

Núria Puig and Adoración Álvaro-Moya

The Long-Term Effects of Foreign Investment on Local Human Capital: Four American Companies in Spain, 1920s–1970s

This article explores the long-term effects of foreign direct investment on the human capital development of host economies, based on the historical analysis of the Spanish operations of four leading American firms: IIT, J. Walter Thompson, Merck Sharp & Dohme, and John Deere. Our research shows that the training and working practices of these companies had a positive impact on the Spanish subsidiaries in terms of technological upgrading and managerial development. However, the local context was also relevant, through mandatory agreements that empowered local partners from the start and the availability of locally educated professionals eager to absorb new knowledge.

Keywords: foreign direct investment, spillovers, human capital, American multinational enterprises, Spain

Does inward foreign direct investment (FDI) promote the managerial and entrepreneurial capabilities of host economies? International business scholars, traditionally concerned with the driving forces and specific advantages of multinational enterprises (MNEs), have often pointed to the potentially positive effects of multinationals on host countries.¹ MNEs are particularly good at transferring difficult-to-codify

The authors acknowledge financial support from the Spanish research system (projects ECO 2012-35266 and HAR 2015-64769). They are grateful to the editors and reviewers for their insightful comments.

¹ Sanjaya Lall and Rajneesh Narula, “Foreign Direct Investment and Its Role in Economic Development: Do We Need a New Agenda?” *European Journal of Development Research* 16, no. 3 (2004): 447–64; Rajneesh Narula and John H. Dunning, “Multinational Enterprises, Development and Globalization: Some Clarifications and a Research Agenda,” *Oxford Development Studies* 38, no. 3 (2010): 263–87; Theodore H. Moran, Edward M. Graham, and Magnus Blomstrom, eds., *Does Foreign Direct Investment Promote Development?*

Business History Review 92 (Autumn 2018): 425–452. doi:10.1017/S0007680518000764
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knowledge, such as technical skills and organizational capabilities.² Given the fact that this knowledge is not properly captured by quantitative analysis, research on international human resource management enriches the debate by focusing on staffing strategies and expatriate knowledge transfer (at both the organizational and individual level).³ But evidence is not conclusive anyway, as the impact of MNEs on host economies depends largely on the characteristics of the host economy and varies across specific industries and firms.⁴ There is, as a result, a growing demand for contextualization and empirical research at the industry and firm levels.⁵

(Washington, D.C., 2005); Eduardo Borensztein, José De Gregorio, and Jong-Wha Lee, "How Does Foreign Investment Affect Economic Growth?" *Journal of International Economics* 45 (1998): 115–35.

² Peter Buckley and Mark Casson, *The Future of the Multinational Enterprise* (London, 1976); Alain Verbeke and Liena Kano, "The New Internalization Theory and Multinational Enterprises from Emerging Economies: A Business History Perspective," *Business History Review* 89, no. 3 (2015): 415–45.

³ David G. Collings and Hugh Scullion, "Global Staffing," *International Journal of Human Resource Management* 20, no. 6 (2009): 1249–52.

⁴ John H. Dunning and Sarianna Lundan, *Multinational Enterprises and the Global Economy* (London, 2008), 444–47; Geoffrey Jones, *Multinationals and Global Capitalism from the Nineteenth to the Twenty-First Century* (Oxford, 2005), 260–66; Dirk Willem te Velde, "Foreign Direct Investment and Development: An Historical Perspective" (background paper, Overseas Development Institute, 30 Jan. 2016), 15–17; Geoffrey Jones, "Firms and Global Capitalism," in *The Cambridge History of Capitalism*, vol. 2, *The Spread of Capitalism: From 1848 to the Present*, ed. Larry Neal and Jeffrey G. Williamson (Cambridge, 2014), 169–200; Geoffrey Jones "Editor's Introduction," *Business History Review* 89, no. 3 (2015): 403–4; Mira Wilkins, "Multinational Enterprises and the Varieties of Capitalism," *Business History Review* 84, no. 4 (2010): 638–45; Gary Oddou, Joyce S. Osland, and Roger N. Blakeney, "Repatriating Knowledge: Variables Influencing the 'Transfer' Process," *Journal of International Business Studies* 40, no. 2 (2009): 181–99.

⁵ Rajneesh Narula and Nigel Driffield, "Does FDI Cause Development? The Ambiguity of the Evidence and Why It Matters," *European Journal of Development Research* 24, no. 1 (2012): 1–7; Rajneesh Narula, "Foreign Direct Investment as a Driver of Industrial Development: Why Is There So Little Evidence?" in *International Business and Sustainable Development*, ed. Rob Van Tulder, Alain Verbeke, and Roger Strange (London, 2014), 45–67; Robert E. Lipsey, and Fredrik Sjöholm, "The Impact of Inward FDI on Host Countries: Why Such Different Answers?" in *Does Foreign Direct Investment Promote Development?* ed. Theodore H. Moran, Edward M. Graham and Magnus Blomstrom (Washington, D.C., 2005), 23–43; Theodore H. Moran, "How Does FDI Affect Host Country Development? Using Industry Case Studies to Make Reliable Generalizations," in Moran, Graham, and Blomstrom, *Foreign Direct Investment*, 281–313; Theodore H. Moran, *Foreign Direct Investment and Development: Launching a Second Generation of Policy Research* (Washington, D.C., 2011); Klaus E. Meyer, Ram Mudambi, and Rajneesh Narula, "Multinational Enterprises and Local Contexts: The Opportunities and Challenges of Multiple Embeddedness," *Journal of Management Studies* 48, no. 2 (2011): 235–52. From the perspective of international human resource management, see Dan V. Caprar, "Foreign Locals: A Cautionary Tale on the Culture of MNC Local Employees," *Journal of International Business Studies* 42, no. 5 (2011): 608–28; Chris Brewster, Jaime Bonache, Jean-Luc Cerdin, and Vesa Suutari, "Exploring Expatriate Outcomes," *International Journal of Human Resource Management* 25, no. 14 (2014): 1921–37; Fabian J. Froese and Soo Min Toh, "Guest Editorial: Expatriates in

The multifaceted, and often indirect, effects of FDI and the subsequent need for contextualization have long been recognized by business historians, who have also shown the advantages of long-term horizon studies. In the early 1970s, Mira Wilkins established that effective diffusion of technology required that “effective business organizations” were eager and prepared to absorb that technology.⁶ This process of diffusion and absorption of technology, and knowledge, is also determined by other variables, according to later research, such as the host economy’s stock of human capital (for example, individuals’ knowledge, skills, and competencies) and corporate decisions about the entry mode of the foreign multinational and the ownership structure of its subsidiary—decisions that are in turn influenced by the host institutional and economic context.⁷ Not surprisingly, MNEs seem to have contributed more to knowledge transfer within advanced economies than to knowledge transfer from advanced to developing countries, where they have tended to reinforce, rather than transform, existing institutions. Putting aside the so-called demonstration effect in sectors such as the motor and machinery industries, MNEs tended to operate as enclaves with little effect on the host economy in terms of knowledge transfer and human capital development. So in spite of the efforts of some Western firms to train local staff and transfer business models, human resource management has consisted mainly of expatriation policies based on an ethnocentric perspective—that is, key positions in the organization are filled by employees from the parent company to ensure control or in the absence of host-country qualified executives, among other reasons. Overall, multinationals have only moved to polycentric staffing at the subsidiary level (including the appointment of host nationals for management positions) pushed by local governments, usually after decolonization, in cases of increasingly scarce expatriate staff.⁸

Context—Expanding Perspectives on the Expatriate Situation,” *Journal of Global Mobility* 4, no. 4 (2016): 382–85.

⁶ Mira Wilkins, “The Role of Private Business in the International Diffusion of Technology,” *Journal of Economic History* 34, no. 1 (1974): 166–88.

⁷ Jones, *Multinationals and Global Capitalism*, 260–61; Geoffrey Jones, “Business History and the Impact of MNEs on Host Economies” in Jean J. Boddewyn, ed., *Multidisciplinary Insights from New AIB Fellows*, Research in Global Strategic Management series, vol. 16 (Bingley, 2014), 177–98.

⁸ Geoffrey Jones, *Entrepreneurship and Multinationals: Global Business and the Making of the Modern World* (Cheltenham, 2013), 37, 131–32; Stephanie Decker, “Building Up Goodwill: British Business, Development and Economic Nationalism in Ghana and Nigeria, 1945–1977,” *Enterprise & Society* 9, no. 4 (2008): 602–13, <https://doi.org/10.1017/S1467222700007540>; Daniel R. Headrik, *The Tentacles of Progress: Technology Transfer in the Age of Imperialism* (Oxford, 1988); Caroline Piquet, “The Suez Company’s Concession in Egypt, 1854–1956: Modern Infrastructure and Local Economic Development,” *Enterprise &*

In this article we explore the long-term effects of FDI on local human capital, making use of a business history approach and of multiple-case analysis. We define human capital narrowly, as we are interested in the knowledge, skills, and competencies embodied in managerial and technical professionals (as further developed later, from engineers to marketing professionals and plant managers), which are at the core of the modern business enterprise. Focusing on four American subsidiaries in twentieth-century Spain, we aim to assess the role played in knowledge dissemination both by local-context variables and by corporate decisions on entry mode, and on staffing and training strategies. In selecting the local-context variables we follow Klaus E. Meyer, Ram Mudambi, and Rajneesh Narula, who distinguish two dimensions of local context: institutional framework (in our study, laws shaping FDI) and resource endowment (in our study, existing human capital).⁹ Our choice of corporate-decision variables relies on the historiography mentioned above. Regarding staffing and training policies, our analysis is based on a sample of 120 top officers, or 27 percent of an estimated total of 445. We draw on corporate and national archives in Spain and the United States, as well as interviews, for the empirical study.

