

Long-Run Economic Growth in Spain since 1800: An International Perspective



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1. Introduction.

Over the last two centuries Spain has evolved from a declining imperial power to an emerging, but still relatively backward nation in the Western European periphery. Despite being an interesting case of retarded or failed growth, Spain's economic performance has received only a tiny proportion of the attention paid to her political history during the interwar years and the Civil War (1936-1939).¹

Spain's absence in historical debates on European industrialisation has been associated with the lack of quantitative research and economic analysis in Spanish economic history until recent times when progress along the lines drawn by quantitative and analytical economic historians has proceeded very rapidly.² Some shortcomings have still to be overcome. In the first place, there is no overall picture of economic performance in modern Spain.³ Most historical research has dealt with the nineteenth century while post-World War I history has been abandoned to occasional explorations by economists.⁴ As a consequence, perceptions of economic performance in modern Spain are derived from the nineteenth century experience despite the fact that growth and structural change are mostly twentieth century features.⁵

¹ Spain has been absent from major debates in modern European economic history. The impact of the Napoleonic Wars, the role of colonies in the metropolis' economic development, or late-comers' strategies of development, have all been analysed with no regard to the lessons that could be extracted from Spanish history.

² Modern economic history is a very young subject in Spain and most now classical works are less than a quarter of century old. Cf. Sánchez-Albornoz (1968); Tortella (1973); Nadal (1975); Donges (1976).

³ Cf. recent attempts by Tortella (1992) and Prados (1992).

⁴ Only in the last years has the interwar period captured some attention from economic historians. Cf. Martín Aceña (1984); Fraile (1991).

⁵ Evidence to support such a statement can be derived from the lively debate on the causes of poor performance over the period 1815-1913 where endogenous and

A second feature of Spanish economic history is the lack of a consistent comparative approach despite occasional implicit comparison with an European pattern of development.⁶ Explicit and systematic attempts to compare Spain's performance with other European experiences or models have hardly taken place.⁷ In addition, most explanatory hypotheses have not been put to the test with the available quantitative evidence and the use of modern economics. A major obstacle to accomplish this has been the lack of consistent, reliable and homogeneous macroeconomic data, in particular, historical national accounts that prevented Spain's historians from making systematic comparisons with other European experiences. During the last decade quantitative evidence on major macroeconomic variables has been gathered and attempts to establish the pace of growth have taken place. Benchmarks and annual series are now available for GDP but strong discrepancies among alternative estimates suggest a still weak and incomplete quantitative basis.

It is the aim of this paper to provide a quantitative assessment of Spanish economic growth over the long run taking the Napoleonic Wars as a starting point, and to place her performance within the context of Western European industrialisation. Section two presents new evidence on trends in real gross domestic product per head. Section three compares economic performance between Spain and the leading European nations and provides evidence for an assessment of retardation and convergence. Historical explanations for Spanish relative backwardness are explored in section four. Finally, an agenda for further research is suggested.

2. New Evidence on Spain's Economic Growth.

Spanish national accounts started to be published in 1954 and more detailed accounts only appeared in 1964.⁸ For earlier periods only index numbers of real output were built up by the official Consejo de Economía Nacional (CEN) estimates, that go back till 1906, and by Alcaide's revision of the CEN series

exogenous explanations for failure, retardation and underdevelopment are proposed in sharp contrast with the widely accepted consensus about twentieth century economic modernisation.

⁶ When depicting pre-World War I Spain, historians emphasise the failure to replicate an industrial revolution along the British path, the retardation within the European setting or simply features of underdevelopment as shown in today's third world countries.

⁷ Cf. as exceptions Tortella (1992); Molinas and Prados (1989); Fraile (1991).

