

THE FUNCTIONAL COMPOSITION OF GOVERNMENT SPENDING IN THE EUROPEAN UNION

ARTICLES

The functional composition of government spending in the European Union

The quality of government expenditure has become a prominent issue in the European policy debate, and the size, efficiency and effectiveness of the public sector have been analysed in a number of studies. Available empirical evidence derived from functional spending data indicates that performance differs significantly from country to country with regard to the various government functions and suggests to policy-makers that there is room for efficiency gains. As a result, the need for timely and detailed data on the composition of government expenditure has increased. More detailed information providing a breakdown of spending on individual government functions such as education or health is already being sent to Eurostat on a voluntary basis by 19 European Union Member States. This functional classification is a valuable source of information when comparing and assessing public sector performance across the EU. This article compares the composition of government expenditure in the various EU Member States, while also emphasising that such comparisons need to take account of institutional differences, particularly as regards those countries' social security and tax systems.

I INTRODUCTION

In recent years the quality of public expenditure has received increased attention in the European policy debate. Consequently, qualitative elements relating to European Union Member States' public finances have found their way into the European fiscal surveillance framework, not least in connection with the Lisbon strategy and the reform of the Stability and Growth Pact in 2005. The level and composition of government expenditure feature prominently in this respect, as both are widely regarded as having an impact on economic growth and the smooth functioning of Economic and Monetary Union.¹

This article describes and analyses the basic trends in the level and composition of government expenditure in the EU. Although statistics on the functional distribution of government expenditure (e.g. spending on health or education) are still less readily available than statistics on different types of economic transaction (e.g. spending on subsidies or investment), the timeliness, international comparability and level of detail of these data have improved greatly in recent years. Ensuring the comparability of government expenditure across countries is not always easy, given that the organisation of the government sector differs from country to country. For instance, the government can effect direct expenditure (for example on housing) that benefits part of the

population, or it can provide those target groups with earmarked subsidies or make their private expenditure tax-deductible. Thus, government expenditure data could vary considerably for economically equivalent arrangements. Taking these caveats into account, statistics on the functional classification of government expenditure are a valuable source of information when assessing the quality of government expenditure across the EU in terms of its level, efficiency and effectiveness.

The article is organised as follows: Section 2 looks at the sources of functional government expenditure data; Section 3 reviews developments in the functional composition of government spending in the EU; Section 4 provides an illustrative aggregation of the main functions of government expenditure and shows the ways in which functional data may be used for analytical purposes; and Section 5 concludes.

2 SOURCES OF FUNCTIONAL GOVERNMENT EXPENDITURE DATA

The functions of government expenditure can be analysed using the "Classification of the Functions of Government" (COFOG). This classification was developed by the OECD and

¹ See the article entitled "The importance of public expenditure reform for economic growth and stability" in the April 2006 issue of the Monthly Bulletin.

Table 1 The Classification of the Functions of Government

Categories	Sub-categories
01 General public services	01.7 Public debt transactions
02 Defence	
03 Public order and safety	
04 Economic affairs	
05 Environmental protection	
06 Housing and community amenities	
07 Health	07.1 Medical products, appliances and equipment 07.2 Outpatient services 07.3 Hospital services
08 Recreation, culture and religion	
09 Education	09.1 Pre-primary and primary education 09.2 Secondary education 09.3 Post-secondary non-tertiary education 09.4 Tertiary education
10 Social protection	10.1 Sickness and disability 10.2 Old age 10.4 Family and children 10.5 Unemployment

was published by the United Nations Statistics Division. The COFOG classification divides government expenditure into ten categories, which are each divided into several sub-categories. Table 1 lists all categories, as well as the most important sub-categories in terms of spending-to-GDP ratios for the categories “general public services”, “health”, “education” and “social protection”.²

The EU Member States are obliged to report data on the ten COFOG categories to Eurostat within 12 months of the end of the reference year. In addition, 19 countries currently send Eurostat a more detailed breakdown of government expenditure on a voluntary basis, and others plan to do likewise in the future.

