (FDI), which involves not only an export of capital but also the exercise of managerial control. Wilkins and other business historians have been prominent in drawing attention to the conceptual problems of using FDI as a proxy for multinational investment, starting with the fact that transferring capital across borders is one of the least significant functions of MNEs. A focus on financial flows diverts attention from the key role of MNEs as transferors of technologies and organizational systems across borders.[12] Statistical measures of FDI rest on arbitrary assumptions about the amount of equity required to

[10] Dunning, *American Investment*; Dunning, "The Present Role of U.S. Investment in British Industry," *Moorgate and Wall Street* (Spring, 1961); Dunning and D. C. Rowan, "Inter-Firm Efficiency Comparisons: U.S. and U.K. Manufacturing Enterprises in Britain," *Banca Nazionale del Lavoro* 85 (1968); Dunning, *The Role of American Investment in British Economy* (London, 1969); Dunning, *U.S. Industry in Britain* (London, 1976).

[11] Peter Hertner and Geoffrey Jones, "Multinationals: Theory and History," in *Multinationals: Theory and History*, ed. Hertner and Jones (Aldershot, 1986), 13.

[12] Mira Wilkins, "Comparative Hosts," *Business History* 36 (1994): 18–50.

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"control" a foreign company. In practice, it is often difficult to define "control," and thus to distinguish between direct and portfolio investment. Measures of the flow of FDI may not include the reinvestment of earnings—a key means by which MNEs finance themselves—while measures of stock are quite often based on the historical value of an investment and are not updated at market prices.

The growth of U.S. MNE activities in Britain can be shown from FDI data, but the limitations of this measure must be recognized. The United States remains the only country to possess even remotely plausible FDI estimates for the period before the 1960s. The data cited in the introduction illustrates the importance of Britain as a host for U.S. manufacturing investment overseas, but these figures are less robust than they seem. As Wilkins notes, the estimates for the 1930s and 1940s are "terrible" because of lack of uniformity in accounting practices, exchange rate problems, and general inconsistencies.[13] The post-1950 U.S. data is much better. There is no data at all for inward FDI into Britain until the early 1960s.[14]

An alternative means of quantifying MNEs is to focus on companies rather than capital. The most ambitious research along these lines is the Multinational Enterprise project at Harvard Business School directed by Raymond Vernon (hereafter the Vernon database). This project compiled data on the 10,000 foreign subsidiaries of 187 U.S. manufacturing MNE parents active between 1900 and 1967. The sample was chosen using the twin criteria of whether the enterprise appeared in the *Fortune 500* Largest U.S. Industrial Corporations for the year 1964, and whether, at the end of 1963, the U.S. parent held equity interests in manufacturing enterprises located in six or more foreign countries, such equity interest in each case amounting to 25 percent or more of the total equity.[15] The database was updated in a second phase to include over 19,000 subsidiaries and to extend to 1975.[16] The Vernon database provides an

[13] Wilkins, *Maturing*, 184.

[14] See M. D. Steuer et al, *The Impact of Foreign Direct Investment on the United Kingdom* (London, 1973) and Dunning, *U.S. Industry*. There is an official British estimate for the size of total inward FDI stock in 1962, while the 1963 Census of Production permits a detailed analysis of inward FDI in British manufacturing by nationality of inward investor.

[15] James W. Vaupel and Joan P. Curhan, *The Making of Multinational Enterprise* (Cambridge, Mass., 1969); Vaupel and Curhan, *The World's Multinational Enterprise* (Cambridge, Mass., 1974).

[16] Joan P. Curhan, William H. Davidson and Rajan Suri, *Tracing the Multinationals* (Cambridge, Mass., 1977).

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impressively large sample of firms and, not surprisingly, it continues to be widely employed both by business historians such as Chandler and by international business scholars requiring a large sample on which to test theories.[17]

The Vernon database, however, is not without its drawbacks. The limitation of the study to U.S. firms manufacturing in at least six countries meant the exclusion of "smaller" companies which manufactured overseas, or bigger ones which chose to focus on less than six foreign markets. The methodology of tracing back the antecedents of contemporary MNEs excluded from the sample the many MNE investments which were made by U.S. firms but did not, for one reason or another, continue into the mid-1960s, although the Vernon team did search historical records for earlier entries and exits.

The present authors have compiled their new database on U.S. MNEs in Britain using a different methodological approach. It draws on a large research project which has identified all foreign firms which established a manufacturing presence in the United Kingdom between 1850 and 1962. Firms with distribution operations only were excluded. There was no requirement that such firms had to have factories in any other country. Firms were identified through extensive research in company histories, trade directories, newspapers, annual reports, official records, and other sources. Dates and other details were cross-checked to try to achieve maximum accuracy. Both British and non-British sources were consulted extensively. An article published in 1994 provides an initial survey of the information in this database.[18]

This new study is focused exclusively on U.S.-owned MNEs in Britain. Rather than extending back to the first U.S. investments in the mid-nineteenth century, a shorter time period—1907 to 1962—has been used as the main focus of the study. In addition, the Standard Industrial Classification (SIC) coding used in the original database has been changed from the British to the U.S. system to facilitate comparisons with work using the Vernon database.

It is believed that the database analyzed in this article contains

[17] Chandler, *Scale and Scope*, 158–9; Benjamin Gomes-Casseres, "Ownership Structure of Foreign Subsidiaries," *Journal of Economic Behavior and Organization* 11 (1989): 1–25.

[18] Frances Bostock and Geoffrey Jones, "Foreign Multinationals in British Manufacturing, 1850–1962," *Business History* 36 (1994): 89–126. An earlier study based on a smaller sample of firms is Jones, "Foreign Multinationals and British Industry before 1945," *Economic History Review* 41 (1988): 429–53.

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detailed information about a high percentage of the total population of U.S. firms which invested in British manufacturing in this time period, although the exact size of this corporate population can probably never be known. The numbers are not too out of line with the various existing estimates. The database identifies 222 U.S.-owned manufacturing subsidiaries in Britain in 1935, while a Department of Commerce estimate for 1940 found that 233 U.S. companies were manufacturing in Britain.[19] The U.K.'s Board of Trade estimated that 637 U.S.-owned companies were manufacturing in Britain in 1965, while the database identifies 493 active in 1962.[20] The wider definitions employed in this study allow it to include more companies than the Vernon database. In *Scale and Scope*, Chandler uses the Vernon database to identify 22 new U.S. investments in Britain between 1900 and 1917, 42 between 1918 and 1929, 93 between 1930 and 1948, and 544 between 1949 and 1971.[21] The new database has identified a considerably larger number of firms.

A company database of this kind has both advantages and disadvantages. Compared to an aggregate statistical measure of capital such as FDI, it provides much better information about corporate strategies. But there are problems of interpretation arising especially from the size distribution of firms. In the database, every direct investment is counted as equal, without regard to employment, sales, or asset size. In practice, there has always been a wide variation in size (however measured) in MNE investments. Dunning's 1958 study showed that a mere nine of the sample of 205 U.S. firms identified as active in British manufacturing in 1953 accounted for 43 percent of total U.S.-controlled employment. At the other end of the spectrum, 111 firms accounted for less than 9 percent of employment.[22] The distortions caused by this problem can best be seen in the transportation sector, in which the number of U.S. companies investing in Britain appears quite small, although they include such giants as Ford and General Motors.[23]

The solution to this problem is to weight for firm size, but data on subsidiary size is extremely hard to locate. Table 1 provides an analysis of firm size by employment of the U.S.-owned subsidiaries

[19] U.S. Department of Commerce, *American Direct Investments in Foreign Countries, 1940* (1942). Dunning, *American Investment*, found 205 companies manufacturing in Britain in 1953.

[20] *Board of Trade Journal*, 26 Jan. 1968.

[21] Chandler, *Scale and Scope*, 158–9.

[22] Dunning, *American Investment*, 93.

[23] Bostock and Jones, "Foreign Multinationals," 97.

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at the three benchmark dates—1907, 1935 and 1962—used in the database. (See Table 1.)

The evidence from the database confirms the wide size dispersion of U.S. manufacturers in Britain. In 1907, the largest identified employer was Singer. Its factory employment at that date was approximately 10,500, while the company employed a further 10,000 workers in the extensive distribution and marketing operation which made it Britain's second largest multiple retailer.[24] In contrast, the smallest known U.S. employer in 1907 was Pfister & Vogel Leather Company, which established selling operations in Britain in 1902 and soon afterwards built a factory at Leicester employing forty workers. In 1962, Ford had by far the largest British labor force with 61,000 workers. In contrast, the smallest known U.S. employer was Analytical Measurements Ltd., which produced pH meters in Richmond, Surrey with seven workers.

Table 1
Firm Size by Employment of U.S.-Owned Manufacturing Subsidiaries in the U.K. 1907, 1935 and 1962

Employment (number of persons)	*1907*	*1935*	*1962*
50 and under	1	5	11
51-100	-	19	14
101-200	3	14	16
201-500	-	21	37
501-1,000	2	14	36
1,001-2,000	1	7	22
2,001-5,000	3	7	21
5,001-20,000	-	5	10
over 20,000	1	1	3
Unknown	32	129	323
Total No. of Firms	43	222	493

Source: Database.

Unfortunately, it is the large unknown figure shown in Table 1 which is most striking. A search for alternative size indicators such as asset size or capital proved even less successful. Part of the problem was the inclusion in the study of many smaller companies, as

[24] Andrew Godley, "Early Foreign Direct Investment in Britain" (1995, mimeographed). Dunning, *American Investment*, 36, estimates total British employment in all U.S. manufacturing affiliates at 12,000–15,000 people, but this is clearly a considerable underestimate.

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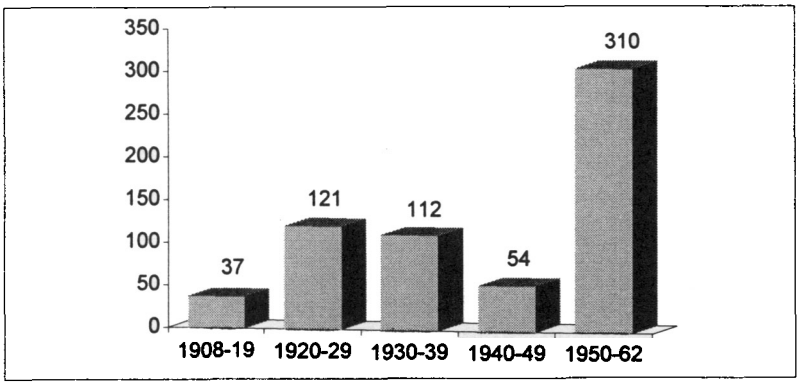


Figure 1 • Establishment of New U.S.-Owned Manufacturing Subsidiaries 1908-1962 (Number of Companies)[1]

Source: Database.
[1] Excludes U.S. MNE acquistition of pre-existing U.S.-owned plant in Britain.

information about smaller companies is usually harder to locate than about larger ones. Certainly, the implications of the wide size dispersion and the large unknown figure need to be firmly borne in mind in the following analysis of the trends shown in the database.

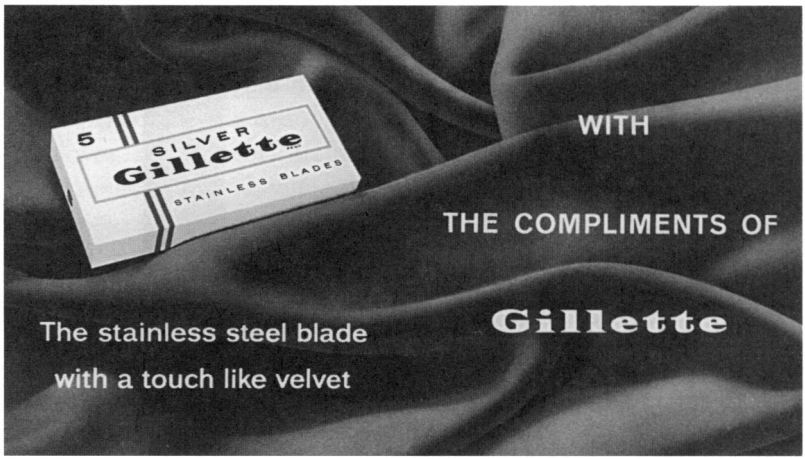
Evolution and Entry Patterns

The arrival of the first U.S. MNEs in British manufacturing in the middle of the nineteenth century has been explored in many studies. Colt, the hand-gun manufacturer, and J. R. Ford, a rubber footwear manufacturer, opened British factories in the 1850s. The Colt investment lasted only until 1856, and that of J. R. Ford until 1869, but the 1860s saw more sustained investments. The most important was that of Singer Sewing Machines, which opened a factory in Glasgow, Scotland in 1867. The trickle of subsequent U.S. investments began to accelerate after 1890.[25] At the 1907 benchmark date the database identifies 43 U.S. affiliates with manufacturing operations in Britain. In 1935 the number was 222, and in 1962 it had grown to 493.

