INTRODUCTION

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Taxation is at the core of public action. It affects the propensity to work, save, take risk and innovate. It influences cyclical developments, long-term growth and the distribution of income and wealth. Tax policy reflects the political debate and, in turn, affects political outcomes.

While the main purpose of tax systems is to provide revenues to governments, it has long been recognised that tax design has to balance efficiency, equity and enforceability considerations. Taxation should not excessively distort economic decisions and reduce the incentives to work, save, invest and take risk. It should be horizontally equitable and it should achieve the vertical redistribution preferred by society. Tax rules should be enforceable and the cost of compliance with tax legislation should be low.

Tax policy has been changing over time. When the primary role of government was the provision of a few public goods, the main purpose of taxation was to raise a limited amount of resources. Most revenues were provided by simple indirect taxes. The development of the government distributive and allocative roles increased the size of public budgets and greatly expanded public revenues. The targets of taxation were widened. Taxes were increasingly used to redistribute income across different groups of citizens, to affect the allocation of resources in the private sector and to control the economic cycle. A variety of increasingly complex taxes was developed.

This process generated a number of problems. High taxation of wage and capital income were considered to exert adverse effects on labour supply and saving. The complexity of tax systems generated costs and distortions. Distributive effects were not straightforward.

In recent decades there has been an extensive debate over the need and features of tax reforms. In the eighties, efficiency, simplicity and equity were the keywords of the reform proposals. There was a wide consensus on the need to broaden tax bases and reduce the dispersion of tax rates. These changes were expected to reduce tax induced distortions. Several countries modified the structure of personal and company taxation. The expansion of the tax burden was stopped in some areas and slowed down in others.

The issue of tax reform remains open. The debate focuses now on the high tax wedges on labour, the use of taxation for environmental purposes, the neutrality of taxation *vis-à-vis* saving, investment and financing decisions, the implications of economic integration on the taxation of mobile tax bases and the effects of tax systems on fiscal stabilisation. It is widely recognised that taxation affects

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competitiveness and growth. It is argued that high marginal effective tax rates distort incentives and hamper the functioning of the labour market.

The papers presented at the workshop were allocated in four sessions which are mirrored by the sections in this volume. Section 1 examines the effects of taxation on the labour market and redistribution. Section 2 deals with the relationship between tax policy and stabilisation policy. Section 3 considers the related issues of tax competition and tax harmonisation. Section 4 examines the debate on tax reforms in some important areas and in some countries.

1. Taxation and the labour market

The first section includes four papers about the taxation of labour. Two of them (Martinez-Mongay and Gokhale and Kotlikoff) present empirical evidence of the fiscal burden on this factor using respectively macro data for the European Union and micro data for the United States. The other two papers (Frederiksen and Nødgaard) present theoretical models focusing on tax-induced behavioural changes. The fifth paper of the section (Kaplanoglou and Newbery) examines the effects on income distribution of changes in indirect taxation in Greece.

The paper by Carlos Martinez-Mongay outlines labour tax trends in the European Union over the last three decades. The analysis is based on macro data: the average effective tax rates on labour, consumption and capital. Different measures of effective tax rates on labour in EU Member States are calculated; they are compared with those in the USA and Japan and with the effective tax rates on consumption and capital. All the measures show that the tax burden on labour has increased in the EU over the last three decades both in absolute terms and in comparison to the effective tax rate on capital. Moreover, over the same period the tax rates on labour, consumption and capital have converged across EU countries. These trends largely depend on two factors: the increase in social spending and international tax competition. However, concerning the latter there is little evidence that changes in tax rates on labour are related to changes in tax rates on capital. This suggests that international co-movements of tax rates and tax revenues may be due to common structural changes underlying tax policies rather than to tax competition forces.