Our choice of host and home countries, and of case studies, deserves an explanation as well. First, we focus on twentieth-century Spain as an example of a Western middle-income, but highly technologically dependent, host economy. Notwithstanding remarkable advances in terms of entrepreneurship and technical education since at least the mid-nineteenth century, Spain did not complete its industrialization and reach Western socioeconomic levels until the 1970s.¹⁰ From the 1920s, when the earliest of the companies studied here initially entered Spain, to the late 1970s, when this story ends, Spain experienced civil war (1936–1939), then stagnation and isolation in the 1940s, and recovery in the following decades thanks to help from the United States in the 1950s and increasing liberalization in the 1960s.¹¹ Institutional modernization—in terms, for instance, of the tax system and the liberalization of commodity and capital markets—did not conform to Western European “standards” until the end of Franco’s dictatorship in 1975. The reforms undertaken then put an end to the economic nationalism that had

Society 5, no. 1 (2004): 107–27; Keetie Sluyterman, “Decolonisation and the Organisation of the International Workforce: Dutch Multinationals in Indonesia, 1945–1967,” *Business History* (advance online publication 17 July 2017), <https://doi.org/10.1080/00076791.2017.1350170>; Kristin Ranestad, “Multinational Mining Companies, Employment and Knowledge Transfer: Chile and Norway from ca. 1870 to 1940,” *Business History* (advance online publication 6 Dec. 2017), <https://doi.org/10.1080/00076791.2017.1407313>.

⁹ Meyer, Mudambi, and Narula, “Multinational Enterprises and Local Contexts.”

¹⁰ Leandro Prados, *Spanish Economic Growth, 1850–2015* (London, 2017), 40–43.

¹¹ Gabriel Tortella, *The Development of Modern Spain* (Cambridge, Mass., 2000).

prevailed in the country since the 1920s, reaching its peak during the autarkic period of the 1940s. Growth and institutional change accelerated with Spain's entrance into the European Economic Community (EEC) in 1986. While Spain was among the poorest countries within the EEC at the time of its entry, it was an industrialized nation. In the years that followed EEC membership, Spanish literacy rates, among other educational variables, converged with the Western European average.

Spanish modernization relied heavily on foreign investment and technology.¹² While the literature has traditionally attributed this technological dependence to the shortage of domestic entrepreneurship, recent scholarship has highlighted the overwhelming capacity demonstrated by Spanish firms to learn from foreign corporations.¹³ This capacity to absorb foreign knowledge would contribute to the creation of competitive advantage.¹⁴ Foreign firms chose to cooperate with local companies not only to overcome their lack of knowledge of the domestic market and overall liability of foreignness, but also to accommodate Spain's economic nationalism and the resultant dominance of local business groups.¹⁵ So, greenfield investment shaped the early history of U.S. FDI in Spain, as in other countries, because of the scarcity of local partners in the new high-tech industries related to the Second Industrial Revolution.¹⁶ But, joint ventures formally or informally controlled by the U.S. partner were the dominant entry mode for large industrial enterprises in the mid-1960s. This set a quite unique pattern in the European context and makes MNEs' entry-mode strategy a variable that deserves our attention, by examining how the local context shapes corporate decisions.¹⁷

¹² Juan Muñoz, Santiago Roldán, and Ángel Serrano, *La internacionalización del capital en España, 1959–1977* (Madrid, 1978).

¹³ Particularly in small and medium enterprises, technical assistance contracts, manufacturing licenses, and hiring foreign technicians, among others, were powerful sources of knowledge. Nuria Puig and Adoración Álvaro-Moya, "The Long-Term Impact of Foreign Multinational Enterprises in Spain: New Insights into an Old Topic," *Journal of Evolutionary Studies in Business* 1, no. 2 (2016): 14–39; Jesús M. Valdaliso, "Accounting for the Resilience of the Machine-Tool Industry in Spain (c. 1960–2015)," *Business History* (advance online publication 20 July 2018), <https://doi.org/10.1080/00076791.2018.1473380>.

¹⁴ Mauro F. Guillén, *The Rise of Spanish Multinationals: European Business in the Global Economy* (Cambridge, Mass., 2011).

¹⁵ Nuria Puig and Adoración Álvaro-Moya, "La huella del capital extranjero en España: un análisis comparado," *Revista de Historia Industrial* 58 (2015): 249–85.

¹⁶ Jones, *Multinationals and Global Capitalism*, 260.

¹⁷ James Vaupel and Joan P. Curhan, *The Making of Multinational Enterprise: A Sourcebook of Tables Based on a Study of 187 Major U.S. Manufacturing Corporations* (Boston, 1969), 384–85; Andrea Colli, "Multinationals and Economic Development in Italy during the Twentieth Century," *Business History Review* 88, no. 2 (2014): 303–27; Hubert Bonin, "American Business Spreading Modernity into France," in *American Firms in Europe (1880–1980): Strategy, Identity, Perception and Performance*, ed. Hubert Bonin and Ferry

Second, we analyze the operations of four leading U.S. companies in the country. Since our focus is on the host market, our choice of companies allows us to offset potential home-country effects of MNEs' recruiting and training practices. Note that Anglo-American companies tend to rely more on the market and the existing skills of newly recruited managers than on the on-the-job training characteristic of continental European and Japanese firms.¹⁸ The United States has consistently ranked among the four largest foreign investors and trade partners of modern Spain.¹⁹ American firms became hegemonic in the middle decades of the twentieth century, representing 40 percent of total foreign investment and 25 percent of Spain's capital stock in the 1960s.²⁰

Third, to separate industry-specific variables affecting knowledge transfer from the influence exerted by the local context, we carry out a multiple-case analysis that comprises both manufacturing and service industries (chemicals, farm machinery, telecommunications, and advertising) in which American investment was highly concentrated in the case of Spain.²¹ The four American firms selected—International Telephone and Telegraph (ITT), J. Walter Thompson (JWT), Merck Sharp & Dohme (MSD), and John Deere (JD)—were global leaders and were positioned at the technological frontier during the period analyzed here. Moreover, all four reached prominent positions in the Spanish market, contributed to the formation of domestic staff, and developed a lasting relationship with the host economy (see Table 1).

The period of study varies across the case studies—depending on when each multinational settled in Spain and the duration of its influence on the local subsidiaries—but does not extend either before the first important wave of U.S. investment in the 1920s or beyond the structural reforms of the late 1970s. The location of their headquarters, mainly in Madrid, warrants further explanation. Not only was Madrid the political and administrative capital of Spain, but Franco's government explicitly encouraged the economic development of the Madrid region over that of the historical industrial districts of Catalonia and the Basque Country.²² American companies were particularly responsive

de Goey (Geneva, 2009), 550–57; and Ferry de Goey and Ben Wubs, "US Multinationals in the Netherlands in the Twentieth Century: 'The Open Gate to Europe,'" in Bonin and de Goey, *American Firms in Europe*, 163–65.

¹⁸ Dunning and Lundan, *Multinational Enterprises*, 449.

¹⁹ Puig and Álvaro-Moya "The Long-Term Impact," 16–17.

²⁰ Muñoz, Roldán, and Serrano, *La internacionalización*, 130.

²¹ Adoración Álvaro-Moya, "Hízose el milagro. La inversión directa estadounidense y la empresa española (c. 1900–1975)," *Investigaciones de Historia Económica* 7, no. 3 (2011), 364–65.

²² Tortella, *The Development*, chap. 12.