Between 1908 and 1962 a total of 634 new U.S.-owned manu-

[25] Dunning, *American Investment*, chap. 1; Wilkins, *Emergence*, 29–30, 37–45, and passim; Bostock and Jones, "Foreign Multinationals."

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Gillette Advertising Promotion, February 1964 • Gillette built a factory at Slough, outside London, in 1921, and by the early 1960s it had three factories in Britain and a research laboratory at Reading. This promotion was for the launch of the new Silver Gillette blade. (Photograph reproduced courtesy of University of Reading.)

facturing subsidiaries were established in the United Kingdom. Figure 1 shows the overall time-trend. (See Figure 1).

The decade between 1908 and 1919 covers the last pre-war years of the wave of U.S. investments in British manufacturing which had begun in the 1890s. It includes the arrival of Ford, which opened a factory at Manchester in 1911, as well as a small number of wartime investments made before the United States entered the First World War in 1917. During the 1920s there was a large surge in the number of new U.S. manufacturing affiliates established, which formed part of a general surge in U.S. direct investment in manufacturing.[26] New U.S. entrants to Britain included General Motors, Goodrich, Goodyear, Firestone, Monsanto, Otis Elevator, and Gillette. The considerable number of new U.S. investments made in the 1930s, which include Procter & Gamble, Hoover, Mars and Coca Cola, is more surprising. It contradicts the picture of stagnation suggested by the FDI data, and the widely accepted view that U.S. manufacturing activities abroad in the Depression decade were "far less than in the 1920s."[27] Instead, it appears that it was the Second World War and its aftermath that reduced new U.S. subsidiary creation in Britain. Altogether less surprising is the surge of MNE

[26] Wilkins, *Maturing*, 60–91.
[27] Ibid., 191.

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investments after 1950. As Vernon described when he developed the product cycle model to explain the growth of U.S. manufacturing FDI in postwar Europe, the United States had innovated in a range of products which were then diffused to foreign markets as the product matured.[28] The dollar shortage throughout Europe encouraged U.S. firms to replace exports by FDI. In Britain, the new U.S. arrivals ranged from Texas Instruments and Hewlett-Packard to Campbell Soup. This was the classic era of the worldwide hegemony of U.S. manufacturing MNEs. In Britain's case, there was a particular surge of new U.S. investments around the beginning of the 1960s—some 117 of the total of 310 new subsidiaries identified opened in the years 1960-62 alone.

A closer look at the evolution of U.S. MNEs in Britain is available in Table 2, which analyzes new subsidiaries by product group as well as decade of entry. (See Table 2.)

This larger sample modifies, to some extent, the existing picture of the industrial distribution of U.S. companies investing in Britain. Both the Vernon data used by Chandler and the present study demonstrate clearly that U.S. FDI was highly concentrated by product group.[29] But while the Vernon data stresses machinery as the leading sector for U.S. investment before World War I, Table 2 indicates that in the prewar decade chemicals was almost as important. In the 1920s, machinery and chemicals, followed by fabricated metals and electric machinery, appear as the most important sectors, while the Vernon data suggests a relatively greater role for the food industry. During the 1930s and 1940s, Table 2 again highlights the importance of chemicals followed by machinery and electric machinery, while the Vernon data suggests that chemicals was followed in importance by food products. Both datasets point to the greater importance of chemicals, machinery and electrical machinery after 1950, though again food appears less prominently in the present study than in the Vernon data.

The industrial distribution of the U.S. MNEs entering British manufacturing is examined in more detail in Table 3, which analyzes by three-digit SIC code the eight product groups for which there were 20 or more entries between 1908 and 1962. These groups include 540 cases or 85 percent of the total number of entries. (See Table 3.)

The heavy concentration of U.S. investments in a relatively small

[28] Raymond Vernon, "International Investment and International Trade in the Product Cycle," *Quarterly Journal of Economics*, 80 (May 1966): 190–207.

[29] Chandler, *Scale and Scope*, 158–9.

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number of products stands out. Within chemicals, pharmaceuticals appear as the largest category, especially after 1930, followed by industrial chemicals and chemicals for agriculture and industry. In transportation, investments in motor vehicles and components were pre-eminent. There were also noteworthy changes over time reflecting technological shifts. The sudden appearance of electronic components as an avenue for U.S. investment after 1950 is the clearest example. Overall, a mere 18 product lines (three-digit SIC code) accounted for 54 percent of the 634 new entries.

Table 2
Establishment of Manufacturing Subsidiaries in United Kingdom by U.S. Industrial Enterprises, 1908-1962 (by 2-digit SIC code) (Number of Cases)

Industry	*1908-19*	*1920-29*	*1930-39*	*1940-49*	*1950-62*	*TOTAL*
Food (20)	2	7	13	3	20	45
Tobacco (21)	0	1	0	0	1	2
Textiles (22)	0	0	3	1	1	5
Apparel (23)	1	2	4	0	4	11
Lumber (24)	1	0	1	1	0	3
Furniture (25)	0	1	0	0	0	1
Paper (26)	0	1	1	1	5	8
Printing and Publishing (27)	0	3	2	1	3	9
Chemicals (28)	6	22	31	8	77	144
Petroleum (29)	0	3	0	0	1	4
Rubber (30)	0	6	1	3	6	16
Leather (31)	1	1	0	1	0	3
Stone, Clay and Glass (32)	2	2	3	0	8	15
Primary Metals (33)	2	4	5	1	12	24
Fabricated Metals (34)	3	14	8	5	20	50
Machinery (35)	6	22	14	15	80	137
Electric Machinery (36)	4	16	14	4	39	77
Transportation (37)	3	8	4	1	7	23
Instruments (38)	3	5	7	5	20	40
Miscellaneous (39)	3	3	1	4	6	17
TOTAL	37	121	112	54	310	634

Source: Database.

In the language of the economic theory of MNEs, U.S. companies possessed ownership advantages over their British competitors which they sought to exploit through FDI. The ownership advantages possessed by the U.S. MNEs in Britain and elsewhere are the

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staples of much business history literature. They arose from the American superiority in mass production and science-based industries derived from the three-pronged investments in manufacturing, marketing, and management described by Chandler.[30] U.S. investment was concentrated in precisely those industries—machinery, chemicals, branded foodstuffs, transportation—in which large U.S. corporations with professional managerial hierarchies had appeared. U.S. firms had secured first mover advantages over most of their European competitors in these capital-intensive sectors, but the British preference for "personal capitalism" had helped to specially disadvantage them.[31] British capitalism had its own strengths which provided the ownership advantages to support Britain's own position as the world's leading direct investor before 1945,[32] but there was no denying the technological and organizational advantages possessed by U.S. corporations in a range of capital-intensive industries associated first with the Second Industrial Revolution, and subsequently with the post-1945 high technology industries such as pharmaceuticals and electronics.

It was the concentration of U.S. MNEs in a limited range of products which accounted for their importance in the British economy. U.S. affiliates accounted for less than 6 percent of total British manufacturing output in 1957. The sales of U.S. affiliates as a percentage of total manufacturing sales in Britain rose from 5.6 percent in 1957 to 7.4 percent in 1962.[33] However, their concentration in high technology and branded products gave U.S. affiliates an importance in the British economy—as indicated by the market share figures cited in the introduction—far greater than the picture presented by their limited share in the British manufacturing sector as a whole.

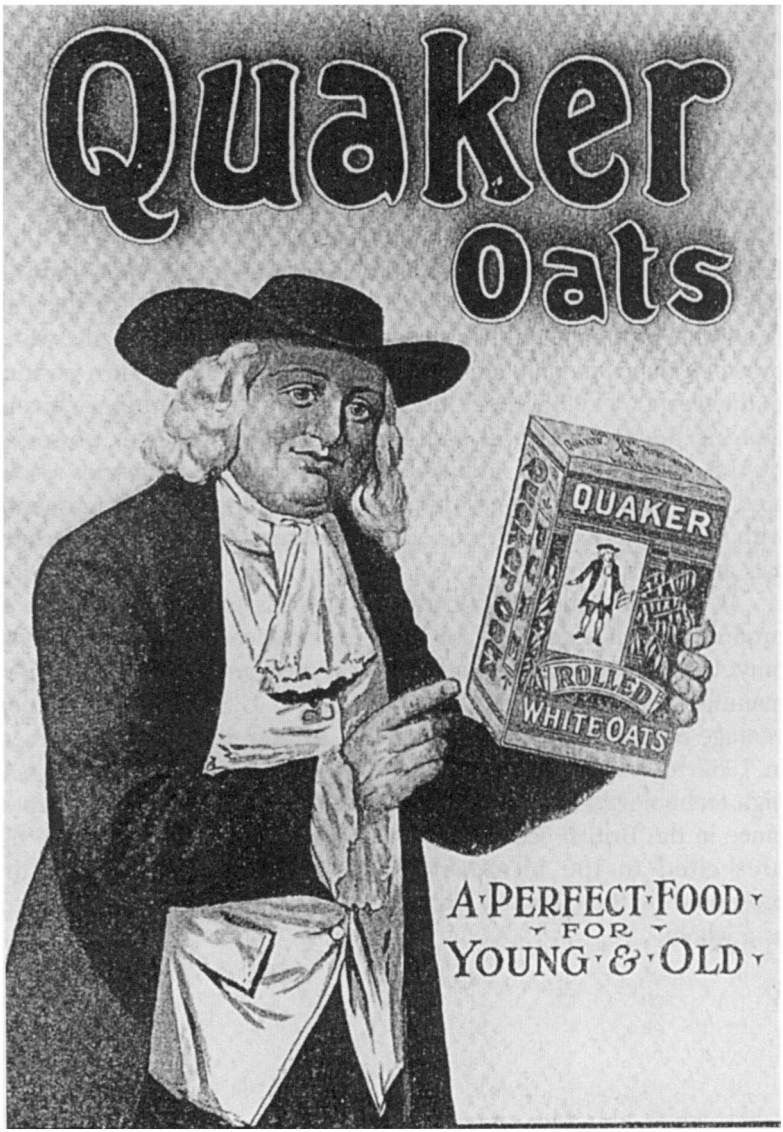
[30] Chandler, *Scale and Scope*.

[31] Geoffrey Jones, "Big Business, Management and Competitiveness in Twentieth Century Britain," in *Big Business and the Wealth of Nations*, ed. Alfred D. Chandler Jr., Franco Amatori, and Takashi Hikino (New York, forthcoming).

[32] Geoffrey Jones, "British Multinationals and British Business since 1850," in *Business Enterprise in Modern Britain from the Eighteenth to the Twentieth Centuries*, ed. M. W. Kirby and M. B. Rose (London, 1994).

[33] Dunning, *U.S. Industry*, 28.

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Magazine Advertisement for Quaker Oats, 1906 • The Quaker Co. began selling its hot cereal Quaker Oats in Britain in 1877, and established a marketing subsidiary in 1899. Skillful advertising assisted in creating a mass market for oatmeal porridge by 1914. Quaker Oats began manufacturing in Britain in 1920. (Photograph reproduced courtesy of Quaker Oats Ltd.)

