

3 The size of the public sector

In this chapter we present the most common ways of measuring the size of the public sector. In addition, some comparisons of the size of the public sector between different countries are presented and discussed.

The size of the public sector can be measured in different ways. For example, size can be measured by relating income or expenditure of the public sector to gross domestic product (GDP), by measuring value-added, or the number of employees.

The different measures each have their own merits, but reservations can be made against them. The most appropriate measure will depend on the context. Often the most informative approach is to use a number of different measures. In what follows, some of the most important instruments for measuring the size of the public sector are presented, together with their associated reservations.

Summary of different measures of the size of the public sector 2004. Per cent

Public authorities' share of total value-added	19
Public sector consumption and investments	30
Employment in public sector exclusive publicly owned companies (2003)	31
Employment in public sector inclusive publicly owned companies (2003)	37
Public sector expenditure	54
Public sector income	55
Public sector - financial assets	70
Public sector - financial liabilities	64

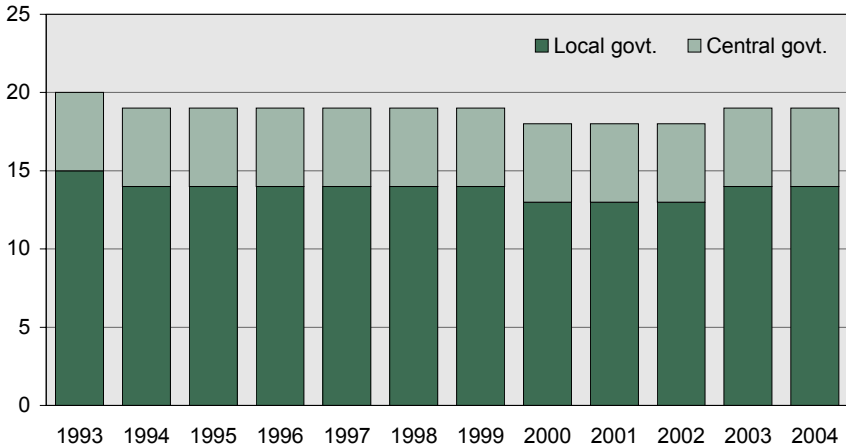
The measures are related to GDP, even though the measure itself may not always be a part of GDP, as described below. Employment is related to total employment in Sweden.

Public sector share of GDP

Part of GDP, which is the sum of value-added in all sectors and industries, is produced by public authorities. The public authorities' value-added is equivalent to its contribution to GDP. This contribution has been between 18 and 20 per cent during the period 1993 to 2004 according to the National Accounts (NA). In 2004 the proportion was 19 per cent. The contribution of the public sector to GDP consists not only of collective services such as defence and the

judicial system, but also individual services such as medical care, child care and education.

The public sector's share of GDP, 1993–2004. Per cent



Local govt. refers to both municipalities and county councils.

Source: Statistics Sweden (SCB), National Accounts

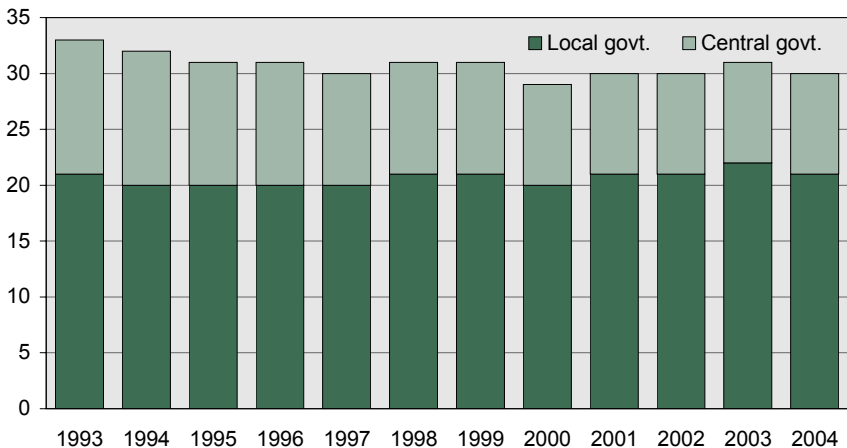
NA delimits the public sector to covering in principle only the public authorities. Business activities run under public ownership are not included. This means, among other things, that public quasi-corporations such as the Swedish Maritime Administration and the Swedish Civil Aviation Administration are not included, neither are publicly owned companies such as Posten (the Swedish Postal Service) and TeliaSonera. These activities are included in NA as part of the corporate sector (market producers). In NA there are no figures on how large a proportion is accounted for by publicly owned companies. According to Statistics Sweden's business statistics, value-added for these activities corresponds to 6 per cent of GDP. The public sector's share of GDP would, according to these statistics, increase from 19 per cent of GDP to at least 25 per cent if publicly owned companies and public quasi-corporations were included (see Chapter 8).

