Capital Formation

Data from 1861 to 1925 are from Italy, ISTAT 1957, 264–265, table 44, col. 6, *investimenti lordi* (gross investment), current prices. Data includes stocks. Data for 1926 to 1945 are from Italy, ISTAT 1986, 143, table 8.1, col. 6, *investimenti lordi* (gross investment). Data on changes in stocks from 1861 to 1925 are from Italy, ISTAT 1957, 264–265, table 44, col. 5, *variazioni scorte* (change in stocks). Data on changes in stocks for 1926 to 1945 are from Italy, ISTAT 1986, 166, table 8.28, col. 5), *variazione delle scorte* (change in stocks).

Current Account

Data from 1861 to 1925 are from Italy, ISTAT 1957, 255, table 39, col. 5, *bilancia dei pagamenti correnti, conto transazioni e trasferimenti correnti* (balance of current payments, including current transfers) Data for 1926 to 1945 are from Italy, ISTAT 1986, 151, table 8.11, col. 11, *saldi, transazioni correnti* (settlement of current transactions), equal to the sum of net exports of goods, services, factor income, and transfers. Merchandise trade figures include silver bullion, but exclude gold bullion and silver coin of the Latin Union. The current account excluding gold is therefore taken to be the the same as the original current account figure.

Gold

Data for 1861 to 1936 are from Di Mattia 1967. Data for gold and silver coin withdrawn from 473–474, table 8, cols. 1 and 2 (withdrawn coins, gold and silver). Data for gold and silver coined and recoined from 477–478, table 9, col. 1 (coinage and recoinage, gold and silver). Imports and exports data from 481–482, table 10, cols. 1, 2, 5, 6 (exports unrefined gold, exports gold coin, imports unrefined gold, imports gold coin).

Since gold and silver flows are not shown separately prior to 1878, our 1861–1877 data for gold specie exports are calculated by taking the average of gold specie to total specie exports for the years 1878–1936 and multiplying by the annual figure for total specie exports. Similarly, 1861–1877 data for unrefined gold exports are calculated by taking the average of gold specie to total specie exports for the years 1878–1936, and multiplying by the annual figure for total unrefined gold and silver exports. The data for gold imports are calculated similarly.

The change in the monetary gold stock is calculated as the sum of specie imports less specie exports plus coinage and recoinage less with-

drawn coin. Data on official reserves of gold from Italy, ISTAT 1968, 105, table 83, col. 11.

Japan

The New Coinage Act of 1871 declared the gold yen as the standard unit of value and legal tender for transactions of any value. Silver coins were relegated to subsidiary money, legal tender up to 10 yen. However, the Act also declared the silver Yen Trade Dollar as legal tender within the confines of treaty ports. An amendment in May 1878 made the silver Trade Dollar legal tender throughout the Empire of Japan. Thus both gold and silver were legal tender within Japan and for all foreign transactions from 1878 to 1897. It was not until the Coinage Act of 1897 declared the gold yen as the standard unit of value and legal tender that Japan officially adopted the gold standard. The coinage of the Yen Trade Dollar ceased, and they were gradually withdrawn from circulation.

GDP
GDP calculated by subtracting net factor incomes and transfers received from the rest of the world from GNP. Gross national expenditure (GNE) data from 1885 to 1929 are from Ohkawa et al. 1979, 251–253, table A1, col. 7, gross national expenditure at market prices, millions of yen, current prices. GNE data from 1930 to 1944 are from Ohkawa et al. 1979, 254, table A2, col. 7, gross national expenditure at market prices, millions of yen, current prices. GNP figures are calculated as GNE plus the current account balance, as calculated below. Data on net factor incomes received from the rest of the world are from Ohkawa et al. 1979, 332–335, table A31, cols. 3, 6, exports: income from abroad less imports: income from abroad. Data on net transfers from abroad are from Ohkawa et al. 1979, 332–335, table A31, col. 8, net transfers from abroad.

Capital Formation
Capital formation data equal gross domestic fixed capital formation plus changes in stocks. Data from 1885 to 1929 from Ohkawa et al. 1979, 251–253, table A1, col. 3, gross domestic fixed capital formation. Data from 1930 to 1944 from Ohkawa et al. 1979, 254, table A2, col. 3, gross domestic fixed capital formation. Change in stocks data from 1885 to 1929 are calculated by taking inventory change as percent of GNE from

Ohkawa et al. 1979, 63, quoting from Fujino and Akiyama 1973, and multiplying by GNE. Inventories data from 1930 to 1944 are from Ohkawa et al. 1979, 254, table A2, col. 4, increase in stocks.