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Table 3
Establishment of U.S. Manufacturing Subsidiaries in United Kingdom, 1908-1962 (by 3-digit SIC code)
(Number of cases)

	1908-19	*1920-29*	*1930-39*	*1940-49*	*1950-62*	*TOTAL*
Food (20)						
meat products (201)	0	2	0	0	7	9
sugar, chocolate (206)	1	1	1	0	4	7
animal feed/misc. (209)	0	2	3	1	4	10
spirit distilling/soft drinks (208)	0	0	4	0	3	7
Other	1	2	5	2	2	12
Chemicals (28)						
pharmaceuticals (283)	2	7	11	5	24	49
soaps/detergents (284)	0	6	7	1	4	18
organic industrial chemicals (286)	3	2	5	2	19	31
chemicals for agriculture, industry (287)	0	2	2	0	16	20
Other	1	5	6	0	14	26
Primary Metals (33)						
non-ferrous (333) metals	2	3	3	1	8	17
Other	0	1	2	0	4	7
Fabricated Metals (34)						
cans/packaging (341)	0	3	0	0	5	8
cutlery/hardware (342)	2	4	2	3	4	15
bolts/nuts (345)	0	0	3	1	0	4
misc. fabricated metals (349)	0	4	2	1	7	14
Other	1	3	1	0	4	9
Machinery (35)						
mining/construction (353)	1	4	0	3	15	23
machine tools (354)	1	2	3	3	14	23
textiles, food, printing, dry-cleaning industries (355)	1	5	6	2	20	34
general industrial machinery (356)	2	4	4	1	15	26
office/computing (357)	0	4	0	2	6	12
Other	1	3	1	4	10	19
Electric Machinery (36)						
records/radio/consumer (365)	2	5	3	2	8	20
electrical components (367)	0	1	0	0	24	25
miscellaneous (369)	0	2	6	1	1	10
Other	2	8	5	1	6	22
Transportation (37)						
motor vehicles (371)	3	6	4	1	4	18
Other	0	2	0	0	3	5
Instruments (38)						
engineering/scientific (381)	1	0	2	1	7	11
measuring and control (382)	1	1	4	0	9	15
Other	1	4	1	4	4	14

Source: Database.

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Mode of Entry

When manufacturing companies seek to sell to foreign markets, the engagement in these markets frequently grows in complexity over time. At first, they would export, but later they would sometimes employ agents, very often invest in distribution facilities, and finally move into production. A variant of this pattern involved licensing technology to local producers. Internalization theory provides an explanation of shifts from one mode to another. The frequency of transacting is a key variable. While discrete or low volume transactions can be mediated through markets, recurrent transactions encourage the use of intermediate modes such as licensing and agents, or else hierarchical modes such as sales and production branches. Both the use of agents and of licensing incur the risk of opportunistic behavior and involve monitoring costs, which increase with the frequency of transactions, encouraging a shift to hierarchical modes.[34]

This pattern is strongly evident in the overseas expansion of U.S. firms as a whole, and not surprisingly in their investments in Britain.[35] The database evidence is instructive in showing the strong firm-specific patterns in this evolution. U.S. firms active in Britain progressed through these stages at very different speeds. Often a lengthy period of time was involved. Coro Inc., a jewelry manufacturing company, established a marketing subsidiary in Britain in 1933. By 1946 a small assembly operation employed 18 people, but it was not until 1959 that full-scale manufacture started.[36] Sudden exogenous events—such as the British adoption of trade protectionism in 1931 or, at the end of the 1950s, the return to international convertibility of Sterling—served as triggers which encouraged clusters of firms to shift modes at broadly the same time.

Table 4 examines the choice of mode when a U.S. firm decided to begin manufacture in Britain. It includes details of the 68 cases when U.S. companies acquired manufacturing firms in the United Kingdom which were already owned by another U.S.-owned firm. Typically, these acquisitions were the result of merger and takeover activity in the United States. (See Table 4.)

[34] S. Nicholas, "Agency Contracts, Institutional Modes, and the Transition to Foreign Direct Investment by British Manufacturing Multinationals before 1939," *Journal of Economic History* 43 (1983): 675–86; Nicholas, "The Theory of Multinational Enterprise as a Transactional Mode," in *Multinationals: Theory and History*, ed. Hertner and Jones.

[35] Wilkins, *Emergence*, 207–13; Wilkins, *Maturing*, 417–22, 432–7.

[36] Coro Inc. Annual Reports.

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Between 1908 and 1962, 38 percent of new U.S. entrants were the result of the acquisition of an existing British firm. However, the ratio of acquisitions to greenfield investments in each period was not constant. While the proportion of new subsidiaries formed as a result of acquisitions of British firms was 27 percent in 1908-19 and 38 percent in 1950-62, the proportion was high in the 1920s (40 percent) and fell sharply in the 1930s (23 percent), before rising a little in the 1940s (31 percent). The Vernon database suggests a higher ratio of acquisitions to total entries in the postwar period. For 1951-66, this ratio for Britain was 64 percent and for Europe as a whole 54 percent.[37] The discrepancy with the present study may reflect the growing number of acquisitions in the first half of the 1960s—64 of the 136 acquisitions between 1950 and 1962 occurred in 1960–62 alone—as well as the larger number of smaller firms covered in the present study.

Table 4
Mode of Entry into the United Kingdom by U.S. Industrial Enterprises, 1908-1962

	Total Subsidiaries	*Acquisition of U.S.-Owned Co.*	*Total New Subsidiaries*	*Greenfield*	*Acquisition*	*Unknown*
1908-19	37	0	37	27	10	0
1920-29	128	7	121	70	49	2
1930-39	122	10	112	84	26	2
1940-49	57	3	54	36	17	1
1950-62	358	48	310	161	136	13
TOTAL	702	68	634	378	238	18

Source: Database.

The theory of the choice of entry mode is not especially well-developed, but a number of propositions have been put forward which may elucidate the long-term trends shown in Table 4. Dubin, who undertook detailed analysis of acquisition versus greenfield using the Vernon database, suggested that firms initially going abroad preferred to enter foreign markets via an acquisition in order to reduce uncertainty while large MNEs were more willing to undertake greenfield investments. The high ratio of acquisitions even in

[37] Curhan et al., *Tracing*, 38.

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1908-19 might support such a proposition, as well as the corollary that when FDI was based on major innovations—as was the case with many of these early investors—the lack of suitable partners simply ruled out acquisitions. Dubin, Knickerbocker and others also suggested that late entrants in oligopolistic markets preferred acquisitions in order to speed up their response to the entry of "leaders" in foreign markets, and that higher acquisition rates were to be anticipated in faster-growing markets because of their being a quicker means of entering such markets. These predictions may explain the high level of acquisitions in the 1920s—when an oligopolistic "bunching" of new U.S. investments was a prominent feature of industries such as tires—and again in the 1950s, when a surge of new U.S. entrants were seeking to establish themselves in the British market, and oligopolistic bunching was again evident. The 1950s were also a period when the British market was growing reasonably fast, although not as fast as most Western European markets.[38]

The database reveals that in some periods a significant proportion of U.S. acquisitions were of British firms with which a pre-existing connection existed. These connections included such intermediate modes as licensing agreements and sub-contractor and supplier relationships. This was the case for at least 20 percent of the 26 acquisitions in the 1930s and of the 72 acquisitions in the 1950s. In 1952, for example, H. H. Robertson began manufacturing in Britain by acquiring the company which had previously manufactured its metal sheets and ventilators under license. In 1954, Corning Glass Works started its production activities in Britain by acquiring 40 percent of James Jobling Ltd, a long-established licensee for its glassware.[39] The significance of such pre-existing connections is not identified in the Vernon or other studies, and the phenomenon merits further investigation, especially since it appears to have been inconsistent over time. Less than 10 percent of the 49 U.S. acquisitions in the 1920s and 64 acquisitions in 1960-62 were of British firms with a pre-existing connection to American enterprises.

[38] Michael Dubin, "Foreign Acquisitions and the Growth of the Multinational Firm," DBA Thesis, Graduate School of Business Administration, Harvard University, 1976; Frederick T. Knickerbocker, *Oligopolistic Reaction and Multinational Enterprise* (Boston, 1973). There is a review of the literature—as well as an empirical test and refutation of the view that followers are no more likely to enter a market through acquisitions than through greenfield investment—in Jean-François Hennart and Young-Ryeol Park, "Greenfield vs Acquisition: The Strategy of Japanese Investors in the United States," *Management Science* 39 (1993): 1054–1070.

[39] Annual Reports and Moodys.

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The problem with hypothesizing about choice of entry mode is that multiple influences were at work. The economic environment was an important one. Theory suggests that acquisition may be a suitable method of entry when a target market is static or declining, as additional production capacity is not required, while greenfield strategies become more attractive when a market is growing. The United Kingdom did not experience the collapse of economic activity seen in the United States in the wake of the Great Depression. Indeed, working Britons in the 1930s experienced rising real incomes, partly as a result of falling world prices for imported foodstuffs and other primary products. As a result, there was a flourishing market for precisely the consumer goods which many U.S. MNEs wanted to manufacture in Britain.

Britain's shift from free trade—albeit tempered from World War I onwards by a growing number of trade restrictions in particular industries—to full-scale protectionism in 1931 was a major exogenous shock. It posed an immediate threat to well-established market shares built up through exporting strategies. One example was Hoover, which had established a marketing company to distribute its vacuum cleaners in 1919, but was now suddenly threatened by tariffs. Hoover initiated manufacturing soon after the British abandonment of free trade, opening a London factory in 1932. Hoover's example was followed by others. Among the U.S. branded food manufacturers building new factories in Britain in the 1930s were Mars, Shredded Wheat, Quaker Oats and Kellogg. The latter had established a large market for breakfast cereals since it began importing into Britain in the early 1920s.[40] Coca Cola and Pepsi Cola also established concentrate manufacturing plants in Britain in 1935 and 1939 respectively. The greenfield investments made in the 1930s were mostly in such branded food products, as well as in those segments of the chemical industry where there were no British competitors to acquire. When appropriate British targets existed, acquisition strategies were still employed. National Distilleries of America built up a presence in the Scotch whisky market by acquiring firms such as Train & McIntyre, in which a controlling interest was taken in 1937.[41]

[40] E. J. T. Collins, "Brands and Breakfast Cereals in Britain," in *Adding Value: Brands and Marketing in Food and Drink*, ed. Geoffrey Jones and Nicholas J. Morgan (London, 1994).

[41] Michael S. Moss and John R. Hume, *The Making of Scotch Whiskey* (Edinburgh, 1981).

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Given the differences in entry mode between the two interwar decades, the hypothesis that exchange rate regimes were an influence has to be investigated. Table 5 explores this issue by analyzing mode of entry on the basis of the three exchange rate regimes seen in these years: general floating rate (before 1925), gold exchange standard (1926-31) and managed float (until 1939).[42] (See Table 5.)

The relationship between currency movements and MNE modes of entry has received attention in the literature. The early work of Aliber pointed to a financial influence on investment decisions by suggesting that firms from countries with strong currencies had an advantage in capital-raising compared to those from countries with weak currencies. This theory would suggest, among other things, that the timing (at least) of acquisitions would be influenced by currency factors.[43] Insofar as a relationship can be discerned in the interwar years, it appears that U.S. acquisitions peaked when Sterling was valued highly against the Dollar. During the first half of the 1920s Sterling was "cheaper" against the Dollar than it had been before the First World War. However, the British return to the gold standard in 1925 at a rate of £1=$4.86 began a period when the British currency was widely regarded as being overvalued by around 10 percent. When the United Kingdom was forced to abandon the gold standard in 1931, the pound fell to $3.5 within a year, although thereafter the exchange rate moved up again, and was approximately $4.9 on average between 1934 and 1938. U.S. firms made most of their interwar acquisitions when the pound was "overvalued," while Sterling's devaluation was followed by the collapse in acquisition activity. Only four acquisitions were made between 1932 and 1934. However, it is difficult to develop a plausible hypothesis to link entry modes with nominal exchange rates given that both acquisitions and greenfield investments involve buying local assets, although in different markets. More generally, as the export of technology and management is a more important function of MNEs than the export of capital, it is unlikely that short-term currency movements will fundamentally influence long-term investment decisions.

It is possible that it was the exchange rate regime rather than the

[42] This typology is based on Michael Bordo, "The Gold Standard, Bretton Woods and Other Monetary Regimes: A Historical Approach," *Federal Reserve Bank of St. Louis Economic Review* 75 (March/April 1993): 123–87. It is possible to describe the currency regimes in different ways, and certainly borderline years such as 1925/6 and 1931/2 can be reallocated.

[43] R. Z. Aliber, "A Theory of Foreign Investment," in *The International Corporation*, ed. Charles P. Kindleberger (Cambridge, Mass., 1970).