Another aspect worth mentioning is that the contribution of the public authorities to GDP at market prices is calculated in a different way compared with the contribution of the business sector to GDP. The public authorities' value-added cannot be calculated in market prices, since these services are not offered on a market. The contribution of the public authorities to GDP is thus basically calculated from the expenditure side by salaries paid out and collective fees with supplements for capital consumption.

Public sector consumption and investments as a proportion of GDP

Another way of measuring the size of the public sector is to go from the expenditure approach and relate the sector's consumption and investments³ to GDP. GDP from the expenditure approach consists of a resource side with the total of GDP and imports and a use side with consumption, investments and exports.

Public sector consumption and investments as a proportion of GDP 1993–2004. Per cent



Local govt. refers to both municipalities and county councils. The data comprise public authorities, i.e. activities which are more than 50 per cent financed by fees have been excluded.

Source: Statistics Sweden (SCB), National Accounts

Public sector consumption and investments were 33 per cent of GDP in 1993, thereafter the proportion decreased to 29 per cent in 2000. After 2000, the proportion has increased again and in 2004 was 30 per cent.

Employment in the public sector

Another method often used for measuring the size of the public sector is to relate employment in the sector to total employment. This can be done in different ways and with different sources depending on the aim of the presentation. Employment statistics from Statistics Sweden's sample surveys such as the Labour Force

³ The term, "investments", is used synonymously with "gross capital formation" which is the official term according to ESA95.

Survey (LFS) provide up-to-date information, whilst not giving the same level of detail for different groups as the Labour statistics based on administrative sources (RAMS) used in our presentation below.

Here employment data from Statistics Sweden's Labour statistics based on administrative sources (RAMS) are compared with the figures in NA. In RAMS employment in publicly owned companies can be shown, which is not possible in NA. The definition of employment in NA differs somewhat from the definition in RAMS. The most important difference is that NA measures employment as an average over the year whilst RAMS measures a specific point in time, namely November in each year.

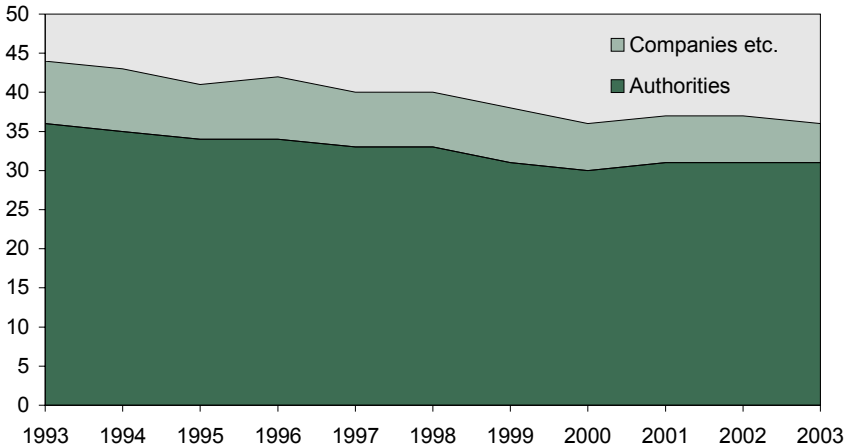
Public sector employment according to the National Accounts and RAMS, 2003

