



ISSN 1725-3209

EUROPEAN ECONOMY

Occasional Papers 125 | December 2012

The Quality of Public Expenditures in the EU



*Economic and
Financial Affairs*

Occasional Papers are written by the Staff of the Directorate-General for Economic and Financial Affairs, or by experts working in association with them. The “Papers” are intended to increase awareness of the technical work being done by the staff and cover a wide spectrum of subjects. Views expressed do not necessarily reflect the official views of the European Commission. Comments and enquiries should be addressed to:

European Commission
Directorate-General for Economic and Financial Affairs
Publications
B-1049 Brussels
Belgium
E-mail: <mailto:Ecfm-Info@ec.europa.eu>

Legal notice

Neither the European Commission nor any person acting on its behalf may be held responsible for the use which may be made of the information contained in this publication, or for any errors which, despite careful preparation and checking, may appear.

This paper exists in English only and can be downloaded from the website ec.europa.eu/economy_finance/publications

A great deal of additional information is available on the Internet. It can be accessed through the Europa server (ec.europa.eu)

KC-AH-12-125-EN-N
ISBN 978-92-79-22932-9
doi: 10.2765/25458

© European Union, 2012
Reproduction is authorised provided the source is acknowledged.

European Commission
Directorate-General for Economic and Financial Affairs

The Quality of Public Expenditures in the EU

ACKNOWLEDGEMENTS

This report was prepared in the Directorate-General of Economic and Financial Affairs under the direction of Marco Buti, Director-General, Servaas Deroose, Deputy Director-General, and Lucio Pench, Director for Fiscal Policy.

Matteo Governatori was the coordinator of the report. The main contributors were Matteo Governatori, Ana Xavier (Section III.2 and Annex 1) and Caroline Vandierendonck (Section III.3 and Annex 2). David Yim provided statistical support for Section II and Hedwig Plamper provided statistical support for Annex 3.

The report benefitted from comments and suggestions by colleagues in the Cabinet of Vice-President Olli Rehn, in particular Madeleine Mahovsky and Peer Ritter, and in the Directorate-General, in particular Matteo Salto, Stéphanie Riso, Giuseppe Carone and Stefan Ciobanu, as well as by other services of the Commission, in particular the Directorates-General of Employment, Social Affairs and Inclusion; of Enterprise and Industry; of Environment; of Energy; of Research and Innovation; of Health and Consumers; of Internal Market and Services; of Competition; of Regional Policy; Eurostat and the Secretariat-General. Provision of background material by Gerhard Steger and Hannah Glatz (Federal Ministry of Finance of Austria) is gratefully acknowledged.

Comments on the report would be gratefully received and should be sent, by mail or e-mail to the editors:

Lucio Pench
European Commission
Directorate-General for Economic and Financial Affairs
Directorate for fiscal policy
Office CHAR 12-062
B-1049 Brussels
E-mail: lucio.pench@ec.europa.eu

or

Matteo Governatori
European Commission
Directorate-General for Economic and Financial Affairs
Directorate for fiscal policy
Office CHAR 12-096
B-1049 Brussels
E-mail: matteo.governatori@ec.europa.eu

Executive Summary

This report follows up on the demand formulated within the "Compact for Growth and Jobs" decided by the Heads of State or Government on 28-29 June 2012. The mandate required to assess and to review the scope for possible action to enhance the quality of public expenditures in the EU within the boundaries of the EU and national fiscal frameworks.

This report (i) reviews trends in public expenditure in the EU with special attention to the impact of the economic and financial crisis and the subsequent fiscal adjustment, (ii) briefly discusses the different notions and indicators of expenditure efficiency, with a special focus on health care and on public administration reform, including performance-based budgeting (PBB), (iii) reviews the scope for possible actions within the boundaries of the EU budgetary frameworks to prioritise reforms towards more growth-friendly and efficient expenditures and (iv) spells out a possible way forward in the context of the European Semester.

In the context of the EU2020 strategy, supportive of smart, sustainable and inclusive growth, pressures on public expenditure are mounting in link with on-going fiscal consolidation and the legacy of the economic and financial crisis. Moreover, they are likely to stay beyond the crisis in light of its historically high level and of the long-term impact of ageing populations. Against this background, the conceptual focus of the report revolves around the composition of public expenditures with respect to its likely growth-friendliness, with a special focus on public investments; and expenditure efficiency, following from the observation that there is often room to deliver the same level of outcomes with lower resources.

As regards the first aspect, the report highlights that the expenditure composition across different government functions shows some commonalities across the EU, such as the large weight of social protection, reflecting the fact that EU Member States tend to organise income smoothing over the life-cycle and protection against social risks through public institutions rather than the private sector. The share of public expenditure items which are deemed to be potentially growth-enhancing, such as education, health care, R&D or public investments, shows significant cross-country variation.

Following on the impact of the economic crisis, the expenditure mix has changed, with social protection generally gaining a larger weight. The share of other functions has fallen accordingly, and this relative decline has continued under the ensuing fiscal consolidation resulting in expenditure cuts particularly in public investments, public wage bill and intermediate consumptions.

There is, therefore, a need that in the on-going consolidation, Member States do not to undermine growth-friendly items, such as education, R&D, human capital investments, including training and activation measures, selected investment projects etc., within national policy frameworks.

As regards the second aspect, expenditure efficiency and effectiveness essentially refer to how well public resources translate into outcomes. Efficiency measurement within the government

sector is a highly challenging and would require very detailed analysis taking into account the specificities of different government functions. The macro-level analysis in this report can, therefore, only indicate areas where further investigations on possible efficiency gains could be useful.

The report takes stock of existing attempts to measure efficiency in the health care sector and presents the latest EU policy recommendations in this field. There is evidence of significant room for efficiency improvements in health care, making the case for Member States to use this evidence and translate existing policy recommendations into concrete measures at national level. At EU level steps have been taken which denote an increased emphasis placed on health care systems and the need to improve their cost-effectiveness.

Moreover, by reviewing case studies on FR, NL, SE and AT, the report discusses recent national experiences with the introduction of performance spending management – budget practices based on a stronger connection between inputs and objectives - highlighting that they have succeeded in generating significant and quantifiable efficiency gains and savings without lowering (if not improving) the outcomes. Although there is significant cross-fertilization between performance-based budgeting and public administration reforms, the latter can generate fast and significant savings in the shorter run. Hence, Member States should engage more resolutely in implementing structural changes in their administration and in the way public policies are defined, carried out and financed

Overall, the available evidence points to large potential efficiency gains in the health-care sector and, more generally, in the government sector. Member States should aim to reap those gains by introducing efficiency enhancing measures within an overall framework for the prioritization and evaluation of public expenditure. This would contribute to reconcile consolidation targets with continued provision of sufficient levels of public services.

Finally, the report reviews the scope to prioritise quality of expenditures within the EU and national fiscal frameworks. In particular it discusses popular arguments about a "golden rule" – a rule which excludes public investments from the relevant deficit figures – and rejects the case for it, thus confirming the approach taken in the Maastricht Treaty and the Stability and Growth Pact (SGP). Secondly, it argues that the current reformed EU budgetary framework already caters to a reasonable extent for expenditure quality concerns, in particular through the notion of 'expenditure benchmark' in the preventive arm of the SGP and that of 'relevant factors' in the excessive deficit procedure (EDP), which have been introduced or expanded by the recent reform. Finally, ways to support member states' efforts to improve the quality of public expenditures are sketched out. This could take the form of (i) a regular policy dialogue at EU level focusing on selected topics and (ii) an enhanced focus on quality of public expenditures in the Country Specific Recommendations (CSR) issued within the EU Semester and in the Stability and Convergence Programmes (SCP) by the Member States. The issues raised in this report, mainly the need for a growth-friendly composition of consolidation measures and to increase the efficiency of government expenditure including through public administration reforms, are indeed already reflected in the Commission's 2013 Annual Growth Survey (AGS).

Table of content

1. Introduction
2. Composition and quality of public expenditures in the EU
 - 2.1 Growth-friendly expenditures – theoretical considerations
 - 2.2 The composition of expenditures in the EU and its recent evolution
 - 2.2.1 The composition of expenditures in static terms – the share of investment and other productive expenditures
 - 2.2.2. The evolution of the expenditure mix since the onset of the economic crisis
 - 2.2.3 Conclusions
3. Improving the efficiency of public expenditure
 - 3.1. Preliminary considerations
 - 3.2 Efficiency of health care expenditure: main findings and recommendations
 - 3.3 Towards more performance-based public spending: case studies
 - 3.3.1 Context and definition
 - 3.3.2 Conclusions
4. Growth-enhancing and high-quality expenditure in the EU budgetary framework
5. A way forward for the assessment of quality of public expenditures in the EU
- Annex 1. Efficiency and cost-effectiveness of health care expenditure
- Annex 2. Case studies on performance-based public spending
- Annex 3. Figures on growth-friendly spending items within COFOG-II data

I. Introduction

The "Compact for Growth and Jobs" decided by the Heads of State or Government on 28-29 June 2012 stated that *"particular attention must be given to investment into future-oriented areas directly related to the economy's growth potential and ensuring the sustainability of pension systems. The Commission is monitoring the impact of tight budget constraints on growth enhancing public expenditure and on public investment. It will report on the quality of public spending and the scope for possible action within the boundaries of the EU and national fiscal frameworks;*

Pressures on public expenditure are mounting in the context of the on-going crisis repair in the wake of the economic and financial crisis started in 2008. In this context economic considerations would suggest that expenditures that are deemed to be growth-enhancing should receive a more favourable treatment when making spending cuts, on account of their positive effects on both demand *and* supply. On the other hand, political economy considerations imply the risk of a bias against productive expenditure within fiscal consolidation packages, in particular public investments, on account of its costs being incurred head-on and its benefits accruing over time. Thirdly, pressure on public expenditure is likely to stay beyond the crisis repair in light of its historically high level and of the long-term impact of ageing populations.

To the extent that powerful short-term pressures and long-term drivers place constraints on the level and composition of public expenditure, reviewing its efficiency becomes increasingly important, also in light of the current deterioration of the EU macroeconomic outlook and the need to avoid compounding its adverse effects on growth with those stemming from fiscal consolidation.

Regarding the expenditure side of public budgets, the 2013 AGS underlines¹ that *"Investments in education, research, innovation and energy should be prioritised and strengthened where possible, while ensuring the efficiency of such expenditure. Particular attention should also be paid to maintaining or reinforcing the coverage and effectiveness of employment services and active labour market policies, such as training for the unemployed and youth guarantee schemes"*²

Against this context, the report i) reviews trends in public expenditure in the EU with special attention to the impact of the economic and financial crisis and the subsequent fiscal adjustment ii) briefly reports on the different notions and available indicators of expenditure efficiency, with special attention to efficiency of health care and to public administration reforms geared at greater spending efficiency, including performance-based budgeting – PBB, iii) reviews the scope for possible actions within the boundaries of the EU national frameworks, with a particular attention to the treatment of public investment in the stability and Growth

¹ AGS 2013, p. 5.

² In the recently adopted Youth Employment Package, Member States are urged to establish a Youth Guarantee as a means of investing in young people and avoiding the high costs of youth unemployment and inactivity. A Youth Guarantee ensures that every young person up to the age of 25 receives a good-quality offer of employment, continued education, an apprenticeship or a traineeship within four months of becoming unemployed or leaving formal education.

Pact and the quality of public finance in the context of the European Semester, and (iv) presents a possible way forward.

A framework to analyse the Quality of Public Finance (QPF) was already introduced within the Public Finance in EMU reports of 2008 and 2009³. QPF was defined as including "all fiscal policy arrangements and operations that support achieving macroeconomic goals of fiscal policy, in particular long-term economic growth", hence encompassing several dimensions. Given the above-mentioned mandate, this report takes a narrower scope and focuses **on government expenditures, especially looking into composition** (albeit based on quite broad categories) **and efficiency issues**, mainly with respect **to their implications for long-term growth**. Specifically, section 2 of the report reviews main trends with respect to the composition of expenditure by function of government and economic type in order to highlight main cross-country patterns across the EU in the wake of the financial and economic crisis and the subsequent fiscal consolidation. Section 3 reviews notions and indicators of expenditure efficiency within individual functions and items taking stock of existing analysis (including in past editions of the Commission services' Public Finance Report) and focusing on two subjects, i.e. efficiency of the health care sector and reforms aimed at increasing public administration efficiency, including performance-based budgeting practices. Section 4 discusses why the "golden rule" is not desirable in the Stability and Growth Pact. Section 5 proposes some ways forward on the monitoring of expenditure quality across Member States.

II. Composition and quality of public expenditures in the EU

II.1 Growth-friendly expenditure – theoretical considerations

This section reviews **main patterns** and recent **trends in the composition of public expenditure** in the EU.

Economic literature has often emphasised that the size of the government sector may have an impact on potential growth, employment and private investments. However, the sheer size of government - commonly measured by the total level of public expenditures as a percentage of GDP – is not per se a good indicator. Indeed on the one hand a part of the literature points to a negative correlation between the size of the government sector and potential growth (see e.g. Afonso and Furceri, 2008), which is rationalised by the distortionary impact of taxation needed to finance government activities on economic decisions of firms and households, the possible direct crowding out of private consumptions and investments⁴ or by the risk of unsustainable fiscal policies, which may be associated with deficit financing of expenditures. However, other studies point to a non-linear or hump-shaped relationship between expenditures and long-term

³ http://ec.europa.eu/economy_finance/publications/european_economy/public_finances_emu_en.htm, see also Barrios and Schaechter (2009).

⁴ This may occur depending on whether resources consumed or invested by the state are direct substitutes for or complements with private consumption and investments. For instance, public spending on free (at the point of delivery) public education and healthcare may be a substitute for private spending on these sectors, although public provision of these services may be preferable to private one for correction of market failures.

growth as up to a certain point an expansion of the public sector may act as a support to growth by providing the right institutional environment for economic transactions via ensuring the rule-of law, enforcing property rights and providing essential public services⁵. It has been suggested that in several advanced economies, particularly in Europe, such thresholds may have been exceeded (European Commission, 2008). However, there are examples of countries (e.g. Sweden) that succeed in reconciling quite high growth rates with relatively large public sectors. Overall, the macroeconomic **link between the size of government and long-run growth is not clear cut, but there is a need to ensure that** governments are efficient and do not become a drag on the economy.

Beyond the issue of government size, the literature tends to **differentiate productive, or more growth friendly, types of expenditures** from more unproductive ones, based on theoretical considerations inspired by classical or endogenous growth models (IMF, 1995). Accordingly, specific categories of government expenditure should support growth by improving the economy's endowment of production factors (labour and capital) or their productivity. The items which are more often mentioned in this context (European Commission, 2002 and 2004) are public infrastructure investments, education and training (which, together with other spending categories such as active labour market policies, are associated with improved human capital and skills), R&D (which is associated with technological development and innovation) and health care (which increases both the quantity and the productivity of labour, via an increased length of years of healthy life).

Government investments are considered to be an expenditure category more directly linked to growth, as it is associated to an increase in the capital stock of the economy. In particular, investments in infrastructure for transports and communications should be particularly beneficial as they set favourable conditions for undertaking private investments. Moreover, infrastructure investments are likely to be under-supplied if completely left to the private sector as they are subject to a number of market failures such as increasing returns to scale and natural monopolies. However, this being said, the productivity of public investment may strongly depend on the nature of the individual project, as public investment can also become subject to interest-group capture and thus not necessarily yield social returns. Furthermore, the optimal scale of public investments is conditional on the initial endowment of infrastructure which is likely to be higher in more developed economies. Hence government investments are likely to play a more important role for growth in catching-up and emerging economies rather than in advanced ones.

Emphasis should be put on **selecting the most productive investment projects through cost-benefit analysis**, using discount rates comparable to those applied by the private sector⁶, thereby avoiding the creation of so-called "white elephants" (i.e. useless or ineffective investments), and on counteracting the depreciation and obsolescence of the existing capital stock. **The empirical literature on the link between government investments and growth** (or

⁵ This resonates the "classical" Wagner law which states that a rising level of economic development goes hand in hand with an expanding public sector the reason being the rising demand of certain public services that can be seen as luxury services (and hence associated to the level of income) such as high quality health care or education (Martinez-Mongay, 2002).

⁶ Cost-benefit analysis should form part of an economic impact assessment framework, which takes into account non-monetizable effects due to the fact that some environmental and cultural impacts are difficult to quantify.

private investments) **is not fully conclusive on their positive effects** (European Commission, 2003), although more recent work highlights that this may be due to measurement issues, essentially the widespread use of gross (i.e. including capital stock depreciation) rather than net investment figures. When the latter are used, the evidence points to a more robust positive effect of public investments on potential growth (Arslanalp et al., 2010).

Finally, **expenditure in Research and Development (R&D) and innovation are associated to higher potential growth** (see e.g. Conte et al., 2009). This category of spending improves total factor productivity by supporting technological progress in production processes. More generally, the literature tends to point to a stronger link with growth for public spending on human capital rather than on physical capital.

The need for public intervention in the abovementioned areas (education and training, health care, infrastructure etc.) **is rationalised through the need to correct market failures** which would lead to their under-provision by the private sector. In the case of externalities social marginal benefits exceed the private benefit. In the case of R&D, for instance, this relates to economic benefits of innovation being spread across the economy and only partly accruing to the innovator. In the case of public goods, like transport infrastructure, free riding would lead to a suboptimal or even null investment if completely left to the private sector.

Given the wide choice of expenditures and the many ways in which projects can be implemented, it is not surprising that **it is so difficult to provide a fully uncontroversial list of productive or growth-friendly expenditure items mainly because other categories of spending can also contribute to growth**, albeit in a more indirect way. This is the case, for instance, for public order and the judicial system, which by ensuring the rule of law and enforcing property and other economic rights, underpin a functioning market economy and thus potential growth.

Another case in point is expenditure on social protection which, albeit mainly fulfilling an income insurance function and, to some extent, also a redistributive role, can stabilise consumption and aggregate demand by reducing individual liquidity constraints. It may also reduce precautionary savings which could foster individual human capital development. Furthermore, unemployment insurance systems coupled with effective active labour market policies can lead to more efficient matching between labour supply and demand while not lowering re-employment probabilities, as also recognised in the Annual Growth Survey 2013 (see above).

Finally, **the level and composition of expenditures is not informative of their efficiency in translating public resources into desired outcomes** (see below, section 3).

II.2 The composition of expenditures in the EU and its recent evolution

With this caveats in mind, the rest of this section presents fresh evidence of the composition of public expenditure in the EU and its latest trends, with the purpose of answering two main questions.

1. What are the main commonalities and differences in the composition of expenditures across the EU? Are there any common patterns when it comes to expenditure that is presumably more supportive to potential growth (in particular investment)?

Main findings: The analysis shows that **social protection is generally the main expenditure item across the EU**, followed by health care, education, general public affairs and economic affairs. The combined share of spending items that are presumed to be more growth-friendly (education, health care, R&D etc.) varies across countries. With respect to the economic composition, **the share of public capital expenditure is higher in recently acceded Member States of Central and Eastern Europe**, signalling the importance of catching-up dynamics.

2. What were the main trends in the expenditure mix of EU Member States in the wake of the economic and financial crisis and the ensuing fiscal consolidation? What were the main areas of spending cuts during consolidation?

Main findings: while there are considerable differences across countries, the shares of social protection in public spending have generally increased, with a corresponding reduction in the shares of several other functions, including education, whereas the cross-country pattern is less clear-cut for health care and economic affairs. Overall, these changes, albeit partly reflecting the role of social protection as automatic stabiliser and its responsiveness to the social needs induced by the crisis, do not appear to go in the direction of a more growth-friendly expenditure structure. In terms of economic types of spending, recent cuts mainly affected investments (confirming this is an easy target for consolidation), compensation of employees and intermediate consumptions.

The analysis is based on two different break-downs of government expenditure data available in Eurostat:

1. Functional classification (COFOG), which breaks-down total expenditure across 10 main functions of government (COFOG-I); i.e. (i) general public affairs; (ii) economic affairs; (iii) housing; (iv) education; (v) social protection; (vi) health care; (vii) defence; (viii) culture, recreation and religion; (ix) environment protection; (x) public order and safety.
2. Economic classification, which distinguishes different types of public expenditures based on their economic function, including investment (i.e. gross fixed capital formation), intermediate consumption, compensation of employees, social benefits in cash, social transfers in kind etc⁷.

Unfortunately, COFOG data are only made available with a significant time delay, i.e. data for a specific year are released only on December of the following year, implying that the most recent figures currently available are those of 2010. Moreover, the level of disaggregation of COFOG-I figures is insufficient to fully capture how much the expenditure mix is growth-

⁷ For details on both COFOG and economic classifications see http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-11-013/EN/KS-RA-11-013-EN.PDF.

friendly, as a number of relevant items such as R&D, infrastructure for transports and communication, energy-related expenditures, or expenditure on active labour market policies and life-long learning are not included. Another shortcoming of this data set is that it does not take full account of tax expenditures, i.e. revenues lost due to tax exemptions and incentives, nor the extent to which spending on social transfers is partially clawed back through taxation. Some of the above shortcomings can be tackled, albeit only partly, through the more detailed COFOG-II breakdown (see below).

