

COMMENTARY

From Globalisation to Revolution? The Porfirian Political Economy: An Essay on Issues and Interpretations*

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Abstract. This essay evaluates the political economy of Mexico during the Porfirian period (1876–1911), with the aim of discussing advances in scholarship and presenting an outline of the elements for a future research agenda. To this end, the essay examines the current state of knowledge on four crucial aspects of the Mexican economy: growth and its dimensions; the state, finance and economic strategies; the construction and functioning of the internal market; and the international economic relations of Mexico during the first period of globalisation. In particular, it assesses the arguments that link features of Porfirian economic organisation with the outbreak of the Mexican Revolution in 1910.

Keywords: Porfiriato, Mexican economy, Mexican Revolution, first globalisation

The Porfirian era, or Porfiriato, spans a 35-year period in Mexican history (1876–1911), dominated by the presidential figure of Porfirio Díaz, and roughly coinciding with what is known as the first ‘modern’ globalisation of the international economy.¹ As in other Latin American countries, this stage was characterised by a process of trade liberalisation and economic growth. For Mexico, its distinguishing features include its incipient integration into the US market, largely as a result of railway construction, and the fact that it saw the first Latin American social uprising, the Mexican Revolution. The chronological coincidence between the long re-electionist regime of Díaz and the rise in the free movement of capital in the international economy has led to simplistic comparisons based on scant historical

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* The insightful observations of two anonymous referees are acknowledged. All the errors are mine.

¹ Luis Bértola and Jeffrey Williamson, ‘Globalization in Latin America before 1940’, in Victor Bulmer-Thomas et al. (eds.), *The Cambridge Economic History of Latin America* (Cambridge, 2006), vol. II, pp. 1–28; Marc Flandreau and Frédéric Zumer, *The Making of Global Finance, 1880–1913* (Paris, 2004).

evidence.² A succession of political events created the stereotype of the Díaz regime as one of authoritarian modernisation subordinated to the demands of the international division of labour or to imperialism, and the post-revolutionary state sponsored the effective reproduction of such a stereotype. It was a truth that had been proved by the Revolution, and should not be questioned.³ For a long time there seemed to be a clear pattern to defining the economic and social structure of Mexico before the Revolution: outward-looking development based on the external sector; the search for foreign capital at any cost; the preference given to the latter over national actors; a monopolistic concentration of investments; foreign debts; and extremely high costs in terms of economic sovereignty. This view of a growth model that was reproduced for over thirty years and cemented by the president's autocratic continuity has persisted in most historical studies from the 1920s and the 1930s until recently. This was due to explanations of the Revolution based on the idea of a 'pressure cooker', whereby, between 1880 and 1910, economic and social conditions progressively and systematically deteriorated until, finding no outlet, an explosion eventually occurred. This is not an appropriate means of recording the historical processes and actors involved, nor does it identify the possible 'economic causes' of the Mexican Revolution.

The study of the economy of the Porfiriato based on scientific criteria is actually fairly recent.⁴ After the publication of the *Historia Moderna de México*, coordinated by Daniel Cosío Villegas, on the Porfirian period, several chapters of which were devoted to various aspects of its economy, no new knowledge emerged for a number of years. The political passion for revolutionary phenomena in Latin Americanist historiography tended to reduce over three decades of Mexican history to the condition of a preparatory context for the Revolution. Moreover, the subjection of part of historiography to the state-administered revolutionary heritage led to the caricature of Porfirian economy and society.⁵ This combination of intellectual

² Oddly enough, the personalisation of the period based on Díaz was accompanied by a lack of academic studies on him. Before the publication of the study by Paul Garner, *Porfirio Díaz. Del héroe al dictador: una biografía política* (Mexico, 2003), there was only the work of Enrique Krauze, *Porfirio Díaz: el místico de la autoridad* (Mexico, 1987), which was based on secondary sources, and a much older one by the US radical, Carleton Beals, *Díaz, Dictator of Mexico* (Philadelphia, 1932), the sources for which are unknown.

³ Leaving to one side the obvious differences between the two countries, compare this with what Paul Gregory writes in *Before Command: An Economic History of Russia From Emancipation to the First-Five Year Plan* (Princeton, 1994), pp. 6–7. Gregory notes how for a long time the study of the Tsarist economy was steeped in myth and stereotypes, linked to the influence of the Leninist research agenda on Soviet historians.

⁴ This comment refers to the use of statistical reconstruction, quantitative methods, and economic theory.

⁵ These two points found intellectual support in dependency theory. For a critical evaluation of this family of theories, see Stephen Haber, 'Economic Growth and Latin American

trends and state interests encouraged the removal of the Mexican case from historical comparison with respect to its political regime, its economic structures, and levels of well-being. What standards should be used to gauge the degree of authoritarianism, the concentration of wealth, and economic performance in pre-Revolutionary Mexico, and to determine whether it was an extreme outlier or in fact shared some of the features and patterns of other countries in the late nineteenth and early twentieth centuries? The issue seemed irrelevant, even if in many parts of the contemporary western world democracy and development were certainly not universal currency.⁶ But the engagement of historians with somewhat tautological issues such as how dependent Porfirian dependency was or how revolutionary the Revolution was took centre stage in the debate.

Since then, a wealth of research and good literature has significantly expanded the knowledge available, opened up new channels of research, and enabled the various results to be systematised.⁷ The purpose of this essay is to describe these advances, discuss the results, and outline some of the elements for a research agenda. To this end it examines four aspects which may be regarded as crucial to an assessment of the political economy of the Porfiriato: economic growth and its dimensions; the state, finance and economic strategies; the construction and functioning of the internal market; and the international economic relations of Mexico during the first period of globalisation.⁸ The purpose is to understand, on the basis of the recent literature, what kind of economic order emerged and where its weakest features lay.

Historiography', in Haber (ed.), *How Latin America Fell Behind: Essays on the Economic History of Brazil and Mexico, 1800–1914* (Stanford, 1997), pp. 1–33.

⁶ For a recent effort at systematic historical comparison between Mexico and Spain, see the essays put together by Rafael Dobado, Aurora Gómez-Galvarriato and Graciela Márquez (eds.), *México y España. ¿Historias económicas paralelas?* (México, 2007). In particular, the two countries' long-run economic trajectories, their fiscal systems, their mining sectors, regional growth, patents, and human capital are the subjects of an explicitly comparative approach.

⁷ For an exhaustive bibliographical essay on the Porfirian age and insightful observations, especially about the relationship between politics and society, see Mauricio Tenorio Trillo and Aurora Gómez-Galvarriato, *El Porfiriato* (Mexico, 2004). A useful long-term vision is provided by Enrique Cárdenas, *Cuando se originó el atraso económico de México: la economía mexicana en el largo siglo XIX, 1780–1920* (Madrid, 2003).

⁸ One referee suggested that the issues of human capital and unequal access to education might also be discussed. Unfortunately an assessment of the role of educational lags as drawbacks to Mexican growth in historical perspective is still lacking. Bridging the gap between scholarship on the educational history of Mexico and that on its economic history should be considered an urgent, and potentially rewarding, task. Around 1900 Mexico's literacy rates were very low, even by Latin American standards: see Carlos Newland, 'La educación elemental en Hispanoamérica: desde la independencia hasta la centralización de los sistemas educativos nacionales', *Hispanic American Historical Review*, vol. 71, no. 2 (1991), p. 358.