National Accounts	Per cent of total employment	Number employed
Central government including social security funds	5.6	245 100
Local government	25.0	1 088 500
Non-profit institutions serving households	2.5	112 200
Market producers and producers for own final use	66.8	2 890 700
Total, whole economy	100	4 336 500
RAMS		
Central government	5.2	214 500
Municipal administration	19.8	811 000
County councils	5.8	236 300
<i>Total public authorities</i>	30.8	1 261 800
Public quasi-corporations	0.1	5 700
Companies and organisations owned by central government	3.3	136 500
Companies and organisations owned by local government	1.9	79 500
Other public institutions	0.4	16 300
<i>Total publicly owned companies and organisations</i>	5.7	238 000
Limited companies, not publicly owned	51.2	2 096 800
Other companies, not publicly owned	7.9	322 500
Other organisations	4.3	175 900
Total, whole economy	100	4 095 300

Source: Statistics Sweden (SCB), National Accounts and Labour statistics based on administrative sources, RAMS

According to RAMS the proportion employed was 31 per cent in central government, municipal administration and county councils. Including public quasi-corporations and companies owned by central or local government, the proportion amounts to 37 per cent. The figure of 31 per cent corresponds to the proportion employed in central and local government according to NA.

The proportion employed in the public sector 1993–2003. Per cent



The term "companies" in the figure refers to public quasi-corporations and publicly owned companies.

Source: Statistics Sweden (SCB), Labour statistics based on administrative sources, RAMS

The proportion employed decreased in the public sector during the years 1993–2000, and thereafter was around 36–37 per cent. This trend coincides closely with changes in value-added as a proportion of GDP. In this context, it is worth noting that the reduction in the proportion is due to both a reduction in the number employed in the public sector and an increase in the number employed in other sectors. NA also reports the number of hours worked in different sectors. The public authorities' share of employment becomes a little lower when measured by number of hours worked instead of number of employees.

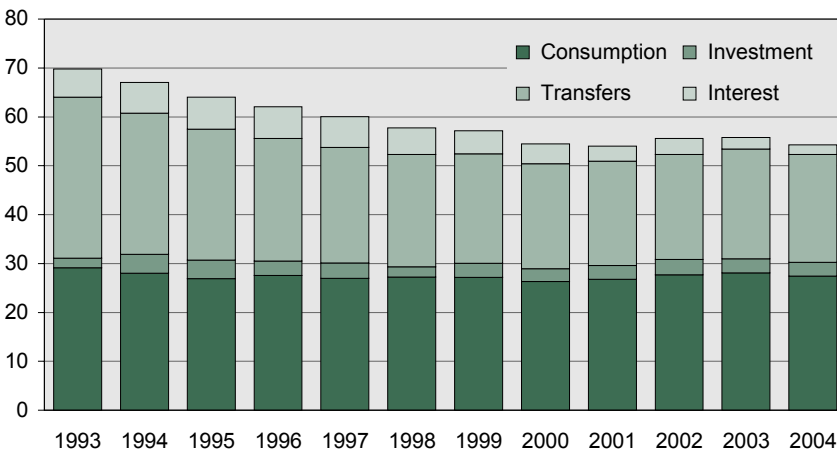
Employment in the public sector is described in more detail in Chapter 8.

Public sector expenditure

The size of the public sector can also be measured by relating its expenditure to GDP. A distinction is made on the one hand between public sector expenditure on consumption and investments, and on the other hand transfers and interest payments. Consumption and investments refer to the expenditure of the sector on its "own" activities.

It is slightly dubious to relate public expenditure to GDP, since not everything in the term expenditure is a part of GDP. This applies in particular to transfers and interest. However, this practice is established, for example in international contexts where the purpose is to obtain a measure of the size of the public sector.

Public sector expenditure in relation to GDP 1993–2004. Per cent



Source: Statistics Sweden (SCB), National Accounts

Expenditure in the public sector has varied between 54 and 56 per cent in relation to GDP in recent years, after having been around 70 per cent in 1993. As already mentioned, the public sector cannot be interpreted as consuming more than half of GDP, since a large part of the expenditures goes back to other sectors, mainly households, in the form of transfers.

It can be noted that expenditure as a proportion of GDP decreased in relation to its level in the crisis years at the beginning of the 1990s. The major part of the reduction originates from transfers. Interest costs have also decreased during the period. The sum of consumption and investments, on the other hand, is at the same level as in 1993, namely about 30 per cent.