2.2.1 The composition of expenditures in static terms – the share of investment and other productive expenditures

Table 1 below shows the composition of total public expenditure by function across the EU in 2010. The first feature to be highlighted is the **relatively large weight of social protection** which, according to the country considered, represents between a quarter (CY and IE) and more than 40% of total public spending (AT, DE, DK, FI, FR, IT, LU and SE). **Health, education, general public services⁸ and economic affairs are also quantitatively significant** across all Member States, accounting for no less than 10% of total spending in most cases.

Table 1: General government's shares of expenditures per COFOG in total expenditures (2010)

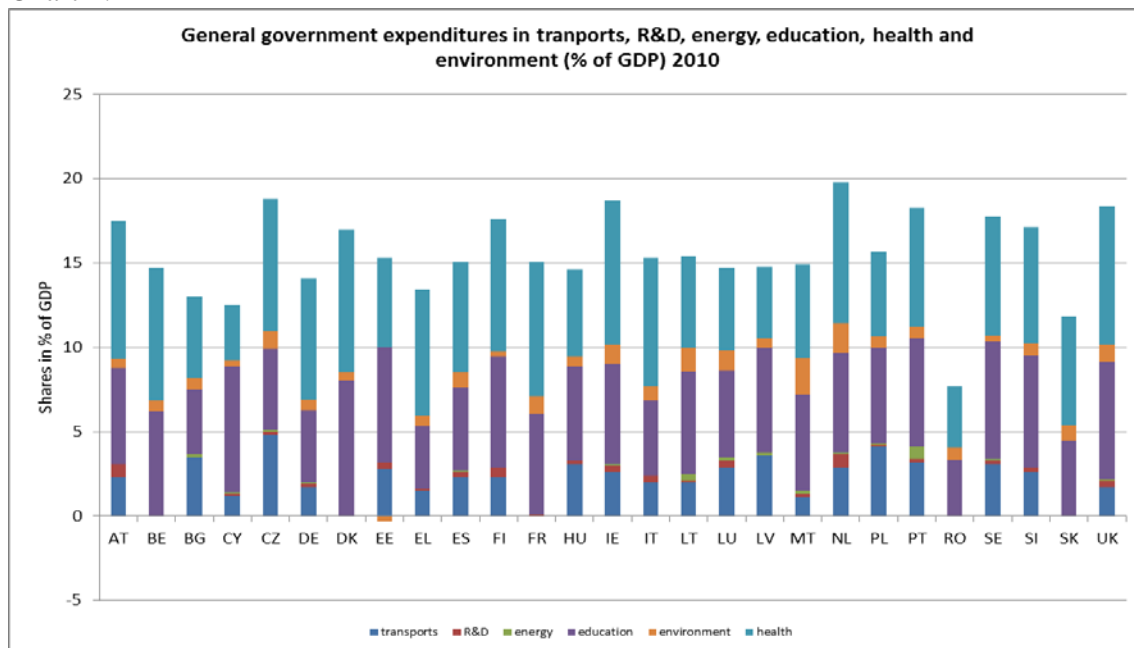
| Cofog/country | General public services | Defence | Public order and safety | Economic affairs | Environment protection | Housing and community amenities | Health | Recreation, culture and religion | Education | Social protection |
|---------------|-------------------------|---------|-------------------------|------------------|------------------------|---------------------------------|--------|----------------------------------|-----------|-------------------|
| AT | 12,9 | 1,4 | 2,9 | 10,8 | 1,0 | 1,3 | 15,5 | 2,0 | 10,8 | 41,4 |
| BE | 15,8 | 1,9 | 3,5 | 11,5 | 1,2 | 0,7 | 14,9 | 2,3 | 11,8 | 36,4 |
| BG | 10,3 | 4,7 | 7,0 | 13,5 | 1,9 | 2,7 | 12,6 | 2,0 | 10,0 | 35,4 |
| CY | 23,1 | 5,1 | 5,2 | 8,4 | 0,7 | 6,1 | 7,2 | 2,8 | 16,1 | 25,3 |
| CZ | 10,6 | 2,3 | 4,6 | 15,1 | 2,3 | 2,1 | 17,8 | 3,1 | 10,9 | 31,1 |
| DE | 12,8 | 2,2 | 3,3 | 10,0 | 1,4 | 1,4 | 15,0 | 1,8 | 9,0 | 43,1 |
| DK | 13,0 | 2,5 | 1,9 | 5,8 | 0,8 | 0,6 | 14,6 | 2,8 | 14,0 | 43,9 |
| EE | 7,8 | 4,4 | 5,5 | 10,8 | -0,7 | 1,4 | 13,1 | 5,1 | 16,8 | 36,0 |
| EL | 22,2 | 4,3 | 3,4 | 8,8 | 1,2 | 0,8 | 14,9 | 1,2 | 7,5 | 35,8 |
| ES | 11,4 | 2,4 | 4,6 | 11,4 | 2,0 | 2,6 | 14,3 | 3,5 | 10,7 | 37,2 |
| FI | 13,0 | 2,8 | 2,8 | 8,8 | 0,5 | 0,9 | 14,2 | 2,2 | 11,8 | 43,1 |
| FR | 12,1 | 3,7 | 3,0 | 6,1 | 1,8 | 3,3 | 14,1 | 2,6 | 10,6 | 42,7 |
| HU | 18,8 | 2,5 | 3,8 | 11,8 | 1,2 | 0,7 | 10,4 | 3,6 | 11,3 | 35,9 |
| IE | 5,8 | 0,7 | 2,9 | 37,6 | 1,7 | 2,7 | 12,8 | 1,1 | 9,0 | 25,7 |
| IT | 16,4 | 2,9 | 3,9 | 7,6 | 1,7 | 1,5 | 15,1 | 1,6 | 8,9 | 40,5 |
| LT | 11,2 | 2,9 | 4,8 | 11,0 | 3,3 | 0,8 | 13,3 | 2,4 | 14,9 | 35,4 |
| LU | 10,7 | 1,2 | 2,5 | 10,1 | 2,8 | 1,8 | 11,6 | 4,2 | 12,1 | 43,1 |
| LV | 10,1 | 2,3 | 4,4 | 20,3 | 1,4 | 3,4 | 9,6 | 3,6 | 13,9 | 31,1 |
| MT | 15,3 | 1,9 | 3,5 | 11,0 | 5,0 | 0,5 | 13,2 | 1,8 | 13,5 | 34,3 |
| NL | 11,6 | 2,8 | 4,1 | 11,7 | 3,5 | 1,3 | 16,3 | 3,6 | 11,5 | 33,7 |
| PL | 13,0 | 3,0 | 4,2 | 12,4 | 1,6 | 2,2 | 11,0 | 3,0 | 12,4 | 37,1 |
| PT | 13,7 | 3,2 | 4,6 | 10,9 | 1,3 | 1,2 | 13,6 | 2,5 | 12,6 | 36,3 |
| RO | 11,1 | 3,7 | 6,0 | 17,0 | 1,8 | 3,3 | 9,0 | 2,6 | 8,3 | 37,2 |
| SE | 13,3 | 3,0 | 2,6 | 8,7 | 0,6 | 1,4 | 13,5 | 2,3 | 13,3 | 41,2 |
| SI | 11,4 | 3,1 | 3,6 | 10,2 | 1,5 | 1,4 | 13,8 | 4,5 | 13,3 | 37,3 |
| SK | 15,8 | 3,1 | 6,6 | 8,9 | 2,3 | 2,5 | 16,0 | 3,0 | 11,2 | 30,6 |
| UK | 10,6 | 5,3 | 5,3 | 6,2 | 2,1 | 2,5 | 16,3 | 2,2 | 13,8 | 35,7 |
| EU27 | 12,9 | 3,1 | 3,8 | 9,2 | 1,7 | 2,0 | 14,7 | 2,3 | 10,8 | 39,4 |

Source: Eurostat - General government expenditure by function (COFOG)

⁸ Which also include the functioning of main political and institutional bodies.

General public services and economic affairs show a somewhat larger cross-country variability than health and education. The former category includes spending on general public administration and political bodies, as well as interest on government debt, whereas economic affairs include public spending on the different sectors of the economy, including subsidies.⁹ For general public services, shares range from around 20% in CY, EL and HU to 10% or less in BG, CZ, EE, IE, LU, LV and UK. For economic affairs, IE stands out with around 37% of total expenditure¹⁰, followed by LV, RO and CZ (15-20%).

Chart 1:



In Chart 1 an **indicator of the weight of productive expenditures that are deemed to be growth-enhancing across the EU** is computed¹¹, by selecting those expenditure items deemed to be more directly linked to potential growth based on theoretical considerations (see above) and policy guidelines (see the above-mentioned reference to the 2013 Annual Growth Survey). Chart 1 displays the sum of spending in education, health care, environment protection¹², transports, R&D and energy in 2010 as a percentage of GDP. One caveat to this figure is the lack of data for transports, R&D and energy for a few Member States (for energy in particular).¹³ This is linked to the fact that these items are not included in the main COFOG

⁹ The concept of 'subsidies' for the purposes of this report only partly overlaps with the concept of 'State aid' within the meaning of Article 107 TFEU which for example includes selective tax exemptions in favour of some firms or a particular sector but which does not cover non-selective subsidies to industry. State aid expenditure in the EU is monitored by the Commission through the State aid Scoreboard.

¹⁰ which is most likely driven by massive public recapitalisation of banks

¹¹ Similar indicators were also produced in the Public Finance Report 2008 and 2009 (see also Barrios and Schaechter, 2009).

¹² This function is included as it counteracts market failures (i.e. pollution and use of natural resources would be higher than the socially optimal level in the absence of public intervention) and underpins the preservation of natural resources, thereby indirectly supporting the growth potential

¹³ For R&D a different data-set, known as Government Budget Appropriations or Outlays for R&D (GBAORD), constitutes the reference data regarding government budgets for R&D; this data set is generally considered more

breakdown (see above) and are only available within the more detailed COFOG-II break-down which is still provided on a voluntary basis by Member States and, despite recent improvements, is not yet fully available for all of them (see Annex 3).

Based on this indicator, the level of productive spending is largest in NL, CZ, IE, UK, PT, FI, SE and AT (15-20% of GDP) and lowest in RO (around 7% of GDP), SK, BG, CY and EL (around 12-13% of GDP). For more details on spending on transports, R&D and energy based on COFOG-II see Annex 3 below, which also highlights the existence of alternative, and in some cases more reliable, data sources for those items.

Moving from the functional to the economic classification of public expenditures, it is possible to identify the share of it devoted to **public investment** (see above). In this respect the variable which is more often used is expenditure on gross fixed capital formation¹⁴. However, this is subject to the caveat that gross fixed capital formation does not correct for depreciation and obsolescence of the existing capital stock, hence only net accumulation of capital (or net investments) should positively contribute to potential growth (IMF, 2010, see above).

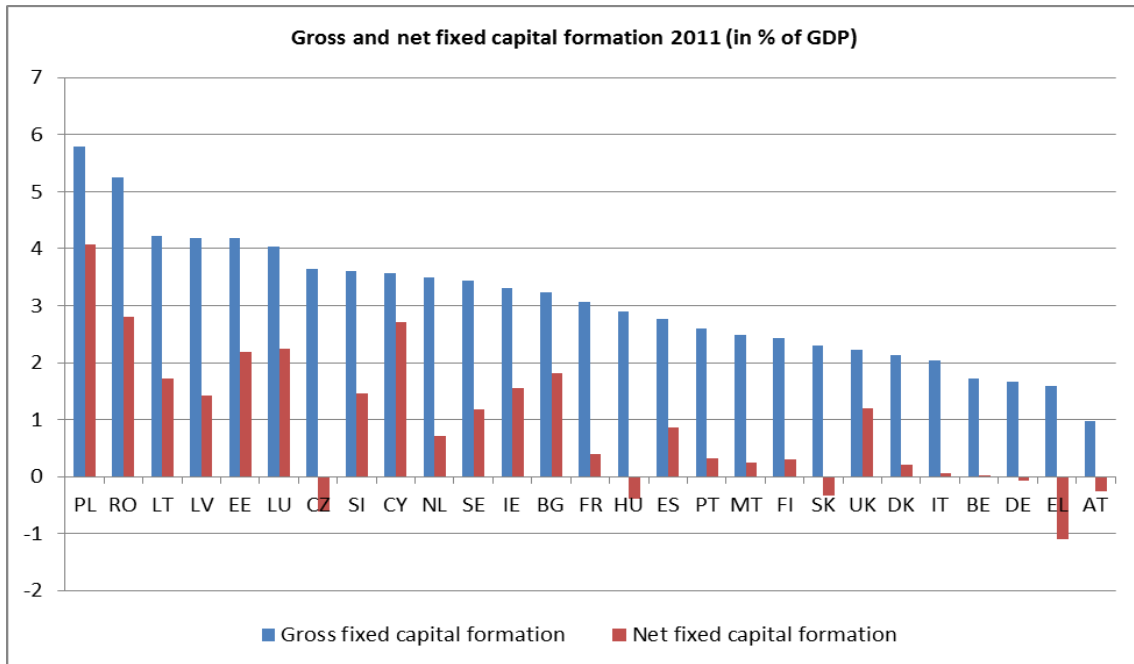
Thus, Chart 2 below shows the level of public expenditures on both gross and net fixed capital formation (both as % of GDP). **Gross fixed capital formation is substantially higher than net capital formation in all Member States**, suggesting that expenditures aimed at keeping the level of capital stock constant are relatively large on average. In a few cases there is basically a zero or even slightly negative net capital increase and almost the totality of gross fixed capital formation compensates for depreciation (HU, CZ, EL, SK, IT, BE, DE and AT).

The country ranking is quite different across the two measures. Gross capital formation is highest in PL, RO (5-6% of GDP), LT, LV, EE and LU (around 4%) and lowest in BE, DE, EL and AT (1-2%). Net fixed capital formation is highest in PL (4% of GDP), RO, CY, LU and EE (2-3% of GDP). **Overall, recently acceded Member States of Central and Eastern Europe tend to cluster at the top-end of the ranking, underlining the importance of catching-up dynamics**, i.e., countries with a comparatively lower level of economic development tend to exhibit larger levels of investments as they attempt to converge to the level of capital stock of more advanced economies.

accurate than COFOG breakdown, while also allowing a full EU coverage (see Annex 3). However, in Chart 1 all figures are taken from the COFOG breakdown to ensure data consistency and comparability. Moreover, as the order of magnitude for R&D is relatively small according to both sources the country ranking in Chart 1 would remain basically unchanged if GBAORD data were used.

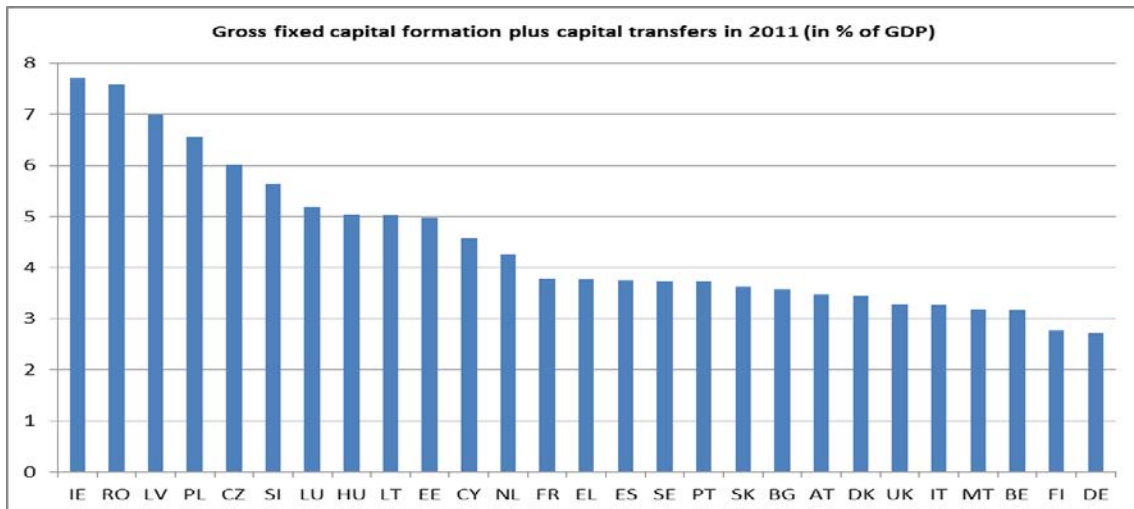
¹⁴ This consists of "resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realised by the productive activity of producer or institutional units." (see Council Regulation No. 2223/96).

Chart 2:



Source: Eurostat - Government revenue, expenditure and main aggregates.

Chart 3:



Source: Eurostat - Government revenue, expenditure and main aggregates.

However, available net investment measures are the result of estimates, implying that their reliability is limited and that they can be controversial particularly as regards the choice of the correct depreciation rate. It is therefore common to refer to gross figures to obtain country-level information on public investment, which is also the approach adopted in the remainder of this report. A further caveat of figures on capital formation is that they do not include investments undertaken by state-owned enterprises which are classified as 'market operators' within ESA95 regulations and so are not included in the statistical definition of general

government. Such investments can be quantitatively very important as state-owned companies may include, for instance, railways or telecommunications operators¹⁵. An attempt to correct for this drawback and better capture the effective government contribution to capital formation in the economy is **to sum up gross fixed capital formation with government capital transfers**.

This indicator is provided in Chart 3 above and ranges from close to 7.5% of GDP in IE (likely to be driven by large bank recapitalisation) and RO, followed by LV (7%), PL and CZ (6-6.5%) to around 3% or less of GDP in IT, MT, BE, FI and DE. Although there are a few changes compared to chart 3, the main cross-country patterns are maintained, including the clustering of most **recently acceded Member States of Central and Eastern Europe** (and some Southern Member States) at the top end of the ranking. However, quantitative differences between figures in Chart 3 and those in Chart 2 are not negligible suggesting that capital transfers are quite substantial across the EU¹⁶.

Of course, over the last decade there have been important shifts in the provision of goods and services from the public to the private sector. The Single Market Programme and the application of state-aid control have supported the secular shift from public to private investments in liberalised markets. The telecom sector is a good illustration that the liberalisation and privatisation of investment and services provision has lowered prices and increased choice, where the public sector now assumes a regulatory role. Even where the public sector is still co-investing, risk-sharing arrangements with the private sector in public-private partnerships tend to reduce public investment.

2.2.2. The evolution of the expenditure mix since the onset of the economic crisis

After having reviewed expenditure composition across the EU in static terms, the remainder of this section **reviews its trends** over the most recent years in order to have *prima facie* evidence on the combined effect of the economic and financial crisis and the fiscal consolidation which followed it. This review is based on changes in shares of total government expenditure, rather than shares of GDP to correct for business cycle effects on the denominator. Given constraints on COFOG data availability (see above) this review will cover the 2007-2010 time period for the functional composition and the 2007-2012¹⁷ period for the economic composition. With respect to the evolution of the functional composition, the next set of charts shows the change in the shares of each function (or groups of) in total public expenditure. The following main developments can be highlighted.

The share of social protection increased across almost all Member States, which at least partly reflects the counter-cyclical nature of such spending. The largest increase (around 7-8pp) occurred in BG, EE, RO and LV, followed by ES and LT (4pp) whereas non-negligible reductions occurred only in IE and DE¹⁸. On the other hand, reductions in the share of education, the sum

¹⁵ Governments may also influence capital formation through (de-)regulatory measures that do not involve direct public spending or expenditure via state-owned enterprises.

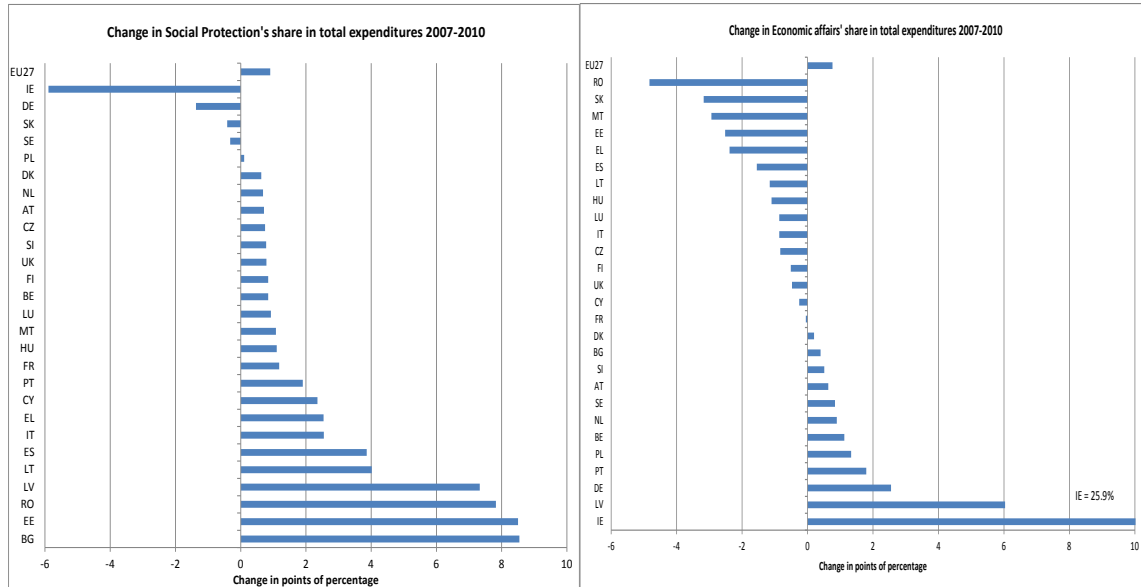
¹⁶ A drawback of capital transfers' data is that they also include government subsidies to private investments which, admittedly, are not a component of public investments.