Growth (and Backwardness)

A major obstacle to assessing the growth of the Mexican economy before (and during) the Revolution is the lack of reliable GDP measurements, meaning that there is no general frame that enables one to generalise and compare the experience of the Porfiriato. During the 1960s, analysts at the Bank of Mexico constructed a product series beginning in 1940 and extrapolated backwards from this, publishing their calculations in current and constant pesos. Their figures, for which they hardly provided any explanation, were projected as far back as 1895.⁹ It should be added that these figures in no way constitute a GDP series. However, in a curious cliometric/relativist drift, a growing number of scholars have used them without reservation in order to make calculations and construct arguments about both general and sectoral economic performance, particularly for banking and industry, and also about conjunctures.¹⁰ This has been done lightly, and it has had unfavourable consequences: it has not contributed to available knowledge and it has masked the urgency of reconstructing historical GDP series, in which Mexico lags behind other Latin American countries.¹¹

The lack of aggregate measurements of economic activity means, for example, that there is no overview of the trajectory of the Mexican economy before the Revolution. Did it experience high, destabilising growth due to the speed of its rates or to the concentration of resources and income it caused? Or did it involve rather weak long-term growth, distorted by large flows of foreign investment, or restricted to a few years of expansion (1896–1905) which could not be reproduced? The problem with the common estimate of an average nominal growth rate of 6 per cent during the Porfiriato, which would undeniably put Mexico into the ‘sustained growth’ club, is the reliance on the output performance of the modern manufacturing sector. In spite of its expansion and its greater productivity it still represented

⁹ On the uncertain way in which the series were constructed and all the attendant problems, see Clark Reynolds, *The Mexican Economy: Twentieth-Century Structure and Growth* (New Haven and London, 1970), pp. 338–44.

¹⁰ The term ‘relativist’ is used impressionistically here to denote the lack of interest in the reliability or origin of the data with which one works, hand in hand with the skilful use of powerful quantitative techniques.

¹¹ The lack of a critical reconstruction of GDP series contrasts with Argentina, Brazil and Chile, where the work of economic historians has enabled relatively reliable data to be assembled and published. See Roberto Cortés Conde, *Estimaciones del producto interno bruto de Argentina, 1875–1935* (Buenos Aires, 1994); Raymond Goldsmith, *Brasil 1850–1984: desenvolvimento financeiro sob um século de inflação* (São Paulo, 1986); Claudio Haddad, *O crescimento do produto real no Brasil, 1900–1947* (Rio de Janeiro, 1979). See, José Díaz B, et al, *Economía chilena 1810–1995: evolución cuantitativa del producto total y sectorial* (Santiago, Documento de Trabajo no. 186, 1998).

a small fraction of the Mexican economy that does not account for an overall trend.¹²

The lack of GDP figures, however, contrasts with the abundance of long series for various sectors of the economy. Together with those reconstructed in *Estadísticas económicas del Porfiriato* in the 1960s, successive works have reviewed and perfected those for railways (Coatsworth, Kuntz Ficker), industrial production (Haber), and fiscal series on revenue, expenditure and their composition (Carmagnani, Pérez Siller).¹³ The reconstruction of data on prices and salaries lags further behind, reflecting the acute market segmentation of the Porfirian economy, although it has been improved by the construction of a price index for Mexico City which suggests significant differences in relation to previous indices.¹⁴ The large-scale reconstruction of foreign trade figures (1870–1929) undertaken by Sandra Kuntz Ficker, which is based on the statistics of the countries with which Mexico traded, warrants special mention.¹⁵

Taken as a whole, these efforts have permitted the compilation of a corpus of data of significant quality and scope, whose use by scholars guarantees high yields. The main disadvantage is the great inaccuracy of data on the volume and monetary value of agricultural production. This statistical flaw, which was in fact of concern to Porfirian officials, has its origins in information costs and the traditional practice of concealment in the Mexican rural world. However, it poses a serious problem for the analysis of an economy in which the majority of the labour force was associated with the primary sector. Coatsworth's 1976 overview of the relationship between staple foodstuffs and population showed that, contrary to the usual argument that commercial crops encroached on food production, per capita food levels were in fact improving. Regrettably, no further development has taken place since then.¹⁶

¹² See Donald Keesing, 'Structural Change Early in Development: Mexico's Changing Industrial and Occupational Structure from 1895 to 1960', *Journal of Economic History*, vol. 29, no. 4 (1969), pp. 716–21.

¹³ John Coatsworth, *Growth Against Development: The Economic Impact of Railroads in Porfirian Mexico* (DeKalb, 1983); Sandra Kuntz Ficker, '¿Mercado interno o vinculación con el exterior?: el papel de los ferrocarriles en la economía del porfiriato', *Historia Mexicana*, vol. 45, no. 1 (1995), pp. 39–65; Stephen Haber, *Industry and Underdevelopment: The Industrialization of Mexico, 1890–1940* (Stanford, 1989); Marcello Carmagnani, *Estado y mercado: la economía pública del liberalismo mexicano, 1857–1911* (México, 1994); Javier Pérez Siller, *Los ingresos federales del porfiriato* (Mexico, 2004). The latter work appeared as the author's thesis in 1982.

¹⁴ Aurora Gómez-Galvarriato and Aldo Musacchio, 'Un nuevo índice de precios para México', *El Trimestre Económico*, vol. 67, no. 1 (2000), pp. 47–92.

¹⁵ Sandra Kuntz Ficker, *El comercio exterior de México en la era del capitalismo liberal, 1870–1929* (México, 2007).

¹⁶ Coatsworth detected an improvement in per capita food production levels, particularly in the second half of the Porfirian period: see John Coatsworth, 'La producción de alimentos durante el porfiriato', *Historia Mexicana*, vol. 26, no. 2 (1976), pp. 166–77.

At the same time there are incipient studies on measurements of well-being, which will hopefully enable records on human growth to be linked to their quality of life.¹⁷ However, the impact on living conditions of the huge public works undertaken in urban centres, such as the provision of drainage, drinking water, street lighting and markets, has only barely been explored.¹⁸

State, Finance, Economic Policy

The very inclusion of a section with this title questions the stereotyped views of Porfirian Mexico as the realm of an extreme version of economic liberalism associated with social Darwinism, in which the only determinants were market movements and forces.¹⁹ The consolidation of the state, its strengthening and expanding activities, as we shall see later have been the subject of major studies which stress the importance of government in the political economy of pre-revolutionary Mexico. However, in a recent interpretation, Stephen Haber, Armando Razo and Noel Maurer suggest that the Díaz regime was characterised not by *laissez faire* and market rules, but rather by a politicisation based on an extensive crony system, a network of privileged contracts between the president and selected groups of asset holders. In fact, they consider Porfirian Mexico an ‘archetypal case of a crony system’.²⁰ In their model, vertical political integration (VPI), a system that enforced property rights as private goods and blurred the lines between those asset holders and the government, was the governance mechanism used in Porfirian Mexico. They use their VPI model to explain the political stability, economic growth and the high levels of market and resource concentration that occurred during the period, as well as its demise and the subsequent revolutionary cycle.²¹ Their model is powerful, in that it provides a systematic explanation of the link between power and wealth and its effects on growth in both politically stable and unstable regimes.²²

¹⁷ See the pioneer anthropometric work of Moramay Lopez-Alonso, ‘Growth with Inequality: Living Standards in Mexico, 1850–1950’, *Journal of Latin American Studies*, vol. 39, no. 1 (2007), pp. 81–105, as well as her PhD dissertation, ‘Height, Health, Nutrition, and Wealth: A History of Living Standards in Mexico, 1870–1950’ (Stanford, 2000).

¹⁸ Marta Vera Bolaños and Rodrigo Pimienta, *Acción sanitaria pública y cambios en el patrón de mortalidad en el Estado de México, 1898–1940* (México, 2007).

¹⁹ As Angus Maddison stated, ‘the government was administered by social Darwinists interested in modernization and so indifferent to popular welfare’: Angus Maddison, *The Political Economy of Poverty, Equity and Growth* (Washington, 1992), p. 113.

²⁰ Stephen Haber (ed.), *Crony Capitalism and Economic Growth in Latin America. Theory and Evidence* (Stanford, 2002), p. xviii.

²¹ Stephen Haber et al., *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876–1929* (Cambridge, 2003).

²² Moreover, the interaction between economics, political science, and history that characterises the work of Haber and his associates places the case of Porfirian and

What this author does not find convincing in this work is the virtual exclusion of the state from the scene, as well as an insensitivity to the dramatic changes in its role: the VPI model 'takes the state out', replacing it with coalitions between the dictator and groups of asset holders in order to share rents, in a balance that does not account for historical evolution.²³ Public finances, Congress, economic policies, and the production of public goods are not included in the analysis. Nevertheless, what we do know points to a significant change in the state's presence and capacities, at least in the context of the nineteenth century. During the five or six decades that followed independence the inability to turn the idea of the Mexican nation into a form of state that would create institutional stability was reflected in the chronic precariousness of public finances and tax collection. A combination of coercive and arbitrary measures (confiscations, forced loans, discretionary spending, and the repudiation of financial commitments) was the principal means of appropriating, handling, and distributing fiscal resources, as a result of which neither the state nor its representatives were trusted by the public. In this respect, the work of fiscal reorganisation and ordering of federal finances that was undertaken in the late 1870s and continued for two decades (and which led eventually to constitutional budgeting practices), constituted a crucial instrument in state building and legitimacy.²⁴ The fact that it was both a function and a consequence of the pacification of the country contributed significantly to the decrease in military spending, which had absorbed most of the budget, freeing up resources for public spending and providing services, at least to certain sectors of the population.²⁵ Secondly, the fiscal reforms reduced the dependence of public finances on customs duties, which had constituted the tax base of the federal state throughout most of the nineteenth century, thereby reducing the vulnerability of the latter to international fluctuations. From 1893–1894 the stamp tax, linked to domestic transactions, constituted an equivalent or higher portion of federal revenues than customs duties. At the same time, although it may have given some interest groups easier access to resources, the increase in federal

revolutionary Mexico within the broader context of the literature on institutions and development.

²³ In fact, according to their interpretation, vertical political integration survived the demise of the Díaz regime and continued at least until the *cardenista* regime. In the light of the abundant evidence of systemic cronyism during the later epoch that was dominated by the PRI, one might conclude that in the context of Mexican history the cronyism of the Porfiriato was not so 'archetypal'.

²⁴ Carmagnani, *Estado y mercado*; Pérez Siller, *Los ingresos federales del porfirismo*.

²⁵ This process did not stop at the federal level, and trickled down to the finances of the states of Mexico. The innovative study of María Cecilia Zuleta, *De cultivos y contribuciones: agricultura y hacienda estatal en México en la 'época de la prosperidad'. Morelos e Yucatán, 1870–1910* (México, 2006), documents this transformation for two regions that were the scene of extensive commercial agricultural developments (henequen and sugar respectively).

budgets and their management also permitted Congress an important role in their formation and discussion.

The financial strengthening of the state meant that for the first time different pieces of economic legislation could be combined in a national strategy. Attempts were made to create a new structure of incentives that would encourage the expansion of economic activities, on various scales, and contribute to the broadening of the sphere of exchange. Within this context, the sequence of institutional innovation focused on the following aspects: (1) reorganising property rights and attempting to make them more secure and more uniform across the nation; (2) formalising economic transactions and publicising information on them; (3) liberalising and opening up spaces for economic activity and lifting legal and informal restrictions. But liberalising was not equal to unilateral deregulation. An abundant production of formal rules was set in motion by the creation of the Civil and Commercial Codes (1870–1879 and 1884–1889 respectively), which redefined two grey – and conflict-producing – legal areas: mortgage contracts and limited liability. Alongside legislation on mining, vacant land and water rights, these two areas constituted the vehicles for this modernising effort, together with the attempt to produce and circulate economic information, which ranged from the creation of a statistics apparatus through to the collection of prices to supporting the emergence of a financial press and financing a substantial enlargement of the postal service.²⁶

In view of the high transaction costs that existed in the Mexican context, the initial conditions of backwardness, the capacity for resistance by privileged groups, and the autonomy of states and state governors, the results of this programme of institutional change were partial and extremely unequal.²⁷ Alongside this, the inability to give life to credible mechanisms of judicial regulation by the courts, especially at the state level, was one of the fundamental hindrances to the growth process and brought about a significant degree of political intervention. As in many more recent experiences in developing countries with low administrative capacity, the government thrust yielded unexpected results, generating rents, favouring insiders, and falling under the control of interest groups.²⁸ The split between the institutional changes which, albeit slowly, diversified the economy and opened up

²⁶ María Luna Argudín's valuable study, *El Congreso y la política mexicana, 1857–1911* (México, 2006), pp. 217–70, reconstructs the debate in Congress on these measures, the process of bargaining between the legislature and the executive, and the different stages of participation of the legislative branch in policy design.

²⁷ Cárdenas, *Cuando se originó*, is one of the few efforts to incorporate the weight of the retarded conditions of Mexican economy before the 1870s on subsequent development.

²⁸ Anne Krueger, 'Government Failures in Development', *Journal of Economic Perspectives*, vol. 4, no. 3 (1990), pp. 9–23.

spaces for new social sectors on the one hand, and the obstinacy of the regime, which was unwilling to permit political change and political organisation, on the other, served as the backdrop to the failure or weakness of institutional innovations.

But the prevailing idea among the federal political elite was that private initiative did not have sufficient energy and that public efforts would have to create the conditions for the development of the private sector. Encouraging economic change was a significant part of the nation-building process, and this involved forging a society and nation-state based on a set of common legal, political and economic features. *Patrias chicas*, ethnic loyalties and religious allegiances were considered useless for this purpose. The expansion of the public sphere was therefore both an objective and an instrument of this design. Classifying this process as either of the two opposing concepts, deregulation and crony capitalism, one of which reduces the presence of the state while the other expands it for clientelist purposes, fails to explain historical reality. What the political elite sought, although in contradictory forms, was a way to combine the building of the nation-state and economic development. Are we in fact observing an exercise in ‘imagining development’, one which tries to connect a fragile path of expansion to more sustained development?²⁹

In this respect it is possible to identify the guiding principles of three public policies during the second part of the Porfirian period (1893–1910), based on general ideas regarding the desirable relationship between the state and the market. First, José Yves Limantour, the powerful Secretary of Finance, placed a great deal of importance on the development of a Mexican industrial base, to which end he promoted a reasonably coherent tariff policy to support and protect domestic producers in order to encourage investment in the manufacturing sector. This was also the goal of a prolonged effort to abolish internal customs and organise a legally unified economic sphere. Patent legislation underwent significant modernisation, and a relative efficient system of subsidies to new industries, not prone to privileges, was adopted.³⁰

²⁹ The reference here is to the innovative study by Paul Gootenberg, *Imagining Development: Economic Ideas in Peru's 'Fictitious Prosperity' of Guano, 1840–1880* (Berkeley and Los Angeles, 1993).

³⁰ These are the results of the novel study by Edward Beatty, *Institutions and Investment: The Political Basis of Industrialization in Mexico before 1911* (Stanford, 2001), pp. 51–2, 78–9. See also Kuntz Ficker, *El comercio exterior*, pp. 212–35. For an interpretation that stresses non-tariff factors of protection, chiefly exchange depreciation due to falling silver prices, see Graciela Márquez, ‘Tariff Protection in Mexico, 1892–1909: Ad Valorem Tariff Rates and Sources of Variation’, in John H. Coatsworth and Alan M. Taylor (eds.), *Latin America and the World Economy Since 1800* (Cambridge and London, 1998), pp. 405–43.

Second, a railway policy was implemented, designed to regulate a system of nearly 20,000 kilometres, which was built in just over two decades as a result of massive foreign capital flows and to a lesser extent, federal subsidies. Its chief features were the Railway Law of 1899, the creating of a Tariff Commission and, finally, the measures that led to the creation of the enormous *Ferrocarriles Nacionales* enterprise (1908), in which the Mexican state was the main shareholder. All of these were significant expressions of a public policy, rather than empirical adjustments to specific conjunctures or expressions of cronyism.³¹

Third, the policy of ‘defensive modernisation’, which will be analysed later, aimed at controlling and reducing the impact of the international on the domestic economy, which fed the roots of economic nationalism, and was a recognisable part of Porfirian economic strategy.³² Behind all this were not only particular interests but broader ideas and visions of development, conceived of and promoted by an intelligentsia.³³

The Construction and Functioning of the Internal Market

The mushrooming of studies and knowledge on the relative importance and size of the internal market – and markets – contradicts the unilateral vision of the *dependentista* interpretation, which is interested solely in emphasising the overwhelming power of external forces over peripheral economies. In the late nineteenth century Mexico was the Latin American country with the largest and most extensive modern manufacturing base. It produced mainly consumer goods, primarily textiles, which played a significant role in the early import substitution process, together with a significant amount of agro-industrial production, including tobacco, beer, soap and flour. By the first decade of the twentieth century the industrial structure had been boosted by the addition of intermediate goods (such as glass, paper, cement and iron) and the first steel works in Latin America.³⁴ At the same time most production in the primary sector (agriculture and forestry) was aimed at the internal market: export crops never accounted for more than a third of

³¹ Arturo Grunstein, ‘Railroads and Sovereignty: Policymaking in Porfirian Mexico’, unpubl. PhD diss., University of California, 1994.

³² William Schell, *Integral Outsiders: The American Colony in Mexico City, 1876–1911* (Wilmington, 2001); Alan Knight, ‘The Political Economy of Prerevolutionary Mexico, 1900–1940’, in Christopher Abel and Colin Lewis (eds.), *Latin America, Economic Imperialism and the State: The Political Economy of the External Connection from Independence to the Present* (London, 1985), pp. 288–317; Tom Passananti, ‘“Nada de papeluchos!” Managing Globalization in Early Porfirian Mexico’, *Latin American Research Review*, vol. 42, no. 3 (2007), pp. 101–28.

³³ Richard Weiner, *Race, Nation, and Market: The Economic Culture of Porfirian Mexico* (Albuquerque, 2004).
³⁴ Haber, *Industry and Underdevelopment*.

the total value.³⁵ Following the introduction of the highly protectionist McKinley tariff in 1890, which imposed a barrier against the low-grade silver-lead ores produced in Mexico, the US groups interested in the smelting business negotiated with the Díaz government to establish smelting plants in the North of Mexico. This trans-border capital movement not only circumvented the tariff barrier; the new metallurgical industry induced a significant reorganisation and expansion in economic activity. Mineral freight contributed significantly to internal rail traffic, and smelting promoted a process of regional specialisation. Railway traffic and revenues therefore consisted mainly of domestic commodities, and, as the length of the average journeys shows, were directed at the main centres of the internal market. On the whole, the contribution of the railways to the Mexican economy was much more substantial than previously recognised.³⁶

What was the origin of these internal markets? The reception of New Institutional Economics in historical studies has enabled scholars to go beyond the neoclassical view of markets as 'natural' mechanisms that emerged outside historical time and existed in a social vacuum. Modern markets have required coordination, promotion, and the design and enforcement of rules and standards; in other words, they have required construction processes. In the case of Mexico the Porfirian state contributed an essential input to the construction of internal markets: the physical and legal unification of the country's economic space.³⁷ This was achieved through long-term actions, focusing on two aspects: (1) the subsidised construction of a railway network that connected most of the country together, making it possible to overcome

³⁵ In the first decade of the twentieth century the value of the output of maize, wheat and beans, staples that circulated almost exclusively within the country, was more than double that of the eight leading agricultural export products (henequen, coffee, tobacco, vanilla, rubber, and others). Even allowing for the weaknesses of Porfirian agricultural statistics, the proportions are revealing. For an exploratory work on the growing integration of maize markets in Mexico resulting from the construction of the railways, see Rafael Dobado and Gustavo Marrero, 'Corn Market Integration in Porfirian Mexico', *Journal of Economic History*, vol. 65, no. 1 (2005), pp. 103–28.

³⁶ Kuntz Ficker, '¿Mercado interno o vinculación con el exterior?', pp. 39–65. See also the essays in Sandra Kuntz Ficker and Paolo Riguzzi (eds.), *Ferrocarriles y vida económica en México, 1850–1950* (Mexico, 1996), which take issue with Coatsworth's influential study, *Growth Against Development*. Coatsworth had argued for a much more restricted role for the railways, due to their foreign ownership, the absence of a capital goods industry in Mexico, and the repatriation of profits.