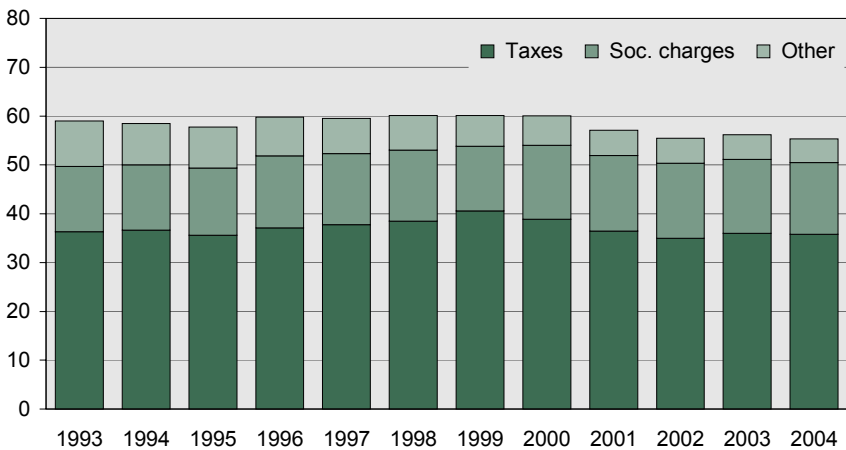
Public sector expenditure is described in greater detail in Chapter 6.

Public sector income

Income can also be related to GDP, with the same reservation as for expenditure. Tax revenues, for example, are not only intended for intermediate consumption in the public sector, but a large part is paid back to other sectors through the transfer systems.

The largest part of public sector income comes from taxes and social insurance fees. These accounted for 91 per cent of the sector's income in 2004. Other income amounted to 9 per cent and covers, amongst other things, interest income and dividends from public quasi-corporations and publicly owned companies.

Public sector income in relation to GDP 1993–2004. Per cent



Source: Statistics Sweden (SCB), National Accounts

Income as a proportion of GDP has decreased between 1993 and 2004, but the reduction is not as large as for expenditure. Income increased up to 1999. Thereafter there was a reduction from 60 per cent in 1999 to 55 per cent in 2004.

It is worth pointing out that the size of the public sector in relation to GDP was nearly as large in 2004, irrespective of studying income or expenditure. Obviously this is related to the fact that public sector income and expenditure were close to each other in this specific year, which has not always been the case in earlier years.

Income in the public sector is presented in greater detail in Chapter 5.

Financial assets and liabilities of the public sector

The size of the public sector is sometimes given by showing its assets and liabilities in relation to GDP. The liabilities of the public sector include the liabilities of central government, local government and the old-age pension system. There are, however, a number of different measures of net financial income; the Ministry of Finance and the National Institute of Economic Research use definitions different from those that Statistics Sweden uses in its Financial Accounts (FA). If the liabilities of the public sector are consolidated, and also reported in nominal values, this measure corresponds with the gross debt term which is the basis of one of the convergence requirements of the EU in the stability and growth pact (see Chapters 4 and 7).

The public sector has large real assets in the form of buildings, roads, harbours, airports etc. In FA only financial assets are reported. Financial assets may, for example, be ownership of shares and bonds, financial claims and the like.

Also the financial assets and liabilities of the public sector can be related to GDP, even though they themselves are not a part of GDP.

Public sector financial assets and liabilities in relation to GDP 1995–2004. Per cent

Year	Assets	Liabilities	Net
1995	69	95	-26
1996	73	99	-26
1997	73	97	-23
1998	75	95	-20
1999	74	83	-9
2000	76	77	-1
2001	70	67	3
2002	63	65	-2
2003	67	65	2
2004	70	64	6

Source: Statistics Sweden (SCB), Financial Accounts

Financial assets have varied between 63 and 76 per cent of GDP over the last decade. Financial liabilities have decreased substantially from 1996, when they were 99 per cent of GDP, to 2004 when they were 64 per cent. This means that the net effect is positive after having been highly negative in the middle of the 1990s.

