



Economic Development in Spain, 1850-1936

Author(s): James Simpson

Source: The Economic History Review, May, 1997, New Series, Vol. 50, No. 2 (May,

1997), pp. 348-359

Published by: Wiley on behalf of the Economic History Society

Stable URL: https://www.jstor.org/stable/2599064

REFERENCES

Linked references are available on JSTOR for this article: https://www.jstor.org/stable/2599064?seq=1&cid=pdf-reference#references_tab_contents
You may need to log in to JSTOR to access the linked references.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at https://about.jstor.org/terms



Economic History Society and Wiley are collaborating with JSTOR to digitize, preserve and extend access to $\it The Economic History Review$

Economic development in Spain, 1850-1936

By JAMES SIMPSON

ndicators of the good health of Spanish economic history include the growing number of publications in English, the proliferation in the number of academic journals within Spain, and the fact that the 1998 International Economic History Congress is to be held in Seville. It is not possible to provide here a general note on all aspects of recent research, but this essay offers a critical examination of the major arguments advanced for the slow growth in the Spanish economy over the century or so before the civil war of 1936-9. The period after 1936 has been excluded because, although many of the obstacles to development remained until the 1960s, three excellent surveys of the literature have recently been published.1 Where possible, English versions of works are cited, and the essay lists only those Spanish publications which are likely to be relatively easily obtainable. After considering recent estimates of economic growth and development, the survey tries to explain the slow change by looking at three areas: agriculture, industry, and the role of the state.

I

Although important gaps still exist in knowledge of some basic indicators, recent work, especially by Carreras and by Prados, makes it possible to place Spain's long-run performance in an international context. Thus in 1929 real GDP per head in Spain was lower than that in all of Maddison's 17 'advanced capitalist countries' except Finland and Japan. By contrast, the level was probably higher than in Latin American countries, with the exception of Argentina, Chile, Uruguay, and Venezuela.² Over the period 1850 to 1935, real GDP per head in Spain grew by 1.1 per cent annually, faster than Italy (0.7 per cent) or Britain (0.8 per cent), but slower than France or Germany (1.6 per cent).³ However, if the longer period is considered, from about 1800 to 1950, Spain's performance was much worse. Carreras's conclusion that 'all the qualitative evidence points to a dramatic fall of industrial output from the end of the 18th century to the beginning of the second quarter of the 19th', appears true for other

¹ Fraile, 'Industrial policy'; Harrison, Spanish economy; Prados and Sanz, 'Growth'.

² Maddison, *Monitoring*, tabs. D-1a-1c.

³ Prados, 'Gross domestic product', tab. 12. The figure for Italy refers to 1861-1929.

[©] Economic History Society 1997. Published by Blackwell Publishers, 108 Cowley Road, Oxford OX4 1JF, UK and 350 Main Street, Malden, MA 02148, USA.

sectors.⁴ After 1936, the civil war, the difficult international situation, and the bizarre policies of the early Franco regime implied that levels of real GDP per head attained in 1929 were not reached again until 1954.⁵ Consequently, one estimate suggests that annual growth in per caput income was only 0.55 per cent between 1800 and 1950, considerably below that of other west European countries.⁶

Slow growth was accompanied by a delay in structural change. As late as 1910, two-thirds of the active population worked in agriculture, and the sector accounted for about one-third of GDP. Urban centres were small, with only 10 per cent of the population living in cities of more than 100,000. Demographic trends were dominated by the appalling levels of mortality, which as late as 1890 remained almost as high as those in Russia, some 32 per 1,000. Illiteracy among men was 37 per cent in 1910, and among women 58 per cent.⁷ Spanish military recruits were some of Europe's shortest, and diets at the turn of the century were as poor as they had been in England in the 1790s.⁸

From around 1910 growth rates improved, and the economy experienced significant structural change. Thus while per caput incomes increased by an annual average of 0.9 per cent between 1850 and 1913, the figure was 1.7 per cent between 1913 and 1935.9 The active population in agriculture fell to 45 per cent of the total in 1930, and its contribution to GDP declined to about a quarter. Literacy rose to 73 per cent, and mortality fell to 17 per thousand. The political unrest of the 1930s was produced, therefore, within a society that was changing rapidly. However, although the gap with the leading European countries had narrowed, Spain still remained essentially a poor country, with per caput income similar to that Britain had reached in 1860.10

II

It is usually argued that the poor performance of agriculture was a major cause of the country's slow growth prior to 1936,¹¹ but much of the research over the past decade or so has emphasized the changes that took place within this sector. The nineteenth-century improvements in transport and a growing international demand encouraged farmers to plant vines and olives on previously marginal land, and to introduce

⁴ Carreras, 'What can we learn?', p. 36. The debate over the economic consequences of the loss of Spain's colonies in the early nineteenth century is conducted in Fontana, 'Crisis colonial'; Prados, 'Pérdida del imperio'; Ringrose, Spain.