The meaning of the various functions in Table 1 seems intuitively clear. However, as always, the devil is in the detail. For instance, how should government expenditure on a military hospital be classified: as defence spending or as health care expenditure? Such issues need to be settled and documented in order to ensure the harmonised compilation of COFOG data across countries (see the box).

The data reported in this article relate to the general government sector. General government expenditure includes not only central government expenditure, but also expenditure by local government bodies and social security funds. Flows between different government units, such as interest payments and transfers, must be consolidated in order to properly reflect total government expenditure. At present, expenditure derived from the EU budget (e.g. agricultural subsidies) is not included in COFOG expenditure data. In 2007 expenditure from the EU budget ranged from 0.1% of GDP in Luxembourg to 3.4% of GDP in Lithuania.

² See the Eurostat publication “Manual on sources and methods for the compilation of COFOG statistics – Classification of the Functions of Government (COFOG)” for a full overview of all COFOG functions (http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-022/EN/KS-RA-07-022-EN.PDF).

Box

THE HARMONISATION OF STATISTICS

It is important to ensure that COFOG statistics are not only harmonised across countries, but also in line with other statistics on government expenditure.

Twice a year the EU Member States provide Eurostat with data on government expenditure broken down by type of economic transaction (e.g. compensation of government employees or government investment). These expenditure data should be in line with the government deficit and debt figures that the Member States report to Eurostat at the same time, which are used in the excessive deficit procedure.

The accounting rules that the Member States are required to apply to all of these statistics are laid down in the European System of Accounts 1995 (ESA 95).

An important rule in the ESA 95 is the requirement that transactions be recorded using the “accrual principle”. This means, for instance, that if military equipment is ordered by a government in year t , delivered in year $t+1$ and paid for in year $t+2$, government expenditure should be recorded in year $t+1$ rather than in year t or $t+2$. The moment at which the obligation to pay arises determines the time at which the government expenditure is recorded. However, government budgets are often prepared on a cash basis. As a result, statisticians need to correct these budget data when compiling government expenditure statistics under the ESA 95 accounting rules. Moreover, under the ESA 95, government expenditure does not include the repayment of government debt. This means that the COFOG sub-category “public debt transactions” does not include the repayment of debt and consists mainly of interest payable on government debt.

In order to check that the COFOG data are consistent with the expenditure data broken down by type of economic transaction, Eurostat asks the Member States to provide breakdowns of government expenditure by function and by type of economic transaction. For most countries, these breakdowns are consistent.

3 DEVELOPMENTS IN FUNCTIONAL GOVERNMENT EXPENDITURE IN THE EU

Total government expenditure in the euro area averaged 46.7% of GDP in 2006, almost 2 percentage points below the figure for 1998. In 2006 the ratio of government expenditure to GDP was higher than the euro area average in Belgium, France, Austria, Italy and Finland. By contrast, total government expenditure was significantly below the euro area average in Ireland, Slovakia and Spain. In the United Kingdom this ratio remained below the EU average in 2006, despite a remarkable increase between 1998 and 2006. The government expenditure ratios of Denmark and Sweden remained among the highest in the

EU in 2006, despite having declined since 1998 (see Table 2).³

Social protection is by far the largest component of total expenditure in every euro area country. Spending on social protection as a percentage of GDP was higher than the euro area average in France, Germany, Finland and Austria in 2006, while in Ireland, Cyprus and Slovakia it was well below it.

³ The COFOG classification does not provide a full picture of the state of government finances. For example, under ESA 95 guidelines, equity injections in public or private enterprises and guarantees provided by governments do not form part of government expenditure. Instead, equity injections are recorded as financial transactions and guarantees are classified as contingent liabilities.