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nominal exchange rate which influenced modes of entry. It is often asserted that flexible exchange rates discourage international capital mobility. Eichengreen has refuted this view for the interwar years in a study on the performance of fixed and flexible exchange rate regimes.[44] However, it is noteworthy that virtually a half of all the acquisitions made in a 20 year period occurred in five years of fixed exchange rates. An examination of volatility in the monthly real exchange rate between the U.S. and the U.K. shows that both the first half of the 1920s and the years after 1931 were extremely unstable periods compared to the intervening gold exchange period. Real exchange rate volatility declined again in the post-1949 era of fixed exchange rates.[45] This evidence suggests that, whatever the effects on overall FDI flows, fixed exchange rates may have influenced U.S. MNE mode of entry into Britain by encouraging acquisitions of domestic firms. If acquisitions are regarded as a less risky means of entering a market, as suggested earlier, this is difficult to explain. However, although acquisition strategies do offer a faster entry into a market than greenfield investments, they can also be regarded as riskier in some respects. Risks arise both from the acquisition itself—sellers of a firm typically have better information than buyers—and also from post-acquisition problems of managing a pre-existing firm. If U.S. firms in the interwar years did consider acquiring British firms as a risky business, low exchange rate volatility might have encouraged them to adopt a more adventurous strategy by reducing one of the risks involved in it.

However, the strongest correlation with the shifts in entry mode in the interwar years shown in Table 5 appears to be with trends in the British capital markets. The 1920s saw an unprecedented merger wave in Britain, which peaked in the second half of the decade. The U.S. acquirers formed part of this restructuring of British business through mergers, and were no doubt encouraged to consider acquisitions as an option by the high level of activity. Conversely, merger activity in Britain fell to subdued levels in the 1930s and 1940s, before starting to rise in the 1950s leading to another giant merger wave in the 1960s.[46] Although other factors were at work, the entry

[44] Barry Eichengreen, "The Corporate Performance of Fixed and Flexible Exchange-Rate Regimes: Interwar Evidence," in *Business Cycles: Theories, Evidence and Analysis*, ed. Niels Thygesen, Kumaraswamy Velupillai and Stefano Zambelli (New York, 1991), 243–7.

[45] V. Grilli and G. Kaminsky, "Nominal Exchange Rate Regimes and the Real Exchange Rate," *Journal of Monetary Economics* (1991): 197.

[46] Leslie Hannah, *The Rise of the Corporate Economy* (London, 1983), 91–7.

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modes of U.S. MNEs appear to have been strongly influenced by overall trends in the British market for corporate control.

Table 5
Mode of Entry by Exchange Rate Regime 1920-1939

Period	*No. of Acquisitions*	*% of Total*	*No. of Greenfield Investments*	*% of Total*
1920-1925	20	27	36	23
1926-1931	37	49	46	30
1932-1939	18	24	72	47
TOTAL	75	100	154	100

Source: Database.

In a longer perspective, there were industry-specific influences on the choice of entry mode. Table 6 provides a crude test for such differences by showing the ratio of acquisitions to total new U.S. entrants for the eight largest product groups shown in Table 3 and for all SIC codes. (See Table 6.)

Table 6
Percentage of Acquisitions in Total New U.S. Entrants in U.K. 1908-1962 (by 2-digit SIC code)

Industry	*1908-19*	*1920-29*	*1930-39*	*1940-49*	*1950-62*	*1908-62*
Food (20)	0	14	23	100	55	40
Chemicals (28)	33	45	13	25	30	28
Primary Metals (33)	100	75	0	0	42	42
Fabricated Metals (34)	0	29	38	40	55	40
Machinery (35)	67	32	29	27	51	44
Electric Machinery (36)	0	50	29	50	36	36
Transportation (37)	67	63	50	100	86	70
Instruments (38)	0	60	29	20	40	35
All SIC Codes	27	40	23	31	44	38

Source: Database.

Table 6 appears to confirm industry-specific differences in choice of entry mode. Over the period as a whole, transportation, and to a lesser extent machinery, primary metals and food had higher ratios of acquisitions to total entries than the average industry, while chemicals had lower ratios. The analysis by decade only partly confirms this general picture, but especially in the earlier decades the total number of

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entries was so small that the ratios have no statistical significance. In this respect, the 1950-62 column is the most meaningful, as it contains the greatest number of entries. Chemicals and machinery had about the same number of entries, but the latter made far more use of acquisition than the former.

There are a number of possible explanations for such industry differences. Transactions cost theory points to the nature of the assets possessed by firms. If these assets are deeply embedded in a firm's labor force and are consequently tightly bound to a firm's organization, it is likely that they cannot be combined with those of an acquired foreign company. Instead, the firm must recreate a replica of itself by means of a greenfield investment. This suggests that the greater the research and development intensity of a foreign investor, the higher the probability that it will enter through a greenfield investment. Conversely, if the main assets of a firm consist of superior organizational ability or technical expertise that can be separated from the organization, a company can combine these assets with those embodied in an acquired foreign firm.[47] On the whole, Table 6 lends support to these predictions. Greenfield entry strategies were the most prominent in the more "research intensive" industries such as chemicals, and not in machinery or food.

At the level of the individual firm, greenfield and acquisition strategies would be combined as a viable business was constructed. Procter & Gamble entered Britain by acquiring the Newcastle soap manufacturer Thomas Hedley in 1930. However, the U.S. company proceeded to invest heavily to modernize the acquired factory, and within a few years had built an entirely new factory at Manchester as the firm rapidly gained market share in the British soap market from Unilever.[48] Pfizer, one of a cluster of U.S. entrants into the British pharmaceutical industry after World War II, entered Britain with a greenfield investment and then made acquisitions. The firm opened an office in London in 1951 to facilitate the marketing of antibiotics, and began training sales representatives. Two years later a small factory opened in Kent. Initially only packaging operations were undertaken, but by 1955, bulk manufacture of products had begun. Research laboratories were in operation by 1958. In the same year, Pfizer acquired a British company—Kemball Bishop & Co.—with a London factory. Three years later it acquired Exning Biological Institute, a British research opera-

[47] Hennart, "Greenfield vs Acquisition," 1055–56.

[48] Chandler, *Scale and Scope*, 385, 388; Charles Wilson, *The History of Unilever*, Vol. 2, (London, 1954): 344–50.

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tion, which gave the U.S. company an extensive line of veterinary vaccines and serums, dairy hygiene products and other animal health products. In 1962 a new purpose-built manufacturing facility was opened in Wales. By then, the marketing of the first product of Pfizer's British-based research—a slimming biscuit—had begun.[49]

Evolution of Subsidiaries

The multinational investments of U.S. firms in Britain grew in complexity over time. Table 7 shows the growth of multi-plant and multi-product operations. (See Table 7.)

Table 7
Numbers of Plants and Products of U.S.-Owned Manufacturing Subsidiaries in the U.K. 1907, 1935 and 1962

	1907	*1935*	*1962*
No. of U.S. Parents	42	204	381
No. of U.S. Subsidiaries	43	222	493
Total No. of Plants	48	264	728
Single Plants	40	199	374
Multi-Plants	8	65	354
Single Product[1]	29	153	345
Multi Product	14	69	148

Source: Database.
[1] Product defined using 3-digit SIC.

A proxy for this complexity is multi-plant operation. Typically, a U.S. MNE started manufacturing in Britain with a single plant, and over time further plants would be built or acquired. The move to multi-plant manufacturing could be rapid. By the early 1880s Singer was operating three separate factories in Glasgow. In 1885, these were subsequently closed when the firm opened a large new modern plant at Kilbowie (later renamed Clydebank) west of Glasgow. This was the largest sewing machine factory in the world and the largest single factory in Britain.[50] In this case and similar instances, a shift from multi-

[49] Pfizer Annual Reports 1950–62; *Focus on Pfizer* (1961).
[50] Robert Bruce Davies, *Peacefully Working to Conquer the World: Singer Sewing Machines in Foreign Markets, 1854–1920* (New York, 1976), 197; David Hounshell, *From the American System to Mass Production, 1800–1932* (Baltimore, 1984), 95; Andrew Godley, "Singer in Britain: The Diffusion of Sewing Machine Technology and its Impact on the Clothing Industry in the United Kingdom, 1860–1905," *Textile History* 1 (1996): 61–3.

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plant to single plant operation was not a retrograde step, but an indication of the growing scale of the business. In 1907 the number of U.S. multi-plant operations was still limited to three firms, of which two were partly British-owned. British American Tobacco (BAT), a joint venture established in 1901 which was two-thirds owned by American Tobacco and one-third by Imperial Tobacco, had four manufacturing plants. Two plants were operated also by Bryant and May, a British company in which Diamond Match had taken a 54.5 percent share, but which had also reverted to full British control by 1914. The only wholly-owned U.S. subsidiary with multi-plant operations was Standard Oil's Vacuum Oil (later Mobil), which had lubricating oil facilities in London and Liverpool.

A substantial increase in multi-plant operations occurred in the interwar years, often as a result of acquisition strategies. Corn Products established a marketing subsidiary in Britain in 1903, and then in 1920 acquired 40 percent of a corn milling and glucose refining firm in Manchester. Within two years Corn Products had acquired all the equity. In 1935 Corn Products bought Brown and Polson, a large Scottish manufacturer, which owned three corn grinding mills in Scotland.[51] ITT, Procter and Gamble, Heinz, United Shoe Machinery, General Motors and Briggs Bodies were among the other U.S. MNEs with multi-plant operations in 1935. By 1962 multi-plant operation by U.S. firms was widespread.[52]

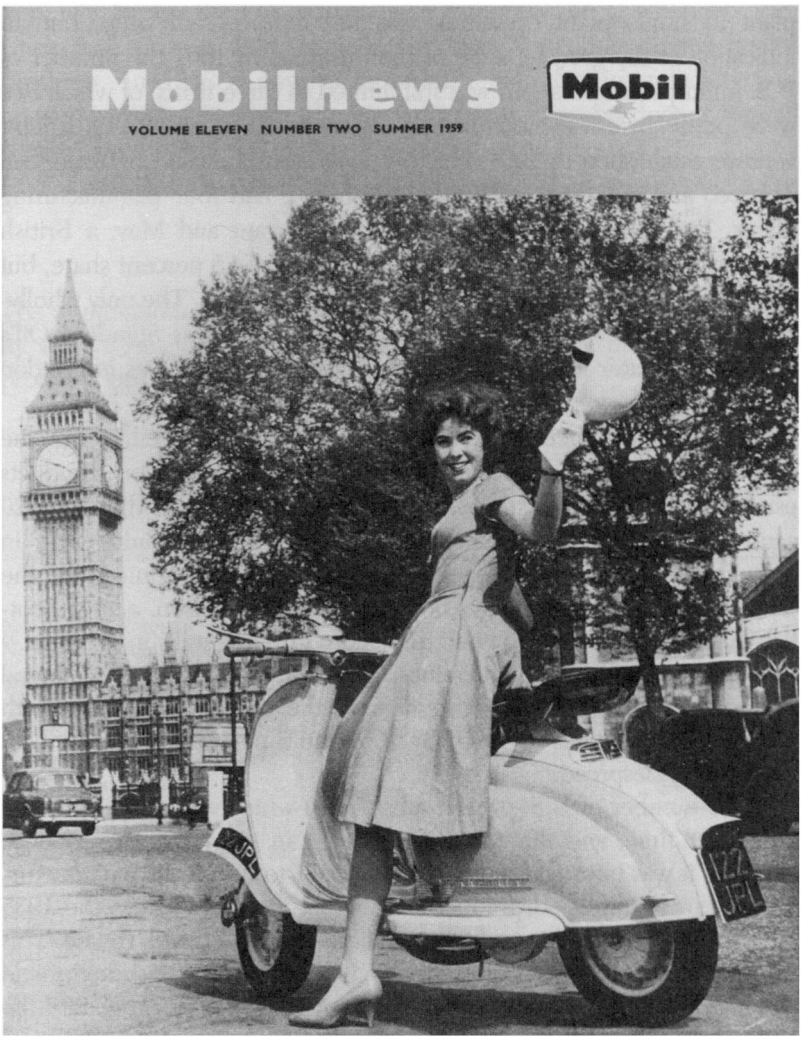
The number of U.S.-owned subsidiaries which were multi-product grew over time, and there was an increase in the range of products, although it was unusual before World War II to find firms manufacturing extremely unrelated product lines. More "typical"—from the 1935 benchmark list of multi-product operations—was Yale and Towne. This company established a sales branch in Britain in 1894, and then made its first move into British manufacturing in 1929 when it purchased the U.K.'s largest lock manufacturer, H. & T. Vaughn. In 1935, Yale and Towne began to manufacture mechanical handling equipment at a second British plant. On a much smaller scale was the O-Cedar Corporation, which produced on a single site at Slough (between London and Reading) a range of cleaning goods, including households mops, brushes as well as chemical and cleaning products, even though its total work force only amounted to sixty employees.[53] Subsequently, the

[51] Daniel Green, *CPC (United Kingdom): A History* (Stevenage, 1979).