⁵ Prados, 'Gross domestic product', tab. E.2.

⁶ Idem, 'Imperio a nación', tab. 1.4.

⁷ Núñez, 'La fuente', p. 94.

⁸ For stature, see Gómez Mendoza and Pérez Moreda, 'Heights and welfare'; Martínez Carrión, 'Stature, welfare'; for diet, Simpson, *Spanish agriculture*, tab. 13.2.

⁹ Prados, 'Gross domestic product', tab. 10.

¹⁰ For a comparative vision of Spain's economic development, see Molinas and Prados, 'Was Spain different?'; Tortella, 'Patterns of economic retardation'.

¹¹ See, for example, Nadal, 'Failure', pp. 553-67; Tortella, 'Agriculture', pp. 55-9; Sánchez-Albornoz, *España*, esp. pp. 13-24.

[©] Economic History Society 1997

350

better manufacturing equipment.¹² From the beginning of the twentieth century, increasing use was made of chemical fertilizers and harvesting machinery in cereal production. While livestock numbers stagnated between 1750 and 1936, there were important variations in the composition of the national herd, and increasing market orientation by livestock owners. 13 On irrigated land, rice yields were the highest in the world and were achieved not so much through the intensive use of labour, but rather from improvements in biological and chemical technologies. 14 Likewise oranges, which had been a marginal export at the end of the nineteenth century, became Spain's leading export commodity by 1929.¹⁵ Finally, domestic production of beet allowed Spain to be self-sufficient in sugar within a couple of years of Cuba's independence in 1898.¹⁶

Yet, despite the ability of Spanish agriculture to feed a growing population, it is questionable whether there were significant improvements in the sector's labour productivity during the nineteenth century.¹⁷ Only from about 1910 did a combination of changes in farming practices and an absolute decline in agricultural employment lead to productivity growth. On the eve of the civil war, agriculture still employed 50 per cent of the male labour force, and labour productivity was only 44 per cent of that in France or 39 per cent of that in the UK. 18 Despite the changes in agriculture during this period, economic historians seem to be correct in regarding this sector as a major cause of economic backwardness. The various explanations advanced for this poor performance can be divided into three broad areas: poor resource endowments, inefficient property rights, and the distortion of factor markets as a result of tariff protection.

The agricultural advances achieved in northern Europe during the seventeenth and eighteenth centuries were irrelevant to Spain, as approximately 90 per cent of its land suffered from summer drought.¹⁹ By contrast, conditions had long proved ideal for the production of merino wool and, during the period under consideration here, crops such as wine, olive oil, and citrus fruits also thrived. Although agricultural produce accounted for about two-thirds of exports on the eve of the civil war, farmers found strict limits to switching resources out of uncompetitive cereals and into these export crops.20 In the case of wine and olive oil, abundant supplies of land and cheap labour led to low entry costs for producers everywhere in the Mediterranean region. This, together with

 ¹² Pan-Montojo, La bodega, pp. 173-96; Zambrana, Crisis, pp. 53-69, 136-60.
 ¹³ García Sanz, 'Ganadería española'.
 ¹⁴ See Piqueras, La agricultura valenciana, pp. 182-6; Garrabou, Un fals dilema, pp. 89-94.

¹⁵ Garrabou, Un fals dilema, pp. 98-107; Palafox, 'Exports'; Calatayud, 'Los inicios'.

¹⁶ Martín Rodríguez, Azúcar, pp. 340-1.

¹⁷ Estimates for agricultural output for the period 1800-1936 can be found in Garrabou and Sanz, 'Introducción', pp. 96-139; Grupo de Estudios de Historia Rural, 'Notas'; Prados, Imperio a nación, ch. 3; Simpson, Spanish agriculture, ch. 1.

¹⁸ O'Brien and Prados, 'Agricultural productivity', tab. 6.

¹⁹ Tortella, 'Patterns of economic retardation', pp. 8-9 and, for the region of Valencia, Garrabou, Un fals dilema, p. 42.

²⁰ For agricultural exports, see Prados, Comercio exterior; Tena, 'Spanish foreign sector', pp. 402-18; Gallego and Pinilla, 'Del librecambio'.

the ease of product substitution in international markets, and the high levels of duty often charged by governments on wines, restricted growth potential. With oranges, these negative factors were absent, and the crop enjoyed important backward and forward linkages with the rest of the economy. However, because the area where oranges could be grown was limited by climate, they accounted for just 3 per cent of agricultural final output in 1930.²¹