⁸ The best updated, homogeneous set of macroeconomic data is the 1980-based series by Corrales and Taguas (1989).

that start in 1901.⁹ In the last decade an attempt to provide long-run GDP series from the expenditure side back to mid-nineteenth century was produced by Carreras.¹⁰ A shortcoming of the three annual series for real product is the neglect of the service sector. In the CEN estimates physical output series for agriculture and manufacturing were weighted by 0.4 and 0.6 coefficients, and smoothed by a de-trended index of nuptiality to incorporate yearly fluctuations. Alcaide followed an analogous procedure for agriculture and industry and assumed that output in services moved with the labour force employed in this sector. The implication is that while CEN estimates implicitly assume that output per worker in services was a weighted average of agricultural and industrial labour productivity, Alcaide assumed no growth at all for services' labour productivity.¹¹ In the case of Carreras' estimates services are, in the best of the cases, clearly underrepresented. In addition to annual series, GDP estimates for seven benchmarks over the period 1800-1930 that included service output were built up by Prados de la Escosura.¹² A common feature of all available estimates is that they are real output indices and not direct calculations of gross domestic product. They all suffer from the index number problem and their economic significance declines as one moves away from the base year. Unfortunately, only contemporary observers have produced direct estimates of national income for the period prior to 1954.¹³

My purpose in providing a new yearly series of real output is to offer an alternative to existing series that incorporates some aspects previously neglected.¹⁴ The new GDP index has been obtained from the output side and it starts from a desaggregated data base that incorporates the results of major independent research on agriculture, manufacturing and services over the last two decades. It has been built up from spliced homogeneous series for agriculture, manufacturing and services with 1913 and 1954 as base years in an attempt to include changes in the product mix and in the price structure.¹⁵ Carreras' pathbreaking research on manufacturing provides the basis for an industrial

⁹ CEN (1945, 1965); Alcaide (1976).

¹⁰ Carreras (1985). In addition, annual estimates were derived for shorter periods by Schwartz (1977), for 1940-1960, and by Naredo (1991), for 1920-1954.

¹¹ Cf. Tortella (1987) for a critique of Alcaide's estimates.

¹² Prados de la Escosura (1988). Benchmark indices for real output for the 19th century were also obtained by indirect methods by Bairoch (1976) and Crafts (1984).

¹³ Cf. Schwartz (1977).

¹⁴ Prados de la Escosura, Dabán and Sanz (1992).

¹⁵ In the case of industry three base years are used: 1913, 1929 and 1958.

output index updated and improved by recent work by Morellà.¹⁶ Benchmark estimates for agricultural final output built up by Simpson have been linked to an annual series derived from a large sample of commodities in an attempt to represent year-to-year fluctuations.¹⁷ Service output has been derived from independent physical indicators for a large sample of subsectors, including transportation and communications, housing rents, public administration, banking, trade and liberal professions. Although only a step in the larger endeavour of producing historical national accounts for Spain, the new index represents an improvement in our perception of Spanish economic growth, reconciling scattered knowledge about performance at the sub-sectoral level with an aggregated view of economic activity. In addition, the series has been constructed with a method analogous to early nineteenth century benchmarks built up by Prados and it allows us, therefore, to splice both sets of estimates in order to produce an overall picture for one hundred and fifty years.¹⁸ Finally, the series can be linked to available national account series for the post-1954 period.¹⁹

Table 1 presents growth rates for the new series over significant periods in the pre-national accounts era and compares the results to those derived from earlier estimates.

The new series improves the picture of Spanish economic performance in the century previous to 1950, in particular for the early twentieth century. After negligible per capita growth over the early nineteenth century, in which increases in output of goods and services were cancelled out by an acceleration in population growth, a sustained gain in product per head took place up to World War I.²⁰ There is a significant agreement between Carreras' estimates and my

new ones on the late nineteenth century pace of growth despite discrepancies for shorter periods. The new series, by contrast with Carreras, emphasises the acceleration of growth in the free-trading years (1860-1890) and the decline that followed the closure of the economy brought by the return to high tariff barriers in 1891 and the delayed effects of giving up the peseta's gold convertibility.²¹