Table 1
Overview of Four U.S. Companies' Operations in Spain,
1924–1970

<i>U.S. Company [industry]</i>	<i>Years</i>	<i>Entry Mode and Ownership Structure</i>
ITT [telecommunications]	1924–1945	Subsidiaries (Telefónica and SESA) with Urquijo Group and other Spanish minority shareholders
	1945	Nationalization of Telefónica
	1945–1970s	Technical cooperation and supplier agreements ITT-Telefónica
J. W. Thompson (JWT) [advertising]	1927–1931	Full subsidiary (JWT Spain)
	1931–1935	Loose cooperation JWT and Thomson Publicidad
	1949–1963	Cooperation agreement JWT and Ruescas
	1963–1966	Joint venture JWT and Alas
	1966–1980	Full subsidiary (JWT Spain)
Merck Sharp & Dohme (MSD) [pharmaceuticals]	1949–1978	License and manufacturing agreement Merck & Co., (MSD after 1953) and Spanish firm CEPA (controlled by Urquijo Group)
	1954–1978	Research agreement MSD and CEPA to create joint R&D center
	1957	Distribution agreement MSD-CEPA
	1968–1978	Full commercial subsidiary (MSD Spain) Clinical research unit and cooperation MSD and Spanish scientific institutions
	1978	Full manufacturing subsidiary (MSD Spain) and acquisition of R&D center
	1956–1961	Manufacturing joint venture (Lanz Ibérica, John Deere Lanz since 1959; JD and Medem family and Spanish banks)
John Deere (JD) [agricultural machinery]	1961–1967	Commercial joint venture (JD and Medem family)
	1970	JD's full manufacturing and commercial subsidiary after subsequent capital share increases (John Deere Ibérica)

Source: Authors' compilation.

to this scenario, and most relevant subsidiaries were located in Madrid.²³

In the following sections, we present our case studies. After a brief overview of these companies' operations in Spain, we focus on their hiring and training practices to see how they were influenced by the

²³Almost 36 percent of the stock of inward FDI between 1960 and 1972 was concentrated in Madrid, followed by Catalonia (26 percent); within Catalonia, investment was concentrated in Barcelona and its surrounding towns. Muñoz, Roldán, and Serrano, *La internacionalización*, 131–33.

availability of managers and professional personnel as well as educational institutions that acted as recruitment pools; to assess which direct and indirect effects resulted in terms of knowledge transfer within and beyond subsidiaries; and to analyze how this process was shaped by the multinationals' entry strategies and economic policies. Here, contrary to cases of subsidiaries in many colonial settings, the nationality of local employees is not determinant.

International Telephone and Telegraph, 1924–1970s

ITT was one of the largest telecom groups of the twentieth century. Founded in 1920 as a small Caribbean operator, and a typical example of a freestanding firm, ITT was by the end of that decade a top-tier global communication conglomerate.²⁴ This transformation was possible thanks to two interrelated strategic decisions: the creation of the Spanish *Compañía Telefónica Nacional de España* (hereafter, *Telefónica*) in 1924 and, one year later, the acquisition of the telephone equipment manufacturer International Western Electric, the international subsidiary of Western Electric (outside the United States and Canada), which was renamed International Standard Electric (ISE).²⁵

Telefónica was the first large-scale foreign investment of ITT. It was founded in 1924 to bid for the Spanish telephone network monopoly, which the company was granted after a few months. Both the terms of the contract signed with the Spanish government in 1924 and the logistics of the work itself necessitated having suppliers in the country. ITT thus sought potential suppliers, which led to acquisition of the company later known as ISE. Consequently, ITT then became and was, until the nationalization of *Telefónica* in 1945, the largest American investor in Spain.²⁶ Since 1924, all ITT subsidiaries in the country ultimately revolved around *Telefónica*, including a new ISE manufacturing plant and minor investments in radio and finance (see [Table 1](#)).

²⁴ Tetsuo Abo, "ITT's International Business Activities, 1920–40: The Remarkable Advance and Setback of a 'Pure International Utility Company,'" in *The Growth of Multinationals*, ed. Mira Wilkins (Aldershot, 1991), 512–36; Dwayne R. Winseck and Robert M. Pike, *Communication and Empire: Media, Markets, and Globalization, 1860–1930* (Durham, 2007), 303–18.

²⁵ Maurice Deloraine, *When Telecom and ITT Were Young* (New York, 1974). Western Electric was integrated into AT&T, which held the monopoly on phone service in the United States and Canada for most of the twentieth century. In 1925, AT&T sold International Western Electric to avoid U.S. antitrust legislation. Mira Wilkins, *The Maturing of Multinational Enterprise: American Business Abroad from 1914 to 1970* (Cambridge, Mass., 1974), 70–71.

²⁶ Álvaro-Moya, "Hízose el milagro," 360.

ITT's success relied largely on the network of contacts—local politicians, engineers, and business groups—that it had developed.²⁷ The most lasting and fruitful relationship was with Urquijo Group, Spain's largest private industrial group for most of the twentieth century and by the time Telefónica was founded also connected with international corporations in the electric industry.²⁸ Although Urquijo Group possessed only symbolic participation capital in Telefónica (less than 1 percent), it occupied several positions on the Board, including the presidency and it was instrumental in allowing ITT to preserve its interests in the country despite various nationalistic threats from the government and a civil war.

In 1924, the Spanish telephone service was poor and expensive. ITT absorbed the existing local operators, developed a truly national network, expanded the organizational structure with new departments and regional units, and reinforced control through protocols and operational routines.²⁹ The modernization of Telefónica and the national telecom network required a large and trained staff that the young ITT did not have yet. However, recruiting new people was difficult because telecommunication studies was quite a young field in Spain—the first degree in telecommunications was granted in 1920.³⁰ This was one reason ITT pushed in-house training of local employees. Another was that the contract signed in 1924 between Telefónica and the government stipulated that at least 80 percent of the staff had to be local, a requirement that was subsequently applied to ISE's Spanish subsidiary (SESA) as well. The information available shows that this commitment was quickly fulfilled. From 1924 to 1928, of the 7,600 employees working for Telefónica, 250 were Americans.³¹ In 1932, apart from the five ITT representatives on the firm's board of directors and top managers in four departments (auditing, construction and maintenance, engineering, and sales), there were only thirteen foreigners on the staff, working in the

²⁷ Adoración Álvaro-Moya, "Networking Capability Building in the Multinational Enterprise: ITT and the Spanish Adventure (1924–1945)," *Business History* 57, no. 7 (2015): 1082–111.

²⁸ William Hausman, Peter Hertner, and Mira Wilkins, *Global Electrification: Multinational Enterprise and International Finance in the History of Light and Power, 1878–2007* (New York, 2008), 135–36, 349n91; Núria Puig and Eugenio Torres, *Banco Urquijo: Un banco con historia* (Madrid, 2008).

²⁹ Compañía Telefónica Nacional de España (CTNE), *La nueva red telefónica de España* (Madrid, 1928); Robert Sobel, *ITT: The Management of Opportunity* (Washington, D.C., 2000), chap. 3; Ángel A. Calvo, *Historia de Telefónica: 1924–1975: Primeras décadas: tecnología, economía y política* (Barcelona, 2010), chap. 3; Deloraine, *Telecom and ITT*.

³⁰ "Escuela General de Telegrafía (1913–1929)," Escuela Técnica Superior de Ingenieros de Telecomunicación, Universidad Politécnica de Madrid (former Official School of Telegraphy), accessed 13 Feb. 2017, <http://www.etsit.upm.es/escuela/historia/escuela-general-de-telegrafia-1913-1929.html>.

³¹ "ITT's Memorandum 26 February 1940," R1671/6, Archivo Histórico del Ministerio de Asuntos Exteriores [Archive of the Ministry of Foreign Affairs], Madrid, Spain.

construction and maintenance, sales, and engineering departments.³² In the case of the Spanish subsidiary of ISE, however, all senior officials were foreigners, either Americans or executives from other European subsidiaries.³³

The training of local staff initially relied on ITT's engineers, accountants, and managers, as well as ITT-recruited experts from AT&T.³⁴ But soon Spaniards became the instructors. All formal personnel training was channeled through the Escuela de Telefonía (Telephone School), founded in 1925 and since 1926, the company's training department.³⁵ Most of the courses offered were also offered at ISE's Spanish branch and were aimed at shop-floor workers, middle managers, and office employees.³⁶

No great changes took place in management positions after Telefónica's nationalization in 1945. By that time only four American executives still played key roles: the executive vice president, general director of the operations departments (auditing, construction and maintenance, engineering, and sales), chief executive of the auditing department, and assistant manager of construction and maintenance.³⁷ Indeed, by virtue of the nationalization agreement, Telefónica would sign two contracts with ITT for its technical advice and equipment. ISE's Spanish branch, controlled by ITT until its acquisition by France's Alcatel in the early 1980s, was Telefónica's exclusive supplier until the 1960s.³⁸ The historical record shows that the role played by ITT executives in Telefónica began to diminish in the late 1950s, in favor of the local managers they had trained and collaborated with throughout their professional lives.³⁹ The 1950 and 1955 work plans were both designed entirely by Spanish engineers and in 1955 for the first time without ITT's advice. But even before 1950, Spanish engineers had developed many of the first projects to expand telephone service in the country.

Our sample of top managers in Telefónica includes 110 professionals who worked in the company between 1924 and 1963, of which we studied around 60 directors. But to delve deeper into the relationship between FDI and local technical employees, we reconstructed the professional

³² Minutes of the Executive Committee 406, 28 Sept. 1932, Archivo Telefónica [Telefónica's Archives], Madrid, Spain (hereafter AT).

³³ Manuel Márquez, *Manuel Márquez Mira: hombre de empresa* (Madrid, 1976), 149.

³⁴ Deloraine, *Telecom and ITT*, 67.

³⁵ Revista Telefónica Española [Spanish Telephone Review, Telefónica's corporate journal], Jan. 1925 and Sept. 1926; Telefónica, *1926 Annual Report*, AT.