The transformation of property rights in land was effected more slowly than in many countries and, in some areas, remained incomplete until the very end of the period.²² The 'liberal' land reforms of the nineteenth century saw the abolition of seigneurial jurisdiction, the sheep grazing association the Mesta (1836), the entail of estates of the nobility (1836-41), and tithes (1841), and led to the disposal of ecclesiastical and municipal land (some, but not all of which was in cultivation), equivalent to perhaps a quarter of the country's agricultural area.²³ But most historians agree that these changes failed to usher in an agricultural revolution, and some have been highly critical of property owners purchasing more land rather than building up capital.²⁴ However, recent studies have shown that investment in labour-saving farm machinery was unprofitable until the twentieth century, while the increase in rents from the 1820s or 1830s provided a strong incentive to purchase land.²⁵ Farm structure undoubtedly had a major influence on political economy. The nineteenthcentury property reforms failed to consolidate the family farm, as happened in France. The interests of small farmers were poorly represented in government, and demand for state intervention tended to be directed to price intervention (which benefited the large producers most), rather than to measures such as cooperatives, or research and development. At the other extreme, the land reforms also failed to sever the links that poorer members of society had with the land, which might have produced a rural exodus such as Britain experienced in the eighteenth century, and which could have encouraged mechanization.

Finally, the growing integration of international commodity markets in the late nineteenth century led to increased tariff protection from 1891, producing some of Europe's highest food prices. As a result, industry was forced to pay higher wages than it might have done, and effective demand for manufactures was squeezed because consumers had to dedicate more of their resources to food.²⁶ Higher cereal prices are also considered to have discouraged farmers from allocating resources to crops

²¹ Simpson, Spanish agriculture, ch. 9.

²² For the incompleteness of reforms, see García Sanz, 'La agricultura tradicional', pp. 30-2; Villares, *Propiedad*.

²³ See esp. García Sanz, 'La agricultura tradicional', pp. 7-73; Herr, Rural change, ch. 3; Pérez Picazo, Mayorazgo; Ringrose, Spain, pp. 163-83.

²⁴ See, for example, Nadal, 'Failure', p. 566. By contrast, Gutiérrez Bringas, 'Productividad', p. 512, argues that wheat yields increased by 80% over the period 1752-1903/12.

²⁵ For rents, see Bernal, 'El latifundio', pp. 128-30; Robledo, *Renta de la tierra*, tab. 24; Carmona, 'Estrategias económicas', p. 70. For the profitability of farm machinery, see Simpson, *Spanish agriculture*, ch. 7.

²⁶ Nadal, 'Failure', p. 567; Palafox, Atraso económico, pp. 39-40.

[©] Economic History Society 1997

which were competitive in international markets, and tariff protection and currency depreciation are believed to have delayed the rural exodus until the decade before the First World War.²⁷

Ш

Spanish industrialization was characterized both by the early appearance of cotton textiles and by the late development of capital goods industries. In terms of the Hoffmann index, the ratio of consumers' to producers' goods failed to change prior to the First World War. Thus whereas Spain was at the first stage in 1860, together with countries such as Belgium, France, Germany, Austria, Russia, and Sweden, in 1910 it was accompanied by Russia only. Spain entered the second stage belatedly in the 1920s, and the third stage in the late 1950s and early 1960s.²⁸ In the words of Nadal, 'the case of Spain is less that of a latecomer than that of an attempt, largely thwarted, to join the ranks of the first comers'.²⁹

One explanation frequently offered is the supposed mismanagement of the country's mineral resources. The mining legislation of 1868 was in response to the growing international demand for minerals, and led to an important inflow of foreign capital and technology, making the sector the country's 'most dynamic in the last quarter of the nineteenth century'.30 While most would agree with Tortella that the government was correct in trying to attract capital and technology, the debate on whether the best terms were obtained from the foreign companies remains as alive as ever. Harvey and Taylor have argued that the level of profitability of foreign enterprises in the sector has traditionally been exaggerated because attention has centred on the activities of a few highly profitable large companies, rather than the 'scores of short-lived enterprises that unsuccessfully scoured the length and breadth of Spain in the hope of striking it rich'. 31 However, the continuing strength of Spanish mineral prices until well into the twentieth century, combined with low taxation and high evasion, has led to frequent charges that the contribution of mining companies to development was insufficient.32 Finally, while forward and backward linkages appear to have been strong in the case of iron ore in the Basque country, they were much less apparent with other minerals, especially in the south.33

Another frequent explanation for the slow transformation of industry

²⁷ Sánchez Alonso, *Emigración española*, pp. 45-7, 135-42, has argued that migration quickened significantly after 1904, and this coincides with the strengthening of the peseta. For a modification of this view, see Simpson, 'Tariffs'.

²⁸ Nadal, El fracaso, pp. 235-8; Carreras, 'What can we learn?', pp. 29-33.

²⁹ Nadal, 'Failure', p. 617.

³⁰ Tortella, *El desarrollo*, pp. 84-5, 185. For mining legislation, see Escudero, 'Leyes mineras'. Between 1876 and 1900, Spain produced 40% of the world's mercury, 24% of its lead, and 17% of its copper. It also accounted for 86% of Europe's iron ore exports, and 90% of sulphur exports: Harvey and Taylor, 'Mineral wealth', p. 185.