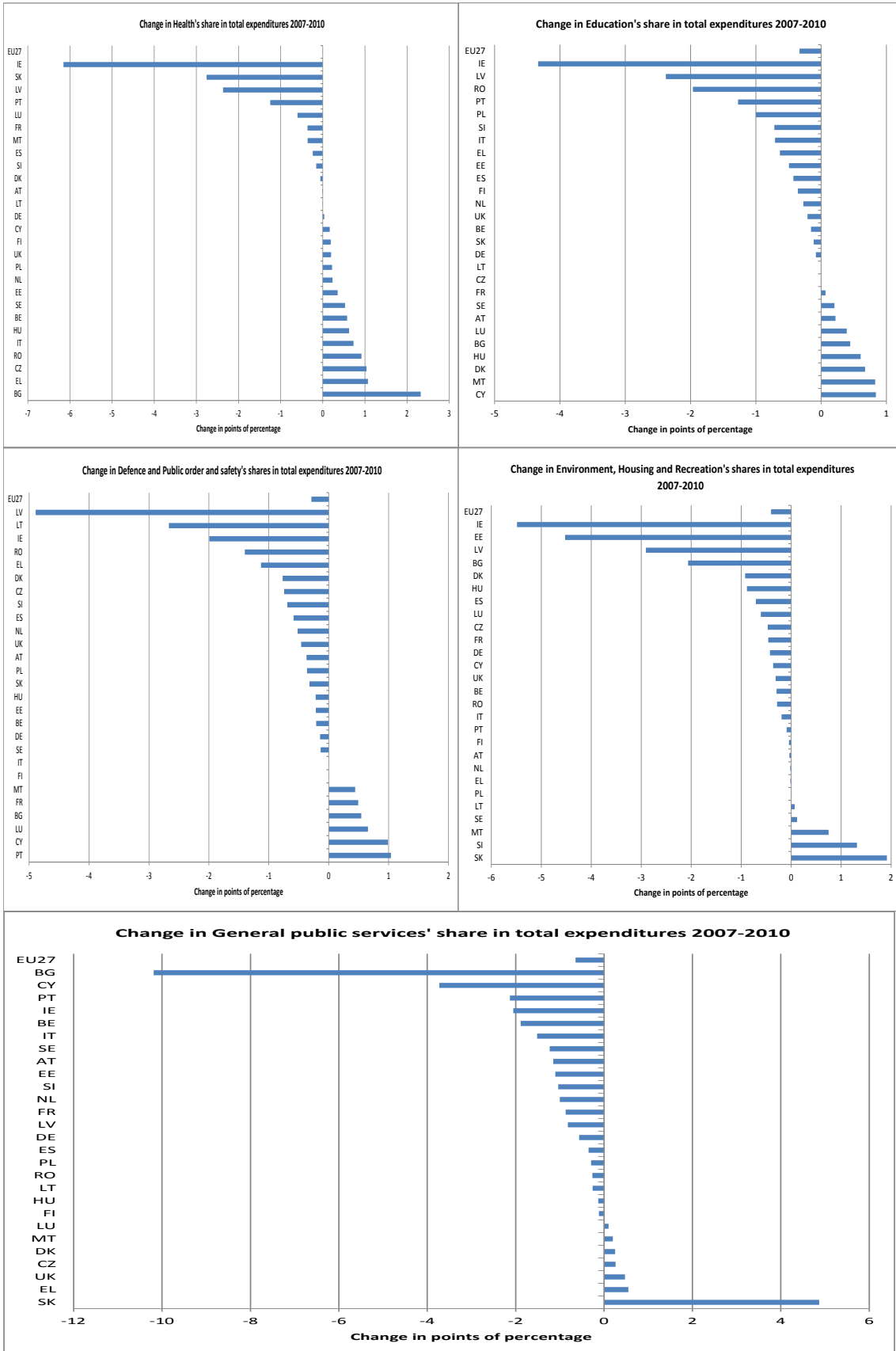
¹⁷ Data for 2012 are forecasts (Commission's Autumn 2012 Forecasts).

¹⁸ In IE, the reduction in the share of social protection expenditure is also the result of the huge increase of spending in economic affairs (bank recapitalisation).

of public order and defence, the sum of culture, environment protection and housing, and general public affairs occurred in the majority of Member States, whereas countries are more evenly split across positive and negative changes in economic affairs and health.

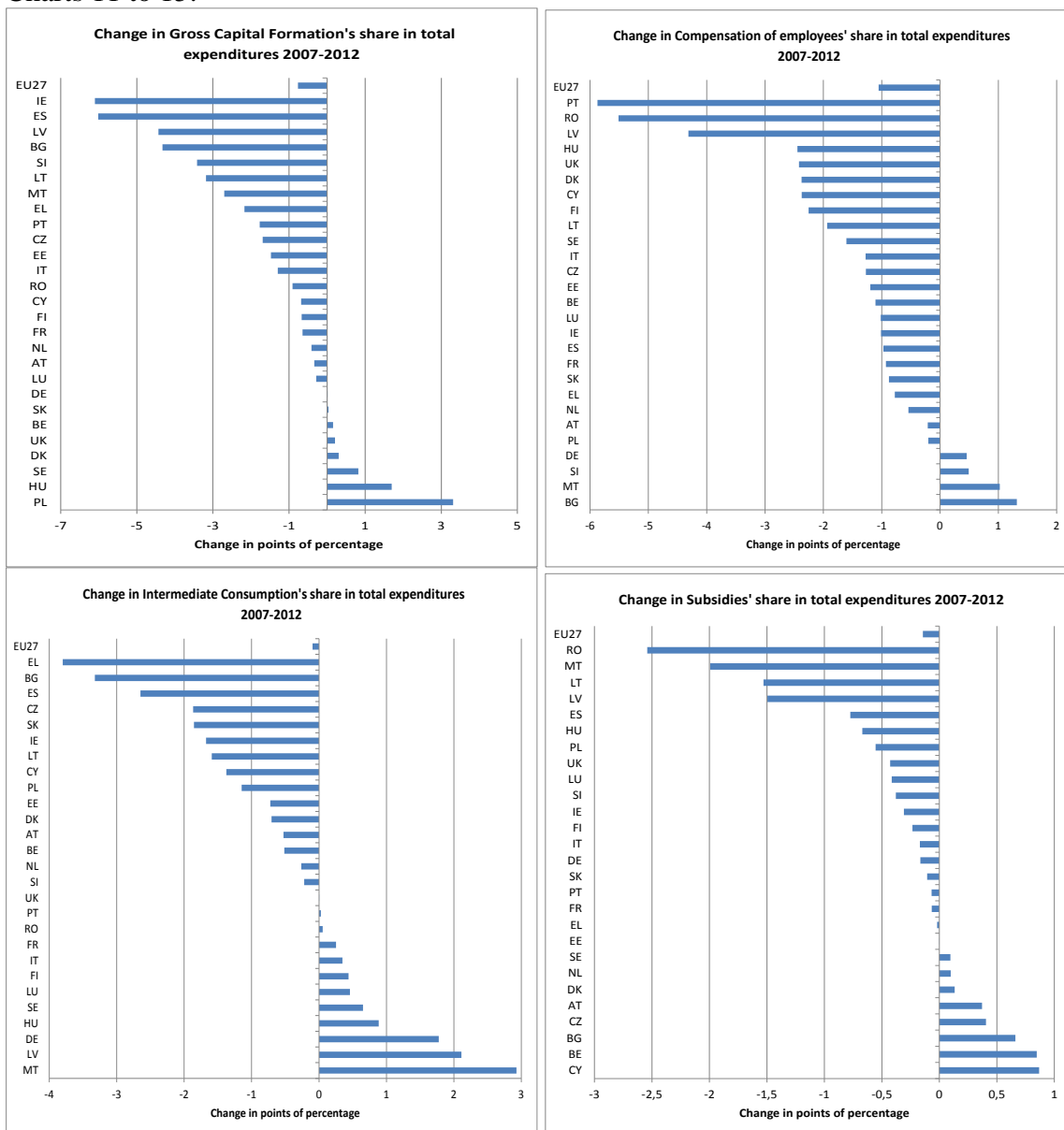
Charts 4 to 10:

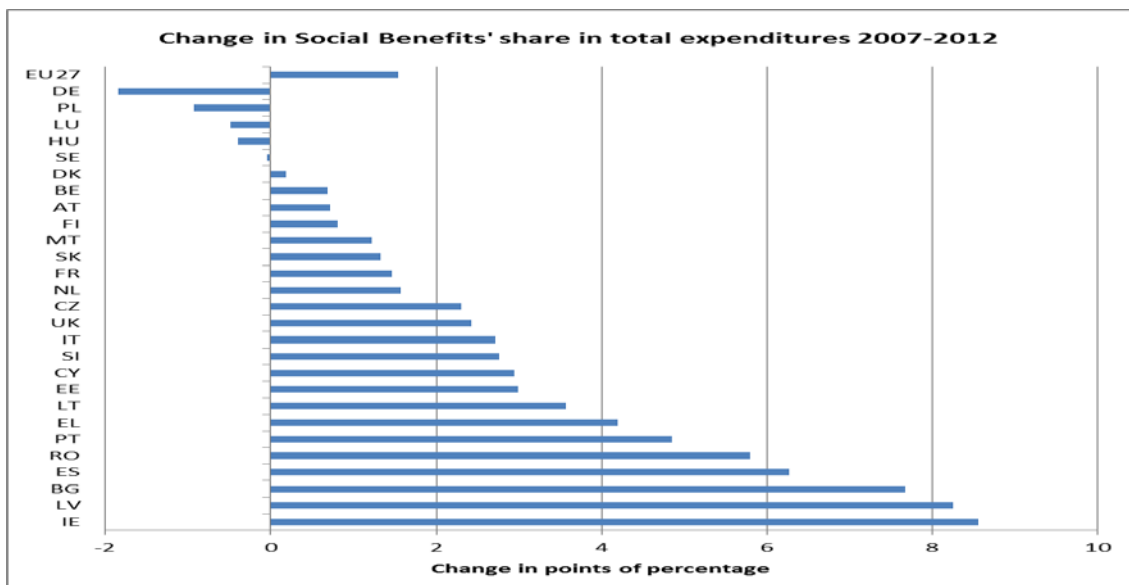




IE is the country which experienced the largest changes in the expenditure mix, which largely reflects substantial capital injections from the government sector to banks, which translated into a 25% increase in the share of economic affairs spending, and, conversely contraction in the relative share of all other functions, especially social protection, health care and education. As regards other Member States the largest changes, by function, were the following: (i) health care: -1-3pp in PT, LV and SK; +1-2pp in RO, CZ, EL and BG; (ii) economic affairs: LV (+6pp), DE, PT (+2), NL, BE, PL (+1); RO (-5pp), EL, EE, MT, SK (-2-3), CZ, IT, LU, HU, LT and ES (-1-1.5); (iii) education: LV, RO (-2), PT, PL (-1); (iv) general public affairs: BG (-10), CY (-4), IT, BE, IE, PT (-1.5-2); SK (+5); (v) sum of defence and public order: LV (-5), LT (-2.5), EL, RO (-1-1.5); CY, PT (+1); (vi) sum of environment protection, housing and culture/recreation: EE (-4.5), LV (-3), BG (-2), DK, HU (-1); SI, SK (+1-2).

Charts 11 to 15:





Changes in the expenditure mix by economic type from 2007 to 2012 are displayed in the next set of charts. A **first notable finding is the reduction in the share of gross fixed capital formation** in total government expenditure in most Member States, with the largest decrease having occurred in IE and ES (-6pp), followed by LV, BG, SI, LT, MT and EL (between -2 and 4.5pp). Similarly **reductions in the relative share of compensation of employees occurred** in a vast majority of Member States, particularly so in PT and RO (-5.5-6pp), followed by LV (around -4) and HU, UK, DK, CY, FI and LT (-2-2.5pp).

Patterns are slightly less clear cut for intermediate consumptions and subsidies, although for these functions too reductions predominate, the largest occurring for intermediate consumptions in EL and BG (-3-4), followed by ES, CZ and SK (around -2 to -2.5) whereas the largest increase occurred in LV and MT (+2-3pp). The largest reduction in the relative share of subsidies occurred in RO, MT, LT and LV (between -1.5 and -2.5). Conversely, data show a **generalised increase in the relative share of social transfers**, being of the order of 2pp or more of total expenditure in around half of Member States with peaks of between 6 and 8pp in RO, ES, BG, LV and IE.

2.2.3 Conclusions

The evidence shown in section 2.2 can be summarised as follows, along three key questions:

1. *What are the commonalities and differences in growth-friendly expenditure composition across the EU?* Some common patterns exist across the EU as regards the functional composition of expenditures, i.e. social protection being the main item, followed by health care, education, general public affairs and economic affairs. The share of spending which is regarded as more productive, although such classification is to some extent arbitrary, varies across countries from at least 15% of GDP in NL, CZ, IE, UK, PT, FI, and SE to 7% in RO. With respect to the economic composition, the share of public capital expenditure is higher in recently acceded Member States of Central and

Eastern Europe signalling the importance of catching-up dynamics, as it ranges from 7-8% of GDP in IE, RO and LV to around 3% in IT, BE, FI and DE.

2. *What changes in patterns of expenditure composition have occurred since the onset of the economic and financial crisis?* A review of trends in the functional composition (up to 2010, given data availability) highlights a generalised increase in the share of social protection and a generalised reduction in several other functions (including education), whereas the cross-country pattern is less clear cut for health care and economic affairs. The largest changes in the functional mix occurred in IE, PT, RO, LV, SK and EL. These changes may be partly attributable to automatic stabiliser effects which give greater weight to social protection spending and hence reduce the relative weight of other categories.
3. *What were the main areas of spending cuts during the recent consolidation? Did consolidation disproportionately affect capital expenditure?* As for trends in the economic composition (up to 2012), the share of investment spending, compensation of employees and intermediate consumptions has generally decreased in most of the EU, whereas the share of social transfers has generally increased (particularly so in countries more strongly hit by the economic crisis). The cuts in capital spending could be detrimental for potential growth (unless targeted to more unproductive projects), and they confirm this item is an easy target for consolidations; however, parallel reductions in intermediate consumption and the public wage bill do not allow clear cut conclusions on the effect of compositional changes on overall "growth-friendliness" of the expenditure structure.

Overall, the expenditure composition has, not unexpectedly, shifted towards social protection . Whether this has led to parallel cuts of potentially more growth-friendly spending items, beyond mechanical changes in shares of total expenditure, would require further analysis of absolute spending levels identifying discretionary measures (which is a quite challenging task given available data). As public investment, in particular, can be an easy target for spending cuts, there is a risk that budget consolidation efforts could result in less growth-friendly spending, thus undermining long-term growth prospects.

A decomposition of social expenditure would be needed to assess the extent to which the increased share of this expenditure is indeed due to a rise in -cyclical- unemployment expenditure compared to other items. As the COFOG data are available up to 2010 and thus not show recent budget consolidation efforts, it would be premature to draw a conclusion of a permanent shift in the composition of public expenditure towards less productive items, with associated negative impacts on long-term fiscal sustainability, via the effects on potential growth.

The above analysis should be refined before drawing any firm conclusions; in particular (i) as has already been pointed out, these trends do not distinguish discretionary changes in the expenditure composition from cyclical effects; (ii) as explained above, the categorisation of expenditure types across more and less "productive" or growth-friendly ones remains to some extent arbitrary and would require a much more detailed breakdown of public spending and analysis of its impact on growth; (iii) these trends capture neither expenditure reallocation across sub-categories of spending within each function/type, due to data availability

constraints, nor whether spending cuts were achieved via efficiency-enhancing measures (see 3 below).

III. Improving the efficiency of public expenditure

III.1. Preliminary considerations

In order to assess the quality of public expenditures as defined in this report, a review of the composition of public expenditures should be complemented by an analysis of the efficiency of expenditure within each category. In a context of fiscal consolidation, there is a need to go beyond a strictly accounting view of public expenditures and to look into efficiency issues in order to reconcile the goal of sustainable public finances with the continued provision of satisfactory levels of public services to citizens. Hence, **the assessment of expenditure quality cannot exclusively be based on the composition of spending but also has to look at whether those resources are translated as efficiently as possible into beneficial outputs to citizens.** In this respect a number of papers have shown that there is significant room for savings of public resources across advanced economies for unchanged levels of services delivered (e.g. Grigoli, 2012).

However, measuring efficiency of public expenditures is a highly complex task due to a number of reasons which are summarised below.

Quality with respect to what? Quality of spending should be defined in relation to the **goals** or outcomes which the public sector aims to achieve. **Public Expenditures may fulfil various objectives**, such as fairness and redistribution, macroeconomic stabilisation, homogeneous service coverage across the whole national territory, sustainable development through environmental protection. These objectives may differ not only across functions of government but also within them.

To provide examples, social protection mainly fulfils income-smoothing as well as redistributive and stabilisation objectives. For a number of public goods and services (such as education, health care or infrastructure), policy-makers need to ensure sufficient coverage for all areas of the country or sectors of the population, which may conflict with pure cost-effectiveness considerations. Within social protection, a distinction could be made between schemes more directly linked to redistribution and shock stabilisation (e.g. unemployment benefits and minimum income) and other schemes such as pensions which aim at income smoothing over the life cycle. As different goals do not necessarily lead to similar prescriptions as regards the expenditure mix and the design of policies within each expenditure item, the meaning of high quality expenditure depends on the goal to which greater importance is attached.

Once objectives are defined, the **efficiency** (i.e. maximising results for given inputs) and **cost-effectiveness** (i.e. reaching a certain level of results with minimum inputs) of spending in reaching them should be the centre of the analysis (see section 3.2 for more details in the health sector case). This essentially refers to the ratio between inputs used to produce public goods/services and outputs. Such analysis entails complex measurement issues, as figures on

the level of expenditures are not informative of their efficiency (for instance, a large spending on education does not automatically lead to a high educational attainment) and have to be complemented by output indicators.

With respect to inputs, indicators on levels of expenditures, even with a more detailed breakdown than the COFOG data discussed in the previous section, need ideally to be complemented by further indicators to assess the way policies are designed and implemented within different functions and sub-sectors of the administration. This includes, for instance, indicators such as the number of teachers per one thousand inhabitants, the number of pupils per class or per teacher in the case of education, or the number of hospital beds per one thousand inhabitants for health-care (see 3.2 below). In addition, more efficient public procurement, which account for up to 20% of EU GDP, can also largely contribute to raise the overall efficiency level of public expenditure.¹⁹

The literature has proposed **a number of output indicators for different categories of public expenditure**. This includes, for instance, educational attainment (i.e. share of the population with upper secondary or tertiary education), average number of years of schooling per individual, indicators of students' skills in different fields (literacy, numerical etc.) such as the PISA²⁰ scores, for education; infant mortality and life expectancy for health care; extension of road or railways networks for infrastructure expenditure or, finally, indexes of corruption or facility to do business as more general indicators of overall public administration efficiency and reliability (see European Commission, 2008 and 2009; De Castro and Gonzalez-Minzeg, 2008; Afonso et al., 2005; IMF, 1995 for a discussion).

The identification of appropriate output indicators can be controversial and remains to some extent arbitrary, while also posing huge statistical problems, as indicators such as those mentioned above are often available for a reduced number of countries, are not regularly calculated and updated which prevents their use for tracking progress over time and come from different sources raising problems of comparability with other indicators.

Moreover, the ultimate goal is to assess the contribution of public expenditures to socio-economic **outcomes**, such as growth, employment, private investments, or improvement of population's health and living conditions, rather than outputs. The link between inputs, outputs and outcomes is even more complex and still far from being fully understood across most government functions. The **transmission links between expenditure and growth** and other objectives differ across different functions/types, calling for a specific analysis of each individual spending item. Furthermore, there are cases when expenditure in one area affects outputs in other areas, e.g. expenditure aimed at improving the environmental quality of the air has a positive effect on health thereby reducing the need for health care expenditure and bringing overall efficiency gains (i.e. reduction in work days lost for sickness leaves).

