Appendix: Data Construction and Sources

Argentina

Agricultural Output:
1900-1960: Banco Central de Argentina (1976)

Industrial Output:

Transport Output:
1870-1960: Geometric weighted average of passagers and tons of freight per kilometers times total railwayroad extension; then spliced in 1913 with the index provided in Carlos F. Diaz-Alejandro, 1970, Essays on the Economic History of the Argentine Republic. Yale.

Cement Consumption:
1870-1913: Total cement imports in tons from the United Kingdom and the United States, which together accounted for no less than between 60 to 70 percent of Argentina’s total cement imports. The sources are the United Kingdom, Board of Trade, Annual Statements of the Trade of the United Kingdom with Foreign Countries and British Possessions. London: HMSO. Commerce and Navigation, several issues; and the United States, Foreign Commerce, Navigation and Tonnage of the United States, Washington, DC: Department of Labor, several issues. Because a local cement industry was non-existing before World War I, all domestic consumption of cement was then met by imports. So this newly constructed series for the period should be expected to a good proxy for domestic construction activity. 1913-2000: Oxford Latin American Economic History database, available at http://oxlad.qeh.ox.ac.uk/.

Fixed Investment:
1870-1884: Capital goods imports from the United Kingdom and the United States (converted into equivalent pounds sterling) and deflated by the UK capital good deflator taken from Charles H. Feinstein, 1972, Statistical Tables of National Income, Expenditure and Output of the United Kingdom, 1855-1965, Cambridge. Since the domestic capital goods industry was virtually non-existent in Argentina before World War I (being in fact relatively negligible before WWII – see Diaz-Alejandro, 1970), and because the UK and the US were
the two most important suppliers of capital goods to Argentina, such imported capital goods series should be expected proxy very well aggregate fixed capital formation in the country in those early decades.

Central Government Expenditures and Revenues:


Narrow (Mo) and Broad Money (M2):

1961-2004: IFS. Both series expressed in real terms by deflating them by the CPI.

Consumer Price Index (CPI):

1961-2004: IFS.

Average Interest Rate on Domestic Public Bonds:

1993-2004: IFS (line 60p). Real interest rate series obtained by deflating annual nominal yields by current period CPI inflation.

Export and Import volumes and Net Barter Terms of Trade:

1961-2004: IFS.

Real Effective Exchange Rate

Net Foreign Capital Inflows:

1870-1960: Obtained by splicing the series on UK capital flows to Argentina provided in Stone, Irving, 1999, The Global Export of Capital from Great Britain, 1865-1914: A Statistical Survey, New York, with a post-1884 series on net capital inflows constructed as changes in end-year net international reserves expressed in US$ million (obtained from Gerardo della Paolera, 1988, “How the Argentine Economy Performed During the International Gold Standard: A Re-examination”, PhD thesis, University of Chicago for 1870-1913 then with the Cavallo-Mundlak series, as kindly supplied by Alan Taylor) minus the current account balance (also expressed in US$ millions) provided in della Paolera and Taylor (2003). The splicing of the two series is warranted by the fact that the UK was by far the most important source of foreign capital flows to Argentina before World War I (and particularly prior to 1890), and evidence that the two series co-move tightly together in the 1884-1913 period, with a correlation coefficient of 0.81. 1961-2004: Also obtained as the difference between changes in international reserves and the current account balance, both as reported by the IFS. The resulting nominal series in US dollars was then deflated by the US Wholesale price index (WPI) obtained from Global Financial Database for the period 1870-1947 and the IFS for 1948-2004.

Wages:

1981-2004: IMF’s WEO database. This series was then deflated by CPI to obtain the real wage index.

Foreign 3-month bill rate:

1921-2004: Annual average yields of the US 3-month Treasury Bill provided in the same source. The choice of 1920 as the splicing point was due to the unavailability of the US instrument prior to 1920. Both series were deflated by the respective countries’ CPI inflation, obtained from Catao and Solomou (2005) for 1870-1913, Mitchell, op cit (1914-1960) and the IFS (1961-2004).
Foreign Output:

Sum of France’s, Germany’s, UK’s and US’s GDP, all expressed in 1990 PPP constant dollars from Maddison (2003).

Population at mid-year:


Brazil

Agricultural and Manufacturing Output:


Transport Output:

1870-1907: Average of freight and passenger transported in railways, using 1908 weights provided in Haddad (1978).

Communications Output:

1870-1907: Average of mail and telegraph traffic in the national postal system, weighted according to current 1889 values provided in Instituto Brasileiro de Geografia e Estatistica, 1987. Estatisticas Históricas do Brasil, Rio de Janeiro, IBGE.

Cement Consumption:

1870-1901: Cement imports from the France, Germany, the UK, and the US, obtained from these countries’ own trade statement data (see above). Since these four countries accounted for between 75 and 85 percent of total Brazilian imports (see IBGE, op.cit., pp. 545-49) and all cement consumed in Brazil at the time was imported, this newly constructed series is very representative of aggregate cement consumption and hence a good proxy for domestic construction activity.
Machinery Investment:


Central Government Expenditures and Revenues:


Narrow (M1) and Broad Money (M2):

1961-2004: IFS. Both series expressed in real terms by deflating them by the GDP deflator.

GDP deflator:

1961-2004: IFS.

Domestic Interest Rate:

1965-1980: Equivalent nominal yield on inflation indexed public bonds (ORTNs), from Goldsmith, op. cit. The gap between the apolice series and the ORTN series was bridged by linear interpolation.
1981-2004: Money market interest rate from IFS. Real interest rate series obtained by deflating annual nominal yields by current annual percentage changes in the GDP deflator.