³¹ Harvey and Taylor, 'Mineral wealth', p. 192.

³² For taxation see ibid., p. 205; Escudero, 'Leyes mineras', pp. 89-93; idem, 'Fraude fiscal'.

³³ See esp. Nadal, 'Andalucía'.

is the high cost of energy. Spain's coal was of poor quality, and mining and transport costs were high. As a result, per caput consumption was around 300 kilos in 1900, against over 3 tonnes in Belgium or Germany, or 4 tonnes in the UK.³⁴ However, Tortella has noted that Italy developed important capital goods industries without domestic coal resources, and that both of Spain's major industrial centres, Cataluña and the Basque country, developed away from Spain's own reserves.³⁵ Imported coal accounted for half the country's consumption by the early twentieth century, before it started to decline, first because of wartime shortages, and then because of the increasing obligation of Spanish industry to consume national production.³⁶ At the same time, the growing importance of hydroelectricity and petroleum helped to diversify the country's energy supply, and these sources together accounted for about one-third of consumption in 1935.³⁷

As in other countries, industry tried to adapt to the high price of energy. In the case of iron and steel, the Bessemer process, which favoured locating the industry near ore rather than coal deposits, benefited the Basque country which enjoyed Europe's best resources of high grade non-phosphoric ore.³⁸ This region's international comparative advantage in pig iron is shown by the fact that about a quarter of output between 1881 and 1910 was exported. However, from the early twentieth century the industry turned increasingly to the domestic market and this, according to Fraile, can be explained by the existence of optimal conditions for rent-seeking behaviour (discussed below). This interpretation has been criticized by Nadal and Sudrià, who argue that technological change was once again responsible because, if Britain's attachment to acid steelmaking technology led to its eventual loss of industrial leadership, Spain suffered even more, given its much greater dependence on the local hematite ores and the high cost of energy.³⁹

Spain's cotton textile industry also adapted to high coal prices, with the improvement in turbine technology allowing the industry to relocate away from Barcelona's coastal plain to the mountainous interior after 1860. By 1914, about 80 per cent of its spindles were water driven, and the hydraulic energy used was equivalent to roughly a quarter of Barcelona's coal imports. Yet if energy costs help to explain the geographical location of the cotton industry, they cannot explain its failure to compete in international markets by the early twentieth century. Other factors have to be considered.

The limited size of the domestic market is another explanation for the

³⁴ Pollard, Peaceful conquest, p. 186.

³⁵ Tortella, El desarrollo, pp. 96, 297.

³⁶ Coll and Sudrià, El carbón, chs. 3, 5.

³⁷ Sudrià, 'Energy', p. 306. For Spain's electricity industry, see esp. Antolín, 'Electricidad'.

³⁸ Fernández de Pinedo, 'Factores técnicos', pp. 254-8. For a general description of Basque industrialization, see Harrison, 'Heavy industry'.

³⁹ Nadal and Sudrià, 'Controversia', pp. 213-4.

⁴⁰ Carreras, 'El aprovechamiento', pp. 47, 59.

⁴¹ Energy represented less than 10% of cotton manufacturing costs: ibid., pp. 44-5; Clark, 'Cotton mills', p. 147.

[©] Economic History Society 1997

slow growth of industry frequently found in the literature. Spain, after Switzerland, was Europe's most mountainous country, had virtually no navigable rivers or canals, and its capital, Madrid, was located some 220 miles from the nearest port. ⁴² Social savings models therefore give Spanish railways a very high rate of return, but throughout the period the country lagged a considerable distance behind the leading European countries in terms of such variables as the length of roads or railway lines, cost of freight, or number of motor vehicles per inhabitant. ⁴³ An inefficient and costly transport system remained a significant factor in the weakness of market integration throughout the period.

In Spain, as elsewhere, government legislation played a crucial role in determining the timing of railway construction, and the nature of its impact on the rest of the economy.⁴⁴ The Railway Act of 1855, which provided favourable conditions to attract foreign capital and technology, including duty free imports of construction material, led to a rapid growth of the network, but implied that Spain's small metallurgical and capital goods industries were little affected, with the economy reaping benefits almost exclusively through forward linkages. Significant backward linkages were not forthcoming, however, until after 1891, when the steel and engineering industries received protection.

Despite these limitations, there can be no doubting that better transportation and technical change in industry increased the supply of consumer goods in Spain prior to the First World War. This can be seen in the example of textiles where consumption per caput, although small in absolute terms, was reasonably high compared with other European countries when income levels are considered. Recent studies of other consumer industries, such as tobacco, sugar, flour milling, or paper making, show similar important changes in productivity and increases in consumption in the century or so before the First World War. 46

The success of Spanish industry in increasing output and productivity for the domestic market was not matched in exporting. Whereas over the period 1830-90 the economy became increasingly open, with exports growing from the equivalent of 2.9 per cent of national income to 13.4 per cent, they then declined to just 7.7 per cent in 1930, a significantly lower figure than that recorded by most other European countries. Worse still for manufacturing industry, its share of total exports peaked at 34 per cent in 1914-8, and then fell to just 11.6 per cent by 1931-5.47

⁴² For the consequences of this in the pre-railway age, see esp. Ringrose, *Madrid*.