Another source of complications is that outputs/outcomes are **conditional on context factors** which are beyond the control of policy-makers. For instance, life expectancy does not only

¹⁹ See total expenditure by the government and utility sector on works, goods and services on p. 8 of DG MARKT's "Public procurement indicators 2010" paper, http://ec.europa.eu/internal_market/publicprocurement/docs/indicators2010_en.pdf.

²⁰ Program of International Students' Assessment (PISA).

depend on the efficiency of the health-care system but also on life-style habits whereas the population's educational attainment and skills' levels depend not only on the education system but also on the family background.

Different methodologies have been developed to assess the efficiency and the effectiveness of government expenditures, which all provide relevant information but also have drawbacks.²¹ All these methodologies suffer from a number of technical drawbacks.

Following on these preliminary remarks highlighting the complexity of measuring public expenditure efficiency and the resulting difficulty to provide "quick fix solutions" or simple indicators to compare countries and monitor progress over time, the following two sub-sections focus on two **special topics which can be deemed illustrative of the wider issues of measuring the efficiency of public expenditures, on the one hand, and promoting efficiency across public administrations, on the other hand.**

III.2 Efficiency of health care expenditure: main findings and recommendations

Against a background of rising demand and constrained resources, ensuring efficiency and cost-effectiveness in the provision of health care services is crucial if countries are to ensure universal access and equity in health care services and their adequate and sustainable financing. This section summarises key findings of existing efficiency analyses of health care sectors and main EU policy guidance in this field over recent years, leaving the more detailed discussion in Annex 1 below.

Overall, **effectiveness in the health care sector refers to the extent to which the health system attains its chosen objectives, proxied by measures of population's health status** (lives saved, life years gained, mortality etc.). Concretely, according to most literature a technically efficient health care system is achieved when a maximum number of lives saved or a maximum number of additional years of life are attained from a set of inputs. This corresponds to the notion of cost-effectiveness.

International comparisons of health systems efficiency (e.g. the 2000 World Health Organisation – WHO - Report) suggest that most countries could further improve their health outcomes with the existing resources. Moreover, countries vary significantly in their ability to translate a similar level of resources into health outcomes (measured by life expectancy or disability-adjusted life expectancy). Hence, empirical efficiency (cost-effectiveness) analysis suggests that **not only "how much is spent" but also "how money is spent" are important determinants of a country's health status.** Comparative international analysis indicates that

²¹ This includes econometric analysis testing the impact of selected spending items (e.g. public investments, education or R&D) on growth or other socioeconomic outcomes; growth decomposition, which, taking as a point of departure a neoclassical production function computes the contribution of specific government expenditure items to different sources of growth (labour, capital or total factor productivity), and non-parametric approaches, which for given inputs calculate a theoretical efficiency frontier for a specific type of public expenditure and measures inefficiency as the distance to the frontier (see below section 3.3).

there is significant room for efficiency improvement in health care and in all types of health care systems.

The question is then how can countries improve efficiency in the health care sector? There is a very extensive literature looking at **different dimensions of health care services provision, attempting to identify possible policy reforms** which can contribute to efficiency gains and greater cost-effectiveness in the health sector. The 2010 EPC/EC Joint Report on Health Systems provides a brief review of this literature (European Commission, 2010). Some policy suggestions apply to all countries, whereas others are country-specific. Both can be summarised as follows:

- Improving the collection and use of information and knowledge to help decision-making in the health sector;
- Strengthening primary care, ambulatory practices and care coordination;
- Correcting price signals in health services markets and align incentives with effectiveness and efficiency;
- Training human resources for health and ensuring a balance between inputs;
- Addressing socio-economic determinants of health and emphasising more strongly health promotion and disease prevention;
- Improving leadership and consensus building and governance.

The 2010 EPC/EC Joint Report attempts to identify good practices that may lead to greater efficiency and cost-effectiveness of health systems, while taking into account country-specific circumstances. It identifies a number of areas for improvements while taking into account long-term financial sustainability concerns. The report concludes that controls on resources and budgets need to be associated with incentive-based reforms, aimed at steering both demand and supply and enhancing micro-efficiency. According to the report, **the main reform measures** are as follows:

1. Ensuring a sustainable financing basis to the sector, a good pooling of funds and a resource allocation that is not detrimental to more vulnerable regions;
2. Adjusting existing cost-sharing systems to ensure that they encourage a cost-effective use of care;
3. Ensuring a balanced mix of different staff skills and preparing for potential staff needs due to ageing;
4. Improving and better distribute primary health care services and reducing the unnecessary use of specialist and hospital care;
5. Increasing hospital efficiency through increasing use of day-case surgery and concentration of some hospital services;

6. Ensuring a cost-effective use of medicines (e.g. greater use of generic medicines) while allowing for innovation in the health sector;
7. Improving the general governance (by ensuring coherence of decision-making, clear priorities and goals and improved management skills) of the system;
8. Improving data collection and information channels and using available information to support performance improvement;
9. Using health technology assessment more systematically to help decision-making processes;
10. Improving population's life-styles and access to more effective health promotion and disease prevention.

Therefore, the remaining question is whether national policies have assessed the need for improving health care sector efficiency and have used the policy recommendations found in the literature. At the EU level a number of steps have been taken which denote **stronger emphasis on the need to improve health care sector efficiency**.

Indeed, the policy lines identified by the 2010 EPC/EC Joint Report have been backed by the Economic and Financial Affairs Council Conclusions of 7 December 2010.²²

Moreover, following the 2012 AGS, six country-specific recommendations were devoted to health care under the European Semester 2012 (see Annex 1). The Council has issued more recently further recommendations in the area of health care, such as inviting Member States to initiate a reflection process supporting the pursuit of modern, responsive and sustainable health systems (June 2011) and to balance the need to provide universal health care and long-term care with an increasing demand for health care services related to ageing population, technological development and growing patient expectations. This enhances the need to assess the performance of health care systems and implement sound and needed reforms to achieve both a more efficient use of limited public resources and the provision of high quality health care within the context of significant budgetary constraints resulting from the high government deficit and debt levels.

In the 2013 Annual Growth Survey (AGS) the Commission issued the following recommendations:

- o In the context of the demographic challenges and the pressure on age-related expenditure, reforms of healthcare systems should be undertaken to ensure cost-effectiveness and sustainability, assessing the performance of these systems against the twin aim of a more efficient use of public resources and access to high quality healthcare.
- o In the field of services, many gains may be reaped by [...] ensuring transparent pricing in healthcare services.

²² http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/ecofin/118273.pdf

o The job potential of expanding sectors, such as [...] healthcare [...], should be tapped through a future-oriented and reliable legal framework, the development of adequate skills and targeted public support.

Concluding, the above discussion **makes a case for Member States to focus to a greater extent on improving health care sector efficiency**. It remains to be seen how Member States will be using existing evidence and will translate existing policy recommendations into concrete policy measures at national level. Nevertheless, **recent developments** are encouraging and **denote an increased emphasis placed on health care systems and the need to improve their efficiency (cost-effectiveness)**. Therefore, **health-care related country specific recommendations may feature more prominently in future European Semesters**.

III.3 Towards more performance-based public spending: case studies

3.3.1 Context and definition

Initiatives aiming at improving the efficiency of public spending through increased linkage of spending to measurable results have been started decades ago in some EU Member States. However, **performance-oriented public spending has become a priority for many Member States** due to: (i) growing constraints on Member States' spending capacity requiring to redefine policies and expected results at an affordable cost; (ii) strengthened public and parliamentary aspiration for fiscal transparency aiming at debating specific policies which make category-oriented budget classification less relevant; (iii) need for a renewed definition of the role of the national public service in comparison to alternatives. Indeed, in several Member States, some competencies have been partially or totally transferred to the private sector, the European institutions or the local and regional governments with the intention to improve the results for citizens, customers and tax payers.

The current section, taking stock of a large variety of practices across Member States, focuses on two types of performance-based spending reforms: **performance-based budgeting** and **public administration reforms**.

Performance-based budgeting (PBB) is defined as "budgeting linking the funds allocated to measurable results"²³. It generally establishes performance targets for budget lines on the basis of various indicators of their actual achievement. The overarching objectives of PBB are the strengthening of accountability towards citizens with more transparent policy and budget information, the optimization of expenditure allocations through better budgetary decision-making processes and the improvement of the quality of public service.

National public administration reforms analysed here share the objective of improving the cost-effectiveness of public spending and the quality of public service²⁴. However, the methodology differs: **performance-based budgeting seeks to fulfil these objectives by a better fund allocation in the budgetary process across all policy areas**, whereas **public administration**

²³ OECD (2007), *Performance Budgeting in OECD countries*.

²⁴ e.g., e-administration, one-stop shops for end-users

reforms supposes that results can be achieved by transforming public service itself. Such reforms are usually implementing **recommendations identified by spending reviews** targeting budgetary aggregates at various levels. In addition, performance-based budgeting is usually an institutionalized process demanding significant adjustments to the budgetary process for future budgetary planning exercises, whereas public administration reforms have been characterized by targeted measures quickly implemented in order to transform the public administration structure (e.g. back-office pooling across entities, lean management projects such as process-reengineering), processes (simplified administrative processes cutting red tape) and culture (individual performance bonuses).

When pursuing the objective to strengthen public spending efficiency, **whatever the instrument chosen, a purely legislative approach is not a sufficient condition for success** because it can fail in structurally reorienting spending and performance management at all levels of public administration. Therefore, when designing national performance reforms, attention should be paid to the following selected **key success factors**:

(i) Secure non-partisan and long-term **political commitment**, define and **coordinate responsibilities** at all level of public administration for the reform;

(ii) Provide **incentives to decision-makers at all levels** (ministers, senior administrative staff, middle-managers) to foster accountability, reward performance and accompany change in administrative behaviours and culture to limit resistance and enshrine performance in daily tasks;

(iii) Develop further the policy-based **analytical capacity** of Ministry of Finance, spending ministries and Parliament, based on the principles of better regulation and making more use of evaluation and impact assessment tools, to challenge targets proposed where needed (e.g., by agencies) and avoid passivity;

(iv) Invest in capturing **quick performance results** on an experimental scope to build credibility and learn for potential broader plans;

(v) Shift the **standpoint of public administration** towards service by acknowledging the needs of end-users while defining policy objectives;

(vi) Improve **data collection systems** to facilitate regular measurement of a limited number of indicators.

Member States have taken very different approaches to enshrine such performance-oriented initiatives in their budgetary processes and in their administrative culture, with various results on fiscal consolidation, end-users satisfaction and state structure reorganization. This section is based on **illustrative case studies of four Member States** featuring above the EU-average share of public spending in GDP²⁵ and committed towards performance initiatives and measuring resulting quantified impact on public savings: France, the Netherlands, Sweden and Austria.

²⁵ 2011 share of general government expenditure in GDP (Eurostat): EU 27, 49.1%; France, 56.0%; Sweden, 51.1%; Austria, 50.5%; the Netherlands, 49.8%.

The drivers of those initiatives were either national fiscal crises (Sweden and the Netherlands in the 1980s/90s) or political commitment (France since the 2000s, Austria currently). The case studies are presented in detail in Annex 2, including an overview of the French and Swedish public administration reforms, and aim at highlighting targeted insights rather than providing a comprehensive analysis of measures taken or their results.

III.3.2 Conclusions

The reviewed case studies (see Annex 2), highlight that **Member States intending to strengthen performance in their public spending have succeeded in generating significant and quantified results in terms of budget transparency, efficiency gains and savings without lowering the quality level of public service** – if not improving it. There is significant cross-fertilization between performance-based budgeting and public administration reforms, as observed in Sweden and France, where the former paved the way for the implementation of ambitious measures for the latter.

However, in terms of outcome, the timeframe and impact differ. In the longer run, initiatives transforming the whole budgetary processes, such as performance-based budgeting, can certainly contribute to redirecting political and administrative culture towards results and accountability. However, their actual impact on fiscal discipline and on the quality of expenditures remains difficult to assess due to the lack of indicators linked to outcomes, or to limited consequences in case of non-achievement of budgetary or performance targets.

On the other hand, in the shorter run, public administration reforms can generate fast and significant results in terms of targeted efficiency gains and total savings provided that they are prepared by rigorous spending reviews, included in long-term strategies, and that their implementation is tightly monitored and constantly supported as a final objective (as opposed to settling for review only). Public procurement reforms can also be an important tool to improve efficiency on the input side. **The current crisis provides the opportunity for Member States to engage more resolutely** – even before launching performance-based budgeting impacting the whole budgetary process - **in implementing structural changes in their administration and in the way public policies are defined, carried out and financed**, with an upfront commitment for implementation and quantified results stabilizing the share of general government expenditure in GDP and potentially leveraging saved resources to investment in growth-enhancing policies.

The entry into force of the EU economic governance legislative package (the so-called ‘six-pack’) **and the signature of the inter-governmental TSCG are expected to provide additional incentives to Member States to introduce or launch performance initiatives at a national level**, with a view to enabling the fulfilment of new fiscal requirements. It shall be reminded that, although most countries are facing similar challenges, **there is no ‘one-size fits all’ plan**. Strategies and implementation plans should be, indeed, built according to national budgetary processes and administrative cultures so that the impact of performance reforms on value-for-public money is maximised.

IV. Growth-enhancing and high-quality expenditure in the EU budgetary framework

A golden rule for public investments: not the way forward

The discussion so far has underlined the complexity of assessing the quality of public expenditures in terms of both composition and efficiency. In particular it has underlined that this comes not only from statistical and measurement issues, but also from the multi-dimensionality of the subject as each function of government is a subject in itself requiring a specific analysis. This implies that formulating policy recommendations and prioritising a “smarter” and more efficient expenditure structure is equally challenging.

In policy terms, the introduction of a so-called “golden rule” excluding public investments from the relevant deficit figures for the application of the EU budgetary surveillance rules was advocated in the past, but was – for good reasons – not followed²⁶.

Each government must finance its current borrowing by future income. The government's wealth would not change, if the government makes an investment whose net return equals exactly the current borrowing cost. As with private investment, consumption would be transferred into the future. If however the government undertakes a net investment with a net return of zero, then consumption takes place already today. The borrowing today needs to be financed by taxes or expenditure restraint tomorrow.

Thus it is the future generations who have an interest that that the current generation invests in projects with a high net return. But this creates the same incentive problem that has led to rules-based policy-making and the creation of the Stability Pact in the first place. It can be in the interest of the current generation to borrow at the expense of future generations, in this case by not being very demanding with regard to the returns of investment projects. **The fact that the Stability Pact does not foresee any general investment carve-out is thus a measure of precaution against moral hazard.**

A carve out is not warranted because the returns depend very much on the specific project. Model simulations on the link between public investments and potential growth assume that **government investments directly influence the level of output** or, in certain cases, of private investments; **although this is not necessarily the case for all expenditures items included among public investments** according to national account definition. EU data show that government investment that aims at affecting long-run growth via their impact on private investment and productivity, such as, for instance, expenditure for transport infrastructure or school buildings, are only a share of all government investments.

²⁶ Several EU countries have resorted to this kind of golden rules in the past, but some preferred abandoning them over time. Amongst the most known was the German rule, which foresaw to use gross fixed capital formation as a ceiling for headline deficit, but has been substituted by a debt brake based on a close to balance position in structural terms. The UK rule envisages that, over the economic cycle, the government will borrow only to invest and not to fund current spending. For an extensive discussion, see Part III, section 5.2.4 in Public Finances in EMU 2003: http://ec.europa.eu/economy_finance/publications/publication473_en.pdf

Most studies **do not take into account the negative impact of the budgetary costs necessary to finance government investments.** The explicit modelling of these costs allows taking into account correctly the marginal productivity of public capital, which is given by the difference between the marginal product and the marginal costs of the investment. When the stock of public capital is large, the marginal productivity of further investment becomes negative due to decreasing returns from capital compared to marginal costs which are at best constant. These costs consist, firstly, of the direct budgetary outlays required to finance the investment and, secondly, of the indirect adverse effects on growth associated to the higher taxation introduced to raise corresponding revenues.²⁷

The costs of financing government investments should be taken into account with a thorough assessment of their profitability. In case the projects are not profitable but are undertaken to pursue a countercyclical budgetary policy or to mainly serve special interests, the revenues generated would not cover the costs for the government budget and have a negative impact on overall fiscal sustainability.²⁸

A carve-out is not warranted because it invites to tinkering with the rules. Expenditures related to the accumulation of human capital, for example wages paid to researchers and scientists are not investment within the meaning of national accounts. Certain exemptions may prompt moral hazard behaviour, such as reclassification of specific items of current expenditures as capital ones in order to reduce relevant deficit figures. According to national accounts, government investment is **defined as gross investment, whereas the economically more appropriate concept would be the change in capital stock or the net investment** (see above, section 2) as the latter takes into account depreciation (i.e. the loss of economic value of the current capital stock due to usage or obsolescence) thereby measuring the actual change in value of the stock of public capital. When depreciation is accounted for, the weight of public investments – and hence the relevance of a golden rule – falls considerably especially for mature economies, i.e. the bulk of EU Member States (see above, chart 3). Moreover, privatisations are recorded as negative public investment in national accounts, thus rendering any general interpretation difficult. Favouring one category of expenditure over another may not be suitable to all circumstances. Countries differ in needs and endowments. The risk is that the set of tax reductions or government expenditures would become too large and hollow out any deficit ceiling, putting an excessive burden on government finances.

Therefore, the previous considerations confirm the validity of the approach espoused by the Maastricht Treaty and the Stability and Growth Pact (SGP), whereby investment is not excluded from the aggregates relevant for the respect of the deficit and debt rules.

²⁷ The relevance of arguments 3) and 4) is stressed in Arslanalp et al. (2010) which show that econometric analyses tend to find a larger effect on output if change in public capital stock is used instead of gross investments and that such an impact decreases with the level of public capital stock. A further reason is constituted by the fact that the causal relationship between GDP or GDP growth and investments is unclear, with effects possible in both directions. As a consequence estimates can easily be biased.

²⁸ This is true also if one takes into account indirect revenues, i.e. government revenues generated from higher growth. According to Buiter et al. (1985) this is the typical case for public investments which may - typically should have in fact - a positive impact on output but not yield government revenues when provides a public good and are therefore likely to have to be financed by increased taxes.

It thus remains first and foremost the choice and responsibility of the relevant budgetary authority to prioritize specific budgetary categories within the overall borrowing constraints. If within this responsibility certain spending items are deemed to deserve protection, national policy frameworks setting expenditure targets should better prioritise such items. As a consequence, other categories of spending, such as government consumptions, the wage bill (wages and/or employment), and social transfers would be correspondingly hit harder.

Public expenditure on investment projects and their treatment by the reformed SGP

Credible and growth-friendly consolidation that improves the efficiency of the tax structure as well as the quality of public spending will contribute to stimulating growth. As recommended in the Annual Growth Surveys 2012 and 2013, the Member States should strive in particular to maintain an adequate fiscal consolidation pace while preserving investments aimed at achieving the Europe 2020 goals for growth and jobs. The 2013 AGS underlines that *"Investments in education, research, innovation and energy should be prioritised and strengthened where possible, while ensuring the efficiency of such expenditure. Particular attention should also be paid to maintaining or reinforcing the coverage and effectiveness of employment services and active labour market policies, such as training for the unemployed and youth guarantee schemes"*. **The EU fiscal framework offers enough scope to balance the acknowledgment of productive public investment needs with fiscal discipline objectives.**

In the preventive arm of the SGP, investment expenditure receives a special treatment under the new expenditure benchmark. In particular general government gross fixed capital formation is averaged over a number of years, in order to avoid Member States to be penalized by annual peaks in investment. Furthermore, all expenditure on Union programmes fully matched by Union funds is also excluded from the expenditure developments under consideration.

Concerning the corrective arm of the SGP, the specific Protocol on the excessive deficit procedure (EDP) annexed to the Treaties envisages that budgetary discipline is assessed against reference values for the general government deficit and debt that, for the reasons laid out above, do not differentiate amid different kind of expenditure. Still, **public investments are one of the relevant factors that can be duly taken into account in the Excessive Deficit Procedure**, and in particular in the Article 126(3) Report, which is the step that precedes the launch of an EDP. Specifically, according to Article 126(3) of Treaty "the report shall also take into account whether the government deficit exceeds government investment expenditure and take into account all other "relevant factors". The list of the other relevant factors in the regulation on the EDP includes "developments in primary expenditure, both current and capital ... the implementation of policies in the context of the common growth strategy of the Union, and the overall quality of public finances".

The importance of relevant factors has increased with the recent reform of the SGP. While previously the SGP stipulated that the consideration of relevant factors could not in any case prevent a Member State from being placed in EDP, unless its deficit was specifically close to the 3% of GDP Treaty reference value and the excess over it was temporary, the reform led to a distinction for Member States with a debt ratio below the 60% of GDP reference value. Moreover, the reform, in operationalizing for the first time the debt criterion of the EDP through the adoption of a debt reduction benchmark, would place a Member State in EDP only

after the assessment of the relevant factors. Finally, even in the case of a Member State being placed in EDP, the SGP foresees that the relevant factors should be taken into account in the subsequent steps of the procedure, namely, when formulating the recommendations for the correction of the excessive deficit.