Current Account

Data for 1868 to 1940 from Ohkawa et al. 1979, 332–335, table A31, col. 9, surplus on current account (excluding reparations). Data do not include nonmonetary or monetary gold shipments. Data from 1940 to 1944 from Ohkawa et al. 1979, 336, table A32, col. 9 surplus on current account (excluding reparations).

Gold

Gold coinage data for 1871 to 1897 are from Matsukata 1899, 13, table II, amount of gold coins issued, and 14, table III, amount of silver coins issued. Data for 1900 to 1939 are from Japan, Ministry of Finance 1901, 1910, 1916, 1926, 1940, coins turned out by the mint. Data for 1913 to 1936 on coinage withdrawn are from Japan, Bank of Japan 1932, 1937, 2, amount of coin melted by the mint.

Data on gold exports and imports for 1872–1933 on exports and imports of gold from Ishibashi 1935, 431–433, 436–437, details of coin and bullion exported, details of coin and bullion imported, gold bullion and total of gold coin and bullion. Data are for Japan Proper (ie excludes Korea and Taiwan after annexation). Data for 1934–1936 on net exports of gold coin and bullion from Japan, Prime Minister's Office 1949, 520–521, table 280, col. 7–8, domestic (Japan Proper) exports and imports of gold coin and bullion. Silver exports and imports data for 1872–1933 are from Ishibashi 1935, 433–435, 437–439, details of coin and bullion exported, details of coin and bullion imported, silver bullion and total of silver coin and bullion. Data are for Japan Proper (i.e., excludes Korea and Taiwan). Data for 1934–1936 on net exports of silver coin and bullion from Japan, Prime Minister's Office 1949, 520–521, table 280, col. 7–8, domestic (Japan Proper) exports and imports of silver coin and bullion. Data on gold coin and bullion imports and exports and silver coin and bullion imports and exports for 1937 to 1945 are from Japan, Bank of Japan Statistics Department 1966, 157, 561.

Data on coins existing in the country from 1868 to 1900 from Japan, Ministry of Finance 1901. Data on coins existing in the country from 1901 to 1914 from Shinjo 1962, 101, table XXB. Data on the estimated stock of specie in the country from 1872 to 1914 is derived from the data on coins existing in the country. Data after 1914 take the previous

years' estimate of specie existing in the country, plus coins turned out by the mint, less coin melted by the mint, less net exports of specie. Changes in the monetary stock take the change in estimated stock of specie, less net exports of bullion. Data after 1934 are based on coinage less recoinage less net exports of gold coin and bullion.

Norway

GDP
GDP data from 1865 to 1938 are from Norway, Statistisk Sentralbyrå 1965, 340–343, table 49, row 11, current prices, millions of kroner.

Capital Formation
Capital formation data from 1865 to 1938 are from Norway, Statistisk Sentralbyrå 1965, 340–343, table 49, row 5, current prices, millions of kroner. Data include increase in stocks from 1909. Data on increase in stocks for 1900–1908 are from Norway, Statistisk Sentralbyrå 1953, 107, table 2, col. 9, *lagerendring* (change in stocks). Data for 1909–1939 are from Norway, Statistisk Sentralbyrå 1965, 340–343, table 49, row 7. Increase in stocks not estimated for the years 1865–1899. For 1900–1913 and 1921–1929 only net increase in standing forests and in livestock are included. From 1930 increase in standing forests is regarded as fixed capital investment.

Current Account
Current account data from 1865 to 1899 are from Mitchell 1993, 922, 927, table J3, current prices, millions of kroner. Current account data for 1900–1929 are from Norway, Statistisk Sentralbyrå 1953, 126, table 12, col. 5, *netto oking eller nedgang i Norges netto fordringer pa utlandet* (net increase or decrease in Norway's foreign assets). Data for 1930–1939 from Norway, Statistisk Sentralbyrå 1965, 184–185, table 25, row 16. The current account data exclude crude gold and silver and coins.