⁴³ Gómez Mendoza suggests a social saving of about 11% of national income in 1878, and between 19% and 24% in 1912, although the same author notes the weakness of the model, especially for a low income country such as Spain: Gómez Mendoza, *Ferrocarriles*, pp. 93-7; *idem*, 'Transportation', pp. 98-9.

⁴⁴ In addition to the works cited above, see Tedde, 'Las compañias ferroviarias', pp. 78-85; Tortella, *El desarrollo*, pp. 106-14.

⁴⁵ Nadal, 'La indústria cotonera', pp. 78-85.

⁴⁶ See esp. the essays in Nadal and Catalán, eds., *La cara oculta*; Comín and Martín-Aceña, eds., *La empresa*.

⁴⁷ Prados, *Imperio a nación*, tabs. 4-10, 5-5; Tena, 'Spanish foreign sector', tab. 3.

This failure to export manufactured goods is considered further in the next section.

IV

Spain's relative backwardness in the period under discussion has led many economic historians to look for the cause in the failures of government,48 and monetary, fiscal, and commercial policies need to be considered briefly.

The most controversial feature of monetary policy was the suspension of the convertibility of gold in 1883. According to Martín-Aceña, Spain became isolated from the growing international financial markets and the quantity of foreign capital entering the country declined sharply after 1883, leading to 'one of the lowest rates of industrialization in Western Europe' prior to 1914.⁴⁹ Furthermore, Tortella argues that because successive governments never gave up hope that Spain could rejoin the gold standard the potentially greater monetary flexibility that the economy might have enjoyed was not forthcoming, at least until the 1920s.⁵⁰

Of perhaps greater importance was the failure of government to increase domestic capital formation. Although government spending as a share of GDP rose from 6 per cent in 1850 to 10 per cent in 1929, a large part of the budget was devoted to administration, defence, and the public debt.⁵¹ The persistent failures to bring about budgetary reform, and the state's consequent inability to undertake major public works projects can be explained by endogenous factors—a governing elite which was unwilling to change a fiscal system that would lead to higher taxation.⁵² Any advantage that a low tax regime might have had for the business sector was therefore offset by the low level of public investment in areas such as transport, health, and education.

Public investment was just one potential area of government activity. According to Comín, 'as long as it did not imply a cost to the Spanish Treasury, government intervention knew no bounds, but any project to develop the private sector which threatened to increase budgetary obligations was rejected.'53 In this respect, Spanish tariffs are usually considered to be among Europe's highest,⁵⁴ and recent work suggests that nominal protection increased significantly from 1891, with levels being subsequently maintained by the legislation of 1906 and 1926. However, no coherent policy can be determined, with textiles, iron, and steel enjoying relatively greater protection after the 1891 law, but agriculture

⁴⁸ A useful survey of the recent literature is to be found in Tedde, ed., *El estado*.

⁴⁹ Martín-Aceña, 'Spain', pp. 157-60.

Tortella, El desarrollo, pp. 149, 331.
 Comín, 'Public finance', pp. 544-5. See also Palafox, Atraso económico, pp. 109-21; Cubel, 'Gasto público'.

⁵² See esp. Comín, 'El papel', p. 303.

⁵³ Idem, 'Public finance', p. 522.

⁵⁴ Palafox, Atraso económico, pp. 23-70.

[©] Economic History Society 1997

356

benefiting from that of 1906, and capital goods from the 1926 legislation.⁵⁵

From the First World War there was growing direct intervention by the state in production and commercialization. This in turn increased the monopolistic tendencies of the economy, raised entrance barriers for new companies, and led to entrepreneurial laxity.⁵⁶ In his study of the steel industry, Fraile shows how four companies accounted for 96 per cent of capital investment in the 1930s, and this level of domination, together with the industry's geographical concentration and the lack of political democracy, made conditions ideal for rent-seeking activities.⁵⁷ Fraile argues that the example of the iron and steel industry was far from unique in Spain, and he himself extended his study to include cotton textiles.⁵⁸ Better examples, perhaps, are capital goods industries, such as electricity, explosives, cement, and mining.⁵⁹ In each of these, technology was quickly introduced from abroad or developed in Spain itself, a few large companies obtained control of the industry, and output then proceeded to lag behind that of other countries. Where Spain differs is not in the existence of cartels and pressure groups, but in the level of control that they were able to exert 'many years before protection became general during the Great Depression'. This seems, at least in part, a convincing explanation for the country's poor performance on the Hoffmann index.