³⁷ The Mexican case still lacks a study like the excellent one by Fernando Rocchi, *Chimneys in the Desert: Industrialization in Argentina during the Export Boom Years, 1870–1930* (Stanford, 2006), which combines analysis of attempts at industrialisation, entrepreneurial behaviour, the structure of demand, and consumption practices and cultures. Rocchi's original PhD dissertation, on which this book is based, was in fact entitled 'Building a Nation, Building a Market: Industrial Growth and the Domestic Economy in Turn-of-the-Century Argentina', unpubl. diss. University of California at Santa Barbara, 1997.

the major constraints of Mexican geography; (2) the prolonged fight against the levying of internal customs tariffs (*alcabalas*) in states and municipalities, which, until their abolition in 1896, divided the country into a set of fiscal territories and hampered the circulation of merchandise. This unification, albeit late and incomplete, benefited domestic firms, traders and consumers.³⁸

The fact that the state promoted the construction of markets does not mean that this was done properly, and it failed, in fact, on criteria such as the rectification of spatial inequality and economic and distributive efficiency. On the first point, it is clear that the Porfirian economic spurt elicited very different responses from the various regions of the country, which in turn triggered regional disparities. The virtuous circle of the mining-metallurgical-railway integration in the North East, around the pole of Monterrey, for example, stimulated the development of a long-lasting business network, as did the rapid expansion of cotton cultivation in La Laguna and its urban centre, Torreón, which is analysed throughout Mario Cerutti's exhaustive work on the North.³⁹ On the other hand, many southern regions, such as Oaxaca, Chiapas, Guerrero, Tabasco, and parts of the states of México and Michoacán, remained in a state of stagnation: here the railways did not set in motion any significant upsurge in modernisation.

With regard to efficiency it is easy to show that the most modern sectors of the economy, those of industry and banking, experienced extremely high levels of concentration, entry barriers and privileged concessions.⁴⁰ An examination of the way the main factor markets operated reveals the existence of considerable obstacles and inefficiencies that constrained the possibilities of growth. In order to assess the extent of these problems, we shall consider the land, capital and labour markets.

The land market was certainly less advanced, and dominated by continuities from the *ancien régime*. The sale of public lands and the division of communal and collective property, the two innovations implemented by the Liberals to modernise Mexican agriculture, failed to yield significant results. The period between 1878 and 1908 saw the extensive privatisation of vacant

³⁸ Unification was late and fragile, since it was carried out largely as a result of federal pressure and subject to concealed attempts to reintroduce differential taxes. In fact, with the disruption of the state after 1914, interior customs houses re-emerged in much of the country: see Luis Aboites, 'Alcabalas posporfirianas: modernización tributaria y soberanía estatal', *Historia Mexicana*, vol. 51, no. 2 (2001), pp. 363–93.

³⁹ See Mario Cerutti, *Proprietarios, empresarios y empresas en el norte de México: Monterrey de 1848 a la globalización* (México, 2001).

⁴⁰ Noel Maurer and Stephen Haber, 'Institutional Change and Economic Growth: Banks, Financial Markets and Mexican Industrialization, 1878–1913', in Jeffrey L. Bortz and Stephen Haber (eds.), *The Mexican Economy, 1870–1930: Essays on the Economic History of Institutions, Revolution and Growth* (Stanford, 2002), pp. 23–48.

public lands (*baldíos*) involving 43.7 million hectares; these were assigned to those that claimed them, granted to the survey companies, and auctioned by federal government.⁴¹ This massive transfer was a failed experiment in terms of the government's objectives. The results, modest in most cases, negative in some, have contributed to an unsubstantiated 'black legend' with respect to this process and its main actors, the survey companies. On the basis of Robert Holden's rigorous, well-documented study, it can be said that: (1) this was a process that was largely concentrated in a small group of states; (2) most of the lands were of very poor quality, desert or semi-desert, and unsuitable for commercial exploitation; (3) the activities of the survey companies elicited an enormous number of challenges, lawsuits, annulments and adverse decisions by the courts and the bureaucracy. When the procedures for measuring or selling land threatened to disturb social stability, government preferred to freeze or annul them. The division of community lands proved to be a much more uncertain, contradictory process than is usually stated, and although this type of property was reduced, it certainly did not disappear. Difficulties in measurement, flaws in property deeds, resistance, disguised forms of ownership (the *condueñazgos* or joint ownership), and prolonged lawsuits hampered the individual assignation of these properties. The interpretation of this process as an analogous phenomenon to that of the English enclosures (in Marx's version), with the integral loss of land, the proletarianisation of peasants, and the displacement of traditional agriculture by commercial agriculture has an extremely flimsy empirical basis.⁴²

Given the structure of the economy and the centrality of the primary sector, the labour market reflected the characteristics of Mexican agriculture with regard to decentralisation, differentiation and lack of formalisation. Contrary to the thesis of the control of peasants by the hacienda, which for many years was accepted without reservations, if we assume that the hacienda system absorbed between 10 and 20 per cent of the rural population, it is clear that these productive units did not control enough labour for the crucial stages of the agricultural cycle, planting and harvesting.⁴³ Thus, the engine for the agricultural labour market lay in certain forms of

⁴¹ Robert Holden, *Mexico and the Survey of Public Lands: The Management of Modernization, 1876–1910* (DeKalb, 1994), p. 18.

⁴² Unfortunately no quantitative assessment of the sale or dispossession of communal property is available. A growing number of regional and local studies coincide in offering a highly nuanced view of the process: see, for example, Emilio Kourí, 'Interpreting the Expropriation of Pueblo Indian Lands in Porfirian México: The Unexamined Legacies of Andrés Molina Enríquez', *Hispanic American Historical Review*, vol. 82, no. 1 (2002), pp. 69–117; Daniela Marino, 'La desamortización de las tierras de los pueblos (centro de México, siglo XIX)', *América Latina en la Historia Económica*, vol. 16 (2001), pp. 33–43.

⁴³ Jean Meyer, 'Haciendas y ranchos, peones y campesinos en el porfiriato: algunas falacias estadísticas', *Historia Mexicana*, vol. 35, no. 3 (1986), pp. 477–509.

contractual relations between haciendas and villages, which were seasonal but repeated. These relations, about which little is known, tended to be based on territorial/informal rather than individual/formal pacts, and were often mediated by *cacique* networks. As for the workforce living in the haciendas and ranches, the literature has identified two sets of informal institutions to explain how labour relations worked: those involving moral economy, focusing on the guarantee of subsistence, which were more widespread, and debt peonage, focusing on the coercive retention of workers, which was typical of plantation agriculture in south and south-eastern Mexico. These are opposite types of relations – one paternalistic, the other coercive – yet they share the fact that the salary dimension was not predominant. While forms of debt peonage, rooted at the state level and weakly challenged by sporadic legal reforms before 1910, disappeared as a result of the revolutionary political processes, the forms of hacienda-peasant relations based on moral economy were only gradually eroded as a result of the extremely unequal commercialisation of Mexican agriculture which displaced traditional relations.⁴⁴ What similarities were there between the agricultural labour market and others such as those in manufacturing and mining? Did they comprise separate or inter-related socio-economic and spatial domains? A systematic evaluation of this subject has yet to be undertaken. It should be noted, however, that an informal, non-market institution, the company store (*tienda de raya*), which could constitute a disadvantageous mechanism for hacienda workers, assumed very different features and meanings in manufacturing complexes.⁴⁵

The capital market focused on the relatively late growth of the banking system, dominated by the issuing banks in the capital. Before 1880 the only existing bank of any importance was the branch of a small British multinational venture, the London Bank of Mexico and South America, and there was a legal vacuum surrounding everything related to the financial sector. By 1910, there were some forty banks operating within a federal concession system while the sector was regulated by general legislation. The copious literature that has analysed these topics over the past two decades has revealed the following features of the banking system: its oligopolistic nature, due to the existence of high barriers to entry, with two firms holding over 50 per cent of assets and evidence of credit rationing; the centrality of one firm, Banamex, due to its role as the government bank; extremely close links

⁴⁴ Herbert Nickel, *El peonaje en las haciendas mexicanas: interpretaciones, fuentes, hallazgos* (México, 1997); Alan Knight, 'Mexican Peonage: What was it and Why was it', *Journal of Latin American Studies*, vol. 18, no. 1 (1986), pp. 41–74.