Gold
Data on gold and silver holdings from 1865–1913 are (the two metals are not reporated separately) from Norway, Statistisk Sentralbyrå 1978, 484, table 257, col. 1&6, *metallfondene* (gold and silver) at bank of Norway. Data from 1914–1939 from Norway, Statistiske Oversikter 1948, 300–303, table 159, rows 1 & 4, *gullbeholdning* (gold stock), and *midlertidig anbrakt i gull* (temporarily invested in gold). The change in

the monetary gold stock is calculated as the first difference of the gold stock at the Bank of Norway (gold and silver stock until 1914). According to United States, Bureau of the Mint 1886, 222, "the amount of gold in banks, other than the Bank of Norway, or in circulation, has probably not been considerable."

Data on gold exports and imports for 1865 to 1896 are calculated as the first difference of the gold and silver holdings of the Bank of Norway (the negative of the change in the monetary stock equals the net exports—i.e., an increase in the monetary stock corresponds to an import). Data on gold exports and imports from 1895 to 1909 and for 1931 to 1944 are from Norway, Statistisk Sentralbyå 1897–1947, unwrought platinum, gold and silver and coins and medals. Missing trade returns data for 1897 and 1899 are interpolated linearly from the previous and subsequent years. Data on net exports of gold from 1910 to 1930 are from the League of Nations 1927, 1931, 1932, exports of bullion and specie less imports of bullion and specie (including silver and platinum, as per the trade returns).

Russia

GDP
Data on net national product are from Gregory 1982, table 3.2, net national product, Russian Empire, millions of credit roubles.

Capital Formation
Data on capital formation are from Gregory 1982, table 3.2, net investment, Russian Empire, millions of credit roubles. Data include inventories. Data on inventories are from Gregory 1982, table 3.2, inventories, total, Russian Empire, millions of credit roubles.

Current Account
Data on the current account are from Gregory 1982, table 3.2, net foreign investment, Russian Empire, millions of credit roubles. The current account data include net exports of silver.

Gold
Data on the monetary gold stock are from United States, Bureau of the Mint 1876–1920. Data for 1880–1891 are calculated as the sum of bullion and gold coin of the treasury at the Bank of Russia plus gold specie on hand at the Bank of Russia (belonging especially to the Bank of Russia).

Data on the monetary gold stock from 1891 to 1914 are the sum of gold coin in circulation plus gold coin and bullion in the treasuries and the state bank.

Data on net exports of gold from 1885 to 1913 are from United States, Bureau of the Mint 1876–1920. Missing data for 1900, 1901, and 1912 are estimated using a regression of net exports on net national product and changes in the monetary gold stock for all other years of available data (1885–1899, 1902–1911, 1913). Predicted values from this regression are used to proxy the missing net gold exports data.

United States dollar values are converted to roubles at the exchange rate of 0.7718 roubles per U.S. dollar until the end of 1897, then 0.514556. Data on monetary gold and net exports of gold are converted from roubles to credit roubles by multiplying by a factor of 1.5.

Sweden

GDP
Data on gross domestic product at factor cost data for 1861 to 1945 are from Krantz and Nilsson 1975, 154–155, table 1:2, col. 4. Indirect taxes and customs duties from Krantz and Nilsson 1975, 154–155, table 1:2, col. 3. GDP at market prices calculated as sum of GDP at factor cost plus indirect taxes and customs duties.

Capital Formation
Data on capital formation for 1861 to 1945 are from Krantz and Nilsson 1975, 150–152, table 1.1, col. 6, domestic investment. Data do not include stocks. Data on stocks for 1861 to 1945 are from Johansson 1967, 38–39, table 1, col. 3, changes in livestock. Our data on capital formation are calculated by adding domestic investment to changes in livestock.

Current Account
Data on the current account from 1861 to 1930 from Lindahl et al. 1937, 598–599, table 174, col. 8, net balance on goods and services. Data do not include shipments of gold and silver. Data for 1931 to 1935 from Ohlsson 1969, 123, table B:1., col. 6, *bytesbalansens saldo*. Data do not include net exports of gold and silver. Data for 1936 to 1945 from Sweden, Statistiska Centralbyran 1960, 64, table 33, row 6. Data do not include net exports of gold and silver. Net exports of silver are added to the current account balance. Data on net silver exports, 1861–1910,

are from Lindahl et al. 1937; 1911–1945 data are from Sweden, Statistiska Centralbyran 1960.

