

Appendix 1: Data

This spreadsheet provides consistent series for the longest possible period, using the Irish national accounts and the Finance Accounts, as well as some other official sources.

The earliest version of the national accounts was published by Duncan (1939) in SSISI. In 1945, the Department of Finance published data for 1938-1944 in nominal terms. From 1951, the CSO published annually, first in the Irish Statistical Survey up to 1958 and, thereafter in the annual National Income and Expenditure Volume. The Central Statistics Office (CSO) has periodically revised the historical data because of new information and, especially in earlier years, because of changes in definitions.

The data for 1995 to 2016 are drawn from *National Income and Expenditure 2016 (NIE)*. The data from 1970 to 1995 are based on the earlier ESA/SNA and are available from the historical data file on the CSO website. For earlier years, the latest volume of NIE giving data for a particular year is used to carry back historical series.

The series are linked by taking data for the earliest year from the latest publication and assuming that the percentage change in the series in earlier years is the same as in the publication covering those years in the splicing process. NIE 1977 has an appendix with data back to 1960. NIE 1971 provides data back to 1958 and similarly NIE69 gives data back to 1947. The series for national income and nominal GNP for 1938 were last revised in the *Irish Statistical Survey 1957 (ISS57)*. In NIE69, the data were revised back to 1947, but not for earlier years.

Sheet: National Income – Deriving National Income

Column	Publisher	Published	Title		Item
B	SSISI	1939	Duncan	£M	National Income
C	D Finance	1944	National Income and Expenditure 1938-1944	£M	National Income
D	CSO	1951	National Income and Expenditure 1938 and 1944-1950	£M	National Income
E	SSISI	1952		£M	National Income
F	CSO	1953	Statistical Abstract 1952	£M	National Income
G	CSO	1953	Irish Statistical Survey 1951-2	£M	National Income
H	CSO	1954	Irish Statistical Survey 1953	£M	National Income
I	CSO	1955	Irish Statistical Survey 1954	£M	National Income
J	CSO	1956	Irish Statistical Survey 1955	£M	National Income
K				£M	National Income
L	CSO	1958	Irish Statistical Survey 1957	£M	National Income
M				£M	National Income
N	CSO	1973	National Income and Expenditure 1969	£M	National Income
O	CSO	1972	National Income and Expenditure 1971	£M	National Income
P	CSO	1979	National Income and Expenditure 1977	£M	National Income
Q	CSO		Historical National Accounts	€M	National Income
R	CSO	2017	National Income and Expenditure 2016	€M	National Income
S	Composite 1				
T	Composite 2				

Two linked series are shown in columns S and T. The difference is due to alternative treatments of the data from 1938 to 1947.

The procedure used for the linked series in column S is as follows:

The data for 1995 to 2016 are shown in Column R. These are then linked at 1995 to the CSO data from 1970 in column Q. In turn, based on the overlap of 1970, these are linked to column P taking the series back to 1960. Column O, linking in 1960, splices back to 1958. Subsequently, column N takes the series back to 1947. The data in column D extends the series back to 1944 and column C takes it back to 1938. However, the 1938 figure in column L, which is much more consistent with the later data, is significantly different from the 1938 figure derived by linking backwards as shown here. The data in column B are used to take the series back from 1938 to 1926 with missing years provided by linear interpolation.

The procedure used for the linked series in column T is:

The 1938 figure in column L is linked to the series in column N at the year 1953. Because this figure for 1938 is different from that derived by linking the continuous series in column S, a constant annual adjustment of 0.989 is added to the growth rates for the years 1938-1947. This ensures that the 1947 and later figures are identical in columns S and T and that the 1938 figure is based on the latest available estimate from column L. The data in column B are then used to take the series back from 1938 to 1926, with missing years provided by linear interpolation.

In this paper, the series in column T is favoured.