⁴⁵ See Aurora Gómez-Galvarriato, 'Myth and Reality of Company Stores during the Porfiriato: The *tiendas de raya* of Orizaba's Textile Mills', CIDE Working Paper No. 317, (2005).

between banking credit and the firms in which directors and shareholders invested; and the acute weakness of financial organisations dedicated to medium- and long-term credit, particularly agricultural credit. The demand for long-term credit remained outside financial intermediation or distorted the credit structure of issuing banks, thereby immobilising capital.⁴⁶ Although the volume of available credit was below what banks could have generated, it is quite clear that their presence contributed to the monetisation of significant parts of the Mexican economy. Later their net benefits were partly offset by the experience of the Revolution, of which banks and credit were one of the prime victims.⁴⁷ In short, an exhaustive balance of the modernisation of credit systems and their contribution to pre-revolutionary growth has yet to be undertaken.

Globalisation and International Economic Relations

What has been labelled as the ‘first globalisation’ of the international economy in the decades before the First World War was based on an extensive network of relatively free movements of global factors: people, merchandise, information, direct investments and financial flows. How was Mexico inserted into this scenario? What results did it achieve? Understanding this requires grasping the fact that, like other medium-sized countries, the insertion of Mexico into these processes was not governed only by automatic features of markets and their comparative advantages. Even if it was a price-taker, several levels of interconnected negotiations between the government and foreign investors, bankers, organisations and other governments underpinned and shaped the Mexican position within this globalising economy. From this point of view, the ‘defensive modernisation’ of the Porfiriato represented an effort to take advantage of, measure out, and regulate interactions with the world market so that they did not prove disruptive or excessively destabilising. A set of principles belonging to liberal economic nationalism, which were relatively widespread in the nineteenth century and

⁴⁶ See the essays in Leonor Ludlow and Carlos Marichal (eds.), *La banca en México, 1820–1920* (México, 1998); Stephen Haber, ‘Financial Market Regulation, Imperfect Capital Markets, and Industrial Concentration: Mexico in Comparative Perspective, 1830–1930’, *Economía Mexicana*, vol. 7, no. 1 (1998), pp. 5–46; Noel Maurer, *The Power and the Money: The Mexican Financial System, 1876–1932* (Stanford, 2002); Paolo Riguzzi, ‘The Legal System, Institutional Change and Financial Regulation, 1870–1910: Mortgage Contracts and Long-Term Credit in Mexico’, in Bortz and Haber, *The Mexican Economy*, pp. 129–54; and ‘Sistema financiero, banca privada y crédito agrícola en México, 1897–1913. ¿Un desencuentro anunciado?’, *Mexican Studies/Estudios Mexicanos*, vol. 21 (2005), pp. 333–67.

⁴⁷ It was three decades before a financial system re-emerged that was better than the one of 1910 with respect to assets and the number of banks. One of the few works dealing with the tortuous and ineffective process of banking reorganisation is Luis Anaya, *Colapso y reforma: la integración del sistema bancario en el México revolucionario, 1913–1932* (Mexico, 2002).

became increasingly intense, guided the preferences, strategies and adjustments of the Mexican government.⁴⁸

Although immigration was acknowledged as necessary in official rhetoric and colonising projects, labour was not imported into Mexico: in 1900 foreigners accounted for a mere 0.4 per cent of the total population of approximately 14 million.⁴⁹ Mexico's location next to the largest international recipient of immigrants, the United States, which had a far superior capacity to attract them, may explain its own weak capacity to recruit such labour.

The most powerful link between Mexico and international economy was the flow of foreign capital. Although the quantity of investments has been inflated, between 1880 and 1914 Mexico was one of the primary recipients of direct investment in Latin America, second only to Argentina and perhaps on a similar level to Brazil.⁵⁰ The main interpretations of this phenomenon proceed from the family of theories of imperialism, albeit not explicitly. There is a persistent, unfounded belief that the insertion of foreign investment into the Mexican economic sphere was the result of an 'open door' offered by the Porfirian regime through privileges and concessions, to the detriment of Mexican entrepreneurs. Complementing this is belief in the organic fusion of capitalism, diplomacy and foreign firms under the sign of the empire, against the countries on the periphery. Thus, somewhat paradoxically, there are recent studies that refer to the (very unlikely) informal British empire in Mexico with reference to the early twentieth century, or to US imperial control over its southern neighbour, halted only by the Revolution which, in these terms, amounted to a struggle for national liberation.⁵¹

The persistence of such received wisdom has prevented the analysis of the pattern and impact of foreign investments in Mexico. There is a lack of solid data on the effective dimensions of investment and its rhythms, its place in

⁴⁸ Nineteenth-century economic nationalism, clearly distinguishable from twentieth-century revolutionary or totalitarian nationalisms, had different strands and could endorse a variety of economic policies, as shown by the insightful work of Eric Helleiner, 'Economic Nationalism to Economic Liberalism? Lessons from the Nineteenth Century', *International Studies Quarterly*, vol. 46, no. 3 (2002), pp. 307–29.

⁴⁹ Although the qualitative importance of the more educated European and North American immigrants could have been weighty in certain spheres of economic life, immigration did not constitute a significant channel for transatlantic links. On this, see Steven Topik, 'Las relaciones entre México y Estados Unidos en la era de la globalización', *Secuencia*, no. 48 (2000), pp. 24–5.

⁵⁰ Victor Bulmer-Thomas, *The Economic History of Latin America since Independence* (Cambridge, 1994), p. 102; also see Lance Davis and Robert Gallman, *Evolving Financial Markets and International Capital Flows: Britain, the Americas and Australia* (Cambridge and New York, 2001).

⁵¹ Lorenzo Meyer, *Su Majestad Británica contra la Revolución Mexicana: el fin de un imperio informal, 1900–1950* (México, 1991); John Hart, *Empire and Revolution: The Americans in Mexico since the Civil War* (Berkeley/Los Angeles, 2001).

capital formation, and its effects on the balance of payments, productive structures, and growth.⁵² What has yet to reach critical mass is the literature that would enable researchers to measure the forms and dimensions of capital transfer and the sectoral impact of investments, and make generalisations on this basis.⁵³ This is an intermediate dimension that goes beyond micro-studies of a firm or region, while at the same time allowing one to verify the macro calculations undertaken on the basis of long chains of unproved assumptions.⁵⁴

What must be accounted for is the fact that Mexico's geographical and political position served as a factor endowment which facilitated access to the two main capital markets in Britain and the United States, a unique case in Latin America before 1914, and comparable to that of Canada. If this is true, it is essential to explain how the strategy for economic modernisation undertaken by Porfirian governments was able to take advantage of this endowment for the purposes of diversification and autonomy. The counterpoint between various sources of financing, with which Mexico sought to balance the spillover of US investments with Anglo-European funds, shows sectoral variations and differences by period. When, during the first decade of the twentieth century, fears about dominance by US trusts (over)alarmed the Mexican government, the instruments adopted were the *Mexicanisation* of railways, a preference given to the British group headed by Weetman Pearson in the development of oil resources, and efforts to attract funds in the French market.⁵⁵ The point is to go beyond the foreign

⁵² Suffice it to note that estimates for the level of total investment for 1911 oscillate in a range between US\$800 and US\$2200 million. See the discussion in Daniel Cosío Villegas, *Historia Moderna de México. El Porfiriato*. Vida económica (México, 1955), vol. VII, t. II, pp. 1148–55.