The paper by Jagadeesh Gokhale and Laurence Kotlikoff tackles the issue of the redistributive features of the US tax and benefit system. The analysis is based on a microsimulation model which simulates in great detail taxes and transfer payments respectively paid and received by a representative two-earner couple in a lifetime perspective. Lifetime average and marginal tax rates are calculated. Taxes are considered net of benefits. Average net tax rates for different levels of income show that the American system is quite progressive over the bottom half of the income distribution. Most of the progressivity is due to the transfer programmes. On the contrary, the tax system is not very progressive. This depends on the large share of the family tax burden which, especially for low income households, concerns payroll taxes (which are proportional) and consumption taxes (which tend to be regressive).

The paper also shows that US workers face high lifetime marginal tax rates at every income level. These rates become very high for the lowest income earners. If low-income households work at all, the tax-benefit system strongly encourages part-time. Gokhale and Kotlikoff conclude that the generosity of the system toward the bottom of the income distribution results in an incentive structure that strongly discourages labour market participation especially for those with the lowest skills.

The issue of the distributional effects of taxation is examined also in the paper by Ulrik Nødgaard. His framework takes into account not only the direct effect of tax and benefit changes on income, on which conventional static analyses are usually based, but also their indirect effects via changes in labour supply and relative wages. The analysis is based on a stylised theoretical model where two types of workers are represented: the unskilled and the highly educated. The two categories are linked by a complementary relationship. Redistribution takes place via an increase of proportional income tax on high-skilled workers which finances transfers to the unskilled workers (assuming that earnings are closely related to educational qualifications). The paper considers the effects of an increase in the tax burden on highly skilled individuals. The model shows that initially there is a positive effect on the welfare of unskilled workers given by the increase in transfers (which is also captured by conventional static calculation). Later on, the tax increase induces changes in labour supply and in the endogenously determined wages. The overall effect depends on the assumptions concerning the elasticity of labour supply and the degree of substitution between the two types of labour. The author concludes that the assumption that there are no changes in behaviour and in relative prices may lead to an overestimation of the redistributive powers of progressive taxes.

Niels Kleis Frederiksen examines the effects of the broad reductions in the labour income taxation undertaken in many industrialised countries in order to enhance labour force participation. He aims at evaluating whether these tax cuts are likely to lead to supply side adjustments which can justify the fiscal cost. Drawing from the literature on the marginal cost of public funds, the author outlines a methodology that allows to compare the effects of different policy options. The key insight is that the efficiency impact of a tax change is equal to the change in net revenue resulting from the behavioural response and can be measured by a “revenue recovery ratio” (the fraction of the initial revenue loss that is offset by behavioural changes). The paper focuses on the choice between wage and capital income tax cuts. The results suggest that policy makers should devote more attention to reforming capital income taxation rather than implementing across-the-board cuts in labour income taxes. Once behavioural responses are taken into account, the size of the fiscal externalities generated by lowering capital income taxes may be relevant. This is due to the large dimensions of the tax bases affected this category of taxation (household savings, business capital formation, residential housing investment and pension/life insurance asset accumulation). The result is independent of the international tax competition arguments.

Georgia Kaplanoglou and David Michael Newbery examine the distributional effects of indirect taxation in Greece using microsimulation modelling techniques.

They compare the distribution of the indirect tax burden among households in 1988 and 2002 focusing on three main aspects: the distribution of the overall indirect tax payments, the pattern of the tax payments by commodity groups, and the inequality of the after-tax welfare distribution. They show that, although the share of household expenditure absorbed by indirect taxes has remained stable, the change in the distribution seems to have benefited wealthier groups. The pattern of tax payments by commodity group has not changed substantially. As a whole, the indirect tax system is broadly proportional or slightly progressive in both years and, from the assessment of the degree of progressivity or regressivity induced by indirect taxes on each commodity type, a clear grouping of regressive taxes emerges, which is almost identical in 1988 and 2002. The commodities concerned (tobacco, housing and heating oil, health, food and communication) represent over 60 per cent of the average household budget in both years. Taxes on cars and on their use outbalance this regressive effect, generating the slight progressivity of the overall indirect taxation. According to several indicators, the overall inequality of the after-tax welfare distribution has increased between 1988 and 2002. Less than half of such increase is explained by changes in the indirect tax system (the rest being the result of the underlying before-tax distribution of welfare).