Sheet: GNP_{Current} – deriving GNP at current prices

Column	Publisher	Published	Title		Item
B	Composite 1		From the NationalIncome sheet column S		National income
C	Composite 2		From the NationalIncome sheet column T		
D	D Finance	1944	National Income and Expenditure 1938-1944	£M	GNP Current Prices
E	CSO	1951	National Income and Expenditure 1938 and 1944-1950	£M	GNP Current Prices
F	SSISI	1952		£M	GNP Current Prices
G	CSO	1953	Statistical Abstract 1952	£M	GNP Current Prices
H	CSO	1953	Irish Statistical Survey 1951-2	£M	GNP Current Prices
I	CSO	1954	Irish Statistical Survey 1953	£M	GNP Current Prices
J	CSO	1955	Irish Statistical Survey 1954	£M	GNP Current Prices
K	CSO	1956	Irish Statistical Survey 1955	£M	GNP Current Prices
L				£M	GNP Current Prices
M	CSO	1958	Irish Statistical Survey 1957	£M	GNP Current Prices
N				£M	GNP Current Prices
O	CSO	1973	National Income and Expenditure 1969	£M	GNP Current Prices
P	CSO	1972	National Income and Expenditure 1971	£M	GNP Current Prices
Q	CSO	1979	National Income and Expenditure 1977	£M	GNP Current Prices
R	CSO		Historical National Accounts	€M	GNP Current Prices
S	CSO	2017	National Income and Expenditure 2016	€M	GNP Current Prices
T	Composite			€M	GNP Current Prices
U	Composite		Uses 1938 CSO figure as a base	€M	GNP Current Prices

Two linked series are shown in columns T and U. The difference is due to different treatments of the data from 1938 to 1947.

The procedure used for the linked series in column S is as follows:

The data for 1995 to 2016 are shown in Column S. These are then linked (at 1995) to the CSO data from 1970 in column R. In turn, based on the overlap of 1970, these are linked to column Q taking the series back to 1960. Column P, linking in 1960, goes back to 1958. Column O then extends the series back to 1947. The data in column F take the series back to 1944. The data on the national income series in column B is used to take the series back from 1944 to 1926.

The procedure used to derive the linked series in column U is outlined as:

The series is identical to column T back to 1944. The 1938 figure is derived from column F, linked to the series at 1944. For the years 1938 to 1944, a constant annual adjustment is imposed on the growth in the series in column B for national income of 0.988 for the years 1938 to 1944 which ensures that the cumulative growth over the period matches that shown in column F. The series is linked to the national income series (column B) to take the linked series back to 1926.

Sheet: GNPConstant – GNP at constant prices

Column	Publisher	Published	Title		Item
B	SSISI	1939	Duncan	£M	Index real national income
C	SSISI	1941	Duncan	£M	Index real national income
D	D Finance	1944	National Income and Expenditure 1938-1944	£M	GNP Constant Prices
E	CSO	1951	National Income and Expenditure 1938 and 1944-1950	£M	GNP Constant Prices
F	SSISI	1952		£M	GNP Constant Prices
G	CSO	1953	Statistical Abstract 1952	£M	GNP Constant Prices
H	CSO	1953	Irish Statistical Survey 1951-2	£M	GNP Constant Prices
I	CSO	1954	Irish Statistical Survey 1953	£M	GNP Constant Prices
J	CSO	1955	Irish Statistical Survey 1954	£M	GNP Constant Prices
K	CSO	1956	Irish Statistical Survey 1955	£M	GNP Constant Prices
L				£M	GNP Constant Prices
M	CSO	1958	Irish Statistical Survey 1957	£M	GNP Constant Prices
N				£M	GNP Constant Prices
O	CSO	1973	National Income and Expenditure 1969	£M	GNP Constant Prices
P	CSO	1972	National Income and Expenditure 1971	£M	GNP Constant Prices
Q	CSO	1979	National Income and Expenditure 1977	£M	GNP Constant Prices
R	CSO		Historical National Accounts	€M	GNP Constant Prices
S	CSO		National Income and Expenditure 2016	€M	GNP Constant Prices
T	Composite			€M	GNP Constant Prices

The linked series is shown in column T from 1926 to 2016.

The data for 1995 to 2016 are shown in Column S. These are then linked at 1995 to the CSO data from 1970 in column R. In turn, based on the overlap of 1970, these are linked to column Q taking the series back to 1960. Column P, linking in 1960, goes back to 1958. In turn, column O takes the series back to 1947. The data in column L allows the series to be linked in 1952 to provide a figure

for 1938. The figures for the intervening years are provided by linear interpolation. The data in column B are used to take the series back from 1938 to 1926, with missing years provided by linear interpolation.