TABLE 1
Growth in real GDP per Head in Spain since 1800 (%)
(exponential fitting, annual growth rates)

	New	Carreras	CEN	Alcaide
1860-1890	1.5	1.0	-	-
1890-1913	0.8	1.0	-	-
1913-1929	1.4	0.8	1.1	1.2
1929-1935	-0.8	-1.4	-0.5	0.5
1935-1940	-2.5	-6.8	-7.6	-6.9
1940-1954	1.5	1.7	3.0	2.7
1929-1950	-0.7	-2.1	-2.1	-1.4
1800-1860	0.2 ^a	-	-	-
1860-1913	0.9	0.9	-	-
1913-1950	0.1	-1.0	-0.8	-0.2
1800-1950	0.6 ^a	-	-	-
1860-1950	0.8	0.3	-	-
1860-1990	1.4	1.0	-	-

^a compound growth rate between centered three year averages.
Sources: Prados, Dabán and Sanz (1992a); Carreras (1985); CEN (1965); Alcaide (1976).

¹⁶ The sources for industrial output are Carreras (1984) and Morellà (1992).

¹⁷ Simpson's benchmarks are averages for final output, that is, total production less seed and animal feed, for the years 1891/95, 1897/1901, 1909/13 and 1929/33. The annual series used to allow for short-term fluctuations, covers around 50 per cent of output and includes cereals, pulses, olives and must and covers the period 1882-1935. A physical output index is available for the 1940-1954 period. Lack of sources for the years prior to the 1880's make highly conjectural any numbers for agricultural output. Unsatisfactory fiscal data on crop taxes have been deflated by the price of wheat and spliced with the post-1882 series. The results, however, are consistent with qualitative and scattered quantitative evidence.

¹⁸ Prados de la Escosura (1988), chapter 1.

¹⁹ Corrales and Taguas (1989), revised and updated by the authors who kindly allow me to use it.

²⁰ Population grew at 0.9 per cent between 1816 and 1857, according to Pérez Moreda (1985), against 0.4 per cent over the 18th century. It appears that the main contribution of growth in this period was escape from the Malthusian trap.

Much stronger discrepancies emerge over the poor early twentieth century performance. The new series suggests a slowing down in the rate of growth against the lack of growth or the absolute decline suggested by previous estimates. Substantial differences emerge compared to Carreras' series which represents the interwar years as a period of deceleration, while the new index suggests that a phase of remarkable acceleration in growth and structural change took place from 1913 till 1929. A milder intensity of the 1930s crisis, a less steep fall in the level of economic activity during the Civil War (1936-1939), and a slower growth in the autarkic post-war years, are responsible for the discrepancies between the new series and earlier estimates which showed a decline in output per head from 1929 to the early 1950s. To conclude: a more gradual, more optimistic picture emerges from the new estimates that depicts

²¹ Cf. Tena (1992); Martín Accña (1985).

early 20th century Spain as an accelerating economy up to the Great Depression, abruptly interrupted by the Civil War, from which it recovered only slowly under the Dictatorship's economic autarky that lasted until the late 1950s.

A last remark concerns regional dualism within Spain as suggested by strong deviation of regional output per head from the national average during the early twentieth century.²² Such remarkable regional deviations from the national pattern suggests that the conclusions emerging from this section should be used with extreme caution when inferences at regional level are attempted.

3. Spanish Economic Growth: an International Perspective

Despite perceptions of retardation, backwardness or underdevelopment in Spanish history that implicitly suggest the existence of a European or international pattern, historical assessments of Spain's economic performance pay little regard to the international context. Evidence to support such a contention can be obtained from accounts of early industrialisation and progress in the 1830s and 1840s, of the Spanish "wirtschaftswunder" of the 1960s, or even of the expansion occurring since Spain's admission to the EEC in 1986. This section aims at providing the evidence to revise some of the "stylised facts" about long-run comparative growth of Spain.