These existing arrangements, together with a stronger focus on expenditure quality in the monitoring of Member States fiscal policies (see below), are sufficient to cater for the need to improve the structure and efficiency of public expenditures.

As announced in the Communication "A Blueprint for a Deep and Genuine Economic and Monetary Union: Launching a European Debate" recently adopted, the Commission will explore further ways within the preventive arm to accommodate investment programmes in the assessment of Stability and Convergence Programmes. Specifically, under certain conditions, non-recurrent, public investment programmes with a proven impact on sustainability of public finances could qualify for a temporary deviation from the medium-term budgetary objective or the adjustment path towards it.²⁹ This could apply, for example, for government investment projects co-financed with the EU, consistently with the framework of macro-conditionality.

While a fully-fledged framework would have to be worked out to operationalize such conditions (notably in terms of information/definitional requirements), a specific treatment of public investment with a verifiable long-term impact could only lead to a temporary deviation from the medium term budgetary objective (MTO) or the adjustment path towards it. The Commission intends to issue a Communication on the appropriate path towards the MTO in spring 2013. Specific provisions for investment projects should not be confused with a 'golden rule', which would allow a permanent exception to all public investment. Such an indiscriminate approach could easily put in danger the prime objective of the SGP by undermining sustainability of government debt.

V. A way forward for the assessment of quality of public expenditures in the EU

Although the analysis discussed in this report provides several important insights on the topic of quality of public expenditure, knowledge is far from complete and hence further analytical work should be carried out on both growth-friendly composition of public expenditure and efficiency issues. Within the existing EU budgetary surveillance framework, "a way forward" to

²⁹ The SGP embeds specific provisions that allow for such a possibility. Regulation 1466/97 - Article 5(1): "...When defining the adjustment path to the medium-term objective for Member States that have not yet reached this objective, and in allowing temporary deviation from this objective for Member States that have already reached it, provided that an appropriate safety margin with respect to the deficit reference value is preserved and that the budgetary position is expected to return to the medium-term budgetary objective with the programme period, the Council and the Commission shall take into account the implementation of major structural reforms which have direct long-term positive budgetary effects, including by raising potential sustainable growth, and therefore a verifiable impact on the long-term sustainability of public finances..."

strengthen Member States' focus on policy measures improving the quality of public finance along the lines discussed in this report could be spelled out as follows:

1. Conducting regular dialogues and peer-reviews in the appropriate committees on the composition and efficiency of national public expenditures with a special focus on ensuring that consolidation packages do not weigh disproportionately on cuts in more growth friendly items and that savings are, as far as possible, achieved via efficiency enhancing measures without reducing (or while improving) the level of public services delivered to citizens. These peer-reviews could build, with the necessary adaptation in light of the current macroeconomic context still heavily affected by the legacy of the economic and financial crisis and of the narrower focus of this report on expenditure composition and efficiency, on the previous dialogue on quality of public finances (QPF) within the Economic Policy Committee, which culminated in the elaboration of the QPF conceptual framework underlying this report. The planned work on efficient social protection spending in the Social Protection Committee could also contribute to enhancing the quality of public expenditure.
2. Given the complexity of the issues, in particular as regards the specificities of each government function and the need to gather a sufficiently broad set of indicators covering inputs, processes, outputs and outcomes, this policy dialogue should be centred around selected topics, such as:
 - (i) Areas of expenditure, with a preference for those on which the Commission and EU policy committees have already developed a common framework for the assessment of the quality and evolution of public expenditure, e.g. age-related expenditures.
 - (ii) Budgetary frameworks for improving public performance expenditure management. This would include supporting Member States committing to performance-oriented initiatives with value-added in terms of long-term efficiency gains; and especially fostering a larger use of spending reviews, impact assessments and evaluations, e.g. by promoting the assessment and exchange of experiences and best practices among Member States and, on that basis, identifying common principles and recommended features. This should lead to an improvement in the allocative efficiency of budgetary resources, supporting the achievement of budgetary targets while not jeopardising levels of public services.
3. Finally, increasing priority to quality of public expenditure should be given both within EU policy guidance, i.e. via the Country Specific Recommendations (CSR) issued every year within the EU Semester, and in national fiscal frameworks, via improved reporting of relevant measures in the Stability and Convergence Programmes through the following tools:
 - (i) More comprehensive and detailed tables on the economic and functional breakdown of public expenditures (and changes thereof),
 - (ii) More detailed information on measures aimed at enhancing the efficiency of expenditures across different functions and of public administration in general.
 - (iii) Better spelling out of the likely macroeconomic impact of envisaged changes in the structure and efficiency of expenditures.

The issues raised in this report, mainly the need for a growth-friendly composition of consolidation measures and to increase the efficiency of government expenditure including

through public administration reforms, are reflected in the Commission's 2013 Annual Growth Survey (AGS).³⁰ Moreover, the regulatory framework for cohesion policy introduced for the future a thematic objective for enhancing institutional capacity. In particular, the European Social Fund could be used to support the public administration reforms necessary to ensure a greater efficiency of public expenditure.

³⁰ See Macroeconomic Report – Annex II to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "Annual Growth Survey 2013".

References

- Afonso, A. and D. Furceri (2008), 'Government Size, Composition, Volatility and Economic Growth', *ECB Working Paper* No. 849.
- Afonso, A. and St. Aubyn, M., (2005), "Non-parametric approaches to education and health efficiency in OECD countries," *Journal of Applied Economics*, Universidad del CEMA, 0, pp. 227-246.
- Afonso, A. and St. Aubyn, M., (2006), "Relative Efficiency of Health Provision: a DEA Approach with Non-discretionary Inputs", ISEG-UTL Economics Working Paper, No. 33/2006/DE/UECE. At: <http://pascal.iseg.utl.pt/~depeco/wp/wp332006.pdf>
- Afonso, A., W. Ebert, L. Schuknecht and M. Thöne (2005), "Quality of Public Finances and Growth", *ECB Working Paper* 438.
- Anand, S., Ammar, W., Evans, T., Hasegawa, T., Kissimova-Skarbek, K., Langer, A., Lucas, A.O., Makubalo, L., Marandi, A., Meyer, G., Podger, A., Smith, P., Wibulpolprasert, S., Members of the Scientific Peer Review Group on Health Systems Performance Assessment, (2003), "Report of the Scientific Peer Review Group on Health Systems Performance Assessment.", In: Murray, C.J.L. and Evans, D.B. (eds.), (2003), *Health Systems Performance Assessment Debates, Methods and Empiricism*, WHO 2003, pp. 839-843. At: [http://whqlibdoc.who.int/publications/2003/9241562455_\(part5\).pdf](http://whqlibdoc.who.int/publications/2003/9241562455_(part5).pdf)
- Arslanalp, S., F. Bornhorst, S. Gupta and E. Sze (2010), "Public Capital and Growth", *IMF Working Paper* 175.
- Barrios, S. and A. Schaechter (2009), "Gauging by Numbers: A First Attempt to Measure the Quality of Public Finances in the EU", *European Economy, Economic Paper* 382 (available on-line at: http://ec.europa.eu/economy_finance/publications/publication_summary15779_en.htm).
- Bobay F.(2010), "Institutional Foundations for Performance Budgeting in France", *World Bank Results, Performance Budgeting and Trust in Government*.
- Botella, B. (2012), "François Hollande veut réduire le poids des dépenses publiques", article on <http://www.acteurspublics.com>.
- Buiter, W. H., Persson T., and P. Minford (1985), "A Guide to Public Sector Debt and Deficits," *Economic policy*, 1(1), 13-79.
- Conte, A., P. Schweizer, A. Dierx and F. Ilzkovitz (2009), "An Analysis of the Efficiency of Public Spending and National Policies in the Area of R&D", *European Economy, Occasional Paper* 54 (available on-line at: http://ec.europa.eu/economy_finance/publications/publication_summary15845_en.htm).
- Curristine, T. (2009), "Performance Budgeting (PB) in OECD Countries", OECD Presentation at the *Performance budgeting and the quality of public spending Conference, Ministero dell'Economia e delle Finanze –Ragioneria Generale dello Stato Rome, Italy*.
- De Castro, F. and J. M. Gonzalez-Minguez (2008), "La Composicion de las Finanzas Publicas y el Crecimiento a Largo Plazo: un Enfoque Macroeconomico", *Banco de España, Documento Ocasionales* 0809.
- Debets, R. (2008), "Performance Budgeting in the Netherlands" in *OECD Journal on Budgeting*.

Debets, R. and H. Vossers, (2010), "Using performance information in the Netherlands", *World Bank Results, Performance Budgeting and Trust in Government*.

Docteur, E. and Oxley, H., (2003) "Health-Care Systems: Lessons from the Reform Experience.", OECD Health Working Papers No. 9, OECD 2003. At: <http://www.oecd.org/dataoecd/5/53/22364122.pdf>

Dubertret, J. (2011), "Révision générale des politiques publiques et politique budgétaire", *Rencontre annuelle des Hauts responsables du budget de l'OCDE*.

Erlandsen, E., (2008), "Improving the efficiency of health care spending: What can be learnt from partial and selected analyses of hospital performance?", OECD Economic Studies No. 44, 2008/1, OECD 2008. At: <http://www.oecd-ilibrary.org/docserver/download/fulltext/1308011ec002.pdf?expires=1291711561&id=0000&acname=ocid194935&checksum=9A2182EA509FF8E10036807DA3ECAE47>.

European Commission (2002), 'Public finances in EMU — 2002', *European Economy No 3/2002*, (available online at http://ec.europa.eu/economy_finance/publications/publication_summary1666_en.htm).

European Commission (2003), "Public finances in EMU – 2003, Part III: Public investment and its interaction with the EU's budgetary rules", *European Economy No 3/2003*, pp. 99-131 (available online at http://ec.europa.eu/economy_finance/publications/publication_summary479_en.htm).

European Commission (2004), "Public finances in EMU – 2004, Part IV: Quality of public finances: what role within the EU framework for economic policy coordination?", *European Economy No 3/2004*, pp. 179-217 (Available online at http://ec.europa.eu/economy_finance/publications/publication_summary475_en.htm).

European Commission (2008), "Public finances in EMU – 2008, Part III: The quality of public finances and growth: a conceptual framework", *European Economy No 4/2008*, pp. 125-166 (available online at http://ec.europa.eu/economy_finance/publications/publication_summary12834_en.htm).

European Commission (2009a), "Public finances in EMU – 2009, Part II.3: The quality of public finances: data and indicators" *European Economy No 5/2009*, pp. 71-86 (available online at http://ec.europa.eu/economy_finance/publications/publication_summary15289_en.htm).

European Commission, (2011a), Commission Communication: 2012 Annual Growth Survey (AGS), COM(2011) 815 final. At http://ec.europa.eu/europe2020/making-it-happen/annual-growth-surveys/index_en.htm

European Commission (2011b), "Innovation Union Competitiveness report", Chapter 3 "Public investment in research and education", pp. I-74-I-85 (available online at: http://ec.europa.eu/research/innovation-union/pdf/competitiveness-report/2011/chapters/part_i_chapter_3.pdf)

European Commission, Directorate General for Economic and Financial Affairs (2010), Economic Policy Committee / European Commission Joint Report on Health Systems, *European Economy, Occasional Papers 74*. At: http://ec.europa.eu/economy_finance/publications/occasional_paper/2010/op74_en.htm

European Commission (2012), "A blueprint for a deep and genuine economic and monetary union - Launching a European Debate", COMMUNICATION FROM THE COMMISSION, COM(2012) 777 final/2 of 30.11.2012. Fried, H.O., Lovell, C.A. and Schmidt, S.S. (eds) *The Measurement of Productive Efficiency and Productivity Change*, New York, Oxford University Press.

Fried, H.O., Lovell, C.A. and Schmidt, S.S. (eds) *The Measurement of Productive Efficiency and Productivity Change*, New York, Oxford University Press.

Gravelle, H., Jacobs, R., Jones, A. and Street, A., (2002), "Comparing the Efficiency of National Health Systems: Econometric Analysis Should be Handled with Care", University of York, Health Economics, UK, Manuscript, 2002.

Gravelle, H., Jacobs, R., Jones, A. and Street, A., (2003), "Comparing the efficiency of National Health Systems: a sensitivity analysis of the WHO approach", *Applied Health Economics and Health Policy*, 2:3, pp.141-7.

Greene, W., (2004), "Distinguishing between heterogeneity and inefficiency: stochastic frontier analysis of the World Health Organization's panel data on national health care systems", *Health Economics*, 13:10, pp. 959-980.

Grigoli, F. (2012), "Public Expenditure in the Slovak Republic: Composition and Technical Efficiency", *IMF Working Paper* 173.

Häkkinen, U. and Joumard, I., (2007), "Cross-Country Analysis of Efficiency in OECD Health Care Sectors: Options for Research", OECD Economics Department Working Paper, No. 554, OECD 2007. At:

[http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=eco/wkp\(2007\)14&doclanguage=en](http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=eco/wkp(2007)14&doclanguage=en)

Hollingsworth, B. and Wildman, J., (2003), "The Efficiency of Health Production: Re-estimating the WHO Panel Data using Parametric and Non-parametric Approaches to Provide Additional Information", *Health Economics*, 12:6, pp. 493-504.

Hollingsworth, B., (2003), "Non-parametric and parametric applications measuring efficiency in health care.", *Health Care Management Science*, 6:4, pp. 203-218.

Hurst, J. and Jee-Hughes, M., (2001), "Performance Measurement and Performance Management in OECD Health Systems", OECD Labour Market and Social Policy Occasional Paper No. 47, OECD 2001.

Inspection Générale des Finances, Inspection Générale de l'Administration, Inspection Générale des Affaires Sociales (2012), "Bilan de la RGPP et conditions de réussite d'une nouvelle politique de réforme de l'Etat", *Rapport*.

International Monetary Fund (1995), "Unproductive Public Expenditures: A Pragmatic Approach to Policy Analysis", *Pamphlet Series* No. 48.

Jacobs, R., Smith, P.C. and Street, A., (2006), *Measuring efficiency in Health Care: Analytic Techniques and Health Policy*, Cambridge University Press, UK.

Joumard, I, André, C., Nicq, C. and Chatal, O., (2008), "Health Status Determinants: Lifestyle, Environment, Health Care Resources and Efficiency", OECD Economics Department Working Papers No. 627, OECD 2008. At:

[http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=eco/wkp\(2008\)35&doclanguage=en](http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=eco/wkp(2008)35&doclanguage=en)

Joumard, I., André C. and Nicq, C., (2010), "Health care systems: efficiency and institutions", OECD Economics Department Working Papers No. 769, OECD 2010. At: <http://www.oecd-ilibrary.org/docserver/download/fulltext/5kmfp51f5f9t.pdf?expires=1291635143&id=0000&acname=guest&checksum=44B34C27DA66D1A2D209747A61C2A1B8>

Martinez-Mongay, C. (2002), 'Fiscal policy and the size of governments', in: Buti, M., J. von Hagen and C. Martinez-Mongay (eds.) *The behaviour of fiscal authorities. Stabilization, growth and institutions* (Palgrave), pp. 76-93.

Miller, R.D. and Frech, T., (2002), "The Productivity of Health Care and Pharmaceuticals: Quality of Life, Cause", University of California, Santa Barbara, UCSB Departmental Working Paper, No. 12-02.

Ministère de l'Economie et des Finances, France (2005), "Budget Reform and State Modernisation in France".

Ministère de l'Economie et des Finances, France (2012), "Guide pratique de la LOLF".

Ministère de l'Economie et des Finances, France (2012), "La LOLF: cadre organique de la performance publique", <http://www.performance-publique.budget.gouv.fr>.

Murray, C.J.L. and Evans, D.B. (eds.), (2003), Health Systems Performance Assessment Debates, Methods and Empiricism, WHO 2003. At: <http://whqlibdoc.who.int/publications/2003/9241562455.pdf>

Nolte, E. and McKee, M., (2003), "Measuring the health of nations: analysis of mortality amenable to health care", *BMJ*, 327, 1129.

Nolte, E. and McKee, M., (2004), "Does Health Care Save Lives? Avoidable Mortality Revisited", The Nuffield Trust for Research and Policy Studies in Health Services.

OECD (2007), "Performance Budgeting in OECD Countries".

OECD (2008), "Performance Budgeting: A User's Guide", *Policy Brief*.

OECD (2011), "Value for Money in Government: The Netherlands 2010", *Value for Money in Government*, OECD Publishing.

OECD (2012), "Main Science and Technology Indicators, Volume 2012 Issue 1".

OECD, (2002), *Measuring Up: Improving Health System Performance in OECD Countries*, OECD 2002. At: <http://www.ikwilwerken.nl/pdf/eu/8102011ehealthsystem.pdf>

Or, Z., (2001), "Exploring the Effects of Health Care on Mortality Across OECD Countries", OECD Labour Market and Social Policy Occasional Paper No. 46, OECD 2001.

Or, Z., Wang, J. and Jamison, D., (2005), "International Differences in the Impact of Doctors on Health: A Multilevel Analysis of OECD Countries", *Journal of Health Economics*, 24, pp. 531-560.

Puig-Junoy, J. (1998), "Measuring Health Production Performance in the OECD", *Applied Economic Letters*, 5:4, pp. 255-259.

Räty, T. and Luoma, K., (2005), "Nonparametric country rankings using health indicators and OECD health data". *Valtion taloudellinen tutkimuskeskus*, 74.

Retzlaff-Roberts, D., Chang, C. and Rubin, R., (2004), "Technical Efficiency in the Use of Health Care Resources: A Comparison of OECD Countries", *Health Policy*, 69, pp. 55-72.

Rexed, K. (2008), "Institutional Foundations of Performance-Informed Budgeting in Sweden", *World Bank Results, Performance Budgeting and Trust in Government*.

Robinson, M. and D. Last (2009), "A Basic Model of Performance-Based Budgeting", IMF Fiscal Affairs Department.

Shaw, J.W., Horrace, W.C. and Vogel, R.J., (2002), "The Productivity of Pharmaceuticals in Improving Health: An Analysis of the OECD Health Data", WUSTL Economics Working Paper, HEW series.

Spinks, J. and B. Hollingsworth (2009), "Cross-country Comparisons of Technical Efficiency of Health Production: A Demonstration of Pitfalls", *Applied Economics*, 41:4, pp. 417-427.

Steger, G. (2010), "Austria's Budget Reform: How to Create Consensus for a Decisive Change of Fiscal Rules", *OECD Journal on Budgeting*.

Steger, G. (2012), "Budget Reform: the Austrian Case".

Verhoeven, M., V. Gunnarsson and S. Carcillo (2007), "Education and Health in G7 Countries: Achieving Better Outcomes with Less Spending", WP/07/263, IMF 2007.

WHO, (2000), *Health Systems: Improving performance*, World Health Report 2000. At: <http://www.who.int/whr/2000/en/WHO>, (2003), Report of Scientific Peer Review Group on Health Systems Performance Assessment [http://whqlibdoc.who.int/publications/2003/9241562455_\(part5\).pdf](http://whqlibdoc.who.int/publications/2003/9241562455_(part5).pdf)

World Bank (2010), "Results, Performance Budgeting and Trust in Government".

Annex 1: Efficiency and cost-effectiveness of health care expenditure

A.1.2 Measuring efficiency in the health care sector

As elsewhere, measuring **efficiency in the health care sector implies looking at inputs in relation to outputs**. Health care inputs include labour (physicians, nurses, and other health staff), facilities or equipment (hospitals, health centres, beds). Health care outputs often refer to processes or activity, such as the number of doctors' consultations or the number of patients treated or the number of patient discharges from hospital (see Chart A1 below). Considering, for example, hospital discharges as a measure of output, a technically efficient hospital is one which achieves the maximum possible number of discharges on the basis of its set of inputs (staff, beds, equipment...) ³¹.

Effectiveness in the health care sector refers to the extent to which the health system attains its chosen objectives. It implies looking at health care system *outcomes*, typically proxied by **measures of health status** such as lives saved, life years gained, quality of life ³², avoidable deaths, mortality measures. Therefore, effectiveness is an evaluation of the ability of a health care system to achieve defined outcomes.

However, the application of the efficiency concept to the health care system is not straightforward. Indeed, looking at outputs, and notably measures of health care sector activities such as hospital discharges, is often seen as inaccurate as individuals do not demand health services *per se*, but in order to improve their health. Hence the success of health interventions should be measured with respect to the health gain achieved (Jacobs et al, 2006). As a result, researchers often **redefine efficiency** in the health sector as the technical relationship between inputs (labour, facilities and equipment, or, in practice, expenditure on these inputs) and health outcomes, such as lives saved or longer life expectancy (Joumard et al., 2008 and 2010). A technically efficient position for a decision-making unit (e.g. a country's health care system) is achieved when a **maximum number of lives saved or a maximum number of additional years of life are attained from (the spending on) ³³ a set of inputs ³⁴**. This corresponds to the notion of **cost-effectiveness**. Strongly related with the concepts of efficiency, effectiveness and cost-effectiveness, although much broader, is the concept of **health system performance** ³⁵,

³¹ See, for instance, Erlandsen, 2008, who carried out an international comparison of hospital efficiency along these lines.