Table 2 Functional classification of government expenditure

(as a percentage of GDP)

COFOG categories	General public services		Defence and public order and safety		Economic affairs		Health		Education		Social protection		Other categories		Total	
	1998	2006	1998	2006	1998	2006	1998	2006	1998	2006	1998	2006	1998	2006	1998	2006
Belgium	11.0	8.5	2.8	2.0	4.7	5.0	6.1	6.9	6.0	5.9	17.6	17.3	2.1	2.8	50.4	48.4
Germany	6.7	5.6	2.9	2.0	4.0	3.2	6.1	6.3	4.3	3.9	21.7	21.6	2.3	2.7	48.0	45.3
Ireland	5.8	3.6	2.5	1.0	4.6	4.5	5.7	7.8	4.2	4.2	9.8	9.7	1.8	3.0	34.5	33.8
Greece	13.3	8.1	3.3	4.5	6.3	4.5	4.3	4.7	3.1	2.3	17.9	17.9	1.2	0.1	49.5	42.2
Spain	6.7	4.6	3.0	2.2	4.8	5.0	5.2	5.6	4.4	4.3	13.6	12.8	3.3	3.9	41.1	38.5
France	7.9	6.9	3.5	3.7	3.2	2.9	6.6	7.2	6.4	6.0	21.8	22.3	3.3	3.7	52.7	52.7
Italy	11.4	8.7	3.1	2.7	4.0	5.9	5.6	7.0	4.8	4.5	17.7	18.2	2.7	1.8	49.2	48.9
Cyprus	8.8	9.9	4.0	4.6	4.4	4.4	2.7	3.1	6.0	7.2	7.7	10.4	3.2	3.7	36.7	43.4
Luxembourg	4.9	4.0	1.3	0.5	4.4	4.5	4.8	4.6	4.9	4.5	16.9	16.4	3.9	4.0	41.0	38.6
Malta	5.5	6.7	2.7	1.6	7.4	5.7	4.6	6.4	5.4	5.5	13.4	14.0	3.9	3.6	43.0	43.6
Netherlands	9.5	7.3	3.0	2.9	4.6	4.7	3.8	5.9	4.8	5.1	17.8	16.5	3.1	3.0	46.7	45.6
Austria	9.0	7.0	2.4	1.7	4.7	4.8	7.7	6.9	5.9	5.9	21.2	20.4	3.0	2.5	54.0	49.4
Portugal	6.0	6.9	3.3	2.6	6.4	3.8	6.2	7.2	6.3	7.1	12.1	16.0	2.5	2.7	42.8	46.3
Slovenia	.	6.2	.	2.9	.	4.1	.	6.2	.	6.4	.	17.1	.	1.6	46.3	44.5
Slovakia	.	5.0	.	3.6	.	4.1	.	5.3	.	4.1	.	12.2	.	2.8	45.8	37.1
Finland	7.6	6.5	3.2	3.0	5.2	4.5	5.9	6.8	6.1	5.8	22.4	20.4	2.1	1.7	52.5	48.9
Euro area	8.3	6.6	2.9	2.6	4.1	4.2	5.9	6.6	5.1	4.8	19.5	19.1	2.8	2.7	48.6	46.7
Bulgaria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	36.5
Czech Republic	4.0	4.9	3.7	2.5	9.5	6.9	5.9	7.2	4.0	4.9	12.6	12.7	3.4	4.8	43.2	43.8
Denmark	9.1	6.0	2.7	3.2	4.1	3.5	6.9	7.0	7.6	7.7	23.0	21.8	2.2	1.9	55.6	51.2
Estonia	4.6	2.6	4.0	2.7	4.7	4.2	4.5	4.0	7.3	6.0	10.9	9.5	3.5	5.1	39.4	34.2
Latvia	6.7	6.1	3.3	2.9	4.9	6.0	2.7	2.9	6.6	6.3	13.7	9.6	2.3	4.2	40.2	37.9
Lithuania	.	4.2	.	3.3	.	4.0	.	4.7	.	5.5	.	10.0	.	1.9	40.4	33.6
Hungary	.	9.6	.	2.8	.	6.3	.	5.5	.	5.8	.	17.7	.	4.3	52.8	51.9
Poland	.	5.9	.	2.3	.	4.4	.	4.7	.	6.0	.	16.9	.	3.7	44.3	43.8
Romania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	38.5	35.3
Sweden	10.2	7.7	3.7	3.4	4.5	4.8	6.2	6.8	7.4	7.1	23.1	22.7	3.7	1.6	58.8	54.1
United Kingdom	5.5	4.3	4.6	5.1	2.0	2.9	5.4	7.1	4.6	6.1	15.3	15.4	1.6	3.0	39.0	43.9
EU	8.0	6.2	3.5	3.1	4.0	4.0	6.0	6.6	5.3	5.2	19.2	18.3	1.2	2.9	47.3	46.3

Sources: Eurostat, national data and ECB calculations.