The point of departure is Kuznets' definition of modern economic growth that emphasises sustained changes in real output per head and per worker accompanied by structural change, that allow us to define retardation as slower growth relative to neighbour countries together with deviations from patterns of structural change exhibited by leading industrialised countries.²³ Within this context Spain's levels and growth rates of real per capita income and labour productivity will be related to those of major Western European countries and the U.S.A. in order to establish her relative performance and to qualify previous historical assessments.

Figures 1, 2 and 3 and table 2 present evidence for Spain's comparative performance with real GDP per head expressed in 1990 "international" dollars and adjusted for the peseta's purchasing power parity.²⁴ Levels of real product

²² Cf. Prados (1992), p. 34, the coefficient of variation remained over 35 per cent between 1900 and 1950.

²³ Kuznets (1966), p. 1.

²⁴ OECD's 1990 PPP "international" dollars were preferred to existing alternatives for 1985, where estimates by Summers and Heston (1991) show strong discrepancies with OECD's similar estimates or with Maddison's (1991) Paasche PPP estimates for Spain's real GDP per head (I am indebted to Angus Maddison for pointing out these discrepancies to me). Besides, the gap between the exchange rate and the PPP rate is narrower for 1990 than for 1985, making the resulting figures more easily

per person for 1990 as estimated by OECD were projected backwards with the new series for Spain's GDP per head and a similar procedure was used to derive annual series for other countries in 1990 "international" dollars.²⁵

TABLE 2
Real GDP per Capita Growth in European Countries, 1860-1990
(annual rates, exponential fitting)

	Spain	Italy	France	Germany	U.K.
1860-1890	1.48	0.38	1.08	1.36	1.08
1890-1913	0.83	2.38	1.29	1.69	0.87
1919-1938	0.97 ^a	1.01	1.66	2.71	1.34
1950-1960	4.09	5.13	3.59	6.51	2.39
1960-1973	5.73	4.08	4.57	3.48	2.42
1950-1973	5.11	4.79	4.23	4.52	2.38
1973-1990	0.99	2.76	1.53	1.98	2.02
1860-1913	0.91	0.90	1.09	1.55	1.03
1860-1938	0.93 ^b	1.21	1.13	1.26	0.81
1950-1990	3.53	3.91	3.27	3.27	2.19
1860-1990	1.45	1.87	1.71	1.82	1.23

^a For Spain, 1914-1935; ^b For Spain, 1860-1935;.

Notes: t coefficients are highly significant.

Sources: All countries, except Spain, Maddison (1991, 1992); Spain, Prados, Dabán and Sanz (1992b).

Unfortunately, index number problems arise as we move away from the present and are faced with the changes in relative prices and the composition of output that economies experience in the process of structural change.²⁶

understandable.

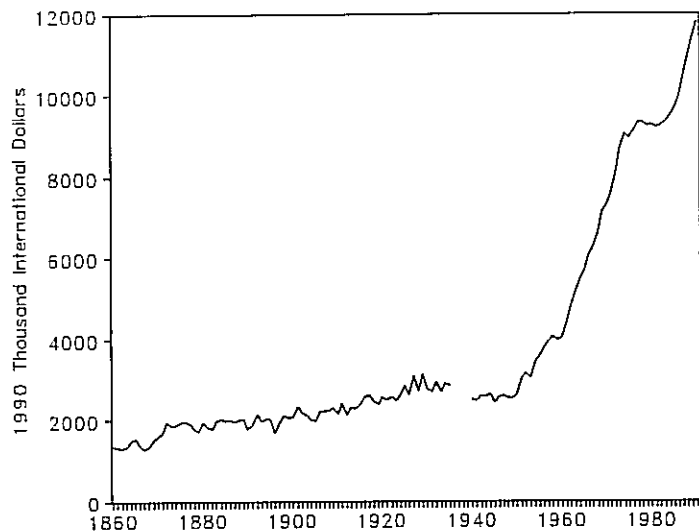
²⁵ Together with OECD (1992) PPP levels of real product per head expressed in 1990 "international" dollars, annual indices of national real output derived from Maddison (1991, 1992), for all countries, and Prados de la Escosura, Dabán and Sanz (1992), for Spain.