³² Beyond gained life years, a growing importance is given to the quality of these additional years. Several indicators have been utilised, such as the disability-adjusted life years (DALYs), the quality-adjusted life years (QALYs) and the healthy life years (HLYs). The latter was adopted as a European Structural Indicator in the Lisbon Strategy (http://ec.europa.eu/health/indicators/healthy_life_years/index_en.htm).

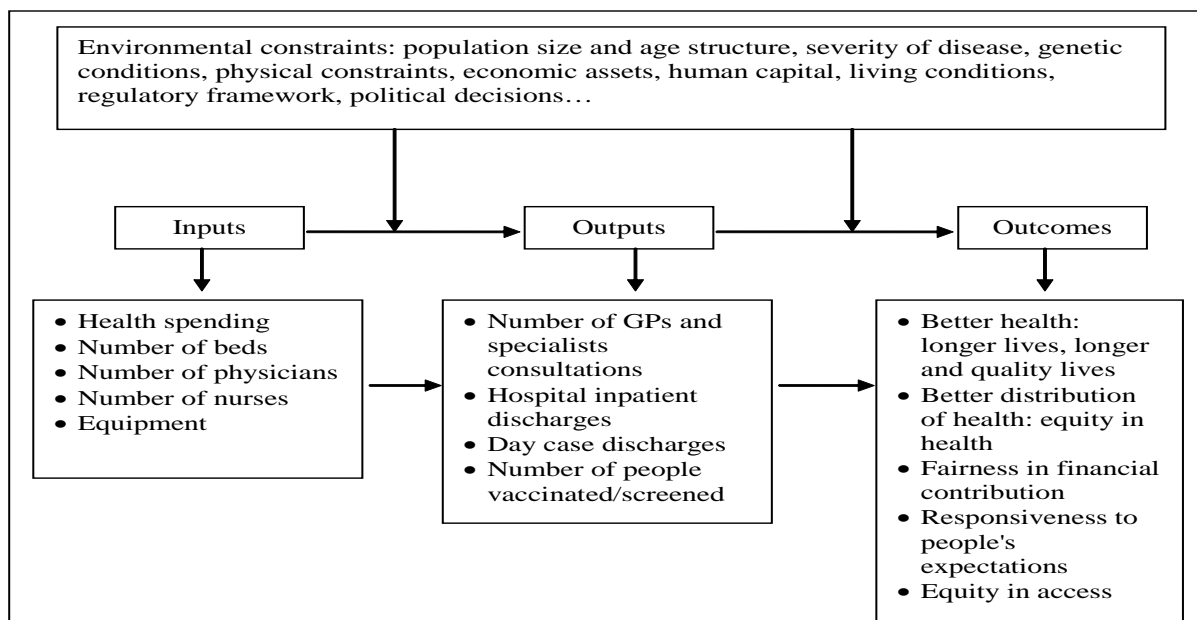
³³ There appears to be wide acceptance of the use of health expenditure per capita as an aggregate indicator of the inputs available to the system (WHO, 2003).

³⁴ The measurement of efficiency is often done at one of three levels: system wide, by disease and by sub-sector of care (Hakkinen and Joumard (2007, OECD). System level analysis is typically based on aggregate measures of the costs of inputs, such as total public expenditure, and aggregate measures of health status, such as life expectancy, healthy life expectancy or mortality. Sub-sector analysis is often done within a country and regards parts of health care system such as the hospital sector, or primary care health centres. As such, it is easier to identify and collect data on inputs and outputs. Disease-specific analysis allows for a more accurate choice of health outcomes and better estimation of the link between inputs and outcomes but data and study examples are still limited.

³⁵ http://www.nist.gov/baldrige/enter/health_care.cfm

which considers additional dimensions besides health outcomes, such as the safety, patient centeredness, timeliness or equity among others (see Table A1 for a list of conceptual frameworks developed to analyse health systems performance).

Chart A1 - Efficiency and effectiveness in the health sector: inputs, outputs and outcomes



Source: Commission services.

In practical terms, efficiency analysis in the health care system involves choosing a decision-making unit (e.g. a country's health system, a hospital, a primary care centre, a doctor). It is then assumed that this unit consumes a certain set of inputs at a cost and produces outputs through a certain technology i.e. production function that determines a production possibility frontier. **A technically efficient decision-making unit is one that lies on that frontier**, while an inefficient unit lies somewhere below that frontier. **The distance or part of the distance to the frontier is called inefficiency** (Fried et al., 2008).³⁶

Better data availability and better estimation techniques have led to an increased use of efficiency analysis in the health care sector, also triggered by a greater interest of policy makers to identify good and bad practice and introduce reforms in the health care sector. As a result, a large number of indicators (inputs, outputs/processes, outcomes) have been used. The analysis has also moved from process/production analysis to measuring outcomes (going as far as considering patient satisfaction and health status inequalities

³⁶ The minimum technical requirements for efficiency analysis are: a) an adequate number of comparable units of observation b) the relevant dimensions of performance (inputs, outputs, outcomes and environmental circumstances) be satisfactorily measured (Jacobs et al., 2006).

across population groups) and attempting to relate inputs and outputs and inputs and outcomes (Hakkinen and Joumard, 2007; Joumard et al., 2008 and 2010, see table A2).³⁷

Table A1: conceptual frameworks to analyse health systems performance

Frameworks Table

| Framework | General Description | Source |
|------------------------------|--|--------------------------|
| Behavioral Healthcare | Framework to assess the effectiveness, efficiency and equity of health-care recognizing the influence of social and individual determinants of health. | Aday, 1998 |
| WHO 2000 | Attempts to provide a clear conceptualisation of health system performance in terms of health system functions and goals. | WHR, 2000 |
| OECD 2001 | OECD framework evaluates how good a health system is, its performance, as the extent to which the system is meeting its objectives. While the OECD does not calculate performance of national health systems, it illustrates which of the key health indicators could be used for this purpose in each of the dimensions proposed. | Hurst & Jee-Hugues, 2001 |
| Control Knobs | A framework based on practical experience of designing, implementing and evaluating reforms. This framework conceptualizes the health system as "a set of relationships where the structural components (means) and their interactions are associated and connected to the goals the system desires to achieve (ends)". | Hsaio, 2003 |
| Commonwealth Fund | The framework defines a health care system as "the ways in which health care services are financed, organized and delivered to meet societal goals for health". A high performance health care system has four main goals: high quality, safe care; access to care for all people; efficient, high value care. | Commonwealth Fund, 2008 |
| OECD HCQI | Framework that defines 'quality of health care', placing it within a wider performance framework that acknowledged the key healthy policy goals adopted by the OECD and its member states. | Arah et al., 2006 |
| WHO Building blocks | Framework for Action, with the aim of 'clarifying and strengthening WHO's role in health systems in a changing world'. The framework establishes a common understanding of what constitutes a health system, what its defining goals are, and what activities are included in health system strengthening. | WHO, 2007 |
| Systems Thinking | The 'Systems thinking' frameworks attempt to create a framework that identifies important interrelationships and repeated events, such that is a dynamic framework, instead of focusing on a static snapshot of health system structures. | Atun & Menabde, 2008 |
| EuroREACH Framework | The EuroREACH framework is based on the OECD HCQI framework highlighting the importance of quality of health care within a wider performance framework. The focus within the health system performance is on quality, equity and efficiency. | EuroREACH, 2012 |

³⁷ Hollingsworth (2003) identifies about 190 studies that use cost and production functions in the health sector, with about 50% of the studies concentrating on the hospital sector. There were also studies on primary care, physicians, pharmacies, nursing homes and purchasers of care.

Table A2: efficiency indicators for health care

Table: Sample of efficiency indicators

| Indicator | What is it? | What are the assumptions and what does it ignore? |
|--|--|---|
| Cost-effectiveness of certain intervention | Cost per QALY | Assumes average costs of providing intervention do not change with scale; major data constraints. |
| Emergency department (ED) visits that could have been seen in less invasive settings | The proportion of ED visits that could have been seen in a different, less costly setting | Ignores quality of care. Depends on definitions. |
| Average length of stay | The number of days per hospital inpatient stay | Cases are identical, both in terms of outcomes and in terms of intensity. |
| Unit costs | Estimates of costs | Assume uniform treatment, uniform accounting methods, ignore quality. |
| Case-mix adjusted cost per episode of care | The average costs for treating a certain type of condition | Cases are identical, both in terms of outcomes and in terms of intensity; assumes uniform treatment, uniform accounting methods. |
| Duplicate medical tests | The number of tests that are done more than once for the same patient | Assumes any duplicate test is an inefficiency regardless of situation. |
| Share of total expenditures spent on administration | The percentage of total health expenditures dedicated to administration | Assumes that greater share of admin expenditure is inefficient without accounting for scale. Highly dependent on accounting methods used. |
| Labour hours per episode of care | The number of hours per case-mix adjusted episode of care | Assumes patients require the same intensity of care; difficult to measure accurately across a large sample; affected by health system design as well as efficiency. |
| Share of health worker hours spent treating patients | The percentage of health worker hours spent treating patients | Assumes patients require the same intensity of care; difficult to measure accurately across a large sample; assumes time not spent with patients is unproductive. |
| Disease costs | The average cost per case of treating a certain disease | Can be difficult to calculate without linking patient data across providers. Assumes uniform case-mix. Highly dependent on accounting methods used. |
| Effective coverage | The share of actual health gains achieved relative to maximum potential health gains for an intervention | Difficult to measure need and quality. |

Source: Culy & Smith (2012). Health Performance Comparisons: an agenda for policy, information and research. *Open University Press*.

A.1.2 Is there room to improve efficiency (cost-effectiveness) in the health care sector?

The 2000 report "Health Systems: Improving Performance" by the World Health Organisation (WHO) was certainly a milestone in the field of health systems efficiency (cost-effectiveness) assessment (WHO, 2000 and Murray and Evans, 2003). The report explicitly defined the objectives, functions and challenges faced by health systems and by conducting a stochastic frontier analysis raised the awareness of policy makers to a new level. Chart A2 shows the results of the efficiency (cost-effectiveness) analysis conducted by the WHO.

It can be seen that in general the **higher public expenditure on health goes together with better health**, as suggested by the positive correlation between the two variables shown in the Chart. In addition, **most countries could further improve their health outcomes with the resources spent on the health sector**. This is measured by the ratio (in percentage) between what the country is achieving in terms of health outcomes compared to what they could achieve (on the basis of stochastic analysis) with the resources they allocate to the system. **Also, countries vary significantly in their ability to translate a similar level of per capita expenditures into health outcomes** (measured by disability-adjusted life expectancy). In other words, for all levels of health expenditure per capita, high and low, some countries could attain a higher level of health with the resources they are putting into the system, just as countries with same level of expenditure have achieved. This suggests substantial room for improvement (i.e. efficiency gains) in many countries.

The WHO Report inspired substantial analytical work in the academic world³⁸ and by the OECD Secretariat.³⁹ Recent OECD efficiency (cost-effectiveness) analysis compares life expectancy, infant mortality, perinatal mortality, premature mortality and health adjusted life expectancy (outcomes) with the costs of inputs (proxied by health expenditure per capita). Chart A3 shows the results of the OECD data envelopment analysis⁴⁰, plotting the calculated potential additional gains in life expectancy for each OECD country, given each country's current level of expenditure (and controlling for a set of other variables such as lifestyles, education, environment and income). The figure presents the results for each country but assembles countries by groups, constructed on the basis of a set of health system characteristics. As with the WHO analysis, the OECD analysis also suggests that there is room to improve health care efficiency (achieve higher life expectancy with the same level of per capita public expenditure on health). This is the case for the OECD as a whole (the black line in the figure shows a potential gain of slightly more than 2 years of life expectancy for the average OECD per capita public expenditure on health) but for all countries (as all show a potential positive increase in life expectancy) in all groups (types) of health care systems. Moreover, cross-country differences are large, suggesting that **countries differ in their ability to transform the financial resources allocated to the sector into health status**. Differences can be quite large of up to 3 years of life expectancy. In other words, for some countries substantial **improvements of population health status** (increases in life

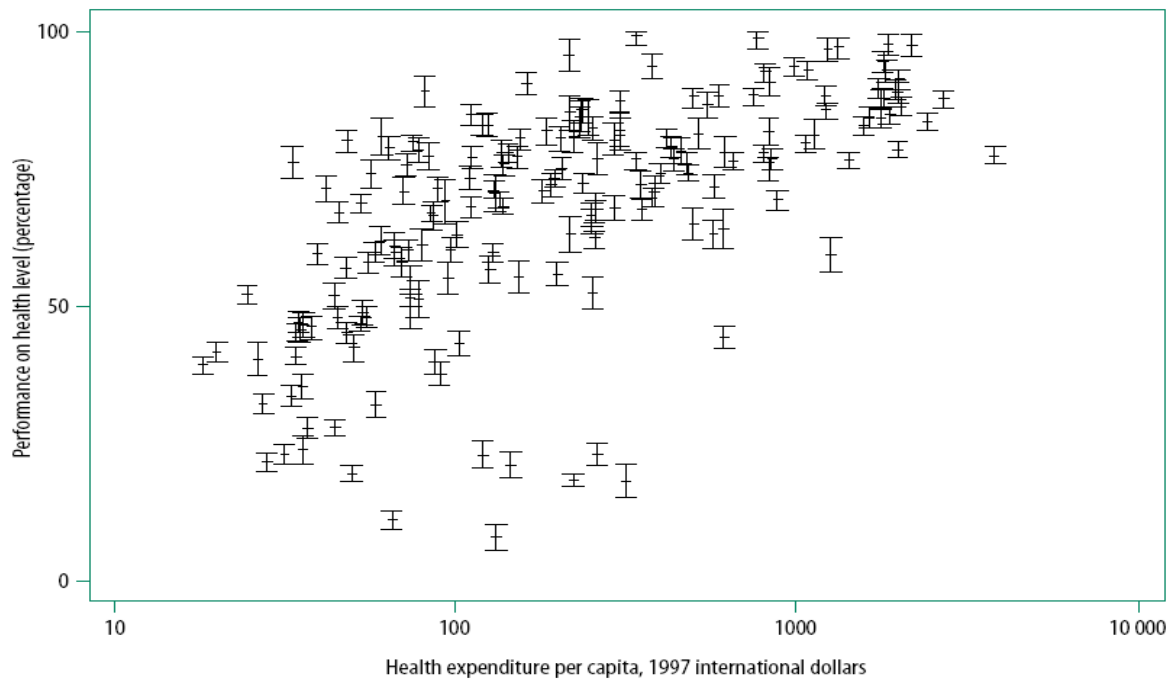
³⁸ The 2000 WHO Report was followed by several re-estimations of the WHO analysis using different model specifications, different outcome variables, different explanatory variables and different data, resulting in different country rankings. Puig-Junoy (1998), Or (2001), Miller and Frech (2002), Shaw et al. (2002), Nolte and McKee (2003, 2004), Hollingsworth and Wildman (2003), Anand et al. (2003), Gravelle et al. (2002, 2003), Green (2004), Retslaff-Roberts et al. (2004), Afonso and St.Aubyn (2005, 2006), Raty and Luoma (2005), Or et al. (2005) Verhoeven et al. (2007), Spinks and Hollingsworth (2009) have been some of those who have re-estimated the WHO analysis or conducted similar (efficiency) analysis of health systems.

³⁹ Mainly the conference in Ottawa on "Measuring up: Improving health system performance in the OECD countries" in 2001 (OECD, 2002) which led to the elaboration of an OECD conceptual framework to analyse health care efficiency (Hurst and Jee-Hughes, 2001; Hakkinen and Joumard, 2007, Docteur and Oxley, 2003) as well as more recent work (Hakkinen and Joumard, 2007; Joumard et al., 2008; Joumard et al., 2010) carrying out international efficiency comparisons.

⁴⁰ DEA aims at estimating the maximum possible production given a set of inputs (or the minimum possible cost of a set of outputs). It uses non-parametric linear programming to fit a curve around the data, which approximates the underlying frontier. It can include more than one output (Grigoli, 2012, Charnes et al., 1978).

expectancy) **could be achieved without increasing spending levels.** Finally, the OECD efficiency estimates show that there is no type of health system that performs unambiguously better i.e. is more efficient than others.

Chart A2: Performance on level of health (disability-adjusted life expectancy) relative to health expenditure per capita, 191 Member States, 1999 (means and confidence intervals)

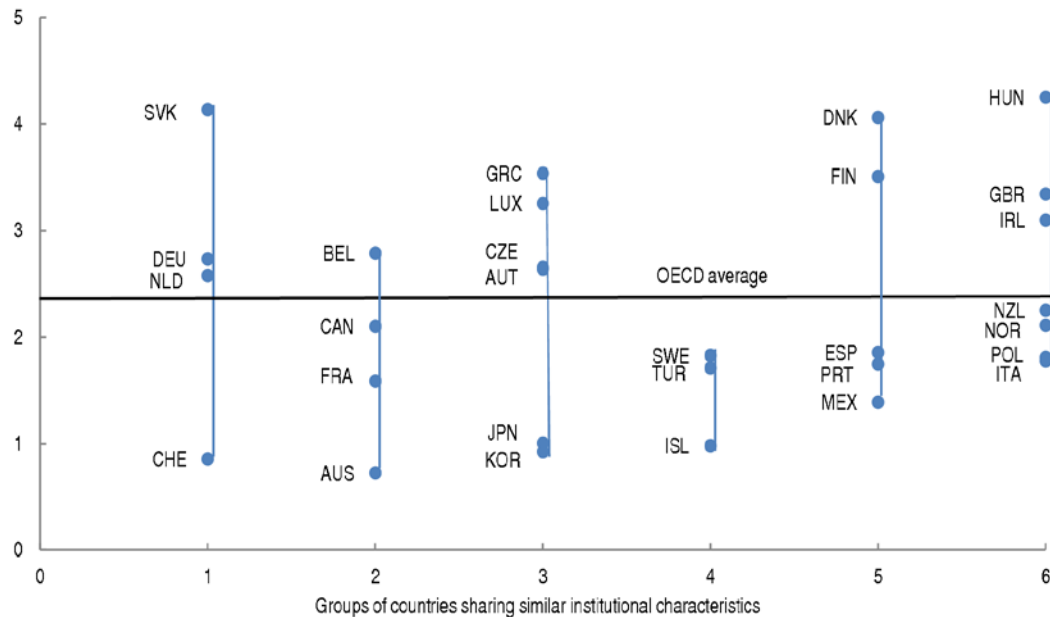


Source: World Health Report 2000 "Health systems: improving performance" - WHO

Note: the vertical axis measures the percentage of disability-adjusted life expectancy actually achieved compared to the theoretical maximum based on the production frontier estimated for any given level of per capita expenditure. The figure is reproduced exactly as in the 2000 WHO Report, without country labels.

Chart A3: Results of OECD DEA analysis on efficiency of health care services

Potential gains in life expectancy (years, DEA)



Source: Joumard, André & Nicq (2010), "Health Care Systems: Efficiency and Institutions", OECD Economics Department Working Paper, No. 769.

To sum up, empirical efficiency (cost-effectiveness) analysis suggests that **"how much is spent" but also and importantly, "how money is spent"** are important **determinants of a country's health status**. Analysis indicates that **there is significant room for improvement in health care and in all types of systems**.

A.1.3 Policy guidance to improve health care efficiency

The question is then how can countries improve efficiency in the health care sector? There is a very extensive literature looking at different dimensions of health care services provision, attempting to understand how various factors affect health system performance (and efficiency in particular) and what possible policy reforms can contribute to efficiency gains and greater cost-effectiveness in the health sector. The 2010 EPC/EC Joint Report on Health Systems provides a brief review of this literature (European Commission, 2010).

From the literature, some policy suggestions apply to all countries. These include better priority setting, more consistent assignment of responsibilities across levels of government, better balanced remuneration systems for providers, better user information on quality and prices of health services. Others, such as those regarding administrative costs or workforce regulations, are country specific. Both types of suggestions from the literature can be summarised as follows:

- Improving the collection and use of information and knowledge to help decision-making in the health sector;

- Strengthening primary care, ambulatory practices and care coordination⁴¹;
- Correcting price signals in health services markets and align incentives with effectiveness and efficiency;
- Training human resources for health and ensuring a balance between inputs;
- Addressing socio-economic determinants of health and emphasising more strongly health promotion and disease prevention;
- Improving leadership and consensus building and governance.

The 2010 EPC/EC Joint Report on Health Systems also attempts to identify good practices that may lead to greater efficiency and cost-effectiveness of health systems, while taking into account country-specific circumstances. In its conclusions the Report identifies a number of areas where improvements can take place to increase the cost-effectiveness of health systems in the medium to the long run, as well as ensuring their long-term sustainability. The report concludes that the usual macro-type controls on resources and budgets need to be associated to incentive-based reforms, aimed at steering both demand and supply and enhancing micro-efficiency.