[52] Bostock and Jones, "Foreign Multinationals," 109.

[53] William Henry Beable, *The Romance of Great Business*, Vol. 2 (London, 1926); *Red Book of Commerce*, various dates.

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Front Cover of Mobil House Magazine, Summer 1959 • Mobil Oil (Formerly Vacuum Oil) had built a petroleum compounding and blending unit in London as early as 1895, but at the end of the 1950s it remained one of the smaller players in the British market. In 1959 it held just under 4 percent of the British retail market, compared to Esso's 23 percent. However it was in a phase of rapid growth, with the number of Mobil service stations increasing from 619 in 1956 to 1,145 in 1961. (Photograph reproduced courtesy of University of Reading.)

number of multi-product companies expanded much further, although (insofar as valid comparisons are possible) there would appear to have

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been no marked contrast between the degree of product specializations produced by the average U.S.-owned firm and British industry as a whole.[54]

Exit Patterns

An advantage in using a company-focused database rather than FDI data is that it demonstrates that MNE activity is a continuous process of entries, exits, growth and decline. This may not seem a revolutionary finding, but the frequent association of MNEs with big business, as well as the emphasis in much of the theoretical literature that MNEs must possess "advantages" to operate in foreign countries, have tended to focus research more on entry than exit patterns, though Wilkins has been consistent in pointing out that multinational growth patterns over time have never been continuous or "inevitable."[55]

Table 8 examines the issue of divestment by analyzing the U.S. subsidiaries which are known to have ceased manufacturing in the United Kingdom in the period under review. (See Table 8.)

The least surprising conclusion from Table 8 is the large number of exits in the 1930s. Many U.S. corporations experienced financial difficulties in their domestic business and reined in their foreign ambitions. Others were apprehensive about the spread of political instability and fascism, and sought to divest, provided they could remit funds out of a country. A substantial number of U.S. MNEs are known to have divested their British and other European operations in this decade, even though some of them simultaneously opened new plants in Latin America and elsewhere. In some cases, U.S. divestment in Britain was accompanied by licensing agreements with British firms.[56] A comparison of the number of exits to the number of entries for each decade shows the consequences of the unstable conditions prevailing during the Depression and World War II. Both in 1908-19 and 1950-62 the proportion of exits to entries was around 11 percent, and in the 1920s it fell to 6 percent, but in the 1930s and 1940s it rose to 28 percent.

There was a concentration of exits by product group. Not surprisingly, given their size in the overall sample, the greatest number of exits came in machinery, electric machinery, and chemicals. But in relating the number of exits to entries, apparent industry differences emerge.

[54] Dunning, *American Investment*, 96.
[55] Wilkins, *Maturing*, 415.
[56] Ibid., 184–91.

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While the proportion for the population as a whole from 1908-1962 was 14 percent, it was less than 10 percent in chemicals and 25 percent in electric machinery. The case of transportation—where the proportion of exits to entries was 22 percent—was distinctive in that all five exits came in the 1930s. These were Bendix-Perrot Brakes, in which a majority was sold to British interests in 1932; J. G. White & Co., in which control was again transferred to British interests in 1933; Willys-Overland Crossley, which was liquidated in 1933; Westinghouse Brake Co., which was sold to British interests in 1935; and the Pressed Steel Co., which was also sold to British interests in 1936. However, the transportation sector remained, as noted above, the home of some of the largest and most significant U.S. MNEs in the United Kingdom. The database's list of the ten largest known U.S.-owned manufacturing employers in the country in 1935 includes Ford (8,600 workers), GM-owned Vauxhall (6,350) and Briggs Bodies, the Ford supplier (5,000).

The Vernon database suggested that, for U.S. affiliates worldwide between 1951 and 1975, a higher proportion of subsidiaries founded by merger subsequently existed than those established through greenfield investment.[57] This is surprising if acquisitions are regarded as less risky than greenfield investments, but fits well with the opposite view. The evidence from the database points in the same direction as Vernon's findings. Of the ninety U.S. exits between 1908 and 1962, thirty-six originated through acquisition. The percentage of acquired firms to total exits was, therefore, 40 percent, or slightly higher than the percentage of acquisitions in total new entrants shown in Table 6. However, there were strong decadal variations. While all four exits in 1908-19 originated as greenfield investments, the numbers of acquired firms subsequently exiting were as follows: 1920-29, 2 out of 7 (29 percent); 1930-39, 17 out of 31 (55 percent); 1940-49, 3 out of 15 (20 percent); and 1950-62, 14 out of 33 (42 percent).[58] The 1930s stand out as a time when more than half of all the exits had originated as acquisitions.

U.S. firms "exited" from the United Kingdom by various routes. Only a relatively small number—ten of the total of ninety—were entirely liquidated. These were spread evenly over the whole period, with a slight peak in the 1930s when three subsidiaries were closed in the context of the general divestment from Europe at the time. An example was the Pfister and Vogel Leather Company which in

[57] Curhan, et al., *Tracing*, 168.

[58] The origins of two firms which exited in 1950–62 cannot be established.

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1930–1 put all of its European subsidiaries—including the British one—in liquidation.[59] This category also included a number of ventures which lasted decades before being wound up. An example was the Oliver Typewriter Manufacturing Company, which entered Britain as a distributor at the turn of the century before establishing a factory at Croydon, near London, in 1928. The subsidiary subsequently developed a large export business before going into voluntary liquidation in 1960.[60]

Far greater numbers were "anglicized" in one of two ways. In thirty-eight cases control over the U.S. subsidiary fell into British corporate hands. This fate awaited many U.S. joint ventures with British firms. A major example was British American Tobacco. After the U.S. Supreme Court ruling against American Tobacco in the antitrust case of 1911, the U.S. firm began to sell its shares in BAT, and by the end of World War I the company—and its large manufacturing and marketing operations in Europe, China and elsewhere—had fallen under British control.[61] In the remaining forty-two cases ownership passed into the hands of the British public through a share issue. Sometimes this process of anglicization proceeded slowly. When Associated Electrical Industries was formed in Britain in 1928 as one of the country's three largest electrical companies, it was secretly controlled by GEC. However, in the mid-1930s, GEC began to dispose of stock and by 1953 the shareholding was down to 25 percent, at which point the remainder was sold off.[62]

A significant proportion of U.S. MNEs in Britain were fairly short-lived. Among the new entrants of 1908-19, 22 percent were no longer under American control within two decades. Of the new entrants of the 1920s, 14 percent did not survive for two decades. And of the new entrants of the 1930s, 20 percent did not survive for two decades. An example of a short-lived and unsuccessful company before World War I was that of National Phonograph. National Phonograph was a wholly owned British subsidiary of National Phono-

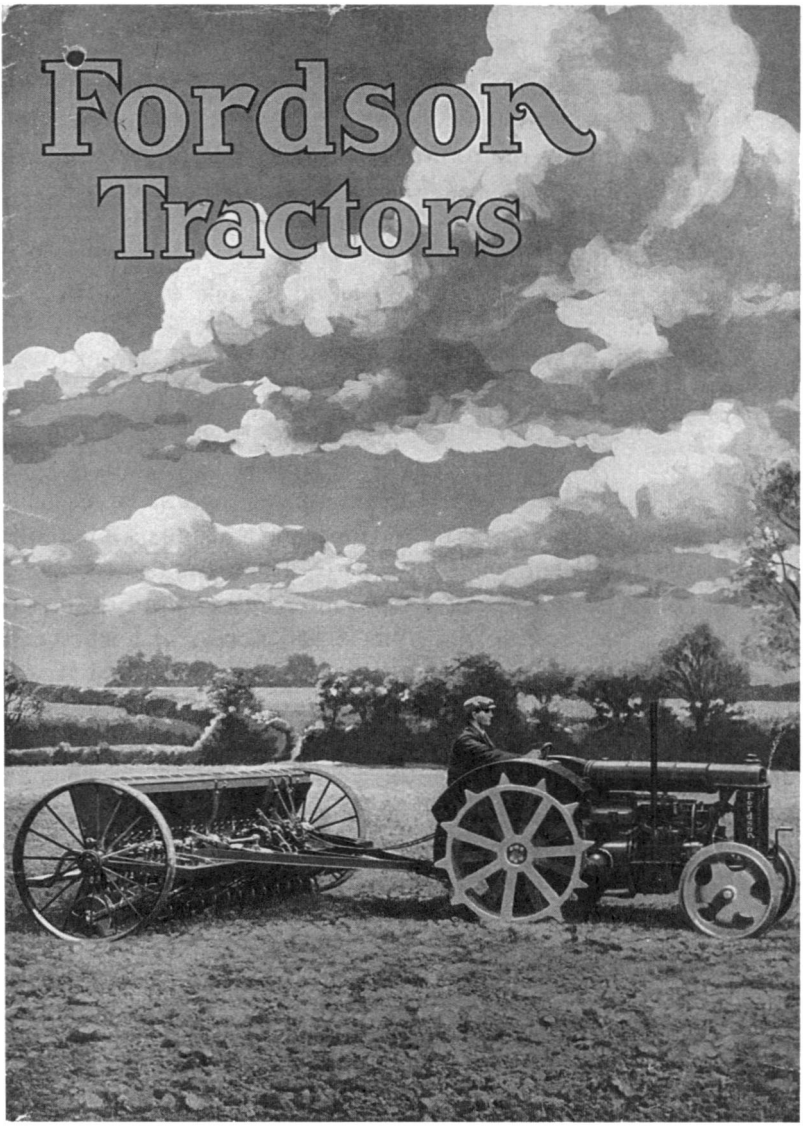
[59] Annual Reports; *Red Book of Commerce*, various dates.

[60] G. Tilghman Richards, *The History and Development of Typewriters* (London, 1964); *Anglo-American News* (Feb. 1928); *Red Book of Commerce*, 1933, 1935.

[61] Howard Cox, "Growth and Ownership in the International Tobacco Industry: BAT 1902–1927," *Business History* 1 (1989): 44–67; Chandler, *Scale and Scope*, 247.

[62] Bostock and Jones, "Foreign Multinationals," 107.

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Cover of Ford Catalogue for Tractors in 1938 • In 1938 Ford accounted for 8,500 of the 10,000 tractors manufactured in the United Kingdom. The British-made Fordson tractor had large export markets, including other European countries, Australia, South Africa, and the Untied States. (Photograph reproduced courtesy of Rural History Centre, University of Reading.)

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graph Inc., of the United States, formed in 1903 to sell records and phonographs which had been made in America. Between 1904 and

Table 8
U.S.-Owned Subsidiaries which ceased manufacturing in United Kingdom, 1908-1962 (by 2-digit SIC code)[1]
(Number of Cases)

Industry[2]	*1908-19*	*1920-29*	*1930-39*	*1940-49*	*1950-62*	*TOTAL*
Food (20)	0	3	0	2	1	6
Tobacco (21)	0	0	0	0	1	1
Textiles (22)	0	0	0	0	1	1
Apparel (23)	0	0	0	0	2	2
Paper (26)	0	0	0	0	1	1
Chemicals (28)	1	0	7	2	3	13
Rubber (30)	0	1	3	0	1	5
Leather (31)	0	0	1	0	0	1
Stone, Clay and Glass (32)	0	0	0	0	1	1
Primary Metals (33)	0	1	0	1	0	2
Fabricated (34)	0	1	1	2	2	6
Machinery (35)	0	0	4	4	10	18
Electric Machinery (36)	2	1	7	2	7	19
Transportation (37)	0	0	5	0	0	5
Instruments (38)	1	0	0	2	3	6
Miscellaneous (39)	0	0	3	0	0	3
TOTAL	4	7	31	15	33	90

Source: Database.
[1] This data includes U.S. subsidiaries founded before 1908.
[2] There were no exits for product groups not listed.