²⁶ Cf. Eichengreen (1986) for a critique of the procedure followed.

Therefore, the evidence offered here only allows us to provide rough orders of magnitude for Spanish economic performance within the international context.

Several distinctive features of the Spanish economy emerge from placing it in an international context. The remarkable tenfold increase in Spain's real per capita income over one hundred and sixty years, only represents a moderate pace of growth compared to industrial European nations if Britain is excluded. Spain started from a lower point in terms of output per person since it practically stagnated over the early decades of the nineteenth century while Western European nations industrialised and, therefore, her international position deteriorated. It appears, thus, that the catching-up hypothesis in which growth rates correlate inversely to initial levels does not seem to apply to Spain's historical experience. When evidence about the pace of growth is supplemented by information on comparative levels of real output per head, the non-convergence case is reinforced.

FIGURE 1
Real GDP per Head in Spain, 1860-1990



In the search for differentials in Spanish economic performance several significant periods emerge. Within the period from the mid-nineteenth century up to the Spanish Civil War (1936), only the moderately free-trading years 1860-1890 and to a lesser extent the late 1910s and the 1920s, represent a mild attempt to catch up with Western European industrial nations. In the late twentieth century the 1960-1975 period is another attempt at closing the gap. Conversely, three periods appear to be responsible for the widening gap between

FIGURE 2
Real GDP per Head, USA=100

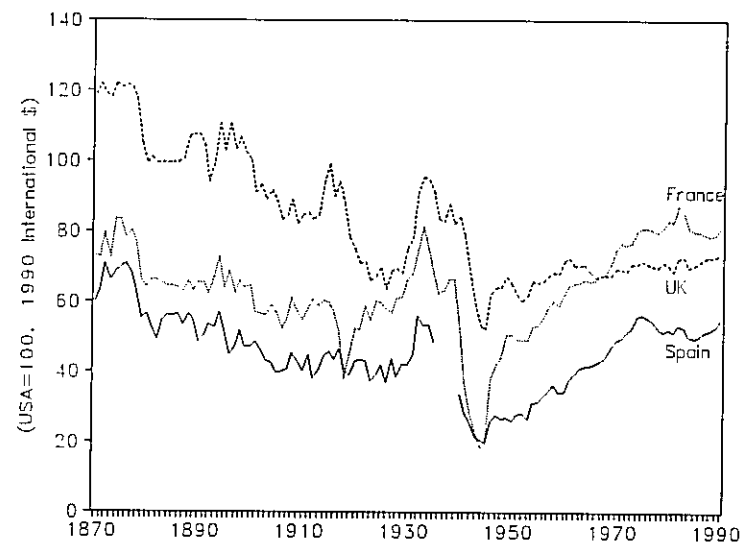
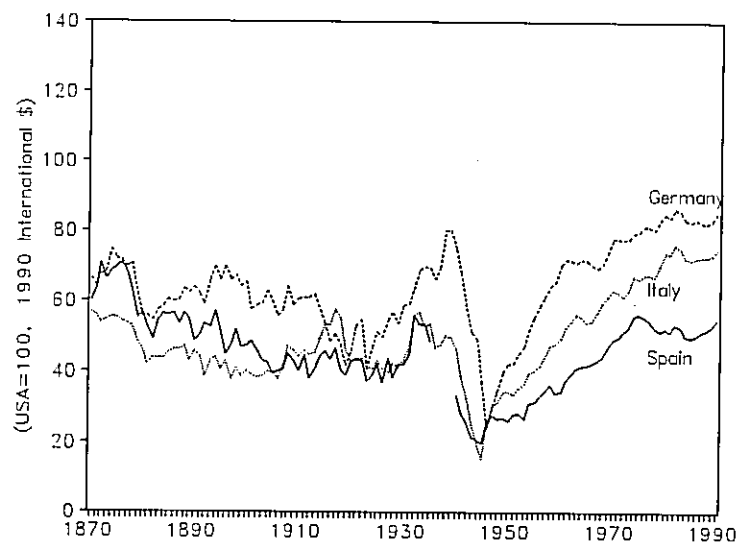