⁵³ See Reinhard Liehr and Mariano Torres, 'British Free-Standing Companies in Mexico, 1884–1911', in Mira Wilkins and Harm Schröter (eds.), *The Free-Standing Company in the World Economy* (Oxford, 1997), pp. 253–78; William Schell, 'American Investment in Tropical Mexico: Rubber Plantations, Fraud and Dollar Diplomacy, 1897–1913', *Business History Review*, vol. 64, no. 2 (1990), pp. 217–54; Carlos Marichal y Paolo Riguzzi, 'Bancos y banqueros europeos en México, 1864–1933' in Sandra Kuntz Ficker and Horst Pietschmann (eds.), *México y la economía atlántica. Siglos XVIII-XX* (México, 2006), pp. 207–39.

⁵⁴ An example of this is the heroic counterfactual estimate of the contribution of FDI to Latin American growth before 1913 put forward by Alan M. Taylor, 'Foreign Capital Flows', in Bulmer-Thomas et al., *The Cambridge Economic History*, vol. II, p. 76. Taylor's calculations suggest that, in line with the Latin American average, the absence of foreign investment would have meant an 18 per cent loss in income for Mexico. However, the reader interested in evaluating the data employed is referred to another author's work, one that does not offer any clue on how the foreign investment figures were obtained.

⁵⁵ On the Pearson oil interests in Mexico, see Geoffrey Jones, *The State and the Emergence of the British Oil Industry* (London, 1981), pp. 65–70; Jonathan Brown, *Oil and Revolution in Mexico* (Berkeley and Los Angeles, 1993), pp. 63–5. On the French-Mexican financial connection, see Steven Topik, 'When Mexico Had the Blues: A Transatlantic Tale of Bonds, Bankers, and Nationalists, 1862–1910', *American Historical Review*, vol. 105, no. 3 (2000), pp. 714–38. Topik provides a fascinating analysis of the prolonged lockout of Mexican securities from

investment aggregates to identify the different typologies of capital investments according to their source and the form of transfer.

The second connection, in terms of importance, which linked Mexico to the world economy was foreign trade, although it was more a case of the regionalisation within the North American sphere than of a multilateral commercial regime. The growth of Mexico's exports, its ability to take advantage of the opportunities offered by international demand, in other words, was striking, particularly between 1890 and 1911.⁵⁶ Despite this extraordinary growth rate, the value of foreign trade, which had started at very low levels at the beginning of the Porfiriato, remained significantly below those of the largest Latin American exporters in both absolute and per capita terms.⁵⁷

What was the significance and economic impact of foreign trade? Kuntz Ficker's study, based on an impressive international, national, regional and sectoral analysis until the 1929 crisis, shows the following. First, trade expansion during the period was due to a change in the composition of exports, encouraged by changes in relative prices, yet promoted by government policies. Mexico thus escaped from the traditionally poor pattern of resource allocation, which had been linked to the exchange of silver and two or three other products (such as timber and cochineal) for textiles and sumptuary goods. Second, her study convincingly debunks the idea of the enclave as the framework of export-led growth. For many years, the enclave was regarded as the dominant modality of Latin American exports, forming a geographical, economic and social cage that restricted the economic benefits they provided. Through a rigorous analysis of the linkages of the main export activities, Kuntz Ficker provides a very different overview that identifies multiple linkages to the returned value of exports, depending on their rating by periods and regions. In particular, the mining-metallurgical complex established in the North generated important spurts of export-led industrialisation and spread local engines for growth across the region.⁵⁸

the Paris Stock Exchange, due to the non-payment of the bonds issued by Maximilian, and the manner in which it was solved.

⁵⁶ In real terms, the average growth rate was 7.1 per cent for total exports and 7.9 per cent for merchandise (net of specie outflows): Kuntz Ficker, *El comercio exterior*, pp. 324–5. It is worth noting that in order to calculate the real value of exports, the author constructed a price index with nearly total coverage (20 products).

⁵⁷ By 1912, Mexico, together with Chile, was the fourth largest Latin American exporter while its per capita exports in dollars were half the Latin American average: Bulmer-Thomas, *The Economic History*, p. 68.

⁵⁸ This confirms what Salvucci has aptly written about the first industrialisation of Latin America, as a process 'not independent of international trade, much less opposed to it, but complementary to, consistent with, or even consequent upon the expansion of the external sector': Richard Salvucci, 'Export-led Industrialization', in Bulmer-Thomas et al. (eds.), *The Cambridge Economic History*, vol. II, p. 249.

The little-known, recurrent negotiations between Mexico and the United States to establish a preferential framework for trade, through diplomatic agreements or treaties, presented a dilemma for commercial regionalism, given the huge difference in size of the partners. Within this set of interactions, Mexican positions were active and reflected in autonomous behaviours.⁵⁹ Despite the dependence of Mexican foreign trade on the US market, it did not behave passively with regard to its neighbour's preferences nor did it comply with its decisions. Keeping the US market open for the Mexican products, avoiding either being abused in negotiations or permanently bound to cooperate in order to prevent conflicts that would have an impact on other aspects of their relations, were the elements that inspired the Porfirian stance, in a changing order and through diversified strategies. In most trade games the result was favourable and reasonably close to Mexican preferences. Economic asymmetry did not unilaterally condition commercial relations nor did it translate into a stable mechanism of power that would shape the terrain in which they occurred.

An analysis of the Mexican experience as a debtor country is crucial to completing the landscape of its relations with the world economy of the Gold Standard era. Despite the existence of a group of studies on the history of Mexican foreign debt, we appear to lack an analytical reconstruction of Mexico's debt and credit performance that would place its experience on the map of international financial relations.⁶⁰ Mexico was a latecomer to the arena of capital seekers, due to its prolonged insolvency, and its first public loan was issued in 1888, over twenty years after the modern international financial operations of the major South American countries commenced. It was a moderate debtor throughout this period: a comparative exercise indicates that in absolute terms the level of the Mexican foreign debt was considerably lower than those of Argentina and Brazil and, in per capita terms, lower than Chile also.⁶¹ In relative terms, Mexico resorted to issuing public debt on international capital markets in a moderate fashion and tended to concentrate this resource in large-scale financial operations such as

⁵⁹ These are the results of the study by Paolo Riguzzi, *¿Reciprocidad imposible? La política del comercio entre México y Estados Unidos, 1857-1938* (Mexico, 2003). The following paragraphs are based on this source.