This process of industrial concentration was aided by the banking system, as Spain is often considered to be an example for Gerschenkron's hypothesis of the role of German 'universal' banks in relatively backward countries. From the early twentieth century, a handful of banks promoted industry, and owned large quantities of shares, especially in heavy industry. By 1921, directors of the seven largest banks were found on the boards of 274 corporations, whose combined capital amounted to half that of the paid-up capital of all Spanish corporations. The possible negative effects of this concentration were compounded by the fact that Spain on the eve of the civil war had the 'lowest financial intermediation level and the most underdeveloped financial system in Western Europe'. 62

Although this essay gives only a brief summary of recent works in economic history, it is clear that no one argument can explain the slow growth of the Spanish economy. However, the inability of agriculture to raise productivity, and to release labour prior to the First World War, were decisive factors. Likewise, the concentration of industry on the internal market, and the increasing restrictions to competition from the

⁵⁵ Tena, Protección nominal.

⁵⁶ García Delgado, 'Economic nationalism'.

⁵⁷ Fraile, *Industrialización*, ch. 2 and p. 132.

⁵⁸ For criticism of this, see Nadal and Sudrià, 'Controversia', pp. 214-6.

⁵⁹ Fraile, *Industrialización*, pp. 51, 212.

⁶⁰ Ibid., p. 143.

⁶¹ Roldán and García Delgado, *La formación*, cited in Tortella and Palafox, 'Banking', p. 87. The fact that these represented only 7% of all companies shows that close links were forged with big corporations.

⁶² Martín-Aceña, 'Development', p. 121.

turn of the twentieth century, appear greater in Spain than in other European states. Although neither the growth in per caput income nor the level of structural change in the 30 years prior to the civil war should be underestimated, Spain remained a poor country in 1936.

Universidad Carlos III de Madrid

Footnote references

- Antolín, F., 'Electricidad y crecimiento económico: los inicios de la electricidad en España', *Revista de Historia Económica*, 4 (1988), pp. 635-55.
- Bernal, A. M., 'El latifundio y su evolución', in M. Artola, A. Bernal, and J. Contreras, eds., El latifundio: propiedad y explotación ss. XVIII-XX (Madrid, 1978), pp. 83-197.
- Calatayud, S., Los inicios de la mecanización en el regadío valenciano, 1850-1930', Areas: Revista de Ciencias Sociales, 12 (1990), pp. 201-11.
- Carmona, J., 'Las estrategias económicas de la vieja aristocracia española y el cambio agrario en el siglo XIX', Revista de Historia Económica, XIII (1995), pp. 63-88.
- Carreras, A., 'El aprovechamiento de la energía hidráulica en Cataluña, 1840-1920: una aproximación a su estudio', *Revista de Historia Económica*, I (1983), pp. 31-63.
- Carreras, A., 'What can we learn from long-term Spanish economic performance?', in P. Martín-Aceña and J. Simpson, eds., *The economic development of Spain since 1870* (Aldershot, 1995), pp. 24-47.
- Clark, G., 'Why isn't the whole world developed? Lessons from the cotton mills', J. Econ. Hist., XLVII (1987), pp. 141-73.
- Coll, S. and Sudrià, C., El carbón en España, 1770-1961 (Madrid, 1987).
- Comín, F., 'El papel del presupuesto en el crecimiento económico español: una visión a largo plazo', Revista de Historia Económica, XII (1994), pp. 283-314.
- Comín, F., 'Public finance in Spain during the nineteenth and twentieth centuries', in P. Martín-Aceña and J. Simpson, eds., *The economic development of Spain since 1870* (Aldershot, 1995), pp. 521-60.
- Comín, F. and Martín-Aceña, P., eds., La empresa en la historia de España (Madrid, 1996).
- Cubel, A., 'Gasto público y crecimiento económico en la Restauración, 1874-1923', Revista de Historia Económica, XI (1993), pp. 49-78.
- Escudero, A., 'Leyes mineras y grupos de presión: el coste de oportunidad de la política fiscal en la minería española', *Revista de Economia Aplicada*, 1, 3 (1993), pp. 75-94.
- Escudero, A., 'El fraude fiscal en la minería española, 1876-1913', Hacienda Pública Española (1994), pp. 321-41.
- Fernández de Pinedo, E., 'Factores técnicos y económicos en el origen de la moderna siderurgia y la flota vizcaína, 1880-1899', in E. Fernández de Pinedo and J. L. Hernández Marco, eds., La industrialización del norte de España (Barcelona, 1988), pp. 252-79.
- Fontana, J., 'La crisis colonial en la crisis del Antiguo Régimen español', in H. Bonilla, ed., El sistema colonial en la América española (Barcelona, 1991), pp. 305-20.
- Fraile, P., Industrialización y grupos de presión: la economía política de protección en España, 1900-1950 (Madrid, 1991).
- Fraile, P., 'Industrial policy under authoritarian politics: the Spanish case' (forthcoming).
- Gallego, D. and Pinilla, N., 'Del librecambio matizado al proteccionismo selectivo: el comercio exterior de productos agrarios en España entre 1845 y 1935', Revista de Historia Económica, XIV (1996).
- García Delgado, J. L., 'Economic nationalism and state intervention', in N. Sánchez Albornoz, ed., The economic modernization of Spain, 1830-1930 (New York, 1987), pp. 151-65.
- García Sanz, A., 'Crisis de la agricultura tradicional y revolución liberal', in A. García Sanz and R. Garrabou, eds., Historia agraria de la España contemporánea, 1: cambio social y nuevas formas de propiedad, 1800-1850 (Barcelona, 1985), pp. 7-99.
- García Sanz, A., 'La ganadería española entre 1750 y 1865: los efectos de la reforma agraria liberal', Agricultura y Sociedad, 72, 1994, pp. 81-119.
- Garrabou, R., Un fals dilema: modernitat o endarreriment de l'agricultura valenciana, 1850-1900 (Valencia, 1985).
- Garrabou, R. and Sanz, J., 'Introducción', in R. Garrabou and J. Sanz, eds., Historia agraria de la España contemporánea, 2: expansión y crisis, 1850-1900 (Barcelona, 1985), pp. 7-191.
- Gómez Mendoza, A., Ferrocarriles y cambio económico en España, 1855-1913 (Madrid, 1982).
- Gómez Mendoza, A., 'Transportation and economic growth, 1830-1930', in N. Sánchez Albornoz, ed., *The economic modernization of Spain, 1830-1930* (New York, 1987), pp. 90-106.
- © Economic History Society 1997