In commenting on the papers of this section, Geert Langenus points to the heterogeneity of the issues tackled and of the approaches followed which reflect the wide variety of research in the field of taxation. From this heterogeneity of points of view one can draw the main lesson of this section: taxation can pursue many conflicting objectives. The papers point to the importance for policy-makers of being fully aware of all the consequences of any tax change. Referring to the paper by Martinez-Mongay, Langenus highlights the need for a cautious approach in estimating internationally comparable tax rates. In commenting on the papers by Fredriksen and Nødgaard, even though he agrees with their basic message (the need to take into account behavioural responses to tax changes), he wonders whether any specific feature of the models can be responsible for the main predictions. The papers by Kaplanoglou and Newbery and Gokhale and Kotlikoff, which are both about the redistributive features of individual tax systems, highlight the importance of taking into account the whole tax and transfer system in any analysis on the redistributive effects of taxation.

Lucio Pench also points to the different approaches followed by the authors of the papers. Martinez-Mongay and Gokhale and Kotlikoff produce fiscal burden indicators, respectively based on a macroeconomic "backward looking" approach and a microeconomic "forward looking" approach. Nødgaard and Frederiksen focus on the efficiency effects of taxation associated, respectively, with a tax increase on high wage earners and tax cuts on wage and capital income. He highlights two open questions regarding the paper by Martinez-Mongay: the lack of treatment of seigniorage from the taxation point of view and the possibility that the increase in taxes on labour could also depend on a misguided preoccupation with redistributive issues. The papers by Nødgaard and Frederiksen show how the assessment of the revenue impact of tax reforms, assuming unchanged behaviours, might be misleading. In both cases, there is scope for some "free lunches" from tax reforms, which are rarely considered by policy makers. In quantifying the lifetime tax and transfer implications of the decision of working for different stylised individuals, Gokhale and Kotlikoff do not consider the effects of current choices on future income prospects. The main result for the USA is that part-time employment may not be convenient when the household is entitled to social assistance. This kind of incentive concerns also other industrialised countries and Pench underlines that the extension of the authors' approach to a cross-country study would be very interesting.

In commenting on the results of Nødgaard, Antti Suvanto points to the critical role of the assumptions about full wage flexibility and the elasticity of labour supply by skilled workers. As to the paper by Gokhale and Kotlikoff, he supports the use of stylised households but criticises the lack of dynamics in the lifetime evolution of their tax and benefit profiles and stresses that the computation of the costs associated with such profiles is merely based on earnings and not on welfare considerations. Suvanto notes that the paper by Martinez-Mongay is largely descriptive but has the important merit of a wide geographical and historical coverage. Martinez-Mongay draws some conclusions about the simultaneous growth of the welfare state and the rising tax burden in most countries. According to Suvanto, the relationship between unemployment and the tax burden and transfers may have also played a role. He observes that Kaplanoglou and Newbery, who show that changes in indirect taxation increased inequality in Greece between 1988 and 2002, do not give hints on whether the implied reduction in welfare is large or small. He suggests to test the changes in the results under alternative assumptions about tax incidence.

2. Taxation and fiscal policy

The second section focuses on the role of taxation in macroeconomic fiscal policy. Two papers describe the tax systems and analyse the reforms undertaken in Japan and Australia. Two papers examine the issue of stabilisation. The last paper outlines an agenda for empirical tax policy analysis and evaluation.