Sheet: NatDebtInt – National Debt Interest

Column	Publisher	Published	Title	Item	Item
B	D Finance		Finance Accounts	£M	Central Fund
C	D Finance		Finance Accounts	£M	Supply
D	D Finance		Finance Accounts	£M	services
E	D Finance		Finance Accounts	£M	Supply
F	D Finance		Finance Accounts	£M	services
G	D Finance		Finance Accounts	£M	Central
H	D Finance		Finance Accounts	£M	Fund
I	D Finance		Finance Accounts	£M	UK debt
J	CSO		Irish Statistical Survey 1956 and 1957	£M	Central
K	CSO			£M	Fund
L	D Finance	1944	National Income and Expenditure 1938-1944	£M	Total Central Govt
M	CSO	1951	National Income and Expenditure 1938 and 1944-1950	£M	Local Authorities
N	SSISI	1952		£M	Public
O	CSO	1953	Statistical Abstract 1952	£M	Authorities
P	CSO	1953	Irish Statistical Survey 1951-2	£M	Interest
Q	CSO	1954	Irish Statistical Survey 1953	£M	National Debt Interest
R	CSO	1955	Irish Statistical Survey 1954	£M	National Debt Interest
S	CSO	1956	Irish Statistical Survey 1955	£M	National Debt Interest
T				£M	National Debt Interest
U	CSO	1958	Irish Statistical Survey 1957	£M	National Debt Interest
V				£M	National Debt Interest
W	CSO	1973	National Income and Expenditure 1969	£M	National Debt Interest
X	CSO	1972	National Income and Expenditure 1971	£M	National Debt Interest
Y	CSO	1979	National Income and Expenditure 1977	£M	National Debt Interest
Z	CSO		Historical National Accounts	€M	National Debt Interest
AA	CSO	2017	National Income and Expenditure 2016	€M	National Debt Interest
AB	Composite			€M	National Debt Interest

The data for 1995 to 2016 are shown in Column AA. These are then linked at 1995 to the CSO data from 1970 in column Z. In turn, based on the overlap of 1970, these are linked to column Y taking the series back to 1960. Column X linking in 1960 extends back to 1958. In turn, column W takes the series back to 1947.

For years before 1947 the series are linked at 1947 using the derived series in column K which is based primarily on data in the Finance accounts. The series for public authorities' debt interest in column K is the sum of estimates for debt interest of central government, column I, and for local

authorities, column J. In the case of column J figures are available from the CSO for 1938 and 1952 onwards. Between these years the figure is derived by interpolation. Prior to 1938, the local authority figure is assumed to decrement by £20,000 a year.

The figure for central government interest in column I is the sum of columns B, D, E, F, and H. Interest was paid from the Central Fund and also from the supply services. In earlier years, the interest from the supply services was not separated from sinking fund payments – column C. However, the total was given back to 1935. It was assumed that the sinking fund payments from this source were £200,000 a year. Prior to 1935, the interest payments are assumed to decrement by £30,000 a year. Also, the interest on the £5 million settlement with the UK in 1925 is not identified in the Finance Accounts until 1946. An estimate of this interest is included from 1926 to 1945 in column F. The necessary imputation means that the figures for national debt interest become steadily less reliable as you move back before 1935.