⁶⁰ But see Carlos Marichal, 'The Construction of Credibility: Financial Market Reform and the Renegotiation of Mexico's External Debt in the 1880's', in Bortz and Haber, *The Mexican Economy*, pp. 93-119; Jaime Zabłudowski, 'Money, Foreign Indebtness and Export Performance in Porfirist Mexico', unpubl. PhD. diss., Yale University, 1984; Thomas Passananti, 'Conflicto y cooperación financiera en la Belle Époque: bancos alemanes en el porfiriato tardío', in Kuntz Ficker and Pietschmann (eds.), *México y la economía atlántica*, pp. 173-203.

⁶¹ From 1911 to 1912, the stock of Mexico's external debt was equivalent to half that of Argentina's and a third of Brazil's; calculated from Bulmer-Thomas, *The Economic History*, p. 102.

those of 1888, 1889 and 1910. The depreciation of silver, from 1873 onwards, which raised the cost of debt to be paid in gold, certainly functioned as an implicit restraint on over-borrowing, but it is possible to argue that debt moderation belonged to a set of government preferences. On the one hand, this immunised the country to periods of instability caused by debt crises such as those faced by Peru in 1876 or the Baring crisis that hit Argentina in the 1890s. On the other, it gave Mexico a certain degree of bargaining power and autonomy in relation to international bankers.

Final Remarks

Porfirian Mexico did not constitute a case of savage capitalism in which unfettered economic forces freely imposed their laws on a traditional, recalcitrant society. Nor was it an economy subjugated by the imperatives of international finances or any other external economic power. In fact, the state's action, its economic policies, and its diversification strategies increased the country's ability to cushion external shocks and reinforced various sectors of the Mexican economy. What we do know is that Mexico was a late entrant into the arena of the first economic globalisation but a pioneer in experiencing a social revolution. The current state of knowledge, however, makes it difficult to establish a causal link between the two phenomena. What emerges is the fact that economic growth was insufficient and below the frontier of possibility, and it was also affected by severe distortions, as revealed by studies of the various goods and factor markets. There were industries but no industrialisation; a banking system but little long-term credit; and salaried labour that coexisted with coercive mechanisms. And in the primary sector, there were no substantial improvements in the efficient allocation of resources, meaning that as far as the internal market was concerned, Mexican agriculture remained far below international yields.⁶² This meant that links among the various markets were usually scarce, as borne out by the fact that interior customs houses were not abolished until the very late nineteenth century. Within this context, however, highly significant processes of regional specialisation were activated that were destined to last in the long term, such as that in the Monterrey region.

⁶² According to the data gathered by the International Agriculture Institute of Rome, by the mid-1920s Mexico's average yields ranked 76th in the world for maize, and 45th for wheat: *México Económico* (México, 1932), p. 17. For a different view of agricultural productivity, based on the figures of a few haciendas in the central state of Querétaro, see Simon Miller, 'Wheat Production in Europe and America: Mexican Problems in Comparative Perspective, 1770–1910', *Agricultural History*, vol. 68, no. 3 (1994), pp. 28–33. Miller, however, does not present any comparative figures for 1880–1910, the period for which he sees significant modernisation in the hacienda system.

Did these elements of economic backwardness, inefficient institutional arrangements, and imperfect markets make the Mexican economy an extremely fragile structure, inevitably destined to succumb to the weight of its contradictions? Or one destined to experience external shock beyond a certain level of intensity? In the search for the economic causes of the Revolution, the number of usual suspects has increased to include the inflationary process and the deterioration of real wages, the contractionary policy of the form of Gold Exchange Standard adopted after 1905, the concentration of public expenditure in the capital, and fiscal pressure.⁶³ There is still little evidence to assess their role, while the transmission mechanisms from the economic to the political cycle are unclear, and based largely on circumstantial evidence. It is, however, possible to note how the country was able to absorb the extremely strong impact of the US 1907 crisis, which affected the Mexican economy through the fall of minerals prices and the dearth of investments, albeit at a high cost, particularly in northern Mexico.⁶⁴

What distinguished Mexico from the rest of Latin America was not the excessive weakness of its economy or social inequality, but rather a frozen political regime, incapable of allowing political development to take place. The 80-year old president who continued to try to play the role of indispensable *caudillo* was only a reflection of that failed development. The issue did not boil down to the intransigence of the autocrat, but to the fact that the institutional links between voice (in Hirschman's meaning) and growth scarcely evolved during that period, and did not find outlets, in the form of parties or political movements.⁶⁵ If the official discourse that hailed the growth of the middle classes in Mexico is to be taken seriously, it is possible to understand how, in a conjuncture of economic distress, the social bases of support for those who challenged political monopoly were established. At the same time, the historical weakness of Mexican political development, rather than economic circumstances, might contribute to an explanation of the subsequent rapid demise of the democratic *maderista* experience.

⁶³ For an introduction to these issues see Luis Cerda, '¿Causas económicas de la Revolución Mexicana?', *Revista Mexicana de Sociología*, vol. 53, no. 1 (1991), pp. 307–47.

⁶⁴ The only work to address the transmission effects of the 1907 crisis to Mexico is Kevin Cahill, 'The US Bank Panic and the Mexican Depression of 1908–1909', *The Historian*, vol. 60, no. 4 (1998), pp. 795–811.

⁶⁵ This argument follows Peter H. Lindert, 'Voice and Growth: Was Churchill Right?', *Journal of Economic History*, vol. 63, no. 2 (2003), pp. 315–350. Lindert insists on the significance of evolving institutional channels between political voice (not limited to formal democratic rules) and economic growth.

Spanish and Portuguese abstracts

Spanish abstract. Este ensayo evalúa la economía política de México durante el porfiriato (1876-1911) con el fin de discutir los avances en la literatura académica y presentar un bosquejo de la agenda futura de investigación. Para este fin, el ensayo examina el estado actual del conocimiento acerca de cuatro aspectos cruciales de la economía mexicana: el crecimiento y sus dimensiones; el estado, las finanzas y las estrategias económicas; la construcción y el funcionamiento del mercado interno; y las relaciones económicas internacionales de México durante el primer período de globalización. En particular, se revisan los argumentos que vinculan los rasgos de la organización económica porfiriana con el surgimiento de la Revolución Mexicana en 1910.

Spanish keywords: Porfiriato, economía mexicana, Revolución Mexicana, primera globalización

Portuguese abstract. Este ensaio avalia a política econômica do México durante o período de Porfírio (1876–1911) ensejando discutir avanços no conhecimento e apresentar um esboço de elementos para uma futura agenda de pesquisa. Com este objetivo, examina o atual estado do conhecimento acerca de quatro aspectos cruciais da economia mexicana: o crescimento e suas dimensões; o estado, as estratégias financeiras e econômicas; a construção e funcionamento do mercado interno; e as relações internacionais do México durante o primeiro período da globalização. Avalia, especialmente, os argumentos que ligam aspectos da organização econômica porfiriana com a erupção da Revolução Mexicana de 1910.

Portuguese keywords: Porfiriato, economia mexicana, Revolução Mexicana, primeira globalização.

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