External Interest Rate Spread:


1987-1993: Estimated as the one-year libor interest rate plus a 400 basis points spread minus the US 10-year bond interest rate.

1993-2004: IMF’s global data source database. Real interest rate series obtained by deflating annual nominal yields by current period CPI inflation.

*Export and Import volumes and Net Barter Terms of Trade:*

- 1961-2004: IFS.

*Real Effective Exchange Rate*


*Wages:*

- 1940-1955: IBGE, op cit..
- 1977-2004: IBGE, op cit..

*Foreign 3-month bill rate and Foreign Output:*

The same as for Argentina.

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¹ The choice of GDP deflator rather than a CPI-based index was determined by the deficiencies of the existing CPI series during the period 1870-1913, compared to an existing series based on production weights (therefore mimicking a GDP deflator) which covers a much extensive range of products and constructed based on weights from national production censuses.
Population at mid-year:


Chile

Agriculture, Manufacturing and Mining Output:


Machinery Investment:

1870-1900: Capital goods imports from the United Kingdom and the United States (converted into equivalent pounds sterling) and deflated by the UK capital good deflator taken from Charles H. Feinstein, 1972, *Statistical Tables of National Income, Expenditure and Output of the United Kingdom, 1855-1965*, Cambridge.

Central Government Expenditures and Revenues:


Narrow Money (Mo) and Broad Money (M2):

1870-1878: Mo calculated as paper money issued minus banks’ cash-in-vault, both taken from Llona Rodriguez, Agustin, Chilean Monetary Policy 1870-1925, PhD thesis, Boston University; M2 from Braun et al. op.cit.
1879-1960: Mo from Mitchell, op cit.; M2 from Braun et al. op.cit.
1961-2004: IFS. Both series expressed in real terms by deflating them by the CPI.

Mortgage Credit:

**Consumer Price Index (CPI):**

1961-2004: IFS.

**Domestic Interest Rate:**

1870-1993: Bank lending rate from Braun et al, op cit.
1993-2004: IFS (line 60p). Real interest rate series obtained by deflating annual nominal yields by current period CPI inflation.

**Export and Import volumes and Net Barter Terms of Trade:**

1961-2004: IFS.

**Real Effective Exchange Rate**


**Wages:**

1870-1995: Real wage index from Braun et al, op.cit.
1995-2004: Average nominal wage index from IMF’s WEO database, deflated by CPI.

**Population at mid-year:**


**Mexico**

Agricultural Output:
1878-1910: Colégio de México, 1960, *Estadísticas Economicas del Porfiriato*, p.61. Refers to export crop sub-index. Converted from a fiscal to calendar year basis by the averaging of two successive years.

1911-1921: Index constructed as a weighted average of the output of ten main crops (beans, corn (maiz), cotton, coffee, garbanzo, rice, sisal, sugar, and tomatoes) weighted by their 1900 (normalized) share in total value of agricultural production. The information on individual crop output was taken from INEGI, 1992, *Estadísticas Historicas de Mexico*, Mexico.


**Manufacturing Output:**

1878-1910: Colégio de México, op. cit, p.105. Prior to 1892, the series reflects solely changes in the index of domestic textile production taken from Haber, Stephen, Armando Razo and Noel Maurer, 2003, *The politics of property rights: Political instability, credible commitments, and economic growth in Mexico, 1876-1929*. Cambridge. Figures for 1879-1882, 1884-87, and 1890 derived by linear interpolation due to the gaps in the original source.

1910-1921: INDEC, op.cit.


**Mining Output:**

1878-1910: Colégio de México, op. cit, p.135.

1911-1921: Weighted average of the output of ten main domestically produced metals (silver, gold, iron, graffite, lead, mercury, copper, zinc, antimonio, and lead) as well as oil, weighted according their 1900 value share in total mining output provided in the same source (pp.136-43).


**Transportation and Communications Output:**


*Cement Consumption:*

1870-1931: Cement imports from the UK and the US (by far the two main foreign suppliers), obtained from these countries’ own trade statement data (see above). From 1906 onwards, when the first plants of domestic cement production began operations, we add their output (taken from the Oxford Latin American Economic History database, see above) to imports. 1932-2000: Oxford Latin American Economic History database, available at http://oxlad.qeh.ox.ac.uk/. 2001-2004: INEGI, op.cit.

*Machinery Investment:*


*Central Government Expenditures and Revenues:*


*Narrow (M0) and Broad Money (M2):*


*CPI:*

1870-1913: Catão and Solomou (2005). 1914-1917: Interpolated assuming relative PPP, given that no domestic data seems available for the hyperinflation period. Assuming PPP is probably not very inaccurate since those years were characterizing by soaring inflation and a hyperinflation (see main text) which typically tends to align domestic price movements with the exchange rate. 1918-1940: Williamson, op.cit.
Export and Import volumes and Net Barter Terms of Trade:

1870-1925: Catão (2005), op.cit.
1926-1940: Cardenas, op.cit.
1961-2004: IFS.

Real Effective Exchange Rate


Wages:

1940-1974: Mitchell, op cit..

Foreign 3-month bill rate:

1921-2004: Annual average yields of the US 3-month Treasury Bill provided in the same source. The choice of 1920 as the splicing point was due to the unavailability of the US instrument prior to 1920. Both series were deflated by the respective countries’ CPI inflation, obtained from Catao and Solomou (2005) for 1870-1913, Mitchell, op cit (1914-1960) and the IFS (1961-2004).

Foreign Output:


Population at mid-year: