INTRODUCTION

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Public expenditure management and reform have become increasingly important in the fiscal policy debate. In many countries public expenditure represents a high percentage of GDP with demographic changes exerting pressure for further increases in its size. In all countries public expenditure programmes greatly affect the allocation of resources, income distribution and fiscal stabilisation.

The debate on the role and the need for public spending is quite long. Radically different opinions have been put forward. Some economists have expressed fear of waste and inefficiency. Adam Smith (Wealth of Nations, 1776, 2, III) noted that "Great nations are never impoverished by private, though they sometimes are by public prodigality and misconduct. The whole, or almost the whole public revenue, is in most countries employed in maintaining unproductive hands. Such are the people who compose a numerous and splendid court … great fleet and armies … Such people, as they themselves produce nothing, are all maintained by the produce of other men's labour."

Other economists have taken a more positive view of public spending. Adolf Wagner (Finanzwissenschaft, I, 1883) noted that "The 'law of increasing expansion of public ... activities' … is the result of empirical observation in progressive countries …. Its explanation, justification and cause is the pressure for social progress and the resulting changes in the relative spheres of private and public economy. … Financial stringency may hamper the expansion of public activities … but in the long run the desire for development of a progressive people will always overcome these financial difficulties."

The issues of expenditure growth and expenditure efficiency have also long been debated. The need for a pragmatic approach was stressed by C.F. Bastable (Public Finance, 1927), who wrote that "The great and increasing importance of state outlay does not … afford a presumption that the movement is advantageous. … Expenditure of itself is plainly not a good; it has to be judged by its object, i.e. by the benefits obtained in return for the sacrifices made. By taking this view we avoid the opposite fallacy that all state outlay is bad, or at all event that the less expenditure the better. …It is not true that the cheapest article is the best, nor is the 'cheapest State' the most serviceable. That state organisation is the best and really the cheapest which … gives the greatest amount of benefits to its citizens and provides best for the future progress of the nation."

The papers collected in this volume consider the main strands of the current debate on public expenditure. Some papers evaluate long-term public expenditure trends, either from an overall perspective or by considering a specific country or a

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specific programme. They highlight the complexity of the factors determining expenditure developments and the difficulty of forecasting long-term developments. Some papers evaluate the criteria for assessing the efficiency of spending programmes both from the theoretical and the empirical point of view. They evaluate the impact of public spending on the use of resources and on income distribution. Some papers explore the macroeconomic impact of changes in public spending and examine the role of public expenditure in the design of fiscal rules and in fiscal consolidation episodes. Both emerging economies and developed countries are considered. Finally, some papers examine the reforms being implemented in many countries. They stress the importance of good public expenditure management and planning. They also point to the problematic aspects of the reforms as well as to the results achieved.

The papers presented at the workshop were allocated in four sessions which are mirrored by the sessions in this volume. Session 1 examines public expenditure trends. Session 2 considers the efficiency and effects of public spending programmes. Session 3 examines the role of public expenditure in fiscal policy management. Session 4 deals with the reform of public expenditure programmes.

1. Public expenditure trends

The eight papers included in Session 1 are mainly aimed at highlighting past and future public expenditure trends. In particular, they discuss the fiscal challenges raised by demographic developments and assess available projections of budgetary items. They also discuss the effects of expenditure composition in order to evaluate the growth-enhancing properties of different categories of outlays.

Heller and Hauner examine the uncertainties associated with long-term expenditure projections in order to discuss the challenges faced by industrialised countries as a consequence of the expected demographic trends. They analyse four aspects that have received relatively less attention in the literature: 1) the uncertainties linked with the assumptions underlying long-term forecasts; 2) the implications of the implicit assumption concerning the absence of shocks affecting the economy over the projection period; 3) the potential room to reduce spending in non-age-related categories; and 4) to increase tax revenue. Given the available empirical evidence, they observe that the room for reducing non-age-related expenditure and to increase tax revenue is limited. Furthermore, the fiscal and economic framework underlying the projection exercises tends to underestimate the risks associated with the policy environment and the costs that can arise from the government response to adverse realisations of these risks.

The paper by Wierts aims at evaluating the development of public expenditure in EU countries in relation to the policy recommendations stemming from the Lisbon agenda. Among the objectives of the Lisbon strategy, the paper considers in particular redirecting public spending towards growth-enhancing investment (physical and human capital and knowledge) and increasing the

efficiency of the public sector. After briefly reviewing the literature analysing the relation between fiscal policy and long-term growth, the Author describes the trends in public expenditure items over the period 1970-2004. The available evidence suggests that the countries that have been more active in reforming budgetary institutions have also been more successful in redirecting expenditure towards public investment and education, which are used as proxies for physical and human capital investment.

The issue of pre-funding as a strategy to tackle the increase in expenditure due to population ageing is addressed by Comley and McKissack. As regards pre-funding practices, the paper describes the current situation in OECD countries and discusses the rationale behind the decision by a few governments to adopt such a strategy. In order to define pre-funding, the Authors consider the need for a government to ensure that current policies are consistent with long-term constraints. This brings to the discussion of the sustainability of public finances. Sustainability is defined as implying a stable net-financial-assets-to-GDP ratio over time. Pre-funding is defined as the situation in which a government raises current taxes more than would be necessary to stabilise the net financial assets–to-GDP ratio. The Authors find that strong pre-funding countries are clustered in Northern Europe and in English-speaking countries. In general, pre-funding is accompanied by slightly higher expected increases in pension expenditures and higher initial tax-to-GDP ratios.

Lefèbvre, Perelman, Pestieau and Vidal discuss the choice of increasing retirement age in order to ensure the sustainability of pay-as-you-go pension systems in a context of projected increases in life expectancy. The paper presents a simple overlapping generation model aimed at explaining the resistance to changes in the retirement age. After having presented the developments of effective retirement age, life expectancy and expected length of retirement for the 15 old EU member states in the period 1960-2000, the Authors estimate a best-practice frontier. The slack from the frontier is interpreted as a measure of the resistance to pension system reforms in each country. Using survey data, countries are divided into two groups: less and more resistant to reforms. The empirical analyses shows that preferences, proxied by a dummy indicating whether the country belongs to the less reform-resistant group, play a role in determining the efficiency of pension systems (measured by the distance with respect to the best practice frontier).

The impact of population ageing on public expenditure development in Finland is analysed by Kinnunen and Tuovinen. As in other countries, ageing will lead to an increase in expenditure on pensions and other welfare services. Other than the increase in spending due to the expected demographic developments, they observe that the risk of overrun in expenditure is mostly related to the production process in public services, given that the public sector in Finland is generally service-oriented. In order to contain the upward trend in costs, productivity developments in the public sector will have to be particularly relevant. The Authors note that if a positive productivity trend were to generate substantial cost containment, tax cuts could also be consistent with fiscal stability. However, this

would imply a reversal of the negative productivity trend observed in recent years. Hence, it would be advisable that the adjustment of expenditure policy allows the government to face the possible negative growth and productivity scenarios.

Bos, Douven and Mot describe four scenarios concerning the future of government spending and health-care spending in the EU and the Netherlands. The scenarios are divided into two groups according to the evolution of national and international institutions. As regards national institutions, scenarios are classified as public or market. In the first case, the importance of equity is stressed; in the second case, private initiative has a larger role. As regards the evolution of international institutions, the scenarios are based on the national willingness to cooperate at the international level. The Authors find that the economic growth of the Netherlands is higher in the more market-oriented scenarios, which are also characterised by a higher inequality and a lower concern for environmental issues. The ageing process has a negative impact on labour supply and employment. While the weight of the government sector is expected to increase under the public scenarios, it shrinks in the more market-oriented ones. Health spending is expected to grow as a share of GDP in all scenarios, though its growth rate is lower in the public ones.

Expenditure developments in Slovenia are discussed by Strojan Kastelec. After describing the main trends observed since the early Nineties, the Author evaluates the impact of population ageing. After 1992, social security payments and wages have shown the highest growth rates while investment spending has been relatively stable. In the coming decades, population ageing will have a relevant impact on health and pension outlays. Projections taking into account demographic trends and the provisions introduced by the reform enacted in 2000, show that the replacement rate and the support ratio will display significant reductions. Notwithstanding this, a growing deficit for the pension fund is expected; the deficit would increase up to 5 per cent of GDP in 2050. The decrease in the replacement rate could lead to concerns on the pensioners' welfare, raising the issue of the need of supplementary funded pension schemes. If the replacement rate were to be kept constant at the 2004 level, the projected deficit would double.

The paper by Madhusudhan discusses the annual trends in state expenditure in New Jersey for the period 1993-2003 and presents an analysis of expenditure composition. In the fiscal year 2003, elementary and secondary education and Medicaid were the more relevant items, accounting for more than 40 per cent of total expenditure. Over the decade, transportation and higher education showed the highest average growth rates (about 10 per cent), while public assistance outlays fell by 10.3 per cent per year on average. Considering the source of funding, general funds account for about 65 per cent of state expenditure. Finally, the Author tracks the major economic and political events that have taken place between 1993 and 2003 in order to highlight how political developments may have affected expenditure trends. The evidence suggests that Governors not running for re-election show a higher degree of freedom in choosing the level and distribution of expenditure.