³⁶ Ángel A. Calvo, *Telecomunicaciones y el nuevo mundo digital en España. La aportación de Standard Eléctrica* (Barcelona, 2014), 76.

³⁷ "II Reunión de Jefes Técnicos," July 1945, Fundación Telefónica Archives [Telefónica Foundation Archives], Madrid, Spain.

³⁸ Calvo, *Telecomunicaciones*, chap. 3.

³⁹ Minutes of the Board of Directors and of the Executive Committee (1924–1980), AT.

careers of top managers in the engineering, sales, and auditing departments, between 1924 and ITT's nationalization, a total of eight people.⁴⁰ Of these top managers, six were engineers and two were architects, all with degrees from Spanish universities. They had joined Telefónica, most of them in the 1920s, to work first under the supervision of ITT's executives and engineers, and they had dedicated their entire professional careers to the telecommunication firm. Furthermore, these professionals, in particular José María Clara Corellano and Manuel Marín Bonell, became regular collaborators with local training institutions, were very active in national and international scientific forums, and some of their publications were used to train ITT's staff worldwide. Although beyond the scope of this study, Telefónica's engineering department was the seed, in the late 1960s, of Telefónica's R&D center. A similar institution was promoted at ISE's Spanish branch.⁴¹

The case of ITT illustrates the challenges in terms of capital and human resource management that characterize young multinationals. While other studies have examined ITT training practices for telephone operators, here we have looked at top management and technical positions.⁴² The polycentric staffing strategy followed by ITT might be a response to this firm's accelerated internationalization, but a response also to a local context characterized by an industry restructuring in a regulated sector (telecommunications until very recently), an industry strategic for the country's growth (and target of nationalist groups because of it), and an industry experiencing very fast technological change. Having highly skilled and trained locals was key to adapting to both international and national forces.

J. Walter Thompson, 1927–1980

Advertising agencies were fundamental in the internationalization of American firms, systematically exploring foreign markets and using advanced methods to influence local consumer behavior. Between the late 1920s, when JWT arrived in Europe and paved the way for General Motors (GM), and the 1980s, when it sold out to the British

⁴⁰ Ibid.; Francisco J. García Algarra, "Centrales telefónicas norteamericanas en los años 20: Estudio de la formación de una tipología arquitectónica" (PhD diss., Universidad Nacional a Distancia, 2005), 307–10; Asociación Española de Ingenieros de Telecomunicación (AEIT), *Relación de los ingenieros*; AEIT, *Boletín* (Madrid, 1941); Alfredo Marín Camacho, "Manuel Marín Bonell," in *Cuatrocientos años de los Marín*, ed. Alfredo Marín (Valencia, 2009), 137–51; Ayuntamiento de Morella, "Fondo Manuel Marín," accessed 13 Feb. 2017, <http://www.morella.net/museu/arxiu/?lang=es>.

⁴¹ Calvo, *Telecomunicaciones*, 135, 305–6.

⁴² Cristina Borderías, *Entre líneas: Trabajo e identidad femenina en la España Contemporánea. La Compañía Telefónica, 1924–1980* (Barcelona, 1993).

media group WPP, this leading agency dramatically changed European marketing and advertising. JWT did so by introducing a scientific approach that reshaped markets and the advertising profession alike. JWT's clients were high-profile U.S. manufacturers of consumer goods willing to pay up to 20 percent of their net sales in exchange for a complex service. Over time, the agency learned to work with local firms and institutions as well. JWT would become Spain's top advertising agency between 1975 and 1987, as well as a training ground for professional advertisers.⁴³ Although most of the agency's clients were American multinationals, in the 1970s the number of Spanish clients was increasing.

The story of JWT Spain is all but straightforward.⁴⁴ Like most of JWT's European subsidiaries, it started as a full subsidiary, led by U.S. managers and supervised closely by the New York headquarters. Bad timing, founded on the eve of the Great Depression and GM's collapse, and a too-American approach to the diversity and complexity of European markets put an abrupt end to JWT's first attempt at internationalization in 1935. The agency would return to the Spanish market in 1949, first in cooperation with local agencies and then from 1966 on as a full subsidiary (see Table 1).

Arthur Hartzell, an American, was JWT's first director in Spain, from 1927 to 1932. According to a report he presented in New York in the summer of 1930, the Spanish office spent its first six months doing research and collecting statistics on Spain and the Spanish market for automobiles, trucks, and electrical appliances.⁴⁵ Hartzell was particularly interested in Spain's potential market for GM, Westinghouse, and other American multinationals. He was ambivalent about the country, however. On the one hand, he saw it as primarily rural, with low purchasing power, extremely low literacy rates, low newspaper circulation rates, and many other idiosyncrasies in comparison with other European nations. Therefore, he advised simplifying and adapting ready-made

⁴³ Julián Bravo, *J. Walter Thompson en España de 1927 a 1936* (Madrid, 1978).

⁴⁴ This case study relies on documents from the J. Walter Thompson archives at the John W. Hartman Center for Sales, Advertising & Marketing History, Rubenstein Library, Duke University, Durham (hereafter JWTA); J. Walter Thompson (JWT), *J. Walter Thompson España: 25 años* (Madrid, 1991); JWT España, *Tenemos diez años* (Madrid, 1976); JWT España, *El mercado y nuestros anuncios* (Madrid, 1984); and JWT España, *JWT 25: Esto no es un cuchillo de palo* (Madrid, 1991). This study also utilizes interviews with Julián Bravo (JWT Spain: director, 1966–1992; CEO, 1974–1988; executive president, 1988–1992), Ramón Perales (JWT Spain, top executive), and M. Rosa Pesquera (JWT Spain, top executive); all interviews by Núria Puig, 2004 and 2005, JWT España, Madrid. We have not yet examined two new resources at Duke University's Hartman Center—Edward G. Wilson papers and Rena Bartos papers—both of which hold information about JWT Spain.

⁴⁵ Representatives' Meetings, 29 July 1930, JWTA; Research Reports, Spain 1927–1930, JWTA.

advertisements from New York to fit the Spanish market. On the other hand, Spain was a promising and relatively easy market for some consumer goods, and foreign advertising was highly regarded. JWT had “an enviable reputation for fair dealing, conscientious work, prompt payment and high charges.”⁴⁶ The large fees it demanded (17.65 percent of net sales compared to 1 to 5 percent by Swiss, German, and Spanish agencies) were indeed a problem.

In New York, Hartzell continued to advocate adaptation, arguing that “our future depends upon the growth of our local business and the development of our personnel to the point where we are known as an authority on advertising.”⁴⁷ He observed that “what we have to bring is the vast experience of the JWT company in advertising which can be applied to these problems of the country because when all is said and done, the advertising problems are the same whether in the US or Europe; it is the methods of solving those problems that are different because no two markets have been developed to an equal point.”⁴⁸ His vision was proved to be right thirty years later. Despite Hartzell’s doubts, JWT’s Spanish subsidiary did comparatively well in terms of sales and profitability.⁴⁹ The American agency was associated with rational advertising based on consumer research and reading habits and media analysis. The organization of the Spanish office was a small replica of the standard foreign office, with a neat division of labor among departments, a rarity in a trade where everyone was expected to do everything. Under the supervision of a British artistic director, most of the artwork was developed outside the subsidiary.

In 1931 GM, hit by the Great Depression, decided to retreat from most European markets—Spain included—and closed its account with JWT. Hartzell returned to New York and JWT Spain moved its office from Madrid to Barcelona, where most of its remaining clients were, and hired Malcolm Thomson, who was British, to run it. Under a new name, Thomson Publicidad, and a loose relationship with JWT, the agency developed its own methods and projects until 1935, when Thomson moved to Veritas, a dynamic agency established years earlier by a group of leading Spanish manufacturers of consumer goods.⁵⁰ Veritas’s refusal to merge and the outbreak of the Spanish Civil War in 1936 accelerated the end of Thomson’s agency.

⁴⁶ Representatives’ Meetings, 29 July 1930, JWTA.

⁴⁷ *Ibid.*

⁴⁸ *Ibid.*

⁴⁹ In 1928, it represented 4.5 percent of JWT’s European business and 7.1 percent of GM’s European sales. Profitability was higher than the average (6.8 percent versus 5.5 percent) and labor costs remained relatively low (57.2 percent of total costs). Research Reports, Spain 1927–1930, JWTA.

⁵⁰ Bravo, *J. Walter Thompson*; interview with Julián Bravo.

The dramatic fall of Spanish consumption levels during the long postwar period created a gloomy scenario in Spain. However, the fact that Pan American World Airways, Ford, and other prominent JWT clients continued to operate in the country led the company to return to Spain in 1949 and seek a local partner: Ruescas.⁵¹ Its founder, Francisco García Ruescas, had studied economics and marketing in London and worked for the Spanish agencies Dardo and Alas from 1941 to 1949.⁵² Upon returning from a fruitful stay in the United States, he founded Ruescas and became a passionate educator and a key person in the emerging institutional infrastructure of Spanish advertising. This infrastructure included a school of marketing and advertising and a nationwide association of large advertising clients. When negotiations to consolidate the collaboration agreement between JWT and Ruescas failed, Ruescas associated with McCann-Erickson while JWT turned to Spain's leading agency, Alas, to establish a joint venture that lasted until 1966. In accordance with Spanish law, the Spaniards possessed most of the share capital (51 percent) in this venture.