Sheet: GovBorrowing – Government Borrowing

Column	Publisher	Published	Title	Item
B	Dept Ind and Commerce	1940	Statistical Abstract	£M Revenue
C	Dept Ind and Commerce	1940	Statistical Abstract	£M Expenditure including sinking funds
D	Department of Finance		Finance Accounts	£M Sinking Funds -Central Fund
E	Department of Finance		Finance Accounts	£M Sinking Funds -Supply Services
F	Department of Finance		Finance Accounts	£M Expenditure adjusted
G	Dept Ind and Commerce	1940	Statistical Abstract	£M Borrowing
H	D Finance	1944	National Income and Expenditure 1938-1944	£M Gross Government Borrowing
I	D Finance	1944	National Income and Expenditure 1938-1944	£M Central Gov Borrowing
J	D Finance	1944	National Income and Expenditure 1938-1944	£M Extra Budget Borrowing
K	D Finance	1944	National Income and Expenditure 1938-1944	£M Extra Budget Redemption
L	D Finance	1944	National Income and Expenditure 1938-1944	£M LA Borrowing
M	D Finance	1944	National Income and Expenditure 1938-1944	£M LA repayments
N	D Finance	1944	National Income and Expenditure 1938-1944	£M Total Borrowing net
O	CSO	1951	1938 and 1944-1950	£M Government Borrowing
P	CSO	1951	ISS1949-1950	£M Exchequer Borrowing
Q	CSO	1952	Statistical Abstract 1950-51	£M Public Auth Net borrowing
R	CSO	1953	Statistical Abstract 1952	£M Government Borrowing
S	CSO	1953	Irish Statistical Survey 1951-2	£M Government Borrowing
T	CSO	1954	Irish Statistical Survey 1953	£M Government Borrowing
U	CSO	1955	Irish Statistical Survey 1954	£M Government Borrowing
V	CSO	1958	Irish Statistical Survey 1957	£M Government Borrowing
W	CSO	1959	Irish Statistical Survey 1958	£M Government Borrowing
X	CSO	1962	National Income and Expenditure 1961	£M Gross Government Borrowing
Y	CSO	1962	National Income and Expenditure 1961	£M Redemption of securities

Z	CSO	1962	National Income and Expenditure 1961	£M	Net Borrowing
AA	CSO	1973	National Income and Expenditure 1969	£M	Gross Government Borrowing
AB	CSO	1973	National Income and Expenditure 1969	£M	Redemption of securities
AC	CSO	1973	National Income and Expenditure 1969	£M	Net Borrowing
AD	CSO	1972	National Income and Expenditure 1971	£M	Gross Government Borrowing
AE	CSO	1972	National Income and Expenditure 1971	£M	Redemption of securities
AF	CSO	1972	National Income and Expenditure 1971	£M	Net Borrowing
AG	CSO		Historical National Accounts	€M	Government Borrowing less redemption of debt
AH	Department of Finance			€M	General Government Surplus/Deficit
AI	CSO	2017	Government Financial Statistics	€M	General Government Surplus/Deficit - ESA2010 Code (B9)
AJ	Composite			€M	General Government Deficit

The composite figure for government borrowing on a Eurostat definition is shown in column AJ. Back to 1995, it is taken from the CSO, column AI. For 1988 to 1995, it originates from the Department of Finance, as presented in column AH. For 1970 to 1988, it is taken from the national accounts: column AG. For 1967 to 1969, it is shown in column AF. In turn, column AF is derived from the national accounts item for public authorities' gross borrowing, column AD less redemption of debt, column AE. Borrowing for the years 1958 to 1966 is given in column AC. It is also derived from the national accounts figures for gross borrowing and debt redemptions, columns AA and AB. Column Z also gives public authorities' borrowing from the national accounts for 1953 to 1957.

Prior to 1953, reliance has to be made on borrowing figures derived from the Finance Accounts covering Central Government. However, as a significant component of local authorities' expenditure was financed by central government, this nonetheless provides a reliable guide to total borrowing.

Column B displays central government revenue, excluding receipts of borrowing. Column C provides expenditure excluding direct repayment of debt but including sinking fund payments which were also used to repay debt. Columns D and E provide sinking fund payments. In the case of sinking fund payments from supply services, detailed figures are only available from 1946. As a result, an estimate is made for earlier years. Column F gives expenditure excluding sinking fund payments and column G gives government borrowing on the Finance Account basis. This is used as estimated borrowing for years before 1953 (for 1953, the Finance Accounts figure is significantly lower than the CSO figure).

Sheet: BOP – Current Account of the Balance of Payments

Column	Publisher Dept Ind and Commerce	Published	Title		Item
B		1939	Statistical Abstract	£M	Balance of Payments
C	CSO	1952	ISS1950-51		Balance of Payments
D	CSO	1953	Irish Statistical Survey 1951-2	£M	Balance of Payments
E	CSO	1954	Irish Statistical Survey 1953	£M	Balance of Payments

F	CSO	1956	Irish Statistical Survey 1955	£M	Balance of Payments
G	CSO	1958	Irish Statistical Survey 1958	£M	Balance of Payments
H	CSO	1962	National Income and Expenditure 1961	£M	Balance of Payments
I	CSO	1973	National Income and Expenditure 1969	£M	Balance of Payments
J	CSO		Historical National Accounts	€M	Balance of Payments
K	CSO	2017	Government Financial Statistics	€M	Balance of Payments
L	Composite			€M	Balance of Payments

The composite current account of the balance of payments is given in column L. The data for 1995 to 2016 come from column K. For 1970 to 1995, they come from column J. Column I takes it back to 1947. Column F takes it back to 1938. Reliable data for earlier years are not available.