More specifically the Report concludes that the following main reform measures can improve cost-effectiveness in the health system:

1. Ensuring a sustainable financing basis to the sector, a good pooling of funds and a resource allocation that is not detrimental to more vulnerable regions;

Reform measures in this area include: enlarging the sources of revenues to the sector and increasing the contributory base to strike a better balance between contributors and beneficiaries; fighting tax and contribution evasion and reducing the informal economy; pooling incomes and health risks and devising a formula that adjust regional funding to each region's population characteristics.

2. Adjusting existing cost-sharing systems to ensure that they encourage a cost-effective use of care;

While often used, cost-sharing schemes can be better designed to signal preferred behaviour and help patients follow a cost-effective path of care: from primary care, to outpatient specialist, to hospital, to emergency care, while encouraging patients to reduce the use of unnecessary care.

3. Ensuring a balanced mix of different staff skills and preparing for potential staff needs due to ageing;

Policy reforms in this area should aim at addressing the observed uneven distribution of health staff across regions and across specialties. Countries should develop effective human resources planning mechanisms to address such gaps

⁴¹ Primary care or primary health care is understood here as the initial point of consultation for patients in a health care system. It is usually provided by general practitioners and nurses and often called family doctors and nurses. It is different from specialist care which is provided by doctors who have expertise in a specific area and should be seen as the second line of care. Ambulatory care is care provided without an overnight stay at a hospital. Inpatient care is care delivered in hospitals and assumes at least an overnight stay.

and to prepare to face the coming ageing process which will be felt in the health sector as it is labour intensive.

4. Improving and better distribute primary health care services and reducing the unnecessary use of specialist and hospital care;

Measures in this area should address deficiencies in the number of primary care doctors and nurses, encourage relocation to needed areas and increase opening hours of primary care health centres. They should also be about encouraging referral systems from primary to specialist and hospital care and improving care coordination.

5. Increasing hospital efficiency through increasing use of day-case surgery and concentration of some hospital services;

Policy reforms in this area should address excess/imbalanced hospital capacity, increase bed use, increase the use of day surgery as opposed to inpatient surgery when this is not necessary, supported by better designed more mixed hospital remuneration schemes, which can have an element of performance-related assessment.

6. Ensuring a cost-effective use of medicines while allowing for innovation in the health sector;

Reforms in this area should be directed at providing better access to quality information to patients, health staff and insurers; improving pricing and reimbursement mechanisms to encourage greater use of generic medicines and reduce unnecessary expenditure for insurers and patients; and improving effectiveness and cost-effectiveness assessment of medicines.

7. Improving the general governance (by ensuring coherence of decision-making and improved management skills) of the system;

Better governance includes setting clear priorities and goals for the system, defining clear roles and responsibilities across the system, improving managerial capacity, insuring good information flows and defining clear financing and budgeting procedures across decision levels in the system.

8. Improving data collection and information channels and using available information to support performance improvement;

Policies in this area should aim at creating regular data collection mechanisms on inputs, outputs and outcomes and use it for regular assessment and policy making. Making more use and better connecting survey and administrative data and deeper ICT implementation in the health sector are some of the policy steps to be considered.

9. Using health technology assessment more systematically to help decision-making processes;

Policy here should aim at improving the ability to conduct or use health technology assessment at national level including by pooling available research

at national level and collaborating with other EU countries to help define the necessary framework for implementing health technology assessment

10. Improving population's life-styles and access to more effective health promotion and disease prevention.

Health status is determined by a large number of socio-economic cultural and environmental variables. Education and income redistribution policies can also help improving health status just as with transport or environment policies.

A.1.4 How high is improving health care sector efficiency in the policy agenda?

There is substantial evidence that health care sector can see improvements in efficiency and a vast literature that puts forward policy proposals, which Member States can use to increase efficiency. The question is therefore about the extent to which policy have assessed the need for improving health care sector efficiency and have used the policy recommendations found in the literature.

At the EU level a number of steps have been taken which denote stronger emphasis on the need to improve health care sector efficiency. Indeed, the policy lines identified by the 2010 EPC/EC Joint Report have been confirmed by the Economic and Financial Affairs Council Conclusions on the EPC- Commission Joint Report on Health Systems in the EU of 7 December 2010.⁴²

Following the 2012 AGS, six country-specific recommendations were clearly issued on health care under the European Semester 2012. These include:

| | |
|----------|---|
| Austria | Take further steps to strengthen the national budgetary framework by aligning responsibilities across the federal, regional and local levels of government, in particular by implementing concrete reforms aimed at improving the organisation, financing and efficiency of healthcare and education. |
| Belgium | Continue to improve the long-term sustainability of public finances by curbing age-related expenditure, including health expenditure. |
| Bulgaria | Strengthen efforts to enhance the quality of public spending, particularly in the education and health sectors. |
| Cyprus | Complete and implement the national healthcare system without delay, on the basis of a roadmap, which should ensure its financial sustainability while providing universal coverage. |
| Germany | Continue the growth- friendly consolidation course through additional efforts to enhance the efficiency of public spending on healthcare and long-term care. |

⁴² http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/ecofin/118273.pdf

| | |
|-------------|---|
| Netherlands | Implement the planned reform in long-term care and complement it with further measures to contain the increase in costs, in view of an ageing population. ⁴³ |
|-------------|---|

In addition, in its Conclusions on 6 June 2011, the Council invited Member States and the Commission to "initiate a reflection process under the auspices of the Working Party on Public Health at Senior Level aiming to identify effective ways of investing in health, so as to pursue modern, responsive and sustainable health systems".⁴⁴ Enhancing the adequate representation of health in the framework of Europe 2020 Strategy and in the process of the European Semester is one of the objectives of this reflection process.

More recently, the Council in its Conclusions of 15 May 2012,⁴⁵ invites Member States to balance the need to provide universal health care and long-term care with an increasing demand related to an ageing population, technological development and growing patient expectations in the coming decades. This enhances the need to assess the performance of health care systems and implement sound and needed reforms to achieve both a more efficient use of limited public resources and the provision of high quality health care within the context of significant budgetary constraints resulting from the high government deficit and debt levels.

See above (section III.2) for main messages in the area of health care within the AGS 2013.

⁴³ This reform is about separating the costs of medical care from the costs for assisted living. Patients will pay part of the latter out of their pocket. This will take costing exercise to estimate the share of medical care, so is both about cure and care.

⁴⁴ See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:202:0010:01:EN:HTML>

⁴⁵ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/130261.pdf

Annex 2: Case studies on performance-based public spending

CASE STUDY 1: France – an example of institutionalized programme-budgeting preparing an ambitious state administration reform

France shifted the focus of its budgetary procedure from expenditures by administration to performance by public policy, with the organic by-law adopted in 2001 (*Loi organique relative aux lois de finances, LOLF*) and fully applied for the first time in 2006. The reform encompasses the entire budget framework and the whole central state budget. This case study proposes to focus on three innovations of performance-informed budgeting in France and describes its impact on the subsequent state administration reform launched in 2007: (1) Programme-based budgeting, (2) Managerial responsibility and accountability, and (3) State administration reform.

(1) Programme-based budgeting

The reform has overhauled the budget structure, which is no longer only organized by type of expenditure (personnel, investment, etc.). A three-tier structure was introduced in order to reflect objectives pursued, from a strategic level to a more operational level securing the implementation. First, the *Missions* reflect the State's major public policies and potentially involve several Ministries (e.g., security, social and pension regimes, education). Secondly, each *Mission* consists of several *Programmes* (e.g.: primary education), which are broken down into *Actions*. The Parliament votes the budget by mission and determines a binding spending ceiling for each programme. 32 Missions and 125 Programmes were envisaged in the 2012 Draft Budget Bill (*Projet de Loi de Finances 2012*).

In practice, each Programme is defined in an Annual Performance Plan (*Projet Annuel de Performance, PAP*) appended to the Budget Act. Each PAP combines financial and performance measurements including: the strategy, the objectives⁴⁶ and the corresponding performance indicators with an estimate for the coming year plus a medium-term target, the public entities involved, the expenditure allocated to achieve the objectives (including tax expenditure since 2008) and its indicative split by action (*Guide pratique de la LOLF*, Ministry of Finances). Regarding resources, a binding ceiling for payroll expenditures expressed in number of working full-time equivalent (FTE)⁴⁷ is determined by programme. The programme expected cost is presented according to the principle of "justification of the first euro spent": it details main material and financial variables impacting programme cost, (for example, the number of students per teacher or the cost per kilometre of road built).

This budget structure generates a more transparent and performance-oriented budget allocation by strengthening the link between expenditures and objectives and orienting institutional budgetary dialogue towards policy purposes and results achieved.

⁴⁶ Programme objectives are categorized according to three standpoints: social-economic efficiency for citizens, quality of public service for end-users, efficiency of the management of public finances for the tax-payers.

⁴⁷ ETPT ("Equivalent Temps Plein Travaillé")

The budget execution of each programme is reported in an Annual Performance Report (*Rapport Annuel de Performance, RAP*) mirroring the PAPs structure and appended to the Budget Review Act adopted in the spring. The RAPs highlight the results achieved and the expenditure implementation. They are submitted to the Parliament and reviewed before the following year Budget Act is voted with renewed PAPs in the fall. As a consequence, although results do not automatically determine amounts of resources allocated, they are taken into account in the decision-making process.

(2) Managerial responsibility and accountability

The LOLF enhances public managers' accountability and responsibility by establishing the function of "programme managers" designated by the relevant Minister to supervise a programme. In particular, programme managers commit to the objectives defined in the PAP and are accountable to the Parliament for the national implementation of a programme.

The LOLF provides programme managers with budgetary flexibility and autonomy: spending at a programme-level is binding while spending at a sub-programme level is fungible. As a consequence, the manager may reallocate its resources within a programme to achieve its objectives, under the constraint that personnel expenditures cannot be increased by shifting funding from another expenditure category, while the contrary is allowed (principle of asymmetric fungibility). The programme manager is supported by operational administrative managers who are responsible for breaking down programme objectives, indicators and resources on a targeted geographic or thematic scope and monitor their implementation.

The French Ministry of Budget reports that this approach has already been effective in disseminating the culture of performance-budgeting among public managers, with the expected benefit to enhance the quality of public expenditure in the long run (Ministère de l'Economie et des Finances (2012), *Guide pratique de la LOLF*).

(3) The reform of the state administration

While the LOLF reform sowed the seeds of performance and result-oriented budget planning in the French public administration and parliamentary dialogue, an **ambitious state reform** called 'General Review of Public Policies' (RGPP – *Révision Générale des Politiques Publiques*) **was launched in 2007 with a strong political commitment** from the President and the Government.⁴⁸ The objectives pursued were broader than simply optimising resource allocations as the RGPP reform, **albeit mainly aiming at reducing public spending, was also intended to modernize the administration and to improve public service for end-users.** However, the reform did not focus on strategically redefining public policies (or *missions*) or their responsibilities across government levels (regions, departments, cities)⁴⁹. It was a combination of analytical effort (building on spending reviews) and operational effort aiming at actually implementing measures and capturing their benefits.

⁴⁸ Despite its name, it should therefore not be labelled as a spending review per se

⁴⁹ Indeed, very few missions were abolished.

Although the reform encompassed a systemic approach involving all ministries in a same dynamic, its scope was restricted to the central state (including its central and local agencies, excluding local governments and social security) – accounting for less than 1/3 of general government public spending – and focused on operating costs. The outset of the crisis strengthened the relevance of the fiscal consolidation objective, embodied in the two targets assigned to the RGPP reform: (i) achieve the non-replacement of one out of every two civil servant retirees and (ii) contribute to reap fiscal savings of 15bn€ required to sustain public finances in the budget planning period 2009-2012. Targets for the other objectives were not defined upfront.

From 2007 to 2012, the RGPP reform materialized into 503 measures decided in inter-ministerial Public Policies Modernisation Committees and centrally monitored by a dedicated taskforce established within the Ministry of Budget. These measures were more or less equally divided among those focused on **efficiency improvements**⁵⁰, those focusing on **reorganisation and restructuring**⁵¹ and those aimed at the **simplification and modernisation of public services**⁵². During the budgetary process, each measure was detailed in the relevant Annual Performance Plan (PAP) as introduced by the LOLF reform.

In order to identify relevant measures and secure their effective implementation, the RGPP reform leveraged previous initiatives and reports on the reform of public administration. **170 spending reviews** (called "modernisation audits") had been launched in each ministry in 7 waves between 2005 and 2007 and identified potential measures on a scope of 150bn€ worth of public spending. Some of these measures were later implemented under the RGPP label.

The report released by three State Inspectorates in September 2012 estimates the **financial savings actually generated by the RGPP reform at 11.9 bn € over the period 2009-2012**, saving 3% of the total central state spending. 30% of these savings are generated by payroll volume reduction, with the total number of central state FTEs reduced by 5.4% over the period, corresponding to 150 000 civil servants (of which more than half can be attributed to the RGPP reform). Around half of the payroll savings in value were then redistributed to administrative staff. However, the same report identifies several shortcomings in the methodology of the RGPP reform: lack of involvement of the Parliament, quick top-down decision-process hampering consensus building and negotiations with civil servants, fragmented scope excluding local governments and social security, failure to redefine strategic mission of the state and competence allocation across government levels etc.

Although the new government elected in June 2012 **no longer pursued the RGPP reform as such, it is expected to propose a new roadmap for the reform of the**

⁵⁰ Such as the pooling of back-office functions across ministries into a single operator (for payroll management, for purchasing, for IT) or lean management projects (process-reengineering) in various targeted fields

⁵¹ Emblematic examples include the merger of the tax evaluation and collection agencies or the rationalisation of the network of local state administration (RéATE – Réforme de l'Administration Territoriale) with the number of state services shrinking from 18 to 8 in each region and from 13 to 4 or 5 in each department (there are 26 regions and 100 departments in France)

⁵² e.g., e-administration, one-stop shops for end-users

public administration also covering local governments in December 2012. In particular, the head of the newly created inter-ministerial General Secretariat for the Modernisation of Public Action, operating under the authority of the Prime Minister, announced that as from December, public policies reviews will be conducted every quarter with an enlarged scope (i.e. including central, territorial, local governments, social security, public agencies etc.).

CASE STUDY 2: the Netherlands - a need for budget transparency leading to policy-budgeting

In the Netherlands, several experiments and reforms intending to improve budgetary debate and control of expenditures were carried out since the 1980s, when the country experienced a critical fiscal crisis. This case study reviews three instruments of performance spending in the Netherlands: (1) Policy reviews, (2) Programme accounting and consolidated responsibility and (3) Policy-oriented budgeting.

(1) Policy reviews

After a series of initiatives in the 1970s, **policy reviews were structured in the Netherlands with the 1981 *Reconsideration Procedure*, during a severe fiscal crisis, and strengthened by interdepartmental policy reviews from 1995.**

The objective of the policy reviews in the Netherlands is to suggest alternatives to a given policy that could yield savings through efficiency measures or potentially reduction of service levels⁵³.

The constraint to include at least one policy alternative leading to a minimum 20% reduction of expenditure after four years was later abolished due to pressure from line ministries. In practice, the list of policies to review is proposed by the Ministry of Finance to the Cabinet and to line ministries for approval. The list is included in the September budget memorandum. The results of the reviews, carried out by small working groups involving the Ministry of Finance, the line ministries and external experts, are made public and submitted to the Parliament and later potentially materialized in new measures⁵⁴. Overall, 243 reports were produced in the period 1981-2006, with the annual average shrinking to less than five in the early 2000s. The outburst of the crisis reversed this trend, with 20 reports published in 2010 covering 80% of central government expenditures⁵⁵.

In terms of results, an estimated share of **25% of expected savings from measures decided on the basis of policy reviews was actually captured** between 1981 and 1991 (OECD, 2011), considering that expected savings amounted to 4.2 bn€ over the period 1984-1997. The World Bank⁵⁶ identifies the following key success factors for the implementation of policy reviews: political timing, involvement of independent experts and commitment from senior administrative staff.

⁵³ OECD *Journal on Budgeting*, Volume 7

⁵⁴ To illustrate with a successful example, several welfare reforms were based on an interdepartmental policy review, which was itself spurred by an assessment of the Social Assistance Act performed by the Netherlands Bureau for Economic Policy Analysis (CPB).

⁵⁵ OECD (2011), *Value for Money in Government*

⁵⁶ See the World Bank's 2010 report *Results, Performance Budgeting and Trust in Government*.

(2) Programme accounting and consolidated responsibility

Taking stock of the continuous overruns of expenditures and high deficits in the 1980s, the Netherlands enhanced the quality of the accounting base of the budget with the Accounting System Operation (*Operatie Comptabel Bestel*). **This reform allowed improving the control on government expenditures by increasing the availability of information** through an interdepartmental budget consultation system for the entire state budget⁵⁷. The reform also redefined the role of policy directors within each Ministry by combining the responsibility for the policies and the responsibility for the resources allocated in one function, which was previously split with the control directorate (FEZ) operating in each Ministry. The objective of this **consolidated responsibility over a budget line** was to facilitate decision-making with a better financial monitoring of each policy (e.g., a proposal for a budget cut).

(3) Policy-oriented budgeting

Another relevant structural reform of the budget structure, i.e. the Policy Budgets and Policy Accountability Operation (*Van Beleidsbegroting*, VBTB), was applied as from 2002, with the objective to provide the Parliament with **more transparent budget information structured by policy and policy objectives and highlighting the link to performance and resources**. In particular, three questions have to be answered in the annual budget debated in September: "What do we want to achieve?", "How will we achieve it?", "At what maximal cost?". Each budget chapter (mostly dedicated to one ministry) is now expected to emphasize the overarching political objectives (e.g.: "Children in the Netherlands grow up healthy and safe" in the "Youth Policy" chapter), the subdivision in articles according to operational goals (e.g.: "Guarantee payable youth-care" is one of the five operational goals), the multiannual commitments in terms of revenue and expenditures, as well as specific outcome and output targets and indicators plus resources by article (OECD, 2011). As a consequence, the number of budget lines submitted to the Parliament reduced from nearly 800 to less than 200, with an average of 10 budget articles by ministry. Ministers are accountable for the monitoring and implementation of so-defined policies.

The structure of the annual financial report assessing the achievements of previous year budget mirrors the structure of the budget, with three ex-post performance questions: "Did we achieve what we wanted?", "Did we do what we planned to achieve?", "Did the cost remain below the maximum planned?". It is submitted to the Parliament in May and subsequently debated.

Although its initial objective was not to increase budgetary efficiency but rather to increase transparency, this reform certainly contributes to the adoption of a more result-oriented culture within the ministries. However, it has to be noted that (World Bank, 2010) **the capacity to measure the policy outputs remains limited, due to the poor quality of performance indicators**.⁵⁸

⁵⁷ World Bank's 2010 report "Results, Performance Budgeting and Trust in Government".

⁵⁸ The VBTB structure was updated following a 2004 evaluation, recommending to include performance measurements "only if sensible and relevant" (OECD (2011), *Value for Money in Government*), leading to a reduction of information on outcomes and outputs provided.

CASE STUDY 3: Sweden – a continuous state reform

The Swedish public performance model is based on performance management rather than on a formal performance budgeting as such, with a limited number of centrally defined rules or regulations. Sweden supports performance culture which matches its governance model relying on a public administration composed of small central ministries and a large number of autonomous government agencies. This case study provides an overview of (1) the budget performance goals structure, (2) the agency governance model, and (3) the state reform continuously implemented since the 1990s.

(1) The performance goals budget structure

Management by performance was introduced in the late 1980s in Sweden. **During the budgetary planning, policy goals are proposed by the government and decided by the Parliament, in compliance with a budget structure articulated across policy areas** since 2001⁵⁹. Each policy is divided into activities, for which performance goals are also formulated. The Budget Bill includes both appropriations for agencies or transfer payments for the coming budget year and an ex-post assessment of performance results versus goals previously set by the Parliament. However, according to the OECD⁶⁰ the linkage between performance information provided for each policy area and the proposed appropriation remains weak. The annual national budget sets expenditure limits for policy areas, within which line ministries negotiate funds allocation across the agencies in their respective scope. As a consequence, until the final Budget Bill is presented to the Parliament in autumn, negotiations take place between line ministries and the Ministry of budget, and between line ministries and their agencies, especially regarding policy goals and appropriation allocation.

(2) The agency governance model

In Sweden, independently-managed government agencies spend the biggest share of the budget and employ more than 90% of the public workforce⁶¹: **This governance model is built on the conviction that agency managers are the key drivers for high public performance**. For example, since the 2001-2002 budget reform, agencies have the flexibility to define their resource allocation across activity lines and output within the envelope of a single appropriation for all their expenditures and in compliance with a borrowing limit. The underlying hypothesis here is that such flexible resource allocation at agency-level will deliver better results. Indeed, agency managers' are rewarded for their individual performance and have been granted increased capacity to attribute performance bonuses to their staff. Two documents embody the performance dialogue between line ministries and agencies – although more discussions and negotiations take place: the *Letter of Appropriation*, where the line ministries specify operational and financial goals for the coming budget year, and the annual report, where each agency presents its achievements regarding the envisaged goals and its operating costs.