The paper by Masashi Nagaosa illustrates the background and the main objectives of the tax reform currently underway in Japan. Since the early Nineties, the Japanese economy has been experiencing a period of stagnation characterised by persistent deflation, large non-performing loans in the banking sector, debt overhang in the corporate sector, huge fiscal deficits and public debt accumulation. The government tried to stimulate the economy via expansionary fiscal policies without achieving the desired effects. Structural reforms are now widely advocated for the financial sector, regulation, government spending and taxation. The Government Tax Commission established in January 2002 conducted an extensive study on the reform of the tax system. The Commission pointed to the need to make the tax system more compatible with the current socioeconomic structure and recommended to take into consideration the long-term perspectives of the economy. The reform should help meet the challenges arising from the ageing of population and the decline in the potential economic growth of the Japanese economy. Expenditure cuts and administrative reforms were considered prerequisites to the tax reform. The Commission advocated a conciliation of the objectives of boosting the economy and controlling the deficit. It suggested extensive changes of the Japanese tax system. A greater role would be attributed to consumption taxes.

Greg Smith reviews the Australian tax system from four points of view: the tax reform process, the main labour market issues, the role of taxation within fiscal policy, tax competition and harmonisation issues. Over the last decades, tax reforms have primarily aimed at reducing the adverse effects of taxation on economic activity. In the Eighties, reforms were oriented at broadening the income tax base and reducing the rates. In the late Nineties, indirect taxation was restructured by replacing the former narrow based taxes by a broadly based Goods and Services Tax, similar to the value-added tax. A business tax reform was implemented. Recent reforms have reduced both personal income tax rates and the withdrawal rate for social security and family payments. Smith notes that since Australian fiscal policy is committed to balancing the budget over the economic cycle, little use has been made of taxation for discretionary stabilisation purposes. Due to the relative small size of the economy and its geographical position, Australia has become increasingly conscious of tax competition issues in recent years. Several provisions of the tax system have been accordingly modified; the reforms have concerned company tax rates, dividend taxation and the definition of corporate income.

Marco Buti and Paul van den Noord show that the trade-off between output stabilisation and efficiency may not be relevant under supply shocks. By using a macroeconomic AD-AS model, with wage resistance and taxes affecting both demand and supply, they derive an optimal tax burden which maximises the stabilisation properties of the system in the event of supply shocks. They also identify an optimal threshold tax level maximising stabilisation and a critical level above which stabilisation properties become perverse. They obtain the following main results: the less redistributive the taxes and benefits are, the higher is the critical tax rate and the wider is the range of tax rates whereby the automatic stabilisers are effective; the threshold level of taxation is inversely related to the degree of wage resistance, to the weight of output stabilisation in the central bank reaction function and to the degree of openness of the economy; it is positively related to the responsiveness of demand to fiscal impulses due to the automatic stabilisers. Buti and van den Noord conclude that tax reforms aiming at lowering marginal effective tax rates and the tax burden may enhance the stabilisation properties of the automatic stabilisers under supply shocks. Depending on some assumptions about the relevant parameters, they estimate that in the euro area the optimal tax burden and the critical threshold are respectively about 0.4 and 0.8.

The paper by Maria Rosaria Marino, Daniela Monacelli and Stefano Siviero proposes a methodology for evaluating the implications of changes in tax structure for automatic stabilisation. The approach is similar to the one used in the recent literature on optimal monetary policy rules. The features of the proposed approach are illustrated with an application to a reduced-scale steady-state version of the Bank of Italy Quarterly Econometric Model. The stabilising properties of different tax schemes are appraised on the basis of the variance of output oscillations associated with the income elasticities from various tax schemes; the variance is estimated by means of long-horizon stochastic simulations around a steady-state growth path. The results suggest that there is a value of the tax elasticity parameter which minimises the output gap variance. Higher values do not considerably worsen the stabilisation properties of the tax system while lower values may result in a sharp loss of stabilising properties. Recent reforms do not seem to have significantly modified the stabilisation properties of the Italian tax system. Despite the non-trivial differences in the methodology, the authors' findings are consistent with those from other studies. In particular, there may be no trade-off between output stabilisation and efficiency. Furthermore, a relatively high degree of automatic fiscal stabilisation tends to do a good job in keeping cyclical fluctuations under control when demand shocks prevail, whereas the opposite applies when supply shocks prevail.

Katinka Hort and Henry Ohlsson formulate an agenda for empirical tax policy analysis taking the Swedish case as an example. They consider the different approaches of researchers and practitioners to tax policy design. After outlining the normative criteria for tax policy design, the main instruments and constraints, they present some stylised facts about taxation. They focus on the 2002 Report by the Official Swedish Government Committee on Tax Base Mobility, which evaluated how to design the Swedish tax system as economic integration strengthens. First, they assess the report from the academics point of view, by using a simple model to describe how taxes on labour, capital and consumption affect economic behaviours and to determine their incidence as well as their efficiency effects. Second, they highlight the aspects relevant to practitioners, like the political economy implications arising from the possible trade-off between efficiency and distributional issues and the need for reliable empirical estimates of behavioural responses. Hort and Ohlsson conclude that, when designing a tax system, policy makers have to strike a balance among objectives of equity, efficiency and stabilisation. In order to do so, they need some important information on a regular basis. In the Swedish case they need information on the effects of taxes on household and firms behaviour, on income distribution and on tax evasion and avoidance.

José Herce discusses this section through a "grille de lecture" based on four main areas: short-term stabilisation, long-term sustainability, efficiency in the tax system and international tax competition. The first area is mostly addressed by Buti and van den Noord and by Marino, Monacelli and Siviero, who conclude that high tax rates tend to be destabilising while high income elasticity of taxes may mitigate fluctuations. The second area is of major concern for Australian and Japanese authorities, as Smith and Nagaosa show in analysing tax reforms in their countries. Hort and Ohlsson mainly deal with efficiency issues, advocating more uniform taxation, lower rates and broader tax bases as desirable features of tax policy design. International tax competition is addressed by Smith, who investigates the best strategies to prevent capital incomes from avoiding taxation. Herce notes that all the papers indicate that the structure of tax systems reflects more their history than the above mentioned objectives. It is also widely considered that tax systems are increasingly exposed to the mobility of tax bases across countries. He also observes that built-in stabilisers and discretionary levers are used more to ensure short-run output stability rather than long-run sustainability.

Pedro Duarte Neves organises his comments in three parts. First, he discusses the Smith and Nagaosa papers on tax reforms, asking the authors for details about the role of environmental considerations in the tax reforms and the expected distributional effects of VAT, recently introduced by both countries. Second, in examining the issue of tax policy analysis, he identifies three modelling techniques: general equilibrium analysis, macroeconometric modeling and microeconometric modeling. Hort and Olsson stress the importance of the last approach, which allows to incorporate responses of individual agents. Finally, Neves considers the issue of taxation and stabilisation. He notes that Buti and van den Noord and Marino, Monacelli and Siviero reach fairly similar results by using two totally different approaches. The first paper is based on a AD-AS model where automatic stabilisers operate not only on the demand side but also on the supply side. The second paper assesses the stabilisation properties with a technique similar to the one generally used to appraise the performance of monetary policy rules, *i.e.* by replicating the mix of relevant shocks rather than concentrating on a limited number of selected shocks.

Peter Part observes that the theoretical papers in the session focus on automatic short-term stabilisation while the more policy-oriented papers emphasise the long-term aspects of tax reforms. On the issue of short-term stabilisation via automatic stabilisers, Buti and van den Noord stress the role of the overall tax burden while Marino, Monacelli and Siviero focus on the tax elasticity of the personal income tax, which seems to have become more volatile in recent years. The medium and long-term efficiency issues are at the core of the papers by Smith and Nagaosa. Smith emphasises the role of budgetary discipline in safeguarding an appropriate national savings/investment balance, by which the economy is more resilient to shocks. Nagaosa illustrates the shift in policy occurred in Japan towards structural reforms in consequence of the poor economic performance of active counter-cyclical tax measures. Hort and Ohlsson identify in tax competition, tax avoidance/evasion, interest groups and collection costs the major constraints to the tax policy manoeuvre. To this list the discussant would add the challenge from determining the right time to enact reforms and from identifying the available budgetary room for manoeuvre.

3. Tax competition and tax harmonisation

Five of the papers included in the third section are about tax competition. The sixth paper examines the effects of current capital income taxation in the UK. Within the first group of papers, the issue of tax competition is tackled from several perspectives: in three cases (Kastrop, Boothe and Haughwout) the analysis starts from the study of an empirical case; the paper by Ederveen and de Mooij is a review of the literature while the one by Catenaro and Vidal presents a theoretical model. The papers highlight that tax competition can significantly affect the decisions of economic agents. This applies, for example, to foreign direct investment (Ederveen and de Mooij). However, harmful tax competition may not be the more likely outcome in real cases (Boothe, Haughwout), as well as in theoretical models (Catenaro and Vidal).

The paper by Christian Kastrop describes the German federal system with a view to drawing some lessons for the European Union. The German system is reckoned to be very good at promoting cooperation and integration, but it has been showing growing problems in terms of efficiency and transparency. Efficiency problems mainly stem from the fact that while on the expenditure side of the budget a high degree of autonomy is guaranteed to *Länder*, on the revenue side two factors strongly limit such autonomy: the predominant role of revenue sharing in financing local expenditures and the extensive system of horizontal and vertical financial equalisation. Moreover, the two-tier federal state requires a complex process of coordination for every policy: any tax reform results from a compromise between federal and *Länder* interests. The German experience shows that the allocation of expenditure decisions to local governments in order to be closer to citizens' preferences does not yield gains in terms of efficiency if there is a mismatch between the responsibilities for expenditures and the ones for collecting revenue, since accountability problems emerge. Kastrop points to a "German disease", where problems determined by institutional factors are accentuated by stagnating economic conditions.

The issue of tax competition in a federation is tackled also by Paul Boothe who examines the recent reforms concerning the financing of Canadian provinces. In 2000 and 2001 nine of the ten Canadian provinces moved from a tax system based on levying taxes as a percentage of the federal income tax to a system based on levying taxes directly on federally-defined taxable income. The introduction of the new provincial tax systems was expected to more closely meet local preferences. Therefore, a greater dispersion of income tax burdens across regions could have been expected. The paper compares marginal and average tax rates before and after the reform. The fact that the dispersion of taxation levels has not increased is interpreted by the author as the effect of tax competition. According to his view, in the Canadian context, characterised by high capital and labour mobility, tax competition has played a positive role by promoting harmonisation among provinces. However, it has not degenerated in harmful competition: provinces have not introduced measures which would distort the decisions about the location of economic activities.

The paper by Sjef Ederveen and Ruud de Mooij surveys the empirical studies on the effect of taxation on foreign direct investment. After having presented a review of the existing literature on the impact of taxation on the investment of multinational enterprises, the paper summarises the main results of this literature by using the so-called meta-analysis. The meta-analysis evaluates how the variation in the estimated elasticity across different studies depends on the characteristics of the studies. In so doing, it allows a direct comparison of the values of the elasticity. The outcomes of the individual studies are regressed, after having been transformed into a uniformly defined elasticity, on a set of variables reflecting various study characteristics. Although results have to be interpreted with caution, the paper estimates that the elasticity of foreign direct investment to changes in the tax rate is on average about –3.3. In explaining differences among studies, the choice of the tax variable definition plays a crucial role: effective tax rates yield higher elasticities than statutory tax rates and, among them, the *ex ante* rates yield the highest elasticity. One may conclude that while standard regression analysis aims at better understanding the underlying data, meta-regression can be seen as the method to better understand the existing literature by identifying study characteristics which are responsible for the variations in the estimated elasticity.