The fast-growing Spanish market, its abundance of creative talent, and an ever-friendlier legal framework for foreign companies led JWT to establish a full subsidiary, JWT España, in 1966, with Manuel Eléxpuru at the helm. Eléxpuru, a dropout architecture student, had begun at Clarín in 1955 as a cartoonist and graphic designer. His creative and organizational talents took him to the top first of Clarín, and then of Alas, in record time. JWT CEO Don Johnson entrusted Eléxpuru with putting its first team together, a team that remained remarkably stable through the years, in contrast to the high turnover of the rest of the staff. Eléxpuru's closest collaborator was Julián Bravo. After studying law and business at the University of Madrid, Bravo worked for the Spanish-American agency Publinsa, Kenyon & Eckhardt, where he learned on the job and was offered the opportunity to spend a year in New York.⁵³ Like Ruescas fifteen years earlier, Bravo became an engaged disseminator of American-style marketing and advertising in professional and academic areas. He would go on to be a prolific writer and effective institutional entrepreneur in his field. Within JWT Spain, Bravo developed programs of in-house training, work by objectives, and an exchange program that allowed employees to spend time in any of JWT's foreign branches. Last but not least, he built an outstanding professional team.

⁵¹ Sam Meek Papers, Madrid, correspondence, 13 Mar. 1961, JWTA.

⁵² Francisco García Ruescas, *Historia de la publicidad en España* (Madrid, 1971); Francisco García Ruescas, *Relatos al final del camino* (Madrid, 1995).

⁵³ Clemente Ferrer Rosello, *Los gurús de la publicidad* (Madrid, 1996); Fernando Montañés, *Una historia de la publicidad y el consumidor en España* (Madrid, 2014).

By the time JWT established its own subsidiary in Spain, the company's other European offices, active since the immediate post-World War II period, had learned to creatively adapt their New York-made portfolios to the characteristics of local markets. However, research remained the agency's blueprint, and our study shows that the reputation of the Spanish office relied on and would continue to rely on its thorough methodology, even if a growing number of agencies had already adopted similar methods. In any case, JWT remained a trendsetter. It released yearly analyses of socioeconomic indicators and pioneered in-house training of personnel. More than anything else, this strategy helped to disseminate JWT's methods and style within the Spanish advertising industry. Our research reveals that JWT Spain's clients remained strikingly loyal. American multinationals continued to be its most important clients, but in the 1970s a number of Spanish corporations would join the roster as well.

Indeed, JWT Spain grew exponentially between 1966 and 1980, and the number of employees rose from 22 to 108.⁵⁴ This growth was characterized by high turnover rates at the lower and middle levels and stability at the top. The good results of the Spanish office, stated in the flattering reports written by Denis Lanigan, the JWT European director, explain why Eléxpuru's team increased both their autonomy and influence within JWT's international organization. In 1974, the two American directors, Lee Pavao and Bill Peniche, who had supervised the Spanish subsidiary, were replaced by Spanish managers. Eléxpuru and Bravo were appointed chairman of the board of directors and CEO, respectively, and in 1980 the number of Spanish partners rose to fourteen. Two years later, the board of directors became all-Spanish as well, and Eléxpuru was appointed executive vice president of JWT Worldwide.

In spite of the relatively small size of JWT Spain, its influence on the Spanish advertising industry was remarkable. Between 1963 and 1980, according to our estimates, there were around two hundred professionals working for JWT Spain. Further, our research on the individual careers of almost thirty local directors confirms that the institutional and educational involvement by these approximately two hundred professionals left its mark on this creative industry.

Merck Sharp & Dohme, 1949–1978

The world pharmaceutical industry underwent dramatic changes after World War II. Not only did wartime cooperation between governments and private firms produce major innovations (such as penicillin

⁵⁴ JWT, *J. Walter Thompson España*.

manufactured on an industrial scale), but it paved the way for changing the rules of the game under U.S. leadership; specifically, the cartelized structure of prewar industry was replaced by an emerging technological market in which patents, licenses, and technical assistance could be traded freely at decreasing prices.⁵⁵ One of the founders of the modern antibiotics industry and the postwar architecture of pharmaceutical research and manufacturing was MSD, headquartered in Rahway, New Jersey. It should be noted that Merck & Co. and its customer for fine chemicals Sharp & Dohme merged in 1953.

In the 1950s and 1960s, the Spanish pharmaceutical market became one of the ten largest markets in the world.⁵⁶ Despite the nationalistic mindset of General Franco's early governments, the spectacular development of this postwar industry took place without interference from the government or competition from state-owned firms and with the assistance of foreign, particularly American, companies. A law passed in 1948 established a private duopoly in the emerging antibiotics industry: Compañía Española de Penicilina y Antibióticos (CEPA) and Antibióticos SA.⁵⁷ Both firms were granted fiscal and administrative privileges and the exclusive right to sell in the domestic market. We focus here on CEPA, founded in 1949 by the Spanish business group Urquijo with the technical assistance of Merck & Co. (MSD after 1953). Like Antibióticos, CEPA became one of the largest Spanish pharmaceutical firms in terms of capital and employees, strengthening its ties with the Universities of Madrid and Barcelona, and promoting an organized defense of Spain's pharmaceutical industry.⁵⁸ Many of the scientists involved in the research and manufacture of antibiotics in Spain were already familiar with American institutions. Between 1919 and 1936, the Rockefeller Foundation had provided support to the country's public health system.⁵⁹ After 1958, ties between American and Spanish medical schools would be reinforced through the Spanish Fulbright program, which was strongly focused on the life sciences.

⁵⁵ Núria Puig, *Constructores de la química moderna: Bayer, Cepsa, Puig, Repsol, Schering y La Seda* (Madrid, 2003), chap. 4; Núria Puig, "Networks of Innovation or Networks of Opportunity? The Making of the Spanish Antibiotics Industry," *Ambix* 51, no. 2 (2004): 167–85.

⁵⁶ Puig, *Constructores*, chap. 4; Puig, "Networks of Innovation"; Núria Puig, "Networks of Opportunity and the Spanish Pharmaceutical Industry," in *Innovation and Networks in Europe*, ed. Paloma Fernández and Mary Rose (London, 2010), 164–83.

⁵⁷ Puig, "Networks of Innovation".

⁵⁸ María Jesús Santesmases, *Antibióticos en la autarquía: banca privada, industria farmacéutica, investigación científica y cultura liberal en España, 1940–1960* (Madrid, 1999).

⁵⁹ Esteban Rodríguez-Ocaña, "La intervención de la Fundación Rockefeller en la creación de la sanidad contemporánea en España," *Revista Española de Salud Pública* 74 (2000): 27–34.

As shown in [Table 1](#), the introduction of MSD in Spain took place in five steps. The first was a technical and manufacturing agreement in 1949 between CEPA—represented by the brilliant scientist Antonio Gallego—and Merck & Co.⁶⁰ This agreement was renewed and expanded in 1951 and 1955. CEPA's strategy of matching MSD's interests (reaching the Spanish market, selling raw materials, and cashing and repatriating royalties and dividends) to Spain's official requirements (saving dollars, minimizing royalties, and retaining dividends at home) consisted of paying royalties and dividends on MSD's planned investments and raw materials.

The story of CEPA is closely linked to the pharmaceutical complex built by Urquijo Group. After World War II, the group would go on to acquire many expropriated German firms, playing a remarkable role in Spain's economic/diplomatic relations with the United States and becoming the voice of the Ford Foundation in Spain.⁶¹ One of the leading expropriated German firms, Schering, became the foundation of CEPA, directed by Gallego. He had been hired through his brother José Luis, the scientific director of Bayer, which was also expropriated, in Spain. Schering's excellent sales network was used to commercialize the first antibiotics manufactured by CEPA under MSD's license, and the rising profits of Schering itself kept CEPA going during its difficult beginning. Moreover, Bayer and Schering financed one of the few private scientific institutions of the time, the Instituto Español de Farmacología (IFE), founded in 1950 at the University of Madrid.

The IFE's contribution to the second step is the Natural Products Screening Program, which is the origin of MSD's research center in Madrid (Centro de Investigación Básica Española [CIBE]) and an extremely interesting piece of the scientific-academic puzzle constructed by Gallego in postwar Spain.⁶² In 1954, he persuaded MSD to establish a branch of the newly launched screening program to identify natural active ingredients that were later synthesized in the United States. The modest research unit focused on the continued work of Dr. Martínez

⁶⁰ Industria, box 5112, folder 37Q, Archivo General de la Administración [General administration archives], Madrid, Spain (hereafter, AGA).