Sheet: National Debt – the National Debt, Gross

Column	Publisher	Title	Item
B	Department of Finance	Finance Accounts	£Ir National Loans
C	Department of Finance	Finance Accounts	£Ir Foreign Borrowing
D	Department of Finance	Finance Accounts	£Ir Other Long-term borrowing
E	Department of Finance	Finance Accounts	£Ir Short-term borrowing
F	Department of Finance	Finance Accounts	£Ir Telephone Acts
G	Department of Finance	Finance Accounts	£Ir Land Bonds - Guaranteed
H	Department of Finance	Finance Accounts	£Ir Other including capitalised Liabilities
I	Department of Finance	Finance Accounts	£Ir National Debt - Gross
J	Department of Finance	Finance Accounts	£Ir Liquid Assets
K	Department of Finance	Finance Accounts	£Ir National Debt – Net
L	Department of Finance	Finance Accounts	€M National Loans
M	Department of Finance	Finance Accounts	€M Foreign Borrowing
N	Department of Finance	Finance Accounts	€M Other Long-term borrowing
O	Department of Finance	Finance Accounts	€M Short-term borrowing
P	Department of Finance	Finance Accounts	€M Telephone Acts
Q	Department of Finance	Finance Accounts	€M Land Bonds - Guaranteed
R	Department of Finance	Finance Accounts	€M Other including capitalised Liabilities
S	Department of Finance	Finance Accounts	€M National Debt - Gross
T	Department of Finance	Finance Accounts	€M Liquid Assets
U	Department of Finance	Finance Accounts	€M National Debt – Net
V	CSO and Department of Finance	1990-1999 Department of Finance. 2000-2016 CSO	€M General Government Gross Debt (EDP face value) - ESA2010 Code (GGDebt)
W			€M Contingency - Treaty
X		Finance Accounts	€M Contingent Liability - economic War
Y	Composite		€M Debt including contingent liability

Column W shows the composite debt series. From 2000 to 2016, it comes from the CSO government statistics. From 1990 to 1999, it originates from the Department of Finance. In both cases it is on the

standard EU definition. For earlier years, the series is taken from the Finance Accounts, as shown in column S. The definition here differs from that used in the Finance Accounts but the resulting figure for 1990 is quite close to the figure using the EU definitions.

The debt is defined as the sum of national loans (L) plus foreign borrowing (M) other long-term borrowing (N) plus short-term borrowing (O) plus borrowing under the telephone acts (P) plus guaranteed land bonds (Q) plus other capitalised liabilities (R).

$$D = L + M + N + O + P + Q + R$$

In the case of borrowing under the telephone and similar acts – this disappears in 1987 when the post office was set up as a commercial public company.

Column Y shows the debt series including two contingent liabilities. In column W an estimate of the potential liability for a share of the UK debt as a result of the Treaty in 1921 is included. This was written off in 1925 (FitzGerald and Kenny, 2017). The second contingent liability is the sum withheld from the UK government as a result of the “Economic War” from 1932 to 1938. This was shown as a contingent liability of the state each year till 1938. The agreement reached that year permanently ended the payments in return for a once off capital payment of £10 million. Column Y shows the debt, including these contingent liabilities.

Sheet: Graph1DebtGNP

The debt to GNP ratio

Sheet: Graph2Borrowing

Government borrowing as % of GNP

Sheet: Graph3IntGNP

Debt interest as a % of GNP

Sheet: Graph4RevExpGNP

Government revenue and expenditure as a % of GNP, 1924-1953. Thereafter the CSO series is superior.

Sheet: Graph5BOP

The current account of the balance of payments as a % of GNP, 1938 to 2016

Sheet: Graph6

Debt interest as a % of GNP. Debt interest as a % of the debt. The long-term bond yield.