1908, these products were manufactured in Antwerp, where the U.S. company had established a subsidiary, and the British company imported products from Belgium for sale in Britain. In 1908, the Belgian manufacturing company was relocated to London. With the factory, skilled Belgian workmen and a Belgian Managing Director were relocated to London. This proved to be an unwise decision. The London factory had the wrong ventilation system. There was also industrial action and a large turnover of staff. Manufacture in London ceased and was relocated to the United States in 1909. Sales continued, but only until 1914, when the parent withdrew from Europe altogether.[63]

[63] S. P. Martland, "A Business History of the Gramophone Company, Ltd., 1897–1918" (unpublished Ph.D. diss., Cambridge, 1992), 298–9.

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Investments of short-duration could have long-term consequences for the British economy. In 1929, American Can's acquisition of the small British container manufacturer Ernest Taylor & Co. was intended to challenge the position of the British-owned Metal Box on the British market. But American Can's arrival prompted Metal Box to form a wide-ranging licensing agreement with its U.S. rival, Continental Can. This resulted in radical improvements in the British firm's production technology and management. Although American Can sold its British company to Metal Box in 1931, thus becoming one of the shorter-lived U.S. investments in Britain, the consequences for the British industry were considerable.[64]

This evidence on divestment rates and longevity demonstrates the risky nature of multinational investment, and in a wider sense suggests the need for caution when employing the concept of ownership advantages. While corporations such as Singer or, later, IBM entered Britain possessing large and distinct technological and/or organizational advantages over any local competitors, the scale of "advantage" held by many of the U.S. firms investing in Britain was less impressive. Moreover the considerable number of divestments suggests that many U.S. firms either overestimated the scale of their advantage in Britain or else underestimated the costs of FDI.

There were also cases where strong initial advantages were not sustained over time. There was often a diffusion of techniques and products to British competitors which diminished the initial advantages of U.S. firms, and it is misleading to classify this process as a "failure" on behalf of the U.S. company. Indeed, some divestments occurred—as in the 1930s—as a result of U.S. firms withdrawing from a mature market to seek more attractive returns elsewhere. In other cases, there was a real failure to sustain competitiveness. A prominent example was Ford, which did not end up by divesting but did experience a dramatic reversal of fortunes. Having secured a commanding market share in Britain over its local competitors by the early 1920s, managerial failure permitted powerful British automobile producers, especially Austin and Morris, to emerge and overhaul it. Ford's market share of British automobile production tumbled from 22 percent in 1921 to only 4 percent in 1929. In 1932, Ford opened the largest automobile factory in the world outside the United States at Dagenham, and the subsequent production of vehicles designed specifically for the British market was followed by a

[64] W. J. Reader, *Metal Box: A History* (1976), 52–4; Chandler, *Scale and Scope*, 318–20.

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revival in the company's fortunes, but even in 1938 its market share was only 18 percent.[65]

Characteristics of U.S. Affiliates in Britain

This section discusses some of the characteristics of U.S.-owned manufacturing affiliates in Britain which are shown in the database. The focus is on four issues: ownership patterns, propensities to engage in R & D, exporting activity and locational decisions.

Table 9 provides an analysis of the ownership structure of U.S.-owned subsidiaries in Britain. (See Table 9.)

Table 9
Ownership Structure of U.S.-Owned Subsidiaries 1907, 1935 and 1962[(1)]
(Numbers of Firms)

Ownership Structure	*1907*	*1935*	*1962*
Wholly-owned	26	149	337
Joint Venture (U.K.)	0	5	69
Joint Venture (U.S.)	1	0	4
Majority-owned	12	48	64
Minority-owned	3	13	10
Unknown	1	7	9
Total Cases	43	222	493

Source: Database.

[1] Joint Venture (UK) = Joint Venture between U.S. and U.K. company; Joint Venture (US) = Joint Venture between U.S. companies; Majority-owned = over 50 percent of the equity held by a U.S. company with remainder distributed to British equity market; Minority-owned = under 50 percent of the equity held by a U.S. company with remainder distributed to British public.

The proportion of wholly-owned subsidiaries to the total population of U.S. affiliates firms (whose ownership structure is known) went up from 62 percent in 1907 to 69 percent in 1935, and remained around that level in 1962. This latter ratio matches quite well with the evidence from the Vernon database, which suggests that 72 percent of new U.S. entries into Britain between 1951 and 1962 were wholly U.S.-owned.[66] However, the high percentage of

[65] Roy Church, *The Rise and Decline of the British Motor Industry* (London, 1994), 36–7.

[66] Curhan, et al., *Tracing*, 24.

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wholly-owned affiliates does not mean that there were not significant U.S. investments employing other modes. Ford, for example, offered 40 percent of the equity of Ford of England to the British public in 1928, and the U.S. parent only resumed full ownership in 1960. A prominent use of the joint venture form in the 1950s was the Haloid Co. (Xerox Corporation from 1960), which began its international expansion by forming Rank-Xerox as a joint venture with Britain's Rank Organization.

U.S. MNEs as a whole have had a long-term preference for wholly-owned affiliates, which reflected a desire to retain full control over their intangible assets in product and/or process technologies.[67] But the proportion of U.S. wholly-owned subsidiaries in Britain appears a little higher than in other developed countries. The Vernon database shows that only 61 percent of new U.S. entrants to Europe (excluding Britain) were wholly-owned between 1951 and 1966, although the corresponding figure for Canada was 80 percent.[68] The less frequent use of joint ventures in Britain may have reflected the fact that this organizational form might be employed to economize on information requirements in foreign ventures, and was consequently often favored in unfamiliar host economies. Given the cultural proximity of the United States and the United Kingdom, U.S. MNEs may have felt less of a need to share ownership than elsewhere in Europe. They may also have judged that British partners had in most cases little to add in terms of capabilities, which made co-operation with them rather redundant.

Table 10 examines industry-specific differences on ownership structures by comparing the ratio of wholly-owned subsidiaries to total subsidiaries for the eight largest product groups. (See Table 10.)

There is an expectation in the literature that firms in research-intensive industries are more likely to seek 100 percent control ownership of their affiliates because of the danger of diffusion of their knowledge, and Dunning found support for this hypothesis in the case of U.S. affiliates in Britain.[69] The evidence of Table 10 also

[67] Richard E. Caves, *Multinational Enterprise and Economic Analysis* (Cambridge, 1982), 86–7.

[68] Curhan, et al., *Tracing*, 24.

[69] Dunning, *U.S. Industry*, 13.

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points in this direction, though the small number of observations for some products in 1907 and 1935 makes the percentages shown of limited value. If the 1962 figures alone are taken, research-intensive industries such as chemicals and instruments do show a greater enthusiasm for the wholly-owned form than primary and fabricated metals. However, over the whole period, it is the food industry which emerges with the strongest consistent preference for wholly-owned subsidiaries. This is surprising, given that there is a correlation between high exporting activity and the wholly-owned form, while the U.S. food affiliates in Britain tended to focus on the domestic market (see below).[70] The concentration of U.S. affiliates in branded products, however, appears to have provided a strong incentive towards retaining full ownership.

Table 10
Percentage of Wholly-Owned Subsidiaries, 1907, 1935 and 1962
(by 2-digit SIC Code)

Industry	*20*	*28*	*33*	*34*	*35*	*36*	*37*	*38*	*All Products*
1907	67	100	-	33	55	71	50	0	62
1935	100	67	86	67	63	68	70	58	69
1962	85	68	50	57	70	70	57	88	69

Source: Database.

Britain appears to have attracted some U.S. R & D from quite an early date. Table 11 provides evidence on the number of U.S.-owned subsidiaries which were known to undertake R & D in the United Kingdom. (See Table 11.)

There is little evidence of R & D activity by U.S. affiliates in Britain at the time of the 1907 benchmark date, but in at least one case—that of Singer—such activity was evident. There is evidence of innovations in machine tools as well as sewing machine technology originating at the Glasgow factory and being diffused to the firm's operations back in the United States and elsewhere.[71]

[70] Caves, *Multinational Enterprise*, 87.

[71] We are grateful to Andrew Godley for this information, which is based on his research on the Singer archives deposited at the State Historical Society in Madison, Wisconsin.

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Table 11
R & D by U.S.-Owned Subsidiaries in United Kingdom, 1935 and 1962 (by 2-digit SIC code)

Year	*Total Cases*	*Not Known*	*No. R & D*	*R & D*	*20*	*23*	*24*	*28*	*29*	*30*	*32*	*33*	*34*	*35*	*36*	*37*	*38*	*39*
1935	222	114	80	28	0	2	0	3	0	1	2	2	4	6	4	3	1	0
1962	493	226	132	135	4	2	1	40	2	3	5	5	12	20	18	8	13	2

Source: Database.

By 1935 there was quite extensive R & D activity by U.S. affiliates, supporting recent research that has suggested that U.S. firms achieved high levels of internationalization of technological activity in the interwar years.[72] Kodak is credited with having established the first American industrial research laboratory abroad in 1928 when it established a facility at Harrow on the outskirts of London. By the end of the 1930s this laboratory was larger than the entire scientific effort of the U.S. firm's British competitor—Ilford—and it was also engaged—unlike Ilford—in fundamental research work.[73] Ford also had extensive R & D operations in Britain in the 1930s.[74] General Motors, Gillette, Firestone and Monsanto were among other U.S. investors undertaking some R & D in Britain in the 1930s, though their strategies fluctuated. ITT's affiliate Standard Telephones & Cables established R & D facilities in 1927, but closed them in the early 1930s, though some adaptive research continued.[75] Overall, chemicals, machinery, electric machinery and instruments accounted for 58 percent of the total known number of cases of R & D in 1935. Unfortunately, information on the quality and extent of R & D activity is thin for most firms, but it seems likely that few if any U.S. affiliates could match the research activities of Kodak and Ford in Britain.

The database shows that, by 1962, a considerable number of U.S. firms were engaged in R & D in Britain, two-thirds of which were located in chemicals, machinery, electric machinery and instru-

[72] J. A. Cantwell, "The globalisation of technology: what remains of the product cycle model?," *Cambridge Journal of Economics* 19 (1995): 155–74.

[73] Wilkins, *Maturing*, 84; D. Edgerton, "Industrial Research in the British Photographic Industry, 1879–1939," in *The Challenge of New Technology*, ed. Jonathan Liebenau (Aldershot, 1988).

[74] Mira Wilkins and Frank Ernest Hill, *American Business Abroad: Ford on Six Continents* (Detroit, 1964), 291–2, 303, 384.

[75] Peter Young, *Power of Speech: a History of Standard Telephones and Cables, 1883–1983* (London, 1983).

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Kodak Advertisement in "The Graphic," 2 May 1904 • Kodak opened a factory in the United Kingdom in 1890. (Photograph reproduced courtesy of Kodak Limited.)

ments. By this date the list of U.S. companies with sizeable R & D operations in Britain included Ford and General Motors, Esso, Monsanto, United Shoe Machinery and Procter & Gamble, although most of the research undertaken remained adaptive rather than fundamental. The 1950s also saw the beginnings of substantial investment in R & D in pharmaceuticals by U.S. affiliates. A pioneer was

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Parke, Davis & Co. which had manufactured pharmaceuticals in Britain since 1900. It established its first overseas research laboratory near London in 1951. This activity was subsequently to grow considerably in significance, as U.S. companies were attracted to Britain by its flexible regulatory system and well-developed scientific and intellectual base. The "demonstration effect" of this U.S. research effort in Britain proved important in stimulating Britain's pharmaceutical companies to engage in more intensive R & D.[76] Overall, in 1966 the British affiliates of U.S. manufacturing firms spent $145 million on R & D in the United Kingdom, which was equivalent to about 10 percent of total privately financed R & D expenditure in that country.[77]

U.S. investors were, from an early date, also interested in using the United Kingdom as an export platform to supply other markets. By 1965 U.S.-owned manufacturing companies in the U.K. exported 25 percent of their output and sold the rest locally. Probably around half of their exports were intra-firm—i.e. to other parts of their company. U.S. affiliates as a whole accounted for over 13 percent of total British manufacturing exports.[78] Table 12 shows the growth over time in the numbers of U.S. firms engaged in exporting activities. (See Table 12.)