⁶¹ Núria Puig and Adoración Álvaro-Moya, "La guerra fría y los empresarios españoles: la articulación de los intereses económicos de Estados Unidos en España, 1950–1975," *Revista de Historia Económica* 22, no. 2 (2004): 413–14; Núria Puig and Adoración Álvaro-Moya, "Misión imposible: la expropiación de las empresas alemanas en España, 1945–1975," *Investigaciones de Historia Económica* 7 (2007): 103–32; Puig and Torres, *Banco Urquijo*, 196–201.

⁶² Jeffrey Sturchio, *Values and Visions: A Merck Century* (Rahway, N.J., 1992); Sagrario Mochales, "Forty Years of Screening Programmes for Antibiotics," *Microbiología* 10, no. 4 (1994): 331–42; W. R. Strohl, H. B. Woodruff, R. L. Monaghan, D. Hendlin, S. Mochales, A. L. Demain, and J. Liesch, "The History of Natural Products Research at Merck & Co., Inc.," *SIM News* 51, no. 1 (2001): 5–19.

Mata and his small team of fourteen people, most of whom were trained and supervised by MSD at Rahway or Madrid. According to Sagrario Mochales, who started as an intern in 1954 and ended up heading this research center from 1988 to 1998, the relationship between Rahway and Madrid was excellent, and the meager salaries (paid by CEPA) did not dampen the enthusiasm of its members.⁶³ Joining the screening program at such an early stage meant having an overview of how this pioneering firm planned its research—an opportunity that few foreign firms had previously offered Spanish researchers. Gallego's persuasive nature and his personal relationship with Oswald Stapley, MSD's program director, help explain why the American firm, whose few foreign research units were located in highly developed countries, accepted the Spanish proposal.

How influential was the screening program on the scientific and industrial fabric of Spain? According to Mochales and Isabel Martín (a student of Gallego's who had a lifelong career at CIBE), the program cannot be separated from the larger IFE, where most of the recruitment and training of young researchers was done. Both scientists note that, despite Gallego's efforts, the worlds of the Institute and the screening program remained outside Spanish academia. Indeed, the industry-minded researchers working within this unique post-World War II arrangement were regarded with suspicion by their academic peers. Consequently, most of the thirty university graduates who worked for the screening program between 1954 and 1978 would spend their careers in the research departments of MSD and other multinational laboratories.

The third step was a 1957 agreement for the distribution of MSD's products by CEPA.⁶⁴ This strategy was common among multinational firms seeking to avoid the many obstacles imposed by the Spanish administration on foreign investment and the commercialization of foreign drugs before 1960. CEPA's records reveal a substantial increase in sales, profits, and staff in the ensuing years.⁶⁵ However, there is no evidence that MSD influenced CEPA's commercial department or sales force in any notable way.

Over time, the Urquijo pharmaceutical complex could not satisfy the expectations of its creators. Falling international prices of raw materials and some active ingredients, the gradual liberalization of the

⁶³ Sagrario Mochales, interview by Núria Puig, 27 June 2001, Madrid. Isabel Martín, Fernando Peláez, and Paloma Fernández-Cano—all senior researchers at CIBE—were also interviewed, 24 Sept., 2 Oct., and 12 Nov. 2001.

⁶⁴ Industria, box 5112, folder 37Q, AGA.

⁶⁵ CEPA *Annual Reports*, 1958–1968, Fundación Juan March, Fondo Banco Urquijo, Madrid, Spain (hereafter, FHBUE).

Spanish economy after 1960, the inexorable advent of petrochemicals, and the approaching expiration of its licensing contracts with Germany combined to bring down the entire structure. As a result, in 1974 CEPA was sold to the Spanish conglomerate Explosivos Río Tinto. The new management fostered backward integration and the acquisition of other Spanish firms. As for the screening program, Explosivos did not seem impressed by its scientific achievements (centered on four new antibiotics patented in the United States between 1972 and 1976).⁶⁶ Understandably, when the opportunity arose in 1978, Martínez Mata and his collaborators moved over to MSD's new manufacturing subsidiary in Madrid.

The forces that harmed CEPA's growth seemed to encourage MSD's independent plans in Spain. Taking advantage of the Spanish government's more liberal policies in the next decade and the expanding domestic market, a commercial subsidiary was established in 1968 on the outskirts of Madrid.⁶⁷ This was the fourth step, well documented in the Spanish National Archives.⁶⁸ In its application, MSD argued that it had cooperated with CEPA in the development of new antibiotics since the foundation of the Spanish firm. Clinical testing was then on the rise in the context of the post-thalidomide shock, which resulted in stricter regulations as well as much longer and more costly processes for the development of new drugs. American laboratories had pioneered the institutionalization of clinical research, then nonexistent in Spain. MSD looked for someone to direct a pioneering clinical testing unit in Madrid and chose Joaquín Mouriz, a medical researcher with wide post-doctoral experience in the United States, sending him to Rahway for more specialized training.⁶⁹ In collaboration with the University of Navarra, MSD helped to create Spain's first clinical pharmacological department, providing the Spanish university with regular funding and launching a competitive biomedical program.

The fifth step was taken in 1978: MSD was granted authorization to build a manufacturing plant in Alcalá de Henares, Madrid.⁷⁰ By then the staff of the multinational firm had risen from 42 to 324 (including only 21 university graduates), 16 of whom were expatriates. The CEO and quality control director were Spaniards. By that time, MSD had built an extensive clinical research network with the Universities of Navarra and Barcelona (Autonomous), Spain's main national research body (Consejo

⁶⁶ Mochales, "Forty Years of Screening Programmes"; Strohl et al., "History of Natural Products Research."

⁶⁷ Industria, box 5112, folder 37Q, AGA.

⁶⁸ Industria, box 322, AGA.

⁶⁹ Industria, box 286, AGA.

⁷⁰ Industria, boxes 291, 292, and 293, AGA.

Superior de Investigaciones Científicas), and Spain's leading military hospital. The list of MSD's scientific collaborators suggests that the American firm knew how to recruit talented and loyal scientists. Under the lead of Mouriz, MSD introduced clinical testing into the Spanish medical system, granted scholarships to promising Spanish doctors and medical researchers (forty-four such scholarships between 1968 and 1977), provided active ingredients and drugs to Spanish hospitals and researchers, and cooperated with the local pharmaceutical industry through CEPA.

The case of MSD, therefore, illustrates how MNEs' knowledge spreads beyond subsidiaries through training and research agreements between firms and universities. In that process, having proper domestic institutions certainly matters, as does having local staff familiar with the domestic educational and science context. And it is in this environment that business groups, such as Urquijo, can emerge as key talent pools.

John Deere, 1956–1970s

The widespread mechanization of agriculture dates from the 1950s in most Western countries.⁷¹ By that time, the market was dominated by a handful of U.S. multinationals, one, Deere & Co., commonly known as John Deere (JD), being at the top.⁷² Compared with other American manufacturers, JD went international quite late when in 1956 it acquired the well-regarded, but declining, German manufacturer Heinrich Lanz. An in-depth reorganization of the company's structure, to support global expansion and focus on marketing activities followed. This strategy, however, proved to be insufficient to cope with saturation in Western markets in the 1960s. JD and global manufacturers then looked to the expanding markets of Latin America, Southern Africa, and Southern Europe, where governments granted niche markets to those foreign companies committed to increasing domestic content in foreign-controlled assembly plants.

This was also the case for Spain, a country in which JD inherited a factory in Madrid owned by Lanz as part of a joint venture with some local partners (Table 1). The U.S. multinational did not begin to reorganize its new European affiliates and subsidiaries, including the one in

⁷¹ Giovanni Federico, *Feeding the World: An Economic History of Agriculture, 1800–2000* (Princeton, 2005).

⁷² Robert T. Kurdle, *Agricultural Tractors: A World Industry Study* (Cambridge, Mass., 1975); Pascal Bye and Jean-Jacques Chanaron, *The Agricultural Machinery Industry in the 1980s: Factors and International Cooperation* (Vienna, 1983); Wayne G. Broehl Jr., *John Deere's Company: A History of Deere & Company and Its Times* (New York, 1984), appendix, exhibit 2.2.

Spain, until 1959.⁷³ JD then undertook a comprehensive two-year program of adapting foreign subsidiaries to the manufacture of John Deere products, as well as to the multinational's corporate culture, global strategy, day-to-day management, and quality standards. In Spain, JD had to also adapt the former Lanz factory to the production of engines and other elements to meet the government's request to increase the amount of local content.⁷⁴ The intelligent adaptation of the American models to the needs of Spanish farmers and the changes introduced in both manufacturing and marketing placed the Spanish subsidiary among the three largest manufacturers in the country since the early 1960s. At the same time, factory facilities were expanded and JD's participation capital in the subsidiary rose to full ownership in 1970, when the subsidiary was renamed John Deere Ibérica (JDI).

The first step to transforming the Spanish subsidiary was training the local top and middle managers in John Deere's business methods, marketing strategies, and accounting practices.⁷⁵ This employed a great novelty, management training (both on the job and in higher education) which was still uncommon in Spain.⁷⁶ Here, American interests coincided with the Spanish drive for productivity, which, supported by the state and again inspired by U.S. technical assistance, had been trying for some years to extend middle-management training among Spanish firms. In the case of JDI, training was handled exclusively by the American multinational.