The paper by Marco Catenaro and Jean-Pierre Vidal presents a theoretical model of capital tax competition in a repeated game framework. The model attempts to reconcile theory and evidence. The theoretical literature on tax competition, based on a static framework, predicts that capital mobility stimulates tax competition. This drives down capital tax rates determining a less than efficient level of public spending. The empirical literature has so far found little support of a downward effect of capital mobility on tax rates. Data seem to suggest that some sort of coordination among governments must be at work. The authors develop a dynamic framework and give theoretical support to the view that coordination can be feasible in the absence of any supranational authority. In this framework, coordination may result from repeated interactions between governments. In the dynamic context, the effect induced by the threat to revert forever to the Nash equilibrium can be taken into account. The long run losses incurred by the deviating government exceed the short run gain generated by undercutting the coordinated tax rate. In the model, the role of cross-country asymmetries is also taken into account. It is shown that this aspect is crucial for the sustainability of the equilibrium: the outcome of decentralised tax coordination is sustainable only provided that cross-country asymmetries are limited.

The paper of Andrew Haughwout addresses the issue of fiscal competition within the regions of a metropolitan area. According to the author, the implications that arise from intraregional competition are general enough to be applied to any economically integrated area. The author designs a model of trade-linked regional economies which presents the main features of American metropolitan areas: a single region with separate political jurisdictions linked by trade in intermediate goods. By calibrating the model with Census data referring to the Philadelphia metropolitan area, Haughwout replicates the kind of interdependency that has been observed in American regions. The model is then used to simulate the effects of a variety of aid packages from the suburb to the city, as examples of coordination among jurisdictions. Simulations show that under certain conditions there may be room for Pareto-improving fiscal redistribution among jurisdictions. They suggest that fiscal redistribution from the suburb to the city can improve the welfare of both jurisdictions. This outcome supports the view that, after having long competed for tax bases, city and suburban areas have recently begun the see that cooperation may yield some benefits.

The paper by Jayasri Dutta, James Sefton and Martin Weale presents an evaluation of the impact of capital income taxation in the United Kingdom. A general equilibrium model with overlapping generations is first set out and then calibrated using the British Household Panel Survey. The model is used to simulate the effects of changes in capital taxation. Simulations show that the tax has the expected effect of reducing aggregate wealth and thus the capital stock and gross domestic product. Moreover, since the model is able to represent the heterogeneity in households (especially by age groups), it allows identifying the households which benefit from a particular tax structure. Simulations show that a tax on capital income raises the consumption level and the income of the young and reduces those of the elderly. Simulations also allow drawing some general considerations regarding the welfare effects of taxing capital income, as has been the case in the UK since the 1930s. The result is that young people are better off in the presence of a capital income tax compared with a situation where capital income is not taxed.

In commenting on the paper by Kastrop, Vieri Ceriani points to the importance of the institutional framework in analysing the behaviour of governments. The efficiency gains from a federal system are conditional on the financial autonomy, as well as on the degree of accountability and transparency of local governments. He agrees with Kastrop's remarks about the inadequate degree of accountability and transparency of the EU budget. Ceriani notes that Boothe's point on the importance of limiting administrative and compliance costs for the overall economic efficiency should be taken into account in the current debate on corporate tax harmonisation in Europe. In noticing that the Canadian reform described by Boothe resulted in a decrease in tax rates, he wonders whether this may depend on tax competition among Canada and the other NAFTA countries rather than among the Canadian provinces as expected by the author. In commenting on the papers by Ederveen and de Mooij and by Catenaro and Vidal, Ceriani notes that a race-to-the-bottom has not yet occurred, although foreign direct investments have been found to be negatively correlated with tax rates. He suggests some explanations. First, as found by Catenaro and Vidal, in a repeated game framework a cooperative solution can emerge. Second, governments have been taking action against harmful competition. Finally, the mobility of factors is not perfect as it is assumed in the literature.