Gold
Data on net exports of gold from 1861 to 1874 from Lindahl et al. 1937, 604–605, table 175, col. 1, net imports of gold according to trade statistics. Data on gold and specie flows from 1861 to 1871 included both gold and silver. According to Lindahl et al. 1937, 610, the figures included only insignificant quantities of gold, so the net export of gold is assumed to be zero from 1861–1871. Data from 1875 to 1913 from Lindahl et al. 1937, 604–605, table 175, col. 4, change in bank holdings plus gold absorbed by industry. Lindahl et al. argue that the trade statistics data suffer from several shortcomings with regards to the net exports of gold, so they use the estimated change in the stock of gold held by banks and the value of gold absorbed by industry as the measure of net gold exports. Data from 1914 to 1945 are from Sweden, Statistiska Centralbyran 1960, 62, table 30, cols. 2, 5, 9, 12, imports of unmanufactured gold and gold coins and exports of unmanufactured gold and gold coins. Data on changes in the monetary gold stock for 1875 from Lindahl et al. 1937, 604, table 175, col. 2, increase in bank holdings of gold. Data on the monetary gold stock from 1876 to 1945 from Sweden, Statistiska Centralbyran 1960, 97, table 76 and 98, table 77, gold holdings of banks (including *Riksbank*). Change in the monetary gold stock is calcuated as the change in the gold holdings of banks.

United Kingdom

GDP
From 1850 to 1869 from Mitchell 1988, 831–832, chap. 16, table 5, Gross domestic product at market prices. Data from 1870 to 1944 from Feinstein 1972, T10–T11, table 3, gross domestic product at market prices.

Capital Formation
Data from 1850 to 1869 from Mitchell 1988, 831–832, chap. 16, table 5, gross domestic fixed capital formation plus value of physical increase in stocks. Data from 1870 to 1920 from Feinstein 1988, 462–463, table 17, gross domestic fixed capital formation plus value of physical increase in stocks and works in progress. Data from 1921 to 1944 from Feinstein 1972, T8–T9, table 2, gross domestic fixed capital formation plus value of physical increase in stocks and works in progress.

Current Account

Data from 1850 to 1869 from Imlah 1958, 70–72, table 4, balance on current account. Imlah's data include net exports of gold and silver bullion and specie. Data from 1870 to 1920 from Feinstein 1988, 462–463, table 17, net investment abroad. Feinstein's (1988) current account data are calculated as the balance of current account transactions not involving gold or silver *plus* the net increase in the U.K. stock of monetary gold and silver. Data from 1921 to 1944 are from Feinstein 1972, T38–T39, table 15, net investment abroad. The data from Feinstein (1972) include silver trade after 1913, but, as noted in the body of this paper, exclude all gold flows. Our own data for the current account CA^{NG} excluding all gold flows (but including all silver flows) are calculated as follows. For 1850 to 1869 we take the current account data from Imlah 1958, less net exports of gold and silver, plus net exports of silver (with net exports of the precious metals as calculated below). For 1870 to 1920 we take the current account numbers of Feinstein 1988, less the change in the total gold and silver money stock (as calculated below), plus net exports of silver. For 1921 to 1944 we simply take the Feinstein 1972 series on net investment abroad, which includes all silver trade and excludes all gold trade.

Gold

Imlah (1958, 70–72, table 4), reports data on net shipments of gold and silver for the years 1850–1870. Imlah's data do not separate net gold from silver shipments, but instead aggregate the numbers for both metals. Separate gold and silver net exports data for 1858–1916 and 1920–1945 are from United Kingdom, Board of Trade 1870–1938, exports of (gold, silver) bullion and specie less imports of (gold, silver) bullion and specie. (This source also provides data on the separate levels of gold and silver imports and exports for 1858–1916 and 1920–1945.) Gold net exports data for 1917–1919 are from Morgan 1952, 335, table 52, net exports of gold coin and bullion. Silver net exports data for 1917–1919 from Morgan 1952, 341, table 53, net exports of gold and silver, less net exports of gold from 335, table 52. Although separate silver and gold *exports* data are reported by the board of trade for 1850–1857, separate silver and gold *imports* data are not reported prior to 1858. To calculate net gold shipments for 1850–1857, we therefore must estimate gold imports separately for those years. We do this in three steps as follows. First, we use the 1858–1916, 1920–1945 board of trade data to measure the average ratio k of silver imports to silver

imports plus silver exports. (This ratio is much more stable over time than the corresponding ratio for gold trade, which is why we take this rather roundabout route to estimating 1850–1857 gold imports.) Because we do have yearly silver exports data, X_S, for 1850–1857, we then estimate silver imports in any year as $M_S = kX_S/(1 - k)$. That is the second step in our procedure. The third and final step is to estimate gold imports for 1850–1857 as the sum of gold and silver exports (from Board of Trade) less our estimated silver imports less the Imlah 1958, 70–72, table 4, figures for net shipments of gold and silver together.