The arrival of the American executives meant a complete transformation of the work done on the shop floor. As in many other large Spanish firms at that time, rationalization and scientific management methods became the rule.⁷⁷ Safety and security standards were also

⁷³ Broehl, *John Deere's Company*, 648–53.

⁷⁴ JDI, *1970 Annual Report*, FHB; Silvia Nieto, *John Deere Ibérica, 50 años juntos: Historia de un líder* (Madrid, 2003), 64–65.

⁷⁵ Based on JDI, *Annual Reports* (1959–1970), FHB; Minutes of the Comité de Empresa [Works council] 1965–1974, Archivo Histórico de Comisiones Obreras [Comisiones Obreras' Archives], Madrid, Spain (hereafter AHCCOO); "Acuerdo sobre la nueva organización de primas e incentivos del personal obrero de Lanz Ibérica, S.A.," 16 Mar. 1964, 02/32, AHCCOO; Report from Francis Lardner (John Deere's delegate in Spain), 15 Mar. 1965, 10/28, AHCCOO; Letter from labor representative at the Jurado de Empresa, 20 Dec. 1969, 3/11, AHCCOO. Ricardo Medem (former president and honorary chairman of JDI) and Luis Sánchez (former general manager and vice chairman of JDI), interview by Adoración Álvaro-Moya, 14 Oct. 2005. Comisiones Obreras is one of the largest Spanish trade unions, formerly attached to the Spanish Communist Party.

⁷⁶ Nùria Puig, "Educating Spanish Managers: The United States, Modernising Networks, and Business Schools in Spain, 1950–1975," in *Inside the Business Schools: The Content of European Business Education*, ed. Rolv Petter Amdam, Ragnhild Kvalshaugen, and Eirinn Larsen (Oslo, 2003), 58–86.

⁷⁷ Mauro F. Guillén, *Models of Management: Work, Authority, and Organization in a Comparative Perspective* (Chicago, 1994), chap. 4.

developed, as well as a strict system of quality control, first for the components purchased from other suppliers, and later for those manufactured at the factory.⁷⁸ This process of transformation was coordinated by the new department of industrial organization, which was also in charge of employee training and was entirely constituted of engineers from the subsidiary.⁷⁹ As a result, the number of engineers at the firm increased at the same time that new scientific management experts were appointed. Skilled Spanish technical employees rose from 32 in 1955 (7.8 percent of total staff) to 101 (11 percent) in 1967.⁸⁰ Spanish engineers adapted the American models to the specific demands of Spanish farmers, particularly in vineyards and orchards.

JDI also radically transformed its existing sales network. The first step in this direction came in 1961 with a commercial joint venture with the Medem family, a close partner since the times of Lanz and until then in charge of commercializing John Deere products.⁸¹ The Spanish partners provided knowledge of and long experience with the domestic market, while the Americans supplied the financial resources needed to consolidate the network and develop credit lines for future purchasers. The company's existing sales branches were transformed into a network of exclusive, independent dealerships, which were also responsible for after-sales service and the relatively new secondhand market.⁸² In 1969, John Deere had nearly a hundred dealers, covering the entire Spanish territory, and a new system of commercialization that was quickly imitated by competitors. JDI's sales division was accordingly reorganized, creating regional units to cope with this new dealer network. The individual units were supervised by a regional manager and a technical expert.

Each dealership comprised, at minimum, a general manager, a traveling sales representative, a sales manager, and technical assistance staff. Traveling sales personnel, who were not contracted on a commission basis, were required to give detailed daily reports on their operations as well as those of their competitors. They were, in fact, the main source of information about the needs of farmers. Mechanical staff, who were periodically trained at the Spanish headquarters, were provided with both technical training and manuals. JD also gave detailed

⁷⁸ Nieto, *John Deere*, 57–58.

⁷⁹ "Acuerdo sobre," AHCCOO.

⁸⁰ Industria, reference (13)1.06 71/6411, AGA; JDI, *Reglamento de régimen interior* (Madrid, 1968).

⁸¹ Industria, reference (13)1.06 71/6940, file 68371, AGA.

⁸² JDI, *Annual Reports*, 1969–1972, FHBUS; JDI, *Profesionalismo John Deere* (Madrid, 1966); Ricardo Medem, *Formación y desarrollo: Discurso a los estudiantes de la Escuela Técnica Superior de Ingenieros Agrónomos de Madrid, el día 19 de febrero de 1969* (Madrid, 1969).

instructions to general managers about how to manage the firm, in terms of accounting, stock control, advertising, financial policy, depot and showroom organization, and how to deal with employees.

The transformation was led by two expatriates in charge of plant organization and sales (Jim Lardner and Robert Hanson) and three local engineers (Ricardo Medem, Luis Sánchez Sanz de Madrid, and José Ramón Escudero).⁸³ Our analysis of their professional careers shows that, in particular, in the case of Ricardo Medem, they had extensive experience abroad, enjoyed training from internships in JD's headquarters and European subsidiaries, and collaborated frequently with local business and engineering schools.

JD internationalized late and in a context of high international competition in a mature market. It followed a strategy of gradual adaptation to new markets, taking some years to fully adapt foreign subsidiaries to the company's standards. In Spain this adaptation was strictly guided by headquarters, to quickly train local managers who were able to fully develop a business model that spread across the industry. These managers would later be able to participate in the global restructuring that JD, like other major manufacturers, had to cope with in the 1980s.

Conclusion

In this article we have explored the long-term effects of FDI on the human capital development of host economies through a multiple-case analysis that integrates both local-context variables and corporate decisions on entry mode and training strategies. We have focused on the hiring and training of top technical and managerial personnel in four leading U.S. multinationals that, for different periods of twentieth-century Spain, established lasting relationships with local companies and reached dominant positions in the Spanish market. Our research examines a specific type of human capital, one that is embodied in managerial and technical personnel and that is at the core of the modern business enterprise. The cases selected encompass a wide range of industries, so human resource development took on different dimensions, but there are five major conclusions that apply to the four of them.

First, the recruitment of technical and organizational talent ran rather smoothly. Expatriates, although crucial in the early stages, tended to be replaced by Spanish-educated managers. Why? We have identified three main drivers. Spanish economic nationalism certainly

⁸³ Nieto, *Cincuenta años*, 56, 66–68; Medem, *Formación y desarrollo*; and sources in note 75.

encouraged such practices. But the implementation of adaptive strategies by American multinationals after World War II and the availability of either experienced or promising Spain-based professionals played a significant role as well. It should be noted that highly skilled positions required educational backgrounds that ranged from telecom and industrial engineering (ITT and JD) to chemistry and pharmacology (MSD) and social sciences (JWT). The availability of Spanish professionals across these fields was uneven. While engineering schools were firmly established in nineteenth-century Spain and the study of medicine and natural sciences experienced remarkable development in the first decades of the twentieth century, business and marketing studies were not formally taught until the late 1950s, when the dominant role of U.S. production and marketing techniques fueled the formal teaching of business and marketing studies.⁸⁴ In-house formal and informal training were, therefore, crucial to adapting technical knowledge to conform with modern business practices and international standards. Not surprisingly, expatriates sought to enhance marketing and sales and their influence was felt across the entire business spectrum.

Although our research does not focus on MNE staffing strategies, the empirical evidence provided here suggests that expatriates in top managing positions were key to a smooth transfer of the companies' corporate culture and expertise, as noted in the mainstream staffing literature.⁸⁵ The local institutional context and the availability of local qualified labor shaped each subsidiary's policies, apart from the company's global guidelines on international human resources. Business historians have long argued that MNEs used expatriates to fill positions and control subsidiaries, while nationals were appointed to reduce technical, economic, and political risks in host countries.⁸⁶ In the four cases studied, top local personnel had at least some international experience, which helped create relationships with the multinationals' expatriates built on understanding and trust. But we still know little about companies' staffing strategies, or their corporate and environmental determinants. We have only scattered information, in fact, about our companies'

⁸⁴ Puig and Álvaro-Moya, "La guerra fría."

⁸⁵ Anders Edström and Jay R. Galbraith, "Transfer of Managers as a Coordination and Control Strategy in Multinational Organizations," *Administrative Science Quarterly* 22, no. 2 (1977): 248–63; Anne-Wil Harzing, "Who's In Charge? An Empirical Study of Executive Staffing Practices in Foreign Subsidiaries," *Human Resource Management* 40, no. 2 (2001): 139–58.