Notes: The euro area data relate to the Euro 15. "." indicates that data are not yet available.

Social protection expenditure in the euro area is mainly related to the payment of old age pensions. In 2006 this budgetary item totalled almost 9% of GDP in Finland, 10% in Germany and 12-13% in Greece and Italy (see Table 3). Between 1998 and 2006 expenditure on old age pensions rose strongly in Cyprus and Portugal. As regards the EU Member States outside the euro area, social protection expenditure in the United Kingdom has been relatively stable over time, with almost half of it being devoted to old age pensions. The ratio of social protection expenditure to GDP is relatively high in Denmark and, in particular, Sweden, despite a declining trend in both countries between 1998 and 2006.

When interpreting these figures, an important caveat concerns the institutional differences between the social security and tax systems of the various countries.⁴ For instance, while in some countries social benefits accruing to households are taxed in the same way as wage income, in others they are partially or fully exempt from taxation. In other words, in the latter group of countries the government transfers social benefits to recipients net of

4 The fact that countries have different social systems and models obviously plays a role in explaining cross-country differences. See, for instance, G. Bonoli (1997), "Classifying Welfare States: A Two-dimension Approach", *Journal of Social Policy*, 26 (3), pp. 351-372.

Table 3 Sub-categories for main expenditure items

(data for 2006; as a percentage of GDP)

COFOG categories	Social protection					Education					Health			
	Sickness and disability	Old age	Family and children	Unemployment	Other	Pre-primary and primary education	Secondary education	Post-secondary non-tertiary education	Tertiary education	Other	Medical products, appliances and equipment	Out-patient services	Hospital services	Other
Belgium	2.3	7.1	2.1	2.5	3.3	1.9	2.5	0.0	0.7	0.7	0.8	2.1	3.4	0.6
Germany	2.7	10.0	2.2	2.6	4.1	1.0	1.8	0.1	0.7	0.3	1.5	2.0	2.6	0.2
Ireland	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Greece	2.8	12.5	0.5	0.5	1.7	0.3	1.0	0.0	0.5	0.4	1.3	0.2	2.5	0.6
Spain	2.2	6.1	0.5	1.6	2.6	1.6	1.5	0.0	0.9	0.3	1.2	0.0	4.3	0.2
France	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Italy	1.7	12.2	1.0	0.5	2.7	1.7	1.9	0.2	0.4	0.4	0.9	2.2	3.8	0.1
Cyprus	0.2	4.4	1.9	0.8	3.1	1.5	1.9	0.0	1.3	2.5	0.6	0.1	0.4	2.0
Luxembourg	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Malta	1.9	7.5	1.1	0.6	3.0	1.3	2.3	0.0	0.8	1.1	1.2	0.6	4.2	0.3
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Austria	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Portugal	1.6	9.6	1.1	1.2	2.5	0.3	4.3	0.0	1.3	1.3	2.2	2.4	2.5	0.2
Slovenia	2.7	10.4	1.9	0.7	1.4	2.2	2.7	0.0	1.1	0.5	1.2	1.9	2.5	0.5
Slovakia	1.9	6.7	1.2	0.2	2.2	1.7	0.9	0.0	0.7	0.8	2.0	1.7	1.2	0.4
Finland	4.3	8.9	2.7	2.3	2.2	1.1	2.7	0.0	1.7	0.4	0.7	1.7	2.2	2.3
Bulgaria	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Czech Republic	2.8	6.5	1.5	0.3	1.5	0.5	2.9	0.0	1.0	0.5	1.2	1.4	2.9	1.6
Denmark	4.8	7.0	5.0	2.5	2.5	3.4	1.5	0.0	1.6	1.2	0.4	1.0	5.4	0.3
Estonia	1.8	5.5	1.6	0.2	0.5	2.1	2.0	0.4	1.2	0.4	0.5	0.6	2.7	0.2
Latvia	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lithuania	2.5	4.9	1.0	0.4	1.2	1.3	2.2	0.0	1.2	0.8	0.8	1.2	1.9	0.8
Hungary	3.8	6.5	2.4	0.5	4.5	1.9	1.1	0.0	1.0	1.8	1.8	1.0	2.1	0.6
Poland	0.8	13.9	1.1	0.5	0.5	2.0	1.7	0.0	1.7	0.7	0.4	0.7	2.1	1.4
Romania	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	5.7	10.6	2.7	2.0	1.8	4.0	1.3	0.0	1.4	0.3	0.9	2.9	2.5	0.4
United Kingdom	2.8	7.2	2.5	0.3	2.4	1.8	1.8	0.7	0.7	1.0	0.1	0.5	6.4	0.1