- Gómez Mendoza, A. and Pérez Moreda, V., 'Heights and welfare in Spain, 1900-1930', in J. Komlos, ed., *The biological standard of living on three continents* (Boulder, Colo., 1995), pp. 81-91.
- Grupo de Estudios de Historia Rural, 'Notas sobre la producción agraria española, 1891-1931', Revista de Historia Económica, 1 (1983), pp. 185-252.
- Gutiérrez Bringas, M. A., 'La productividad de la tierra en España, 1752-1930', Revista de Historia Económica, 11 (1993), pp. 505-40.
- Harrison, J., 'Heavy industry, the state, and economic development in the Basque region, 1876-1936', Econ. Hist. Rev., 2nd ser., XXXVI (1983), pp. 535-51.
- Harrison, J., The Spanish economy: from the civil war to the European Community (Cambridge, 1995). Harvey, C. E. and Taylor, P., 'Mineral wealth and economic development; foreign direct investment in Spain, 1851-1913', Econ. Hist. Rev., 2nd ser., XL (1987), pp. 185-207.
- Herr, R., Rural change and royal finances in Spain at the end of the old regime (Berkeley and Los Angeles, 1989).
- Maddison, A., Monitoring the world economy, 1829-1992 (Paris, 1995).
- Martín-Aceña, P., 'Development and modernization of the financial system, 1844-1935', in N. Sánchez Albornoz, ed., *The economic modernization of Spain*, 1830-1930 (New York, 1987), pp. 107-27.
- Martín-Aceña, P., 'Spain during the classical gold standard years, 1880-1914', in M. D. Bordo and F. Capie, eds., *Monetary regimes in transition* (Cambridge, 1993), pp. 135-72.
- Martín Rodríguez, M., Azúcar y descolonización: origen y desenlace de una crisis agraria en la vega de Granada: el 'ingenio de San Juan', 1882-1904 (Granada, 1982).
- Martínez Carrión, J. M., 'Stature, welfare, and economic growth in nineteenth-century Spain: the case of Murcia', in J. Komlos, ed., *Stature, living standards, and economic development* (Chicago, 1994), pp. 76-89.
- Molinas, C. and Prados de la Escosura, L., 'Was Spain different? Spanish historical backwardness revisited', Exp. Econ. Hist., 26 (1989), pp. 385-402.
- Nadal, J., 'The failure of the industrial revolution in Spain, 1830-1914', in C. M. Cipolla, ed., *The Fontana economic history of Europe*, 4, 2 (Glasgow, 1973), pp. 532-626.
- Nadal, J., El fracaso de la revolución industrial en España, 1814-1913 (Barcelona, 1975).
- Nadal, J., 'Andalucía, paraíso de los metales no ferrosos', in *Historia de Andalucía*, 7 (Barcelona, 1984), pp. 366-490.
- Nadal, J., 'La indústria cotonera', in Enciclopèdia Catalana: història econòmica de la Catalunya contemporània (Barcelona, 1991), pp. 13-158.
- Nadal, J. and Catalán, J., eds., La cara oculta de la industrialización española (Madrid, 1994).
- Nadal, J. and Sudrià, C., 'La controversia en torno al atraso económico español en la segunda mitad del siglo XIX (1860-1913)', Revista de Historia Industrial, 3 (1993), pp. 199-227.
- Núñez, C. E., La fuente de la riqueza: educación y desarrollo económico en la España contemporánea (Madrid, 1992).
- O'Brien, P. and Prados de la Escosura, L., 'Agricultural productivity and European industrialization, 1890-1980', Econ. Hist. Rev., XLV (1992), pp. 514-36.
- Palafox, J., 'Exports, internal demand, and economic growth in Valencia', in N. Sánchez Albornoz, ed., The economic modernization of Spain, 1830-1930 (New York, 1987), pp. 268-89.
- Palafox, J., Atraso económico y democracia: la Segunda República y la economía española, 1892-1936 (Barcelona, 1991).
- Pan-Montojo, J. L., La bodega del mundo: la vid y el vino en España, 1800-1936 (Madrid, 1994).
- Pérez Picazo, M. T., El mayorazgo en la historia económica de la región murciana: expansión, crisis y abolición (s. XVII-XIX) (Madrid, 1990).
- Piqueras, J., La agricultura valenciana de exportación y su formación histórica (Madrid, 1985).
- Pollard, S., Peaceful conquest: the industrialization of Europe, 1760-1970 (Oxford, 1981).
- Prados de la Escosura, L., Comercio exterior y crecimiento en España, 1826-1913 (Madrid, 1982).
- Prados de la Escosura, L., De imperio a nación: crecimiento y atraso económico en España, 1780-1930 (Madrid, 1988).
- Prados de la Escosura, L., 'La pérdida del imperio y sus consecuencias económicas en España', in L. Prados de le Escosura and S. Amaral, eds., La independencia americana: consecuencias económicas (Madrid, 1993), pp. 253-300.
- Prados de la Escosura, L., 'Spain's gross domestic product, 1850-1993', Universidad Carlos III de Madrid, Working paper, 1995-05/6.
- Prados de la Escosura, L. and Sanz, J. C., 'Growth and macroeconomic performance in Spain, 1939-93', in N. Crafts and G. Toniolo, eds., *Economic growth in Europe since 1945* (Cambridge, 1996), pp. 355-87.
- Ringrose, D. R., Madrid and the Spanish economy, 1560-1850 (Berkeley and Los Angeles, 1983).
- Ringrose, D., Spain, Europe and the 'Spanish miracle', 1700-1900 (Cambridge, 1996).
- Robledo, R., La renta de la tierra en Castilla la Vieja y León, 1836-1913 (Madrid, 1984).