Geert Langenus frames its comments within the three available strategies to cope with the fiscal challenges raised by ageing: 1) creating budgetary room for the expected increases in expenditure; 2) containing the dynamics of age-related outlays; and 3) foster economic growth. He agrees with Heller and Hauner, whose paper addresses the first two issues, that future spending pressure is often underestimated and that projections do not account for potential shocks not related with ageing. He argues that in order to have a meaningful measure of the required fiscal effort, indicators of full-front loading under different assumptions are to be considered. Turning to the paper by Wierts, that deals with redirecting public spending towards growth-enhancing investment and increasing the efficiency of the public sector, he notes that distinguishing spending between productive and non-productive is not straightforward and that the available functional and economic classifications can only provide a first, rough idea. He suggests that country studies and more detailed analyses could be used to assess the growth-enhancing and efficiency properties of expenditure developments.

Martner notes that all the papers of this Session are concerned with the trends in public expenditure that will prevail as a consequence of the ageing process in industrialised countries. With increased life expectancy one should expect an increase also in the effective age of retirement, hence he concludes that pension reforms have to be enacted. In this respect the paper by Lefèbvre *et al.* shows that resistance to reforms prevents reaching best practices; it also highlights that endogeneising the effective age of retirement could play a crucial role in expenditure projections. As to the pre-funding strategies which generate surpluses over long periods of time discussed by Comley and McKissack, Martner points out that this policy should be evaluated considering other factors, such as the characteristics of the country (industrialised or emerging) and hence taking into account the effects on poverty or income distribution. Finally, he notes that expenditure composition matters too, as it is pointed out by Kinnunen and Tuovinen who discuss which items will increase or decline in the projection exercise concerning Finland.

Matalík finds that the role of government and the degree of openness of an economy, as illustrated by the paper by Bos, Douven and Mot, are crucial for the projection exercises. Also on the basis of the results presented in the paper on the Dutch case, he concludes that greater international cooperation and a larger role for the market could enhance the prospects of economic growth in Europe. He also underlines that the analysis of past expenditure trends, as for example presented in the paper by Kastelec, shows that one of the issues that should be considered is the degree of flexibility in expenditure. Finally, he observes that the experience of American States and the mechanisms of the US federal budget could be of interest for Europeans.

2. Evaluating the efficiency and effects of public spending

The efficiency of public spending is the topic addressed by three of the seven papers included in Session 2. While one contribution is aimed at addressing

methodological issues, the other two present and discuss estimates of efficiency scores in the education and health sectors for emerging and industrialised countries. One paper provides an evaluation of quality in expenditure in the framework of the Stability and Growth Pact. Another paper analyses the distribution of federal taxes and transfers across provinces and income groups in Canada. The remaining two papers focus on the effects of public spending: one addresses the relationship between public spending and the rate of economic growth; the other focuses on the impact of non-retirement transfers on economic outcomes.

Höppner and Kastrop discuss the issue of quality in public expenditure in the framework of the Stability and Growth Pact. Their starting point is the reform of the Pact that has taken place in 2005. They summarise the main problems that led to the reform and argue that fiscal rules based only on quantitative indicators rather than on economic analyses of fiscal policies could lead to incorrect policy recommendations and objectives. They point out that the problem is to translate the theoretically appealing concept of high-quality public finances into operational indications. To this end they suggest that the general structure of expenditure should be considered along with an assessment of the necessary structural reforms. Drawing up an agreed methodology to determine non-mechanistic assessments of fiscal positions should be the way forward. Such an agreement should lead to general policy guidelines agreed at European level.

The efficiency frontier approach is used by Herrera and Pang to analyse the efficiency of public spending in more than 140 developing countries over the period 1996-2002. The empirical investigation focuses on health and education expenditures. Results for education indicate that relatively rich countries tend to be the least efficient group; according to a clustering exercise, a group of African countries is also included in the less efficient category. The deviation from the efficient frontier is significant: the most inefficient decile could reach four times higher outcomes with the observed level of expenditure. Relatively rich countries tend to be the least efficient group also in the health sector; African countries spend 35 per cent more than necessary to achieve the same results. The study of the factors correlated with efficiency scores shows that the level of public expenditure, the share of the wage bill on the total budget and the share of public financing are negatively correlated with the efficiency scores. Moreover, income inequality appears to be negatively related to efficiency in the education sector.

Methodological issues relevant when assessing the efficiency of public units are discusses by Pedraja-Chaparro, Salinas-Jiménez and Smith with reference to non-parametric approaches. First they note that public sector activities usually are aimed at achieving various goals other than efficiency, and that often there is a trade-off among various objectives. Output from public sector units is usually not traded on the market and public sector units do not face competition and the threat of bankruptcy. Consequently, the techniques employed to estimate efficiency scores should adjust to take into account problems in the measurement of outputs and inputs and uncertainty as regards the technology. Given its flexibility, data

envelopment analysis seems an appealing approach to be used when addressing public sector efficiency.

Afonso and St. Aubyn estimate inefficiency scores in the production of health and education services in OECD countries using non-parametric techniques. They show that results are sensible to measuring the inputs by physical units or in financial terms. For example, using expenditure as input and the free disposal hull approach (FDH), the outcome shows that countries could achieve the observed performances using about 60 per cent of the resources actually employed. However, using physically measured inputs, such as the number of hours per year spent in school and the teachers/students ratio, the authors obtain higher efficiency scores and hence lower wastes of resources. Results are similar for the health sector where waste of resources depends on the input measure and the methodology applied to compute the efficiency frontier. The authors argue that differences in results could depend on differences in input prices, with countries characterised by cheaper inputs more likely to appear as efficient when measuring inputs in financial terms.

By using an endogenous growth model, in which public services and facilities are subject to congestion (which occurs when output growth rate exceeds that of public spending), Rezk analyzes the relationship between public spending and the rate of economic growth. He derives the optimal government size, that is the size that maximises the per capita growth rate, for Argentina and compares it with the actual size. The results point to an actual size which is smaller than the optimal, suggesting that investment efforts should be increased, particularly in public construction which can more easily be congested by users. Moreover, the Author shows that in Argentina there is in fact room for a more efficient and better administered tax system, able to produce revenues consistent with the enlargement of the government size. In particular, Rezk argues that additional financial needs, as well as revenues required to partially eliminate highly distortionary existing taxation (such as Financial Transaction Taxes and Export Tariffs) and to settle defaulted public debt, would not alter the fiscal balance, provided that the extremely high evasion levels are reduced to more reasonable standards.

Deussing analyses the distribution of federal taxes and transfers across provinces and family income groups in Canada. She confirms previous results as far as federal total taxes and federal direct transfers are concerned. In particular, the federal total tax incidence is found to be progressive, mainly reflecting the progressivity of the personal income tax. For given income groups total federal taxes are distributed quite uniformly across provinces. In contrast, the relative size of federal direct transfers varies significantly across provinces and family income groups, mainly because of the influence of employment insurance benefits. The impact of these transfers is found to be progressive, with average transfer rates being more important for lower-income groups. Finally, the distribution of total indirect transfers appears to be progressive, with considerable variation across provinces for lower-income families and little variation for higher-income groups. This finding leads Deussing to conclude that the previous argument that low-income Canadians

in high-income provinces are funding transfers to higher-income residents of low-income provinces cannot be supported.

Gokhale examines whether federal non-retirement transfers in the US, such as unemployment insurance, education and training subsidies and child-care benefits, exert mainly "defensive", "offensive", or "regressive" economic effects on recipients; that is, whether they aim at supporting the needy and those experiencing bad economic outcomes ("defensive"), at improving the functioning of the economy and markets ("offensive"), or rather end up worsening future economic outcomes for recipients ("regressive"). For this purpose Gokhale constructs a dataset of cohort averages of earnings, labour-force participation, demographic characteristics and receipts of federal non-retirement transfers, spanning the years 1988-2001. The analysis bears on the ongoing debate on Social Security: if such transfers, which have more than doubled since the early Sixties from 1.9 to 4.2 per cent of GDP, fulfilled a significant offensive role, then Social Security surpluses could constitute an effective storage technology, expanding economic output and the future tax base to meet the government's future Social Security obligations. However, the results provide little support to the idea that federal non-retirement transfers improve the functioning of labour markets and of the economy. The transfers appear to play a predominantly defensives role.

In his discussion, Brender focuses on the difficulties of defining and measuring the quality of spending. An appropriate evaluation system for public expenditure should be able to measure the outputs, evaluate the relative costs and relate the outputs to the desired outcomes. Such an evaluation system would be able to identify welfare-enhancing reallocations. Nevertheless, it requires easy-to-measure outputs/outcomes and significant amounts of information. In the case of public sector activities such conditions are hardly met. As a consequence, more easily verifiable conditions are typically analysed (such as technical efficiency). As concerns the risks associated with implementing evaluation-based systems, the Author notes that public sector units might focus on pre-set outputs, ignoring other desirable outcomes, and they might divert too much emphasis on measurable outcomes. Relying on evaluation-based systems can also weaken budgetary controls and hurt budgetary discipline. Finally, public sector units might lower quality in order to improve their quantitative performance. Brender concludes that DEA analysis, used in most of the papers included in this Session, can be useful when studying the performance of parallel production units, the results however should be interpreted with caution and social preferences for the level of public goods provision should be taken into account.

The comments by Moreno-Dodson focus primarily on the papers by Afonso and St. Aubyn and by Salinas-Jiménez *et al.* on the efficiency of public spending. Her main point is that in general, in addition to searching for the best methodologies to assess public expenditure efficiency, efforts to determine the factors that would trigger higher effectiveness and contribute to achieving ambitious final results should be intensified. This is especially relevant when one aims at assessing the impact of public spending in developing countries. In particular, for such countries

Moreno-Dodson suggests a "three tiers of performance measuring". In the efficiency tier (lowest level) one should aim at measuring how economically inputs are converted into outputs; in the effectiveness tier (second level) performance would be measured by progress towards strategic goals, looking at intermediary outputs; finally, in the highest tier (third level) one would find the final growth and poverty reduction objectives, such as per capita GDP growth, infant and maternal mortality.

In commenting Deussing's paper, Prammer notices that in Canada, despite a decrease in overall direct transfers in relation to income, direct transfers to the lowest income group has increased, and asks whether this is the result of a restructuring in the transfer system aimed at reducing income inequality, or rather of an increase in primary-income inequality. Concerning the paper by Gokhale, Prammer expresses some concerns on the results. In particular, she wonders whether unemployment benefits actually affect earnings growth or rather both variables react to the level of unemployment, and notices that the finding that child-care transfers are associated with higher earnings growth and higher full-time job rates for women is in contrast with the evidence for European countries. Regarding the econometrics of the paper, Prammer provides the following suggestions: i) to use the fixed-effects panel data estimation rather than the pooled OLS one, as cohort-specific effects concerning different preferences might be important, given that there is a 20 year gap between the youngest and the oldest cohort; ii) to explicitly control for the cycle by including some output gap variable, as both unemployment benefits and the level of employment are very responsive to the cycle; iii) to take into account the life-cycle position of the respective cohort by interacting the benefit variable with an age dummy, as some types of transfer may affect the labour market decision only at particular ages (for example, child care benefits).

3. Public spending and fiscal policy management

Session 3 includes nine papers dealing with fiscal and public spending policies. Both the relationship between public expenditure and the economy and the contribution of expenditure management to fiscal consolidation efforts are addressed in this session. One paper focuses on public investment. Two papers analyse the link between public spending and growth, equity and poverty reduction, and two more papers examine the effects of fiscal policy on income, inflation and interest rates. Experiences of public spending management in Bulgaria, India, Portugal, Japan and Sweden are also discussed.

Fedelino and Hemming analyse different choices of fiscal indicators and targets that are better suited to promoting and safeguarding public investment. After having documented the decline in public investment as a share of GDP in many countries over the last two decades, they note that the empirical evidence on the links between public investment and growth has so far been inconclusive and, furthermore, there is no guarantee that public investment is especially meritorious or productive. The Authors thus propose several "public investment-friendly" approaches to fiscal policy without abandoning the traditional framework based on

overall balance and gross debt: broadening the usual set of fiscal indicators and targets, by paying more attention to the current balance; introducing more budgetary flexibility; strengthening the institutional framework for public investment; promoting private sector involvement. They conclude that the best solution to protecting public investment is to implement fiscal policy in a flexible, sustainable and transparent way.

The paper by Paternostro, Rajaram and Tiongson focuses on the relationship between the composition of public spending on one side and growth, equity and poverty reduction on the other. The Authors point out that, although expenditures in education and health sectors are consistently classified as poverty-reducing, there is a growing concern on relying so heavily on social sector spending, rather than on infrastructure, to promote poverty reduction. They acknowledge the difficulty to assess the impact of public spending on growth, equity and poverty and the paucity of empirical work on this issue and propose a conceptual framework to be used to improve the quality of public policy advice to governments on their development strategies. The framework is based on an explicit consideration of trade-offs between various policy interventions, which are broadly identified as expenditure policy, tax policy and regulatory policy.

The paper by Giordano, Momigliano, Neri and Perotti studies the effects of fiscal policy on private real GDP, inflation and interest rates in Italy using a structural Vector Autoregression. For this purpose, a database of quarterly cash data for selected fiscal variables for the period 1982-2003 is constructed. The analysis shows that a shock to government purchases of goods and services has a sizeable and robust effect on economic activity: an exogenous one per cent (in terms of private GDP) shock raises private real GDP by 0.6 per cent after 3 quarters. The response of private GDP dynamics reflects the increase in both private consumption and investment; the effect on inflation is positive and short-lived. In contrast, public wages, which in many studies are lumped together with purchases, have no significant effect on GDP and employment in the short-run; a negative and significant effect emerges after two years. The reactions of inflation and interest rates are positive and larger than in the case of a shock to purchases. Shocks to net revenue have negligible effects on all the macroeconomic variables.

Pattnaik, Bose, Bhattacharyya and Chander analyse the role of public expenditure in India as a key fiscal policy instrument to achieve the goals of growth, equity and stability and, at the same time, to ensure the sustainability of public finances. The paper documents the development of fiscal policy and, in particular, of public expenditure in India since the beginning of the Eighties. After a period of mounting fiscal deficits (from 7.5 per cent of GDP in 1980-81 to 9.4 in 1990-91), mainly driven by an increase in interest payments, in the early Nineties the government implemented a strategy of fiscal consolidation, which primarily focussed on expenditure compression. In particular, the decline in capital outlays (from 3.0 per cent in 1986-87 to 1.0 in 1996-97) enabled a reduction in fiscal deficit to 6.4 per cent of GDP in 1996-97. In view of the evidence of a stable long-run relationship between public sector expenditure and national income in India, the

Authors argue that such a trend needs to be reversed in the future and conclude that the bulk of fiscal adjustments has to rely on a greater mobilisation of revenue receipts rather than on curtailing developmental expenditure.

Creel, Monperrus-Veroni and Saraceno estimate a structural Vector Autoregression model to assess the effects of fiscal and monetary policy shocks on the French economy. The VAR includes five variables: primary surplus, debt, real GDP growth, inflation rate and short-term interest rate. The estimation period goes from 1978 to 2003. The theoretical restrictions to identify their model are derived from the implications of the fiscal theory of the price level (FTPL). Their results confirm the Keynesian effects of fiscal expansions already found in most of the recent literature on the subject and are consistent with the theoretical predictions of FTPL models. In particular, the Authors find a negative significant impact of a positive surplus shock on GDP from the second quarter after the shock has occurred. The negative wealth effect, following the decrease in public debt, plays a crucial role in the long-lasting decrease in GDP. The pick up in prices inflates public debt thus re-establishing the intertemporal budget balance. In view of the results of the paper, the Authors conclude that the Stability and Growth Pact lacks an empirical foundation.

The paper by Hansson-Brusewits and Lindh describes the Swedish reform of the budget process undertaken in the late Nineties and discusses the experiences since then. Central features of the reformed budget process are a "top-down" budgetary process, which assigns a clear role to the Ministry of Finance in setting the budget, multi-year ceilings on nominal expenditure and a medium-term target for the government's net lending. Such a target, set at 2 per cent of GDP per year on average over the business cycle, primarily aims at reducing public debt in view of the budgetary impact of an ageing population. Hansson-Brusewits and Lindh point out that between 1997 and 2004 the expenditure ceiling has contributed to the fall in general government expenditure from 60 to 54 per cent of GDP and has thus helped to stabilize public finances. They conclude that, although such strict budget rules have to some extent provided the Government with incentives to circumvent them, nominal expenditure ceilings have generally functioned well.

The paper by Nenova-Amar describes the experience of Bulgaria in managing public finances from 1991, when the transition to a market economy started, to 2004. It documents a difficult but eventually successful fiscal restructuring, characterized by a gradual reduction of the debt burden to a sustainable level. In Bulgaria budget revenues fell from 58 per cent of GDP in 1989 to 40 per cent in 1991, owing to a severe output loss and a vast deterioration of the state-owned companies' finances. The initial response was a sizeable reduction of some non-interest payments. In particular, between 1989 and 1991 production subsidies fell by 11 percentage points of GDP and capital expenditures were lowered from 6 to about 2.5 per cent of GDP. Income policy played a major role in stabilising or destabilising public finances: the approaches adopted since 1991 ranged within the extreme cases of automatic inflation indexation to wages freeze. The radical reform

of the public social security system, launched in 2000, and the restructuring of the health care and education sectors also contributed to fiscal sustainability.

By analysing the evolution of public expenditure from 1990 to 2004, Cunha and Braz aim at assessing the Portuguese current fiscal position and the prospects for future developments in the absence of corrective measures and structural reforms. They argue that the current difficult budgetary situation in Portugal is largely due to the lack of fiscal consolidation before 2002. Between 1990 and 2004 the cyclically-adjusted current primary expenditure rose by nearly 11 percentage points of nominal trend GDP, mainly owing to the increase in social payments and in the compensation of employees. Most of the growth in social payments reflects the evolution of pension expenditure in both the private sector and the civil servants systems. This growth trend is expected to continue in the coming years. The structural measures on the expenditure side undertaken since 2002 concern the civil servants pension system, the National Health Service, the subsidisation of interest on loans for house purchase and the limits on municipality financing.

Miyazaki describes the historic developments in Japan's fiscal position, drawing general lessons for fiscal soundness. He evaluates the outlook for fiscal consolidation in Japan in the light of the ongoing reform efforts. Miyazaki sees the experience of the Eighties as a successful realisation of fiscal targets, whereas the Fiscal Structural Reform Act, enacted in 1997, proved a failure. He identifies in the strong commitment of the political leadership, in favourable economic conditions and in an appropriate balance between spending cuts and revenue increases, the key factors underlying a successful fiscal consolidation. As for the outlook, Miyazaki argues that the improving economic conditions should facilitate fiscal consolidation. He notices that further spending cuts, changes in financial arrangements of local governments and reforms in the social security area are still needed. This process of fiscal consolidation should start soon, so as to take advantage of the relatively low long-term interest rates, while the baby-boomers are still in the workforce.

The comments by Knudsen mainly focus on the paper by Creel, Monperrus-Veroni and Saraceno on the French economy. He wonders how robust is the result of a long-lasting negative impact of fiscal tightening on output and expresses concerns about the policy conclusion which welcomes the softening of the Stability and Growth Pact. Knudsen agrees with Miyazaki on the relevance of favourable economic conditions for a successful fiscal consolidation and cites as examples the experiences of Ireland and Denmark in the Eighties, acknowledging however that the current situation may be more problematic for both the European countries and Japan.

Kopits finds that the fiscal adjustment episodes in India, Sweden, Bulgaria, Portugal and Japan discussed in this session represent useful lessons for the new Central European EU members aiming at joining the euro area by the end of the decade. In fact, while sharing some common features, such episodes refer to a variety of economic and institutional set-ups ranging from a developing stage (India) to an advanced one (Sweden and Japan). Kopits argues that Sweden and Bulgaria achieved the most successful fiscal consolidations. The experience in Portugal and

Japan has been rather mixed, whereas in India the adjustment has just begun. The lessons that can be drawn from these episodes are summarized as follows: (i) a rule-based policy framework is superior to a discretionary approach; (ii) the framework should provide for a rolling medium-term budget plan, quantifying major expenditure priorities; (iii) the bulk of the adjustment should consist of structural reforms instead of reductions in productive infrastructure investments or of one-off spending cuts; (iv) sustained political support for the adjustment is essential.

The discussion by Romhányi focuses on three papers of this session. Referring to the paper by Fedelino and Hemming on public investment, Romhányi argues that an array of fiscal indicators, tailor-made for specific purposes, should be used. He identifies at least three different phenomena that the fiscal deficit may aim at measuring: long-term sustainability, government liquidity and inflationary pressure. In commenting the paper by Paternostro, Rajaram and Tiongson, Romhányi points out that the effect of fiscal policy on poverty is partly related to its effect on long-term growth. Hence, private sector investment should also appear in their analysis as crowding-in and crowding-out considerations are important issues in this respect. Finally, Romhányi notices that the main message of the paper by Giordano, Momigliano, Neri and Perotti is that the type of government expenditure is of the utmost importance. He argues that, while the model distinguishes between wage and non-wage expenditure, the composition of the wage shock should matter and be taken into account as well. Furthermore, he expresses some concern about the exclusion from the model of some "international" variables, such as exchange rates or foreign interest rates, and of the interaction between private and public output.

4. Reforming public expenditure programmes

Session 4 includes six papers examining different aspects of the reforms affecting public expenditure programmes. Three papers deal with budgetary institution and fiscal rules in OECD countries, in Latin America and in the UK respectively. One paper examines the decline of public spending in OECD countries in the Nineties. Two papers focus on the two main social expenditure programmes (pensions and health care).

Blőndal examines the key institutional features in the reform of public expenditure management systems in OECD countries. He notes that the countries which are experiencing the best fiscal outcomes are generally those that have more successfully modernized their budget processes. The paper identifies the most relevant aspects for the control of public expenditure: the use of medium-term frameworks, prudent economic assumptions and top-down budgeting techniques; the relaxation of central input controls; the focus on results; the emphasis on budgetary transparency and the introduction of modern financial management practices concerning, inter alia, accruals, capital charges, carry-overs of unused appropriations and interest-bearing accounts. The paper examines the benefits and the problematic aspects of each of these factors and stresses that they must be taken as a package.

The paper by Hercowitz and Strawczynski investigates the reduction in public spending in OECD countries during the Nineties. Using a panel data set of 18 countries, the Authors find that the decline in spending was a general OECD phenomenon: the EU fiscal rules did not introduce any additional effects. The spending adjustment is estimated to reduce the long-run ratio of primary spending to GDP by about 4 percentage points. Hercowitz and Strawczynski find no evidence of differential adjustment in expansions or recessions. Declines in interest payments on public debt were followed by increases in primary expenditures by about the same amount. The analysis of the spending components indicates that the long-run effect of the spending adjustment was concentrated on transfers. The effect on government consumption was much smaller; and the effect on public investment was smaller still.

Martner and Tromben consider the solutions which may reverse the decline of public investment occurred in Latin American countries in recent decades. The paper examines public investment trends and notes that in fiscal consolidation episodes there has been a bias against public investment – although this cannot be generalised to all countries. In some countries, the fall in public investment has taken alarming dimensions. The paper evaluates the solutions which can fill the infrastructure gap without endangering fiscal sustainability. It evaluates the golden rule and the broad adoption of the accounting principles of the Government Finance Statistics Manual. However, both these solutions present some problems in the Latin American context. Martner and Tromben also evaluate the exclusion of public enterprise operations from fiscal targets, in line with EU practice, and the role of Public Private Partnerships. They stress the importance of fiscal frameworks based on structural indicators, which can limit the need for painful fiscal consolidations. Finally, they examine the possibility to expand the role of multilateral development banks.

Francese, Franco and Tommasino examine the debate concerning the reform of pension systems in Europe and in the USA. They consider the reforms introduced in recent years and those currently under discussion in order to trace common features and highlight country peculiarities. Pension reforms have been characterised by three main lines of action: (i) parametric changes in traditional PAYG public schemes, (ii) the introduction of new pension formulas, such as notional funding, in PAYG schemes, and (iii) the development of funded schemes. In spite of the lengthy academic and policy debate and of the many reforms introduced, the process is far from completion. The paper evaluates the role of different objectives (short and long-term budgetary effects, reduction of distortions, horizontal equity) in determining the reform structure and the results achieved so far.

Bouthevillain and Hervé examine the policy problems posed by the expansion of health expenditure in France and in other developed countries. They provide a concise overview of the main features of the different health-care systems and consider some aspects of insurance theory that apply to healthcare. Through an econometric study of the main determinants of the growth in health spending, Bouthevillain and Hervé identify the explanatory factors at work in various

countries. The results are compared with those of earlier studies. Demand factors have a dominant role in the medium term. Finally, the Authors consider the objectives of the recent reform of the French health-care system and describe the measures which can address the pressures towards greater levels of health spending.

Toigo and Woods consider the role of public investment in the UK fiscal policy framework. First, they examine the general guidelines for public investment policy: these should address both microeconomic considerations concerning efficiency and the costs and benefits of individual projects and macroeconomic considerations about the impact of the aggregate level of public investment in the short and the long term. The Authors examine the arguments supporting a specific treatment of public investment (the potential to self-finance, inter-generational fairness and the political economy issues leading to a bias against public investment) and the way this treatment can be embodied in a rule-based framework. Finally, they describe the UK framework both at the macro and micro level and examine the role of Public Private Partnerships. Toigo and Woods conclude noting that the new framework has contributed to addressing the shortfall in public investment which had previously characterised the UK.

Boothe notes that the paper by Hercowitz and Strawczynski provides fertile ground for further research. How can we explain the same public expenditure pattern in both Maastricht and non-Maastricht countries? What theory would predict that primary spending replaces interest payments as they fall? Why are the long-run figures of the expenditure-to-GDP ratios so different among countries? What are the policy implications for countries that are currently far from their calculated long-run values? In commenting the paper by Francese, Franco and Tommasino, Boothe draws some indications from the experience of Canada, which in the late Nineties introduced a pension reform that made the public pension scheme actuarially sustainable for at least the next 75 years. Boothe considers the factors underlying the success of the reform. He points to the role of the broad public consultation carried out in that country, where the public became convinced that the status quo was not an option, and the action taken concerning the other two pillars of the pension system. He notes that raising contributions, rather than using debt finance, improves generational equity and work incentives.

In his comments on the papers by Bouthevillain and Hervé and Toigo and Woods, Yilmaz notes that they both provide a comprehensive overview of the theoretical literature and examine public expenditure reforms in the context of macroeconomic development and in light of the issue of fiscal sustainability. As to the microeconomic dimension, the first paper evaluates the incentives that can be introduced in order to change the behaviour of the different groups of agents, while the second considers the efficiency and the effectiveness of public investment. Yilmaz notes that it would be important to carry out further work concerning the measurement of advances in medical practice. It would also be useful to have data concerning the changes in the composition of public investment in the UK.