(3) The continuous state reform

⁵⁹ In 2008 there were 48 policy areas; examples are transports or migration.

⁶⁰ See the OECD report *Performance Budgeting in OECD countries*.

⁶¹ the Armed Forces and the Police Service are two of them.

The Swedish state significantly transformed itself in the 1990s in reaction to a massive economic, social and fiscal crisis. One of the main drivers of the first phase of state reform was the management of the public administration: life-employment of civil servants was abolished and flexibility was introduced, policy outsourcing materialized into personnel transfer to private and public companies (later partly privatized), public wages were aligned on private ones. These efforts paid off: the number of public agents from ministries and agencies was reduced by 135 000 between 1992 and 2000 and **the weight of public payroll spending in the GDP stabilized** to 2.3% between 1995 and 2010. Although fiscal consolidation objectives were achieved, Sweden persisted in its efforts to reform public administration in the 2000s, focusing on the reorganization of public services. Among the most emblematic achievements can be emphasized the following: i) the mandatory pooling of most back office functions for agencies; ii) the consolidation of the number of agencies by 20% without reducing public competences; iii) the establishment of one-stop-shops for end-users (tax, justice, social security) in 290 municipalities starting in 2011. Agency directors were further empowered by limiting shared competences with the agency board and the control over agencies was strengthened through better-designed performance indicators.

CASE STUDY 4: Austria – increased flexibility in exchange for budgetary commitment

Capitalizing both on domestic experiments and on international benchmarking, **Austria is currently implementing a far-reaching budget reform notably introducing performance in federal budgeting.** This case study outlines (1) pilot performance projects, (2) the on-going reform towards performance-informed budgeting and (3) enforcement mechanisms.

(1) Pilot performance projects

Starting in 2000, Austria successfully experimented performance-informed budgeting and increased flexibility in budget management in around 20 "flexible agencies" within different line ministries. These agencies were allowed to build budget reserve from the lump-sum appropriation they received annually for the next year in case financial results exceeded expectations. **This experiment generated estimated savings of 10% in resources and contributed to legitimising a more comprehensive budget reform** intending to introduce performance-budgeting at a federal level⁶².

(2) The on-going reform towards performance-informed budgeting

Learning from the success of its flexible agencies, **Austria is switching more generally from input-oriented budgeting to performance-informed budgeting.** This reform was initiated by a comprehensive budget package adopted by the Federal Parliament in 2007 and 2009, following a two-step approach: a new budget law implemented in 2009 and a more ambitious second step expected to enter into force in 2013. The principle of performance-informed budgeting was enshrined in the Constitution: the former budget principles of being "economical, thrifty and useful" were converted into four new objectives: outcome orientation, efficiency, transparency and true and fair view. As a

⁶²OECD *Journal on Budgeting*, 2010

consequence, the budget structure was simplified in order to better convey performance information: the budget building block is the budget chapter (one for most ministries) which is now subdivided into a few global budgets (e.g., police, labour market). As a consequence, the number of legally binding appropriations dropped from more than 1000 to less than 100 global budgets (up to 4 by ministry). Starting in 2013, the annual budget bill will include, for each budget chapter (at ministry-level), a mission statement and outcome objectives (5 maximum), and for each global budget, output/measures to achieve the objectives (5 maximum). Both objectives and measures at this level are enacted ex-ante at the Parliament when debating on the annual budget bill, and assessed ex-post by the Court of Auditors. This performance system is further cascading at the level of administrative units, where managers are responsible for achieving identified results under a detailed budget which is binding within the administration (approx. 400 detail budgets in total).

(3) Enforcement mechanisms

The Austrian budget reform establishes enforcement mechanisms relying on both incentives and sanctions in order to spread a result-oriented budget culture within its administration and reinforce overall fiscal discipline. In terms of incentives, line ministries and managers of administrative units are granted with more flexibility, since unused funds can be carried forward for the next year and redeployed on other policies (within the relevant budget category). Bonuses are also paid to civil servants when financial and performance goals are reached. In terms of sanctions, the new budget law envisages reduced flexibility in case of non-compliance with budget law and cut in resources allocated to a budget chapter corresponding to amounts potentially spent in excess of the enacted appropriations.

Annex 3: figures on growth-friendly spending items within COFOG-II data

In this annex a cross-country overview of the level of public expenditure across the EU on four items, i.e. **Research and Development (R&D), fuel and energy, transports and communications** – i.e. items considered to be supportive of potential growth according to both theoretical considerations and EU policy guidelines (see Section 2 above) – is provided based on available data from the more detailed COFOG-II breakdown of government expenditure data, covering the 2005-2010 period. The purpose is to illustrate the current state of the art in terms of COFOG-II data availability given their relevance as a complementary source to COFOG-I data for assessing trends in growth-friendly expenditures items (see section 2). It should be underlined that provision of COFOG-II data by Member States is voluntary and COFOG groups are still experimental for several countries.

Table A3: Public expenditure in R&D (in % of GDP), 2005-2010

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------|------|------|------|------|------|------|
| AT | 0,6 | 0,6 | 0,6 | 0,7 | 0,8 | 0,8 |
| BE | - | - | - | - | - | - |
| BG | - | - | 0,1 | - | - | - |
| CY | 0,1 | 0,1 | 0,1 | 0,0 | 0,0 | 0,1 |
| CZ | 0,1 | 0,1 | 0,2 | 0,1 | 0,3 | 0,2 |
| DE | 0,3 | 0,2 | 0,3 | 0,3 | 0,3 | 0,2 |
| DK | - | - | - | 0,1 | - | - |
| EE | 0,3 | 0,3 | 0,4 | 0,5 | 0,5 | 0,4 |
| EL | 0,1 | 0,2 | 0,2 | 0,2 | 0,2 | 0,1 |
| ES | 0,1 | 0,1 | 0,2 | 0,3 | 0,3 | 0,3 |
| FI | 0,6 | 0,5 | 0,5 | 0,5 | 0,6 | - |
| FR | - | - | - | - | - | - |
| HU | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,2 |
| IE | 0,3 | 0,3 | 0,3 | 0,4 | 0,4 | 0,4 |
| IT | 0,3 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 |
| LT | 0,0 | 0,0 | 0,0 | 0,2 | 0,2 | - |
| LU | 0,2 | 0,2 | 0,3 | 0,4 | 0,4 | 0,4 |
| LV | - | - | 0,1 | 0,1 | 0,1 | 0,0 |
| MT | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| NL | 0,6 | 0,6 | 0,6 | 0,6 | 0,7 | 0,8 |
| PL | 0,0 | 0,0 | 0,1 | 0,1 | 0,1 | 0,1 |
| PT | 0,2 | 0,2 | 0,3 | 0,3 | 0,4 | 0,2 |
| RO | - | - | - | - | - | - |
| SE | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| SI | 0,3 | 0,4 | 0,3 | 0,2 | 0,3 | 0,3 |
| SK | - | - | - | - | - | - |
| UK | 0,2 | 0,2 | 0,4 | 0,3 | 0,4 | 0,4 |
| EA-17 | - | - | - | - | - | - |
| EU-27 | - | - | - | - | - | - |

Source: Eurostat

Based on this source, public expenditure on R&D (Table A3) varies between close to 0 and 0.8% of GDP across EU Member States. AT and NL rank at the top end, with 0.8% of GDP in 2010 (latest year available), whereas CY, LV and PL record the lowest figures with a maximum of 0.1% in any given year. The Table highlights a lack or

incompleteness of data for BE, BG, DK, FI, FR, LT, LV, RO and SK. As a result, aggregate figures for EU-27 and EA-17 are also missing.

An alternative source of data for R&D expenditures is the Government Budget Appropriations or Outlays for R&D (GBAORD), covering the 2005-2012 period (European Commission, 2011; OECD, 2012)⁶³. These figures (see table A.4 below) highlight significant divergences from COFOG-II data for some Member States and are generally considered to be more plausible. According to this different source, public budgets for R&D vary between 0.15 and 1.03% of GDP across EU Member States in 2012, with FI and DK ranking at the top end, followed by DE, PT, EE, FR, SE and AT, whereas LT, LV, MT, RO, SK and BG record the lowest figures, all below 0.25%.

Table A4: GBAORD (Government Budget Appropriations or Outlays for R&D) as % of GDP

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------------------|------|------|------|------|------|------|------|------|
| Belgium | 0,59 | 0,61 | 0,60 | 0,68 | 0,67 | 0,67 | 0,63 | na |
| Bulgaria | 0,29 | 0,28 | 0,26 | 0,31 | 0,34 | 0,28 | 0,25 | na |
| Czech Republic | 0,53 | 0,55 | 0,56 | 0,53 | 0,61 | 0,59 | 0,67 | 0,69 |
| Denmark | 0,71 | 0,72 | 0,79 | 0,85 | 0,98 | 0,97 | 1,02 | 1,01 |
| Germany | 0,77 | 0,76 | 0,77 | 0,80 | 0,88 | 0,92 | 0,90 | na |
| Estonia | 0,40 | 0,50 | 0,48 | 0,64 | 0,70 | 0,72 | 0,78 | 0,84 |
| Ireland | 0,46 | 0,45 | 0,50 | 0,54 | 0,58 | 0,53 | 0,52 | na |
| Greece | 0,33 | 0,33 | 0,30 | 0,30 | na | na | na | na |
| Spain | 0,55 | 0,68 | 0,76 | 0,77 | 0,83 | 0,79 | 0,69 | na |
| France ⁽¹⁾ | 0,97 | 0,81 | 0,75 | 0,88 | 0,93 | 0,84 | 0,84 | na |
| Italy | 0,67 | 0,61 | 0,64 | 0,63 | 0,64 | 0,61 | 0,56 | 0,54 |
| Cyprus | 0,32 | 0,32 | 0,42 | 0,42 | 0,50 | 0,46 | 0,43 | na |
| Latvia | 0,20 | 0,27 | 0,30 | 0,29 | 0,21 | 0,16 | 0,15 | na |
| Lithuania | 0,35 | 0,32 | 0,33 | 0,26 | 0,26 | 0,17 | 0,16 | na |
| Luxembourg | 0,31 | 0,33 | 0,37 | 0,47 | 0,54 | 0,58 | 0,58 | 0,63 |
| Hungary | 0,41 | 0,37 | 0,39 | 0,43 | 0,47 | 0,36 | 0,49 | na |
| Malta | 0,19 | 0,16 | 0,15 | 0,15 | 0,16 | 0,23 | 0,22 | 0,20 |
| Netherlands ⁽¹⁾ | 0,79 | 0,80 | 0,78 | 0,79 | 0,86 | 0,87 | 0,83 | 0,79 |
| Austria | 0,66 | 0,66 | 0,65 | 0,70 | 0,78 | 0,79 | 0,80 | 0,80 |
| Poland ⁽²⁾ | 0,29 | 0,32 | 0,32 | 0,30 | 0,34 | 0,53 | 0,44 | na |
| Portugal | 0,70 | 0,69 | 0,75 | 0,86 | 0,92 | 1,02 | 1,02 | 0,90 |
| Romania | 0,22 | 0,33 | 0,37 | 0,40 | 0,30 | 0,28 | 0,26 | 0,21 |
| Slovenia | 0,58 | 0,56 | 0,52 | 0,51 | 0,69 | 0,61 | 0,66 | na |
| Slovakia | 0,28 | 0,27 | 0,21 | 0,28 | 0,30 | 0,30 | 0,23 | na |
| Finland | 1,03 | 1,02 | 0,97 | 0,98 | 1,12 | 1,16 | 1,09 | 1,03 |
| Sweden | 0,86 | 0,84 | 0,79 | 0,80 | 0,91 | 0,88 | 0,83 | na |
| United Kingdom | 0,67 | 0,66 | 0,65 | 0,65 | 0,69 | 0,64 | 0,60 | na |
| EU | 0,71 | 0,69 | 0,68 | 0,72 | 0,77 | 0,76 | 0,73 | na |

Source: DG Research and Innovation - Economic Analysis Unit and Eurostat

⁶³

See

[http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Government_budget_appropriations_or_outlays_for_research_and_development_\(GBAORD\)](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Government_budget_appropriations_or_outlays_for_research_and_development_(GBAORD))

For definition of GBAORD data and

http://epp.eurostat.ec.europa.eu/portal/page/portal/science_technology_innovation/data/database for the actual figures.

Notes: (1) FR, NL: Break in series between 2006 and the previous years; (2) PL: Break in series between 2009 and the previous years; (3) Values in italics are estimated or provisional.

In the period preceding the economic and financial crisis (2005-2007) public R&D budgets increased in most Member States at a somewhat slower pace than GDP, setting the average EU ratio at slightly less than 0.7% of GDP in 2007. In 2008 and 2009 counter-cyclical support to R&D combined with economic recession led to an increase of this figure to 0.77% of GDP in 2009. In 2011, for the first time since 2007, the average amount of public R&D spending in the EU decreased as a percentage of GDP and partial data for 2012 seem to indicate that this trend is set to continue also this year. However this may be offset by rising R&D tax incentives in a majority of Member States.

Table A5: Public expenditure in fuel and energy (% of GDP), 2005-2010

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------|------|------|------|------|------|------|
| AT | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| BE | - | - | - | - | - | - |
| BG | 0,0 | 0,0 | 0,1 | 0,1 | 0,0 | 0,2 |
| CY | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| CZ | 0,2 | 0,2 | 0,2 | 0,1 | 0,1 | 0,1 |
| DE | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| DK | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| EE | 0,0 | 0,4 | 0,2 | 0,4 | 0,0 | 0,0 |
| EL | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| ES | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| FI | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| FR | - | - | - | - | - | - |
| HU | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| IE | 0,0 | 0,1 | 0,0 | 0,2 | 0,1 | 0,1 |
| IT | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| LT | 0,1 | 0,2 | 0,2 | 0,2 | 0,2 | 0,4 |
| LU | 0,3 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| LV | - | - | 0,2 | 0,0 | 0,1 | 0,2 |
| MT | 0,1 | 0,5 | 0,7 | 1,0 | 0,0 | 0,2 |
| NL | 0,1 | 0,1 | 0,1 | 0,1 | 0,2 | 0,1 |
| PL | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| PT | 0,0 | 0,0 | -0,1 | 0,3 | 0,2 | 0,7 |
| RO | - | - | - | - | - | - |
| SE | 0,2 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| SI | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0,0 |
| SK | - | - | - | - | - | - |
| UK | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| EA-17 | - | - | - | - | - | - |
| EU-27 | - | - | - | - | - | - |

Source: Eurostat

With respect to public expenditure on energy and fuel (Table A5), data for BE, DK, FR, LV, RO and SK, (and hence for EU-27 and EA-17) are missing for some or all years considered. In general, energy-related expenditure ranges from 0% to 0.4% of GDP, with the exception of MT, where it reached 0.7% in 2007, and PT, where it reached 0.7% in 2010.

However, as for R&D data, figures in Table A5 also raise some reservations. Firstly, public expenditure in fuel (probably corresponding to daily energy expenses of public administrations) should not be considered on an equal footing to support schemes to renewable energy, investment in energy infrastructure networks or incentives for energy efficiency, which presumably contribute much more to raising potential growth. Secondly, figures in Table A5 may under-estimate the effective amount of energy-related expenditure, as suggested by alternative sources on public support to renewable energy, which in some case exceed the numbers in the Table⁶⁴.

Table A6: Public expenditure in transport (in % of GDP), 2005-2010

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------|------|------|------|------|------|------|
| AT | 2,1 | 2,1 | 2,4 | 2,6 | 2,5 | 2,3 |
| BE | - | - | - | - | - | - |
| BG | 2,1 | 2,2 | 3,2 | 3,5 | 2,0 | 3,5 |
| CY | 1,2 | 1,2 | 0,9 | 0,8 | 0,9 | 1,2 |
| CZ | 4,6 | 4,6 | 4,4 | 5,1 | 5,4 | 4,8 |
| DE | 1,6 | 1,6 | 1,5 | 1,6 | 1,7 | 1,7 |
| DK | - | - | - | - | - | - |
| EE | 2,7 | 2,8 | 2,5 | 2,8 | 2,8 | 2,8 |
| EL | 0,4 | 1,4 | 2,1 | 2,1 | 2,1 | 1,5 |
| ES | 2,3 | 2,2 | 2,3 | 2,4 | 2,6 | 2,3 |
| FI | 2,1 | 2,0 | 2,1 | 2,2 | 2,4 | 2,3 |
| FR | - | - | - | - | - | - |
| HU | 2,5 | 3,5 | 4,1 | 3,4 | 3,3 | 3,1 |
| IE | 2,1 | 2,4 | 2,6 | 3,3 | 2,7 | 2,6 |
| IT | 2,0 | 3,0 | 2,3 | 2,1 | 2,4 | 2,0 |
| LT | 2,1 | 2,1 | 1,8 | 2,4 | 2,0 | 2,0 |
| LU | 3,1 | 3,5 | 2,8 | 2,6 | 3,0 | 2,9 |
| LV | - | - | 3,1 | 3,6 | 3,7 | 3,6 |
| MT | 2,4 | 1,9 | 1,7 | 3,2 | 1,7 | 1,1 |
| NL | 2,5 | 2,5 | 2,6 | 2,7 | 2,9 | 2,9 |
| PL | 2,7 | 2,9 | 3,1 | 3,3 | 3,9 | 4,1 |
| PT | 2,0 | 1,7 | 2,3 | 2,4 | 2,6 | 3,2 |
| RO | - | - | - | - | - | - |
| SE | 2,5 | 2,5 | 2,5 | 2,7 | 3,0 | 3,1 |
| SI | 2,1 | 2,1 | 2,2 | 2,5 | 2,5 | 2,6 |
| SK | - | - | - | - | - | - |
| UK | 1,6 | 1,7 | 1,6 | 1,8 | 2,3 | 1,7 |
| EA-17 | - | - | - | - | - | - |
| EU-27 | - | - | - | - | - | - |

Source: Eurostat

Out of the four expenditure items discussed here, transport is by far the largest one. Transport expenditure varied from 1.1% to 4.8% of GDP in 2010 across the EU (Table A6). CZ and PL rank at the top with figures above 4%, whereas MT, CY and EL rank at

⁶⁴ See a 2011 report from the Council of European Energy Regulators (CEER) on renewable energy support in Europe which include figures on its magnitude in 2009 amounting to 19.1 bn. EUR summing up schemes in 15 MS (AT, BE, CZ, DE, DK, ES, FR, HU, IT, LT, LU, PT, SE, NL and the UK), which corresponds to about 0.18% of the sum of their GDP.

the bottom with 1.1%, 1.2% and 1.5% of GDP, respectively. No data is available for BE, DK, FR, LV, RO and SK, throughout the period considered. Expenditure on communications is on average the smallest of the four items discussed here, as for all countries with available data it never exceeded 0.2% of GDP in the period considered (with the exception of SI in 2008, Table A7). Data are unavailable or only partly available for BE, DK, FR, LV, RO and SK.

Table A7: Public expenditure in communication (in % of GDP), 2005-2010

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------|------|------|------|------|------|------|
| AT | 0,0 | 0,0 | 0,1 | 0,1 | 0,1 | 0,1 |
| BE | - | - | - | - | - | - |
| BG | 0,0 | 0,1 | 0,1 | 0,1 | 0,0 | 0,0 |
| CY | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| CZ | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| DE | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | -0,2 |
| DK | - | - | - | - | - | - |
| EE | 0,1 | 0,1 | 0,1 | 0,1 | 0,0 | 0,0 |
| EL | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| ES | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| FI | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| FR | - | - | - | - | - | - |
| HU | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,0 |
| IE | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| IT | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| LT | 0,0 | 0,1 | 0,1 | 0,1 | 0,0 | 0,2 |
| LU | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0,0 |
| LV | - | - | 0,1 | 0,1 | 0,0 | 0,0 |
| MT | -0,2 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| NL | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| PL | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| PT | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| RO | - | - | - | - | - | - |
| SE | 0,1 | 0,1 | 0,0 | 0,0 | 0,1 | 0,0 |
| SI | 0,0 | 0,0 | 0,0 | 0,3 | 0,2 | 0,2 |
| SK | - | - | - | - | - | - |
| UK | 0,0 | 0,0 | 0,1 | 0,0 | 0,0 | 0,0 |
| EA-17 | - | - | - | - | - | - |
| EU-27 | - | - | - | - | - | - |

Source: Eurostat

Overall, this exercise underlines that, although significant progress was made, further improvements in the availability of COFOG-II data are still required in order to allow their full use for monitoring trends of growth-friendly expenditure items and in some cases (R&D and energy) COFOG-II should be integrated or even replaced by alternative data sources. The caveat highlighted in the main text applies also to four spending items selected here, i.e. that the identification of more growth-friendly spending items is, to some extent, inevitably arbitrary as other COFOG-II items may also have at least indirect positive effects on potential growth.