- Roldán, S. and García Delgado, J. M., La formación de la sociedad capitalista en España, 1914-1920 (Madrid, 1973).
- Sánchez-Albornoz, N., España hace un siglo: una economía dual (Madrid, 1977).
- Sánchez Alonso, B., Las causas de la emigración española (Madrid, 1995).
- Simpson, J., Spanish agriculture: the long siesta, 1765-1965 (Cambridge, 1995).
- Simpson, J., 'Did Spanish tariffs stifle Spanish agriculture before 1936?', Eur. Rev. Econ. Hist., 1 (1997).
- Sudrià, C., 'Energy as a limiting factor to growth', in P. Martín-Aceña and J. Simpson, eds., *The economic development of Spain since 1870* (Aldershot, 1995), pp. 268-309.
- Tedde, P., 'Las compañias ferroviarias en España, 1855-1935', in M. Artola, ed., Los ferrocarriles en España, 1844-1943 (Madrid, 1978), 2, pp. 9-354.
- Tedde, P., ed., El estado y la modernización económica (Madrid, 1996).
- Tena, A., 'The Spanish foreign sector, 1885-1985', in P. Martín-Aceña and J. Simpson, eds., *The economic development of Spain since 1870* (Aldershot, 1995), pp. 402-18.
- Tena, A., Fue importante la protección? La medición de la protección en España, 1870-1930 (Madrid, forthcoming).
- Tortella, G., 'Agriculture: a slow-moving sector, 1830-1935', in N. Sánchez Albornoz, ed., *The economic modernization of Spain, 1830-1930* (New York, 1987), pp. 42-62.
- Tortella, G., 'Patterns of economic retardation and recovery in south-western Europe in the nine-teenth and twentieth centuries', *Econ. Hist. Rev.*, XLVII (1994), pp. 1-24.
- Tortella, G., El desarrollo de la España contemporánea: historia económica de los siglos XIX y XX (Madrid, 1994).
- Tortella, G. and Palafox, J., 'Banking and industry in Spain, 1918-1936', J. Eur. Econ. Hist., 13 (1984), pp. 81-111.
- Villares, R., La propiedad de la tierra en Galicia, 1500-1936 (Madrid, 1982).
- Zambrana, J. F., Crisis y modernización del olivar español, 1870-1930 (Madrid, 1987).