FIGURE 3
Real GDP per Head, USA=100



Spain and the advanced Western European nations: the turn of the century and the decade prior to World War I seems to be a lost opportunity for closing the gap as the comparison with Giolittian Italy suggests.²⁷ Despite traditional accounts stressing the poor economic performance under autarky in the 1940s, in comparative terms the 1950s emerge as a decade of failed catching-up, as the ups and downs in real output per head and the comparison with Italy's performance suggest. As forces making for growth and convergence were stronger in the 1950s, countries like Spain that failed to catch-up paid a heavier penalty than would have been the case in phases of slowing down.²⁸ Countries that remained closed and did not compete in international markets for similar goods did not share the productivity growth benefits deriving from the leading nations. However, the largest loss in relative levels of income per head during more than one and a half centuries appears to derive from the years between General Franco's death (1975) and the admission of Spain to the EEC (1986). Once again, the comparison with Italy seems to be particularly relevant. Research on the period is lacking and only superficial hypotheses relating poor performance to the difficult transition to a democratic regime are available as explanations. However, there seem to be deeper institutional reasons underlying poor economic performance, i.e. an over-regulated, heavily protected economy, cut-off from the international market. This explanatory hypothesis needs to be explored further.

When assessing differences in the level of efficiency across countries, partial or total factor productivity measures are used. Over the long run only reliable partial productivity estimates can be obtained for Spain. Labour productivity measurements provide a reasonable index for productive potential, influenced by both factor endowments, technology and organisation. Lower participation rates, largely unexplored, improve Spanish relative position but the picture of retardation drawn for real product per head remains basically unaltered.²⁹

4. Retardation and Catching-Up in Spain: A Search for Determinants

Both Gerschenkronian explanations for backwardness and convergence and catching-up hypotheses are related to the search for the causes of growth.

²⁷ Not only Italy but Sweden, and Hungary and Russia, to a lesser extent, reduced distances with respect to Britain and France over the 1900-1913 period. Cf. Berend and Ranki (1982).

²⁸ Cf. Baumol (1986).

²⁹ Cf. Prados de la Escosura (1992) for a discussion and evidence. Gender and age structure of the labour force, urbanisation, educational patterns and levels of unemployment all influence participation rates and contribute to the explanation of differentials across countries.

Economists have emphasised the role of technological progress, partly embodied in new capital, and the social capability for innovative adoption of the leader's technology and organisation to the resource endowment and particular conditions of the follower, as crucial elements for reducing the productivity gap among countries.³⁰ The pace at which catching-up takes place depends on the diffusion of knowledge, the reduction of intersectoral disequilibria through structural change, physical and human capital accumulation, and the degree of openness, along with an institutional framework that favours economic progress through an adequate system of incentives.

Testing the plethora of explanatory hypothesis for growth and convergence in modern Europe is a challenge for economic historians that obviously goes beyond the scope of this paper. However, the definition of backwardness along Kuznetsian lines, allows us to identify the extent to which structural change in a peripheral country like Spain gave rise to a convergence process towards Europe's industrial nations.³¹ Patterns of development for Spain within a European framework built up along the lines defined by Chenery and Syrquin and Crafts are offered in table 3.³² Simulations allow us to compare structural change in Spain with structural change in an "ideal" European country with the same size and income per head as Spain. Convergence would take place if structural differences are reduced, as real income per head grows. Conversely, increasing structural differences would imply backwardness. In table 3 Spain's deviations from the European pattern are presented in percentage terms. The results seem to provide enough evidence to conclude that for most of the period under consideration human and physical capital accumulation in Spain remained below European standards and only converged towards them at high levels of per capita income not reached before the 1960s. A large agricultural sector in Spain, with relatively low productivity - up to 1913, and again in recent years -, together with a slower and delayed release of labour from the countryside, seem to be another explanatory element of retardation. Recent research on European agricultural productivity confirms our findings as it suggests that even in 1980 a large gap in value added per worker existed between Spain and Western European nations.³³

³⁰ Cf. Baumol (1986); Abramovitz (1986); Dowrick and Gemmell (1991); Barro (1991).