Data on changes in the monetary gold stock from 1868 to 1921 are calculated as the change in the estimated stock of gold coin outstanding, plus the change in the stock of gold in the Bank of England. Data on gold in the Bank of England (issue and banking departments) are taken from the *Economist* 1850–1932 (various issues, last week of December). Data on the change in the monetary stock of gold coin are from Capie and Webber 1985, 198–200, table 7.3. Mid-year data from 1868 to 1904 were converted to year-end data by adding data from the following year and dividing by two (this procedure assumes an even distribution across years). Data on the gold coin stock from 1915 to 1920 are calculated by taking the average of the gold coin stock to the total coin stock for the years 1868 to 1914 and multiplying by the figure for the total coin stock. The silver coin stock from 1905 to 1920 is calculated by taking the average of the silver coin stock to the total coin stock for the years 1868 to 1905 and multiplying by the figure for the total coin stock.

After 1921, our estimates assume that the only sources of change in the monetary gold stock are changes in the gold holdings of the Bank of England or the Exchange Equalisation Account. This procedure was adopted because of the lack of available data on holdings of gold coin outside the Bank of England after 1921. For 1922–1932 we use the *Economist* 1850–1932 data on Bank of England gold holdings. Data from 1933 to 1945 are from United Kingdom, Financial Secretary of the Treasury 1951, gold reserves in the Bank of England Issue Department and the Exchange Equalisation Account until 1939, then gold and dollar reserves from 1940 to 1945 (which were not reported separately).

United States

GDP
Data for 1869 to 1888 from Kuznets 1961, 561–562, table R-25, col. 3, GNP, Variant III, five-year centered moving average and 557–558, table

R-23, col. 1, B. Variant III, billions of dollars. Using annual data from 1889–1892, the five-year moving average number for 1890 is used to deduce the level of GNP in 1888 as five times the five-year centered moving average for 1890 less the actual levels for 1889–1892. Using a similar procedure, the annual data for 1869–1888 are derived by disaggregating the five-year moving averages. Data for 1889 to 1928 are from Kendrick 1961, 296–297, table A-IIb, col. 11, GNP, Commerce concept, millions of dollars. Data from 1929 to 1945 are from United States, Bureau of the Census 1975, 229, series F47, GNP, current prices. GDP data are calculated by subtracting net income from investments abroad and net unilateral transfers from abroad from the figures for GNP. The data on income on investments abroad are from United States, Bureau of the Census 1975, 865, series U13, then 864, series U5, U6, U13, income on investments abroad, private and public (U5 + U6) less income on foreign investments in United States (U13). The data on unilateral transfers are from United States, Bureau of the Census 1975, 866–867, series U16 and U17, unilateral transfers, net private (U16) plus unilateral transfers, net public (U17).

Capital Formation

Data for 1869 to 1888 from Kuznets 1961. Kuznets' figures on capital formation include net changes in claims against foreign countries, so we subtract changes in those claims to get our own figure for gross capital formation. Thus, our capital formation figures are calculated as Kuznets 1961, 572–574, table R-29, col. 1, gross capital formation, five-year centered moving average, less 599–660, table R-34, col. 3, net changes in claims against foreign countries, five-year centered moving average. Annual data are derived from the five-year centred moving average using the same procedure that was applied to the GNP series. Data from 1889 to 1928 are from Kendrick 1961, 296–297, table AIIb, col. 7, gross private domestic investment, commerce basis, millions of dollars. Data from 1929 to 1945 are from United States, Bureau of the Census 1975, 229, series F52, gross private domestic investment, current prices. Data on stocks for 1869 to 1888 from Kuznets 1961, 599–600, table R-34, col. 1, net changes in inventories, current prices, five-year centered moving average, and 490, table R-4, col. 3, net changes in inventories, billions of dollars. Annual data are derived from the five-year centered moving average using the same procedure that was applied to the GNP series, except the data are unscrambled from 1920 backwards. Data from 1889 to 1928 are from Kendrick 1961, 296–297,