Sources: Eurostat, national data and ECB calculations.
 Note: "." indicates that data are not yet available.

income tax. As a result, the relevant government expenditure is, on average, higher in the first group, while the disposable income of the beneficiaries could be the same in both groups of countries. Such transfers are taxed in more or less the same way as wage income in Italy and the Nordic countries, while in other countries (e.g. Austria, Germany and Portugal for unemployment benefits paid out in cash, and Germany and Portugal for sickness benefits) they tend not to be taxed. Likewise, mandatory private insurance schemes for pensions, unemployment or health care reduce the headline figures for government expenditure in some countries, whereas state contributions to compensate for households' voluntary payments

into social security funds increase government expenditure. Likewise, a change from one type of insurance system to another may complicate any comparison of government spending levels over time for the country concerned.

Health expenditure by governments increased in the euro area in the period under review, with an increase being observed in the ratio of health spending to GDP in all euro area countries with the exception of Luxembourg and Austria. Between 1998 and 2006 Ireland, Malta and the Netherlands saw the largest increases in government expenditure on health relative to GDP. In 2006 public expenditure on health was particularly high in Ireland, France, Portugal

and Italy, while it was relatively low in Cyprus, Luxembourg and Greece. In the case of Italy and Portugal, health expenditure was driven mainly by expenditure on outpatient services and hospital services. Following an increase in its expenditure on outpatient and hospital services, the United Kingdom's health expenditure was one of the highest in the EU in 2006 as a percentage of GDP. Spending on health in Denmark and Sweden was slightly above the EU average in 2006.

Between 1998 and 2006 government expenditure on education decreased relative to GDP in the euro area. In Greece the ratio of education expenditure to GDP declined by 0.8 percentage point, and in Germany, France and Italy it declined by around 0.4 percentage point. In 2006 spending on education by the governments of Cyprus, Portugal and Slovenia significantly exceeded the euro area average as a percentage of GDP. In the case of Cyprus and Portugal, these high levels of expenditure followed a noticeable increase between 1998 and 2006. Greece, Germany and Slovakia had the lowest ratios of education expenditure to GDP in 2006 (see Table 2). With education expenditure totalling 6.1% of GDP in 2006, the UK government exceeded the EU average. Education expenditure was also relatively high in Denmark and Sweden in that year.

General public services also accounted for a sizeable share of total government expenditure in the euro area in 2006, despite having declined since 1998. Expenditure levels in Cyprus, Italy, Belgium and Greece were well above average in this category. However, in the case of Italy, Belgium and Greece, more than half of this expenditure was due to interest paid on those countries' public debts, which are very large in relation to their GDP. Conversely, countries with low debt ratios reported below average expenditure on general public services in 2006. This was the case for Ireland, Luxembourg and Spain. In both 1998 and 2006 UK expenditure on general public services was less than the EU average. Expenditure on general public services declined significantly in Denmark and Sweden between 1998 and 2006 as a percentage of GDP,

although Sweden's spending was still above the EU average in 2006.