³¹ As defined above, it would imply a widening differential in per capita incomes with regard to advanced countries together with a structural divergence as real product per head grows.

³² Chenery and Syrquin (1975); Crafts (1984). The underlying equations derive from a forthcoming paper by Prados, Dabán and Sanz (1992b).

³³ Cf. O'Brien and Prados de la Escosura (1992).

TABLE 3
Patterns of Development in Spain, 1860-1990
(centered five-year averages)

	1860	1890	1900	1913	1929	1950	1960	1975	1990
Y/pop	1359	1776	2079	2307	3133	2625	4022	8973	11791
Pop. (m)	15.6	17.8	18.6	20.3	23.2	27.9	30.3	35.5	39.2
%INVT/GDP	5.5	7.3	9.6	11.9	17.1	15.2	18.0	27.9	26.0
Dev.(%)	-43	-35	-13	-1	13	-27	-13	24	4
%CON/GDP	88.4	86.6	82.8	75.5	75.6	72.1	65.4	65.7	64.0
Dev.(%)	2	11	9	2	-1	2	0.1	3	8
%SCHOOL	39.0		36.0	30.6	26.0	30.1	49.0	76.0	86.0 ^a
Dev.(%)	26		-10	-41	-43	-33	-10	13	26
%IND/GDP	14.9	20.0	21.2	21.6	21.9	25.8	35.2	41.9	39.1
Dev.(%)	-56	-37	-34	-28	-35	-36	-7	10	1
%AG/GDP	45.2	38.5	38.3	37.7	36.7	29.9	23.7	9.6	6.3 ^b
Dev.(%)	15	9	11	13	22	-2	-6	16	4
%Lag/L	63.5	65.3	66.3	66.0	45.5	47.6	39.0	23.4	11.8
Dev.(%)	17	25	27	25	10	4	4	29	-17
Agriculture's relative productivity	0.71	0.59	0.58	0.57	0.81	0.63	0.56	0.41	0.34 ^b
Dev.(%)	-2	-16	-16	-15	12	-6	-10	-13	11

^a year 1980. ^b year 1985.

Notes: Dev.(%): deviation from the European norm (difference between the log of the actual value for Spain and the log of the European norm).

Y/Pop: real GDP per head in 1990 "international" dollars.

Pop. (m): million inhabitants.

%AG/GDP: agriculture's share in GDP.

%IND/GDP: industry's share in GDP.

%Lag/L: share of agriculture in total active population.

%INVT/GDP: share of domestic investment in GDP, expressed in real terms.

%CON/GDP: share of domestic consumption in GDP, expressed in real terms.

% SCHOOL: percentage of population aged 5 to 19 in school.

Sources: Prados, Dabán and Sanz (1992b).

A lower degree of openness up to the 1980s, divergent from the European pattern, completes a picture in which structural convergence is not clearly visible.³⁴

³⁴ Cf. Tena (1992).

5. Conclusions

Moderate growth, retardation and incomplete attempts to catch up emerge from a brief quantitative assessment of Spain's economic performance over almost two centuries. No persuasive explanations have been provided but a long agenda for research emerges from the questions raised by the empirical evidence gathered. Why did the release of labour from the countryside take so long? Can this be explained by characteristics of the "urban" economy? Why did human and physical capital accumulation proceed at such a slow pace? What prevented Spanish industrialists from having access to international markets? Only a comparative, quantitative approach seems adequate to provide the answers.

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