⁸⁶ Wilkins, *Maturing of Multinational Enterprise*, 159–60; Jones, *Multinationals and Global Capitalism*, chap. 7; Rory M. Miller, "Staffing and Management in British MNEs in Argentina and Chile, 1930–1970," in *The Impact of Globalization on Argentina and Chile: Business Enterprises and Entrepreneurship*, ed. Geoffrey Jones and Andrea Llach (Cheltenham, 2015), 152–81.

international staffing strategies, which makes it difficult to draw comparisons across subsidiaries in different countries. Some of Telefónica's strategies were replicated in other countries.⁸⁷ Lack of resources, including personnel, also explains why JD did not employ expat American managers to run subsidiaries abroad in its first years of internationalization. The first senior executive to be stationed overseas was not appointed until 1966.⁸⁸

Second, we have stated that an MNE's entry strategy played a significant role in each case. Rising economic nationalism in mid-twentieth-century Spain prompted U.S. firms to establish lasting investments (wholly owned subsidiaries, joint ventures, and alliances) in which Spaniards' capital participation differed in percentage, but nonetheless empowered local partners, increased the number and rank of Spanish employees and directors, accelerated the transfer of technology, favored the development of some projects that were not on the agendas of these American multinationals, and led to highly rewarding settlements when the U.S. firms were finally allowed to establish full subsidiaries in Spain. Furthermore, local partners facilitated the foundation of wholly owned subsidiaries, even in strategic sectors such as telecommunications, in the midst of the rise of nationalism. Spanish partners were crucial to ensuring control afterward, as they helped foreign firms not only gain access to local social and political networks, but also benefit from government subsidies and tariff protection.

Third, our research shows that the upgrading of local capabilities was a two-way process. American multinationals were able to engage and train host-nation personnel. But Spanish partners did not act merely as gatekeepers, exchanging their local contacts and knowledge for comparatively high salaries and dividends, but in fact managed to bring their own research and manufacturing plans forward. The initiatives and persuasiveness of professionals around Urquijo Group explain the early Spanish operations of ITT and MSD, not the other way around. Similarly, the Medem family would play a leading role in some of JD's projects. Under restrictive legal requirements, local partners also promoted linkages with local firms, as observed in MSD's, JD's, and ITT's manufacturing branches. This suggests that strategic alliances served not just to avoid the liability of outsidership but to enhance MNEs' direct effects and spillovers.⁸⁹

⁸⁷ Marcelo Bucheli and Erica Salvaj, "Reputation and Political Legitimacy: ITT in Chile, 1927–1972," *Business History Review* 87, no. 4 (2013): 729–56; Deloraine, *Telecom and ITT*.

⁸⁸ Broehl, *John Deere's Company*, 619, 679.

⁸⁹ Jan Johanson and Jan E. Vahlne, "The Uppsala Internationalization Process Model Revisited: From Liability of Foreignness to Liability of Outsidership," *Journal of International Business Studies* 40, no. 9 (2009): 1411–31.

Recent studies on technological transfer and capabilities upgrading in late developing economies such as South Korea and Taiwan, or even Japan after World War II, show that governmental research strategies can be decisive.⁹⁰ By encouraging licensing agreements, higher education, and R&D, governments in those countries promoted the development of indigenous technical and managerial skills and limited the influence of foreign firms. Does this apply to mid-twentieth-century Spain? While it is true that the government invested in education and promoted licensing and technical-assistance agreements, scarce resources were used to promote domestic R&D.⁹¹ This explains the lack of qualified professionals and the limited domestic technological development. Both encouraged inward FDI-led growth in many industries as well as joint ventures. That was also true for concessions, as illustrated by the case of ITT. The preference for strategic alliances has also been observed for other countries of the European periphery, such as Italy and Portugal, particularly after World War II.⁹²

Fourth, the stories of ITT and MSD reveal that business groups might act as catalysts for both local human capital and foreign capital and technology, as the literature on business groups in late industrializing countries shows.⁹³ The Urquijo Group mobilized contacts and managerial and technical professionals, while its foreign partners contributed the capital and technology needed to enter new and promising industries. By contrast, the stories of JWT (after 1949) and JD indicate that American firms were able to hire large numbers of independent qualified professionals who were crucial in implementing the production, marketing, and organizational techniques and corporate culture

⁹⁰ Alice Amsden, *Asia's Next Giant: South Korea and Late Industrialization* (Oxford, 1992); Ha-Joon Chang, *Kicking away the Ladder* (New York, 2002); Dani Rodrik, *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth* (Princeton, N.J., 2008); Mauro F. Guillén and Esteban García-Canal, *The New Multinationals: Spanish Firms in a Global Context* (Cambridge, U.K., 2012).

⁹¹ Mar Cebrián, "La regulación industrial y la transferencia internacional de tecnología en España (1959–1973)," *Investigaciones de historia económica* 3 (2005): 11–40; Antonio Hidalgo, José Molero, and Gerardo Penas, "Technology and industrialization at the take-off of the Spanish economy: New evidence based on patents," *World Patent Information* 32, no. 1 (2010): 53–61.

⁹² Colli, "Multinationals and Economic Development"; Teresa da Silva Lopes and Vitor C. Simoes, "Foreign Investment in Portugal and Knowledge Spillovers: From the Methuen Treaty to the 21st Century," *Business History* (advance online publication 20 Nov. 2017), <https://doi.org/10.1080/00076791.2017.1386177>; Valerio Cerretano, "Multinational Business and Host Countries in Times of Crisis: Courtaulds, Glanzstoff, and Italy in the Interwar Period," *Economic History Review* 71, no. 2 (2018): 540–66.

⁹³ Asli Colpan and Takashi Hikino, "Foundations of Business Groups: Toward an Integrated Framework," in *The Oxford Handbook of Business Groups*, ed. Asli M. Colpan, Takashi Hikino, and James R. Lincoln (Oxford, 2010), 15–66; and María Inés Barbero and Núria Puig, "Business Groups around the World: An Introduction," *Business History* 58, no. 1 (2016): 6–29.

of the MNE. In turn, Spanish professionals saw the opportunity to work for a leading firm and so became very involved, as exemplified by Gallego's and Eléxpuru's teams at MSD and JWT, respectively. Our research, therefore, shows a spectrum of local partners and businesses that is broader than the one identified in the business group literature.

Our fifth conclusion deals with the spillovers of FDI. Our study of over one hundred professionals linked to the Spanish operations of four U.S. multinational firms provides substantive evidence on the dissemination of technical and organizational knowledge within their subsidiaries through, more or less, institutionalized in-house training and personnel exchange programs. Knowledge was spread beyond the subsidiaries and joint ventures by those professionals who moved on to other companies and to educational and scientific institutions (more frequently at JWT and MSD), by directors who taught at Spanish universities and professional schools, and by those who helped to create or support professional and educational institutions in their respective fields. The most visible case is JWT. The agency became an incubator for Spanish advertising, setting trends, providing in-house training for around three hundred people, associating with prolific disseminators of knowledge (such as Ruescas and Bravo), sponsoring yearly surveys, and professionalizing advertising.

Our research suggests that, given the proper institutional support and human-capital development, hosting multinationals is more favorable than excluding them in terms of knowledge transfer and domestic growth. This is the opposite of what has been argued for developing countries.⁹⁴ But early twentieth-century Spain was certainly in a better position in terms of human capital (in a broad sense), entrepreneurship, and enforcement rights than other developing countries in Latin America, Africa, or Asia. Furthermore, our study is biased in the sense that the Spanish headquarters of the four American MNEs analyzed here were located in Madrid, one of the most developed regions in the country. Together with Catalonia (Barcelona, above all) and the Basque Country, the Madrid region presents, since the early twentieth century, better figures than the country average in terms of literacy and labor productivity.⁹⁵ These four U.S. companies operated at a national scale, but they developed long ties to educational institutions in the area of Madrid, where MNEs' headquarters were located and their top managers worked. Foreign companies did not aim to change, or to reinforce, existing institutions—another of the traditional debates

⁹⁴ Jones, "Business History and the Impact."

⁹⁵ Santiago Zapata, "Apéndice estadístico," in *Historia regional de España*, ed. Luis Germán, Enrique Llopis, Jordi Maluquer de Motes, and Santiago Zapata (Barcelona, 2001), 571, 573, and 591.

on FDI spillovers, but their ties with local educational institutions was the result of an adaptation strategy and, we argue, of the empowerment of local staff.

Finally, had the four American firms been able to establish full subsidiaries from the start, their impact in terms of business opportunities (and profits) and development of managerial and technical capabilities would probably have been more limited. To build on this counterfactual, future research should explore the operations of the four American MNEs in other countries. Our single-country, multiple-case study provides a solid empirical base for understanding the cross-fertilization process that multinational firms trigger in their host economies. Despite the spectacular growth of international business scholarship in recent decades, the long-term effects of FDI on the host institutional and organizational settings remain relatively underexplored and misunderstood.⁹⁶ This article has shown that a long-term perspective and a focus on managerial and technical professional development are fertile grounds on which to assess those effects.

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NÚRIA PUIG is professor of economic history and institutions at the Universidad Complutense de Madrid. Her research interests include the long-term effects of foreign direct investment on late developing economies and the growth and organizational strategies of family capitalism.

ADORACIÓN ÁLVARO-MOYA is associate professor of economic history at CUNEF Business School (Madrid). Her research focuses on the long-term effects of foreign direct investment in late developing countries and the effects of international aid on the institutional development of recipient countries.

⁹⁶ Jones, "Firms and Global Capitalism."