4 AGGREGATION AND USEFULNESS OF FUNCTIONAL DATA ON GENERAL GOVERNMENT SPENDING

The ten top-level categories in the COFOG classification can be consolidated to reflect the five main functions of government, namely: redistribution; pure public goods; health and education;⁵ general public services; and private activities (i.e. those that could also be performed through private sector arrangements). Following this approach, the "redistribution" function is represented by the COFOG category "social protection", and "pure public goods" comprises the COFOG categories "defence" and "public order and safety".⁶ "Health and education" comprises the equivalent COFOG categories. The item "general public services" also has a direct equivalent in the COFOG classification and includes administrative spending, as well as public debt transactions related to interest payments. Finally, "private activities" covers programmes for agriculture, energy, manufacturing and infrastructure and includes the COFOG categories "economic affairs", "environmental protection", "housing and community amenities", and "recreation, culture and religion".⁷ The aggregation of COFOG categories to form these functional categories is summarised in Table 4.

5 A healthy and well-educated population could be considered a prerequisite if a country is to have smooth functioning markets, secure property rights, the rule of law and plentiful opportunities which are, in principle, available to all (see A. Afonso, L. Schuknecht and V. Tanzi (2005), "Public Sector Efficiency: An International Comparison", *Public Choice*, 123 (3), pp. 321-347).

6 Using Samuelson's definition of non-rival and non-excludable public goods – although Barro argues that some public goods, such as defence and police, can be subject to congestion (see: R. Barro (1990), "Government Spending in a Simple Model of Endogenous Growth", *Journal of Political Economy*, 98 (5); and P. Samuelson (1954), "The pure theory of public expenditure", *Review of Economics and Statistics*, 36, pp. 387-389).

7 Although this is a reasonable presentation of government functions for illustrative purposes, the various categories could of course be aggregated in other ways. For instance, one could also regard much of the category "environmental protection" as constituting a pure public good.

Table 4 Aggregated functional breakdown of expenditure

Main functions of government	COFOG categories
A. Redistribution	10 – Social protection
B. Pure public goods	02 – Defence 03 – Public order and safety
C. Health and education	07 – Health 09 – Education
D. General public services	01 – General public services
E. Private activities	04 – Economic affairs 05 – Environmental protection 06 – Housing and community amenities 08 – Recreation, culture and religion

Charts 1 and 2 report these aggregated functional expenditure categories as a percentage of total government spending for the euro area for 1998 and 2006 respectively. On average, the functional breakdown of expenditure did not change much over that period. Government expenditure on health and education increased from 22.6% of total government expenditure in 1998 to 24.2% in 2006, while the share of redistribution increased by 0.6 percentage point. On the other hand, the share of total government expenditure directed towards pure public goods decreased somewhat, while a more significant decline was observed for general public services, partly reflecting developments in interest payments on government debt. Interest payments in the EU increased until the mid-1990s,

but then declined gradually thereafter on account of the low interest rate environment.

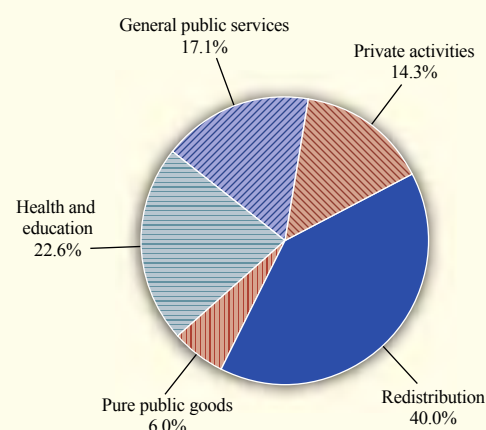
Table 5 breaks down the aggregated functional category “general public services” into different types of economic transaction, which helps to illustrate the heterogeneity among countries as regards interest payments.⁸

In recent years the quality of public finances in terms of the size, efficiency and

8 In addition, the most important types of economic transaction in 2006 in terms of the COFOG categories were: social benefits in the case of social protection; the compensation of employees in the case of education; and social benefits and the compensation of employees in the case of health.

