

Historical time series of National Accounts

The second paragraph of the text was updated on 4 May 2015.

The historical time series of National Accounts are partially based on Statistics Finland's calculations and partially on a later study. Statistics Finland has compiled National Accounts since the statistical reference year 1948. The current National Accounts accordant with the most recent compilation method extends to the statistical year 1975. The extensive research compiled as a basis for the historical time series, so-called growth research, has extended the time series all the way to 1860.

The calculation methods and guidelines of National Accounts have been updated during the time period. The time series have been calculated using different calculation methods and are thus not fully comparable. Here we describe some of the differences. A description of the time series' can be found in Riitta Hjerppe's book "[The Finnish economy 1860–1985 : Growth and structural change](#)", which can be found in electronic format on the web pages of the Bank of Finland. The more detailed calculation methods and tables can be found from this [publication](#).

The first hundred years of the time series, 1860-1960, have been defined adapting the old Finnish National Accounts, which were based on the first UN recommendation from 1953 (System of National Accounts or SNA). The next stage 1960-1975 of the system of National Accounts, FNA (Finnish National Accounts) 80, has followed the UN's second SNA recommendation from 1968. Starting from 1975, the time series have been calculated as exhaustively as possible in accordance with the European System of Accounts, ESA 2010, which is based on the SNA from 2008.

Earlier, time series were continued with series accordant with ESA95 from 1975 onwards. ESA95 was replaced with ESA 2010 in summer 2014. The major changes caused by ESA 2010 were such as capitalisation of research and development expenditure. Further information about the change is available on Statistics Finland's [ESA 2010 website](#).

The historical time series are published as separate current-price series, series produced with different calculation methods are published separately. The time series can thus be comprehensively presented as "three stages" (1860–1960, 1960–1975 and 1975-), of which each stage in itself is in practice uniform, even though the time series differ to some extent in terms of calculation methods and classifications in different time periods. In the examinations of volume developments, the principle has not been as strict, and volume indices have been chained together regardless of apparent discontinuities. The concepts of National Accounts have changed a little between the calculation methods. The aim has been to maintain the original names but the identification codes that correspond with the current National Accounts have been added to the series.

Time series of national balance of supply and demand

The time series do not include all items of the national balance of supply and demand in full. There are some shortcomings in the items of the national balance of supply and demand for 1860 to 1960 that are based on the Bank of Finland's Growth research series and Riitta Hjerppe's research. Nearly all main aggregates are available, however. The annual items of the national balance of supply and demand for 1960 to 1975 have been taken from the FNA 80 system. Current priced series of the national balance of supply and demand for 1860 to 1960 have been determined based on the historical series' volume indices or (in case of indirect taxes and subsidies) by deflation of current priced series.

Current priced items of the national balance of supply and demand for 1860 to 1960 derive from Riitta Hjerppe's (1988) converging research where the results of the growth researches financed by the Bank of Finland are collated using concepts that describe the production of the National Accounts. The series have been calculated adapting the accounting system described in the publication by Grönlund and Niitamo (1968). Examination of the series can be divided into two periods 1860 to 1948 and 1948 to 1960 of which the latter period also includes the figures for foreign trade in services. The figures of the latter period are also comparable with the publication of the Central Statistical Office of Finland (1968), based on which one can examine, e.g. a common value for foreign trade in goods and services. The exports and imports of services have been calculated as residuals by deducting the exports and imports of goods of the historical time series data from the total imports and exports.

On the supply side, the current priced items for the entire period have been defined for GDP at production cost prices, indirect taxes, subsidies and imports of goods. With the help of the first three items, the market price of the gross national product has also been derived. From 1948 onwards, imports of services are also included.

On the demand side, the current priced items for the entire period have been defined for private and public consumption, gross fixed capital formation and exports of goods. From 1948 onwards, exports of services are also included.

The current priced items are missing data on change in inventories for the entire period 1860 to 1960 and on international trade in services for 1860 to 1948. The missing items are included in the residual item of the national balance of supply and demand, which is defined as the difference between total supply and total demand. It has not been possible to separate the items from one another and they are mixed into one net effect where the contribution of one item cannot be determined with the available data. In addition, gross fixed capital formation has not been divided into private and public and the figure presented in the material is a sum of the two.

Value added of industries

Gross value added is viewed by main industries divided into primary production, manufacturing, construction and services.

Primary production includes agriculture, forestry, and fishing and hunting. Manufacturing includes mining and quarrying, manufacturing, and electricity, gas and water supply. Construction includes construction of buildings and civil engineering. Services include all remaining industries as described in the growth research (Hjerppe 1988): transport, trade, financial intermediation and insurance, letting of dwellings, and private and public services.

Changes to industrial classifications usually do not affect the examination by main industry. Most of the differences between industrial classifications are caused by data revisions within the industries and to some extent also by creation of new industries and abolition of old ones.

Different industry classifications have included ISIC 1958 and TOLs for 1972, 1979, 1988, 1995, 2002 and 2008. TOL 1988 has never been in use in National Accounts (Statistics Finland 1994). The longest historical series, 1860 to 1960, follow ISIC 1953. The series for the intermediate period 1960 to 1975 follow TOL 1972 as FNA 80 has been compiled based on this (Statistics Finland 1984, pp. 18-19). The ESA 2010 accordant series starting from 1975 have been compiled in accordance with the newest TOL 2008.

The division into primary production, manufacturing, construction and services maintains a relatively good and uniform picture when industry classifications change. Changes to the classifications often mean that a particular activity is transferred from one of the above-mentioned three main industries into services and becomes an independent industry.

Employment

Employment for 1860 to 1960 has been defined as staff-years as was common when SNA 1953 was used. The data concerning 1948 to 1960 are, with small revisions, based on the publication "Suomen kansantalouden tilinpito vuosina 1948–1960" and earlier figures derive from the Bank of Finland's Growth research series or have been estimated by Riitta Hjerppe's working group. The unit is person-years, which means that part-time employees have been converted to full time equivalent employees. Staff-year and normal staff-year also refer to the person-year concept. The number of person-years does not give the exact number of employees and it does not take into account changes to the annual working hours during the review period.

From 1960 onwards, both the annual number of hours worked and the number of employees have been calculated for employment. The change is part of a larger revision during 1973 to 1979 when Finnish National Accounts were developed to correspond with the recommendation published by the UN in 1968.

Since 1975, working hours have been calculated in accordance with ESA2010. The number of working hours for 1975 is higher than in the series based on the old system because the concept of employment was revised in connection with the transition based on a comparison with the data of the Labour Force Survey. The level shift was caused, for example, by the inclusion of the hidden economy.

The work input index describes the development of overall employment. The index starts with the development of staff-years for 1860 to 1960 and 1926 has been selected as the base year when the index value is 100. At the turning point, the 1960 index has been continued with the hours worked in the whole economy and in 1975 the working hours have been continued with the newest ESA2010 accordant working hours series.

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