International comparisons of the size of the public sector

It is difficult, if not impossible, to find data which can enable accurate comparisons to be made of the size of the public sector between countries. This is because the sector is defined and delimited in different ways in different countries. In addition, there are also differences in how taxation and other systems operate. In Sweden, for example, there are many transfers that are liable to tax. In other countries, these transfers may be exempt from tax. If a person pays tax on sickness benefit, then both public sector income and expenditure become greater than if the sickness benefit had been exempt from tax. It can also be mentioned that there are different rules for tax deductions and different ways of financing activities in different countries. These not only influence the size of the public sector, but also make comparability more difficult. For example, health care costs can be financed wholly or partly through private insurance systems. Education costs can also be financed in ways other than through the public sector.

The size of the public sector in 2004 in certain countries. Per cent of GDP

	Value-added	Income	Expenditure	Consumption
Sweden	19	58 ¹	57 ¹	27
Denmark	20	57	55	27
France	16	50	53	24
Norway	16	58	46	22
Finland	16	53	51	23
UK	11	41	44	21
Germany	9	43	47	19
EU15	13	45	47	21
USA	11	32	36	16
Japan ²	9	30	38	18

1) The data from Eurostat and NA may differ due to revisions and different times for updates.

2) Data from 2002.

Source: Eurostat for EU countries and Norway (update: Jan 24 21:43:12 MET 2006), OECD for other countries (update: Jan 30 2006)

Despite the difficulties of making comparisons between countries, data is published by different international organisations. The EU's statistical office *Eurostat* publishes data on member countries. In principle it can be said that the feasibility of making comparisons is dependent on the extent to which the social systems differ in the countries to be compared. Thus comparisons between Sweden and

the other Nordic countries are relatively straightforward. The greater the difference is between the Swedish social system and the countries to be compared, the greater degree of difficulty with comparisons.

The public sector's value-added is equivalent to the sector's contribution to GDP. The sector's contribution to GDP is highest in Denmark. But the other Nordic countries are close to Denmark. There are other EU countries which are also close to the Nordic countries, examples being Hungary and France. Germany has the lowest figure for value-added in the EU; this is at the same level as countries such as Japan and South Korea.

Sweden, Denmark and Norway are at the top where it comes to public sector income in relation to GDP. Taxes and social charges are the primary source of income for the public sector. France and Belgium have the highest levels among non-Nordic EU countries. Lithuania has the lowest level amongst EU countries. Of the "old" EU countries, Ireland has the lowest proportion. Here it should be said that the comparisons are difficult. High figures in Sweden are due, as earlier mentioned, to the large number of public transfers to households that are charged with tax.

As regards the expenditure of the public sector in relation to GDP, Sweden is also at a high level, together with Denmark and France.

Public sector consumption should pose fewer problems when making comparisons, even though there are difficult problems to be resolved over definitions and delimitations. Sweden is at the top, closely followed by Denmark. Also France, the Netherlands and Iceland are quite close to Sweden. Greece and Ireland have the lowest proportions among EU countries.

The OECD has tried to make calculations to obtain more comparative data on the social expenditure of OECD countries. Some of this information is provided in the table appendix. The OECD material shows that social expenditure in Sweden decreases from close to 30 per cent to 26 per cent, when adjustments are made for taxes on social expenditure and when account is taken of private insurance etc. Countries such as France and Germany, have somewhat higher social expenditure if we look at this after adjustments. In the USA social expenditure is increasing and is slightly less than three percentage points below that of Sweden. The calculations and a review of methods showing the difficulties involved in making international comparisons are published on the OECD web site.

Reading recommendations

SCB. The National Accounts 1999–2004. Statistical Report
NR 10 SM 0501

Related to this section are the following:

Table 1. GDP, by type of producer, current prices

Table 2. GDP, by type of producer, constant prices

Table 3. Employment by sector according to RAMS and NA

Table 4. Public sector expenditure, consolidated, current prices

Table 5. Public sector receipts, consolidated, current prices

Table 6. GDP, expenditure approach, Public sector share, current prices

Table 7 GDP, expenditure approach, Public sector share, constant prices

Table 13. The size of the public sector in different countries

Table 14. Gross public social expenditure and net total social expenditure in the OECD