Chart 1 Aggregated functional breakdown of euro area government expenditure in 1998

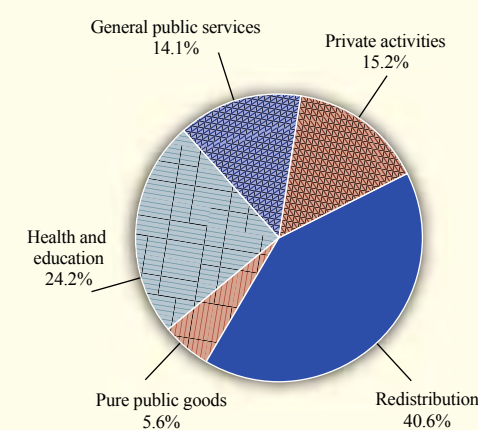
(percentages)



Sources: Eurostat, national data and ECB calculations.
Note: Data relate to the Euro 15.

Chart 2 Aggregated functional breakdown of euro area government expenditure in 2006

(percentages)



Sources: Eurostat, national data and ECB calculations.
Note: Data relate to the Euro 15.

Table 5 General public services broken down by type of economic transaction

(data for 2006; as a percentage of GDP)

Economic transactions	Compensation of employees	Intermediate consumption	Investment	Interest	Other
Belgium	2.4	1.0	0.0	4.0	1.0
Germany	1.1	0.7	.	2.8	.
Ireland	0.9	0.5	.	0.9	.
Greece	2.0	1.2	0.5	4.3	0.1
Spain	1.0	0.7	0.2	1.6	1.1
France	2.1	0.6	0.3	2.6	1.3
Italy	1.6	1.1	0.5	4.7	0.9
Cyprus	3.2	0.7	0.7	3.3	2.1
Luxembourg	1.6	0.7	.	0.2	.
Malta	1.5	1.1	0.4	3.5	0.3
Netherlands	1.7	1.7	.	2.2	.
Austria	1.7	0.9	0.1	2.9	1.4
Portugal	2.0	1.0	0.2	2.8	1.0
Slovenia	1.6	1.1	.	1.4	.
Slovakia	1.2	1.1	0.4	1.5	0.9
Finland	1.6	1.8	0.3	1.5	1.2
Euro area	1.6	0.9	.	2.9	.
Bulgaria	.	.	.	1.4	.
Czech Republic	1.4	1.2	-0.1	1.1	1.2
Denmark	1.1	0.7	0.3	1.8	2.2
Estonia	1.1	0.7	0.1	0.2	0.5
Latvia	1.4	1.2	1.2	0.5	1.8
Lithuania	1.3	0.9	0.4	0.7	0.9
Hungary	2.5	1.4	0.5	4.0	1.2
Poland	1.4	0.7	0.3	2.7	0.8
Romania	.	.	.	0.8	.
Sweden	1.6	2.0	0.6	1.8	1.8
United Kingdom	0.8	0.2	0.1	2.1	1.2
EU	1.4	0.8	.	2.7	.

Sources: Eurostat, national data and ECB calculations.

Notes: The euro area data relate to the Euro 15. "." indicates that data are not yet available.

effectiveness of the public sector have been analysed in a number of studies.⁹ This empirical evidence points to performance differing significantly from country to country with regard to the individual government functions and indicates to policy-makers the areas in which improvements are necessary. This evidence, which also makes use of functional spending data, suggests, for example, that there is room for efficiency gains in the education and health sectors in OECD countries.¹⁰ In particular, empirical studies for a sample of OECD countries show that while some countries (e.g. Portugal, Germany and Italy) are relatively inefficient, other countries (e.g. the Czech Republic, Finland, Australia and the United Kingdom) are more efficient in relative terms.