It is a general feature of MNE affiliates, at least since 1945, that they are on average more active in international trade than their indigenous counterparts. High export propensities are also often matched by high levels of imports, about which it is much harder to find information.[79] The most interesting feature of Table 12 is the considerable number of firms exporting even in the 1930s. The interwar years have been seen as a time when foreign affiliates increasingly focused on their domestic markets in response to stagnant trade flows and high tariffs.[80] Although the forces of political and economic nationalism were undoubtedly encouraging a trend towards the increased autonomy of affiliates in this period, it is evi-

[76] Michael Brech and Margaret Sharp, *Inward Investment*, Chatham House Papers, No. 21, 1984, 41–62; Jones, "Big Business."

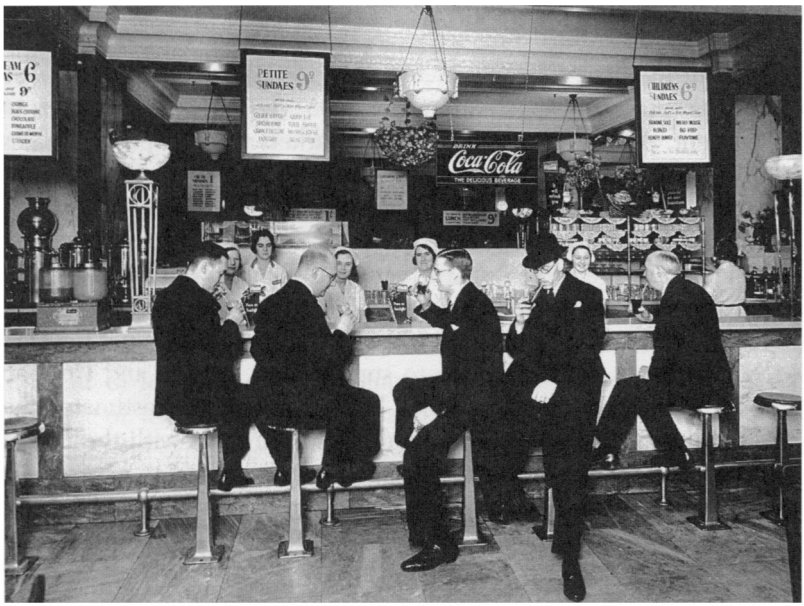
[77] Dunning, *U.S. Industry*, 20. Dunning's data is derived from *U.S. Direct Investment Abroad Part 1, Investment Position, Financial and Operating Data*, Group 2, Preliminary Report 1971, 123.

[78] Dunning, *U.S. Industry*, 26, 100.

[79] The current study is no exception. Only limited and fragmentary data was located on importing activities.

[80] United Nations, *World Investment Report 1994* (New York, 1994), 122.

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Coca Cola Soda Fountain in Lewis's Ltd. Department Store, Manchester, 1932
• Coca Cola began exporting to Britain on a significant scale in the 1920s and in 1935 a company-owned bottling plant began operating in London. Sales were held back by the British preference for warm beer, which meant that pubs rarely had cooling facilities. (Photograph reproduced courtesy of the Coca-Cola Company.)

dent that—at least in the case of U.S. affiliates in Britain—they never opted entirely out of the international economy.

The United Kingdom's position as the center of a worldwide Empire, which included economies with high per capita incomes such as Australia, made it a potentially attractive site for U.S. MNEs to service markets too small in themselves to have a manufacturing facility. The introduction of preferential duties in trade between Empire countries from the 1900s provided a new incentive to manufacture within the Empire. During the 1930s, a full system of imperial preferences was put in place and the Sterling Area—which included not only all the Empire (except for Canada and British Honduras), but also Argentina and Scandinavia and some other countries which were economically dependent on trade with Britain—came into being. The Sterling Area continued in some form until the early 1970s.[81]

[81] P. J. Cain and A. G. Hopkins, *British Imperialism. Crisis and Reconstruction 1914–1990* (London, 1993), chap. 5 and 11.

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The exports of U.S. subsidiaries were never exclusively focused on the British Empire. Singer developed an extensive exporting business from its giant Glasgow factory. By 1881, three-quarters of the factory output was exported, and by 1905, the number had risen to 85 percent. Although British Empire markets were important, sales to other European countries were also very high.[82] In the interwar years, Ford's British subsidiary made substantial exports to Germany and the United States.[83] The formation of the Common Market stimulated a surge of U.S. investment into Britain which was seen as a convenient base to supply what looked like was becoming a large regional market. By the early 1960s, it was becoming usual for U.S. MNEs to use a British factory to supply their French and German sales subsidiaries.[84] In this respect, U.S. business underestimated the scale of the British political and cultural differences with the rest of Europe, for it was not until 1973 that Britain joined the European Community and thereafter began a new role as its most reluctant member.

Table 12
Exporting by U.S.-Owned Subsidiaries 1907, 1935 and 1962
(Numbers of Firms)

	Total Cases	*Exporting*	*Not Exporting*	*Not Known*
1907	43	20	4	19
1935	222	91	15	116
1962	493	293	23	177

Source: Database.

Dunning's study found that, while U.S.-affiliated firms as a whole accounted for around 12 percent of total manufacturing exports in 1953, there were considerable differences between products. While firms in certain products such as refrigerators and sewing machines exported as much as three-quarters of their total output, the food and drink sector was much more focused on the local market.[85] The present study confirms this picture. In 1907, 60 percent of the known exporters were in the machinery (SIC 35) and electric machinery (SIC 36) product codes. In 1935 and 1962, chem-

[82] Godley, "Early Foreign Direct Investment."
[83] Wilkins and Hill, *American Business Abroad*, 247, 304.
[84] For example, Annual Reports of Polymer Corporation and Avon Products.
[85] Dunning, *American Investment*, 281–9.

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icals (SIC 28) joined the other two product codes as the leading export sectors, accounting for 58 percent of known exports in 1935 and 74 percent in 1962. In contrast, the number of food firms known to export in 1907 and 1935 was only one and five respectively, although by 1962 the number had risen to seventeen.

These sectoral differences meant that there were sharp variations in the relative importance of exporting activities between U.S. companies. In 1960—a year for which data is available for quite a number of firms—GM-owned Vauxhall and Ford exported 48 and 46 percent respectively of their total sales. Caterpillar Tractors exported 60 percent of its sales. Burroughs Machines exported 42 percent of its sales of office machines, while Hoover exported 25 percent of its sales of cleaners and washing machines in 1960. In contrast, the exporting activity of the food companies was much less important. In 1960, Brown and Polson sold only 7 percent of its sales of soups, starch and glucose abroad, Heinz exported 5 percent of its sales of baked beans and pasta products, while General Food's Alfred Bird exported only 3 percent of its sales of custard and soluble coffee. For the limited number of companies for which market destination is available, the main export markets in the 1950s and the early 1960s were the British Commonwealth and the rest of Europe, though with wide inter-firm differences, reflecting not only products but also individual multinational strategies.[86]

Finally, U.S. investors in Britain showed a distinct locational pattern. Table 13 shows the location by region of U.S. owned plants. (See Table 13.)

Table 13 confirms the evidence of earlier studies that before World War II U.S. multinational investment was heavily concentrated in the southern half of England, especially the Southeast region which included London.[87] Dunning's survey of U.S. manufacturing affiliates in 1953 found that an area within twenty miles radius of London accounted for over 46 percent of the total British employment in American firms.[88] This strong regional pattern was not an

[86] Replies to Questionnaires on American Enterprises in Britain, 1963 and 1965, Dunning database, University of Reading, U.K.

[87] See also Christopher M. Law, *British Regional Development since World War I* (Newton Abbot, 1980).

[88] Dunning, *American Investment*, 84–90.

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Table 13
Geographical Location of U.S. Manufacturing Plants 1907, 1935, 1962

U.K. Regions	*1907*	*1935*	*1962*
England			
Southeast	25	159	331
Midlands	9	37	86
North West	11	30	62
Other	2	18	80
Scotland	1	8	90
Wales	0	5	48
Northern Ireland	0	0	14
Unknown	0	7	17
TOTAL	48	264	728

Source: Database.

idiosyncratic U.S. phenomenon, but reflected the geographical location pattern of similar British firms in each industry. During the interwar years it was the Southeast region which saw the most rapid industrial growth and the development of the new consumer goods, automobile and light engineering industries. These were the industries in which U.S. investors were engaged.

After the Second World War U.S. companies showed a new interest in Scotland. There was a public policy influence on this locational shift. Parts of Scotland, especially around Glasgow and Dundee, were designated "Development Areas," where the government built plants or let them at favorable rates to British or foreign firms which invested in the area. For the most part these plants were on industrial estates with road, rail and other infrastructure services supplied. The aim of this policy was to create employment in regions with high unemployment rates. Although it was not specifically targeted at U.S. MNEs, new investors with no commitments to particular areas were likely to have been more influenced by incentives than many domestic British firms. Moreover, as discussed below, government officials tried to steer new inward investors to Scotland and other Development Areas when they entered Britain for the first time. However, there were other factors behind these postwar U.S. shifts to Scotland, which in fact began to slow down just as more assertive regional policies began to be pursued in the late 1950s.[89] The region had a pool of skilled labor in engineering and shipbuild-

[89] P. Dicken and P. E. Lloyd, "Geographical Perspectives on United States Investment in the United Kingdom," *Environment and Planning* (1976): 696–7.

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ing, and the U.S. investment in Scotland was very heavily concentrated in engineering. Whatever the motivation, the employment impact in a region of above average unemployment was considerable. By the early 1970s, U.S. affiliates accounted for 14 percent of Scotland's manufacturing labor force and for one-third of Scottish manufacturing exports.[90]

The case of Northern Ireland demonstrated that it took more than policy to influence U.S. locational decisions. For technical reasons, Northern Ireland was not designated a Development Area because of its special constitutional position within the United Kingdom, but as it had the highest rate of unemployment in the whole country—which during the 1950s reached over 9 percent—the British government was extremely anxious to attract U.S. investment. It not only built factories to rent, but offered a program of grants or loans for plant and machinery, together with training grants. In 1956, British officials noted that though they wanted U.S. investment in the country as a whole, they wanted "it most in Northern Ireland and are doing most to get it there."[91] Camco, which began manufacturing oil well equipment for export in Northern Ireland in 1958, cited "very good assistance towards capital outlay and newly built factory supplied at nominal rent" as the primary reason behind its location decision.[92] But, as Table 13 demonstrates, only a small number of U.S.-owned factories had opened in Northern Ireland by 1962.

Public Policy

The public policy environment in Britain was important in attracting U.S. MNEs, but exercised little impact on its form. Long-term political stability in Britain was combined with policies which were—certainly before World War II—even more liberal than those of the United States towards inward investment. British industrial policies were neutral with respect to nationality of ownership. There were no restrictions on foreign takeovers of British firms. In both the pre-and postwar periods, U.S. firms had no difficulties in securing work per-

[90] Dunning, *U.S. Industry*, 12.

[91] Secret Directive to British Information Services about Publicity regarding development areas and American industrial investment, 11 Sept. 1956, T 234/616, Public Record Office (hereafter PRO), U.K.

[92] Reply to Questionnaire on American Enterprises in Britain, 1965, Dunning database, University of Reading, U.K. See also Camco Inc. Annual Report, 1959.