Homogeneous second-level COFOG data may prove useful as regards the category "social protection" (the largest component of total government spending),¹¹ notably with regard to

9 For an overview, see S. Deroose and C. Kastrop (2008; eds.), "The Quality of Public Finances: Findings of the Economic Policy Committee Working Group (2004-2007)", European Commission Occasional Paper 37.

10 See: A. Afonso and M. St Aubyn (2005), "Non-parametric Approaches to Public Education and Health Efficiency in OECD Countries", *Journal of Applied Economics*, 8 (2), pp. 227-246; A. Afonso and M. St Aubyn (2006), "Assessing Education and Health Efficiency in OECD Countries using Alternative Input Measures", in *Public Expenditure*, Banca d'Italia, pp. 361-388; and D. Sutherland, R. Price, I. Joumard and C. Nicq (2007), "Performance indicators for public spending efficiency in primary and secondary education", OECD Economics Department Working Paper 546.

11 Detailed information on social benefits is available in the European System of Integrated Social Protection Statistics on the Eurostat website for most of the countries under consideration. However, these data are less timely than the COFOG data.

assessing issues such as income inequality and its links with economic growth.¹²

The literature also finds considerable differences across industrialised countries as regards the performance of the public sector as a whole.¹³ A range of indicators suggest that better public sector performance is largely uncorrelated with increased public spending. This indicates declining marginal returns for public spending and suggests that it is possible to obtain favourable outcomes for key policy objectives with levels of public spending that are lower than those observed today in many countries. Governments should also favour redirecting public expenditure towards more productive, growth-enhancing activities by increasing the importance of the accumulation of capital – both physical and human – and supporting research, development and innovation. Naturally, obtaining favourable outcomes requires a combination of capital accumulation and current spending, while the appropriate economic and functional composition of public expenditure must necessarily be regarded as country-specific.

Consequently, the availability of functional expenditure data for all levels of the COFOG classification is indispensable in order to analyse the efficiency and effectiveness of government expenditure. Indeed, at the EU level, the work conducted under the guidance of the Economic Policy Committee in cooperation with Eurostat has made a significant contribution to the improvement of these data and the understanding of their policy relevance. Further efforts in this area can be expected to yield important further insights which will assist in the much-needed improvement of the efficiency and effectiveness of public policies.

5 CONCLUSION

Given the scarcity of public resources, it is essential that expenditure programmes be pursued in an efficient and effective manner in order to improve long-term growth prospects while ensuring the sustainability of public

finances. Efficient public spending should help to reduce total expenditure while reinforcing its positive leverage effects on productivity and growth. Moreover, given the significant cross-country differences within the EU in terms of the level and evolution of government expenditure, cross-country comparisons looking at the efficiency and effectiveness of public spending can be useful, provided that the necessary caution is exercised with regard to the measurement and comparability of data. Improving the efficiency and effectiveness of public spending will help to combine the fiscal discipline demanded by the Stability and Growth Pact with the structural reform agenda of the EU's Lisbon strategy.

The availability of detailed COFOG data is crucial for any analysis of how best to improve the quality of government expenditure, a topical issue in the European policy debate. Detailed information of this kind is currently available for many – but not all – EU Member States. A requirement that data be provided on a regular basis for some (but not all) top-level COFOG categories, with a breakdown by sub-category, could significantly increase the policy relevance of those data without unduly increasing the burden for the national governments and data compilers. In particular, the analysis of government expenditure would benefit from more detailed data for the COFOG categories “health”, “social protection” and “education”, which accounted for around 65% of total government expenditure in the euro area in 2006.

12 See R. Barro (2000), “Inequality and Growth in a Panel of Countries”, *Journal of Economic Growth*, 5 (1), pp. 5-32.

13 See: A. Afonso, L. Schuknecht and V. Tanzi (2005), “Public Sector Efficiency: An International Comparison”, *Public Choice*, 123 (3), pp. 321-347; and A. Afonso, L. Schuknecht and V. Tanzi (2006), “Public Sector Efficiency: Evidence for New EU Member States and Emerging Markets”, ECB Working Paper No 581.