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mits to employ U.S. nationals and technical experts, at least in the initial stage of the operation.[93] The British had no legislative block against foreign participation in any sector, though in practice by the end of the 1920s British policy makers had a list of industries—especially finance and defense-related—in which they sought by various opaque means to block U.S. (or other foreign) participation. The manufacturing sector was left as a virtual open field for U.S. companies, though there were odd instances when informal pressures were applied to encourage U.S. companies to reduce their stakes in particularly sensitive sectors. This was a factor in GEC's disposal of equity in Associated Electric Industries from the mid-1930s. British officials in the interwar years and later sometimes reflected on the possibly undesirable consequences of technological dependence on the United States, but they were well aware that any discriminatory legislation could result in retaliation against Britain's own huge outward FDI. This was a constant factor behind maintaining the liberal British inward investment policy.[94]

This policy environment reinforced the cultural and language similarities to produce a host economy which was widely regarded as accessible and hospitable by U.S. firms. It was probably in the late 1940s that U.S. MNEs were at their least comfortable in Britain. The ruling Labour Party's nationalization of a range of basic industries created the aura of a socialist state, with around 20 percent of the economy coming under government ownership, even though there were no U.S. investments in the industries affected. A State Department investigation of U.S. business opinion at the end of 1948 into the prospects for American investment in Britain found widespread concerns that Sterling would be devalued—which indeed happened shortly afterwards—that the British government would limit dividends and/or block the convertibility of profits into Dollars. The same source detected "a large body of unorganized but effective opinion which is fearful that American investors are trying to mortgage the British Isles," and also concluded that "by and large, industrial interests in the U.K. are hostile to American investment."[95] The return of the right-wing Conservative Party to

[93] Board of Trade Memorandum on United States Investment in the United Kingdom, 28 Nov. 1956, BT 258/569, PRO.

[94] Geoffrey Jones, "The British Government and Foreign Multinationals before 1970," in *Governments, Industries and Markets*, ed. Martin Chick (Aldershot, 1990), 196–7.

[95] Memorandum by Ervin O. Anderson on American Investment in Great Britain, 28 Dec. 1948, Mission to U.K. Office of Production and Supply Procurement Files, box 7,

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government in 1951—where it remained until 1964—helped U.S. companies feel more comfortable again in Britain.

The general view of British policy-makers in the postwar period was that U.S. MNEs were a positive good rather than a necessary evil. As one government official wrote in 1959, U.S. FDI "was a means of tapping for the benefit of U.K. industry some of the latest U.S. technological and managerial knowledge."[96] A persistent theme in official discussions was that American companies were beneficial for British business. One internal policy memorandum observed in 1949:

> We have much to learn from foreigners and especially from the Americans about organization, productive technique, sales promotion and so forth. Inefficient British concerns may find such competition troublesome, but without it we may fail to achieve, with a minimum of delay, the overall increase in industrial efficiency which is so essential to future progress.[97]

Twelve years later, in 1961, the theme was the same:

> Her Majesty's Government welcomes (U.S. investment in U.K. industry) and has always done so . . . it helps the process of new capital formation and brings in its train valuable "know how" and access to U.S. research and development facilities. The competition provided by the newcomer gives established firms the strongest form of incentive to modernize their products and their methods.[98]

The large productivity differential between the United States and Britain (and other European economies) made this policy fully explicable. There was a widespread belief among most British politicians and officials from at least the 1920s that the problems of British industry lay in the small scale of its operations and the failure to secure the benefits of mass production. This analysis may well have been erroneous, but it certainly increased the attractiveness of U.S. companies, who—it was hoped—would help deliver the benefits of big business to Britain.

The idea of protecting a British company against a U.S. entrant

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NRA RG 469/392, National Archives. I owe this reference to Jim Tomlinson. Anderson was an official of the European Co-operation Administration London office.

[96] Draft Memorandum on Dollar Investment: The Two-Way Flow, May 1959, BT 258/571, PRO.

[97] Minute No. 6 from H. K. Stanley, 2 April 1949, File on U.S. Investment in British Industry, BT 64/2442, PRO.

[98] Brief by R. H. King on U.S. Investment in U.K. Industry, 8 May 1961, BT 258/571, PRO.

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seldom crossed the minds of British officials. The furthest British government officials were prepared to go was spelled out in a memorandum in 1958. If British firms protested to the government about an impending U.S. investment, the memorandum noted, officials would "consider the question" of seeking "the American company's agreement to a warning and some factual information being given to British competitors in advance of any publicity."[99] Reich has gone so far as to argue that British governments positively discriminated in favor of U.S. firms in the automobile industry after the Second World War, though this argument and its alleged negative impact on British firms remain much in dispute.[100]

The recognition of the advantages to be obtained by the transfer of U.S. technological and organizational skills was far from unique to Britain, and was widely shared in Europe and elsewhere after 1945. The most idiosyncratic aspect of British policy was the pleasure which certain government officials felt about the pain that U.S. investors would inflict on their "inefficient" British competitors. It was in this respect that British policy differed so widely from Japan, where the possible damage to local firms was regarded as one of the most powerful reasons for blocking U.S. direct investment.[101] These British attitudes were especially curious given that the overall thrust of British industrial policy in the postwar decades put little weight on promoting competition in markets as a source of efficiency.

British policy after 1945 passed through several stages. As elsewhere in Europe and in Japan, exchange controls were used as the main means to regulate inward investment.[102] Potential investment projects were screened using two criteria. British officials used this screening stage to influence the locational decisions of U.S. investors by encouraging them to go to Development Areas such as Scotland. U.S. applications to manufacture in Britain were also expected either to produce exports or save imports into the Sterling Area from outside it, or else transfer technology into Britain. Over time there was a steady liberalization and simplification of the screening process. In 1955, the policy was altered so that all projects were approved if they were not to the disadvantage of the Sterling Area, and in July 1958 the exchange control screening process was further modified so that U.S. firms did not need

[99] Memorandum on American Investment in the United Kingdom with Special Reference to Import Facilities, 20 July 1958, BT 258/570, PRO.

[100] Simon Reich, *Fruits of Fascism: Post-war Prosperity in Historical Perspective* (Ithaca, 1990); Church, *Rise and Decline*, 54–6.

[101] M. Mason, *American Multinationals and Japan* (1992): 152–3.

[102] Jones, "British Government," 199–202.

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to demonstrate the merits of their proposal to gain permission to invest in Britain.[103] British policy makers shifted from screening investment proposals to trying to negotiate bilateral deals with firms to secure desirable aims. In 1960, the British authorities acceded to Ford's desire to buy out the minority shareholders in its British subsidiary on the condition that it make a series of commitments on exports, employment, investment and other matters. This policy framework proved especially ineffective as successive British governments proved unable to develop any means of monitoring or enforcing the so-called "assurances" given by firms.[104]

The impact of specific British government policies was marginal. Very few U.S. investment proposals were rejected outright even in the early 1950s, but quite a lot of minor adjustments were made to the financing and other arrangements of particular projects. The strongest impact may have been on the geographical location within Britain of U.S. inward investment, but, as suggested earlier, there were other factors at work. In contrast, the British—unlike the Japanese and a number of European countries—made little attempt to interfere with the mode of entry or ownership structures of U.S. MNEs. Little effort was made to encourage U.S. firms to enter joint ventures with local partners or to license their technology in preference to establishing wholly-owned subsidiaries. While other countries were interested in these intermediate modes as a means of facilitating the transfer of organizational and technological skills to indigenous firms, British officials had a sufficiently poor opinion of the competence of British business that they seemed to consider the effort was not worth making. Certainly insofar as the ownership structure was identified as an issue, it was in connection with profit remittances rather than technology transfer. Noting that "the Americans have a preference for exclusive control," one official observed that in 1959,

> naturally we do our best to persuade American industrialists who come to us for advice to admit U.K. capital to the equity, and the Bank of England itself is able to impose a veto when they are faced with a proposition which puts the greater part of the capital into, say, preference shares raised in the United Kingdom while the American investor holds the ordinary shares and stands to enjoy the bulk of the profits when they begin to accrue.[105]

[103] Memorandum on Encouragement of Overseas Investment and of Agreements Involving Royalty Payments 1947–1958, August 1959, BT 258/570, PRO.

[104] Jones, "British Government," 207.

[105] Note on American Investment in U.K., 7 July 1959, BT 258/571, PRO.

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Conclusions

This article has employed a new database to describe the distribution and form of U.S. manufacturing MNEs in Britain before 1962. The database includes information on 634 U.S.-owned manufacturing subsidiaries established in Britain between 1908 and 1962. Unlike the database developed by Vernon at Harvard Business School in the 1960s and 1970s, U.S. firms of any size were included, and it is likely that many small and medium-sized U.S. enterprises are included, although data limitations have prevented a rigorous analysis of the size distribution. It is likely that a high percentage of the total population of U.S. MNEs manufacturing in Britain have been included.

Already established by the early twentieth century, U.S. MNEs expanded rapidly in numbers in the 1920s. They continued to invest in the 1930s. War and its consequences slowed the growth, but it resumed on an unprecedented scale in the 1950s. U.S. FDI was concentrated in a relatively narrow range of products—between 1908 and 1962 eighteen product lines accounted for over half of all new entries—in many of which they secured a large market share in Britain. These were industries in which the United States had become the world leader through innovation in technology and organization. MNEs became the vehicles for the diffusion of these innovations to other developed economies such as Britain.

U.S. companies used both acquisitions and greenfield investment to enter Britain. The database reveals that there were fluctuations over time in choice of entry mode. The proportion of new entries through acquisitions rose in the first two decades of the study, then fell sharply in the 1930s before rising again. This article has examined a number of possible explanations about these shifts in mode choice, including the stage at which U.S. firms entered Britain, the economic environment, protectionism, the exchange rate regime and industry-specific factors. It is hoped that the database will permit more rigorous testing of these and other hypotheses on choice of entry mode in later studies.

A focus on firms rather than FDI enables MNEs to be seen as evolving business organizations rather than conduits for financial flows. Although U.S. firms entered Britain through either an acquisition or a greenfield investment, both modes were employed in their future growth. It has been shown that, in some periods at least, U.S. firms first developed licensing, sub-contractor or supplier relationships with British firms before acquiring them. Once established,

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the operations of U.S. firms became more complex over time as multi-plant and multi-product operations developed. The database also demonstrates quite high rates of divestment, and reveals that a significant proportion of U.S. investments in Britain were short-lived. Although there were common influences on divestments—such as the Depression in the 1930s—the multiple and idiosyncratic factors at work in individual cases makes general explanations difficult. What does emerge is a sense of the fragility and riskiness of multinational investment. Whatever the size of any initial U.S. advantage in the British market, it was difficult to sustain it over time. Moreover, although acquisitions have been often treated as a less risky means of entering a foreign market than greenfield investment, the database reveals a significant percentage of U.S. firms exiting from Britain originated as acquisitions.

The question arises about what was distinctive about U.S. MNE activity in Britain compared to other host economies for U.S. investment. The most striking characteristic was its size. U.S. FDI in manufacturing in this period was concentrated in the developed market economies of Canada and Western Europe, and although Canada was always the most important host, throughout this period the United Kingdom came second. In 1929 it accounted for 43 percent of total U.S. manufacturing FDI in Europe. In 1962 it accounted for 51 percent.[106] That year the sales of U.S. manufacturing affiliates in Europe were equivalent to 19 percent of U.S.-affiliates worldwide, and 44 percent of U.S. affiliates in Europe.[107] Britain's attractiveness as a host can be explained by cultural and linguistic similarities and their effect on reducing uncertainty and information costs, a large high income market, the ease of making acquisitions, political stability and liberal inward investment policies.

The database evidence points to some other differences of U.S. MNEs in Britain compared, especially, to other European countries. There seems to have been a greater preference for wholly-owned subsidiaries than elsewhere in Europe, though not Canada. Britain seems to have attracted considerable U.S. R & D, and was at least in several cases the location chosen by U.S. companies to begin the internationalization of their research activity. The database has also shown the extensive exporting activity of U.S. affiliates in Britain, even in the interwar years. Britain was regarded over the long term as an attractive "export platform" to penetrate other markets, begin-

[106] Wilkins, *Maturing*, 185, 331.
[107] Dunning, *U.S. Investment*, 31, citing various issues of *Survey of Current Business*.

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ning with Sterling Area markets and, later, the European market. Overall, U.S. companies found Britain an attractive place to do business. As a group, they often seemed able to perform their business more efficiently than the local firms.

This article has sought to cover a wide range of issues related to U.S. MNEs in Britain before 1962. Many of the issues raised here require more rigorous analysis. A proper examination of the distinctiveness of U.S. MNEs in Britain as compared to other host countries requires the construction of comparable databases for other countries, though the Vernon database already permits some comparative analysis. A further set of issues concerning the impact of this multinational investment flow both on the United States and Britain has not been examined in this article. It is believed that this new database will provide a good starting point for proper consideration of such key impact issues as the transfer (or otherwise) of U.S. organizational and technological capabilities to Britain.

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