The discussion by David Heald points first to the different criteria that can be used in analysing and evaluating federal systems (e.g., efficiency, equity, accountability and transparency) and to the importance of being clear about the criteria adopted in comparative analyses. Referring to the papers focusing on national tax policies (including those on Japan and Australia included in Section 2), he notes that there is a sort of "cycle of national mood", according to which different countries have, at different points in history, a sense of whether their institutions are working well or badly. In commenting on the papers by Kastrop and by Boothe, he argues that the Canadian federal experience is much more relevant for Europe then the German one. The latter reflects a high degree of cohesion that European countries do not share. Although very different from each other, Heald proposes a joint reading of the paper by Ederveen and de Mooij and by Catenaro and Vidal in order to extract some lessons for the future potential increase of Scotland's fiscal autonomy. The former paper suggests to reduce the corporate tax rate in order to attract foreign direct investment (following the successful experience of Ireland). The latter paper indicates that small countries have competitive tax advantages over large ones. Heald notes that the analysis by Haughwout suggests that equalisation systems can be justified also for efficiency reasons and not only for equity reasons, as is currently done.

The discussion of Ranjana Madhusudhan begins with a definition of inter jurisdictional competition. She also reviews the policy measures relating tax competition and tax harmonisation in the USA, in particular in New Jersey. In commenting on the papers, she considers the aspects of the US tax system which are mentioned in each paper. In some cases (Kastrop, Boothe, Catenaro and Vidal), the US experience offers examples of implementation of the improvements suggested by the authors to tackle inefficiency issues. In other ways the US experience does not confirm the literature prediction. This is the case of the reactivity of foreign direct investment presented in the paper by Ederveen and Mooij. In commenting on the papers presenting stylised models (Catenaro and Vidal, Haughwout, Weale), Madhusudhan evaluates the implications of relaxing certain assumptions made in the models.

4. Tax reforms

The papers included in this section provide an overview of tax policy issues and reforms in three areas. The papers by Balassone, Franco and Staderini, Briotti and Bernardi examine policy developments in EU countries in the context of increasing economic integration and monetary union. Matalík and Slavík and Barbone and Sánchez focus their attention on Central and Eastern Europe pointing to the problems related to the transition from planned to market economies. Martner and Tromben and Mateos-Hanel examine tax policy in Latin American countries and its relationship to the specific budgetary issues of the area.

The paper by Fabrizio Balassone, Daniele Franco and Alessandra Staderini explores the main challenges that tax policy faces within the EMU framework. It considers the implications of EU fiscal rules, the need for fiscal stabilisation at the national level, the effects of economic integration on tax bases and the role of tax policy with respect to the long term sustainability of public finances. It examines revenue trends in the EU and the main features of the reforms introduced in recent years. In the late Nineties, after a phase of fiscal consolidation, all European countries introduced tax cuts with a view to reducing distortions and supporting growth. The reforms were prompted by concern about the effects of high tax levels on competitiveness and employment. The paper considers the motivation of reforms and their compatibility with EU fiscal rules. The authors note that the reforms had a relatively limited impact on the overall tax burden. This depends both on the reforms having not yet exerted their full effects and on the constraints imposed by the EMU fiscal framework: while it is always true that a lower tax to GDP ratio is sustainable over the medium and long term only if matched by expenditure cuts, EMU rules make this constraint binding over the short term as well. In the end, significant tax cuts can be introduced in EU countries only if expenditure policies are accordingly modified. The paper also notes that the challenges posed by tax degradation and competition are still basically unanswered. It concludes by noting that the scope of national tax policies has been significantly curtailed.

The paper by Maria Gabriella Briotti examines capital income taxation trends in the EU. It aims at assessing whether European countries have engaged in some form of tax competition in corporate income taxation over the past decades. The analysis, which is based on forward-looking effective tax indicators and backward-looking aggregate indicators, shows that no strong conclusions can be drawn regarding tax competition. Although statutory tax rates declined significantly over the last two decades, revenues from corporate income, as a share of GDP, have remained fairly stable. Effective tax rates have converged across countries, especially in the euro area. Briotti reviews the main arguments set forth by recent studies to reconcile these results with the indications of theoretical models of tax competition. The paper stresses the need for some form of tax coordination, in order to prevent harmful competition and to tackle the tax avoidance practice which multinational corporations can implement via a number of cross border transactions to reallocate profits in low tax jurisdictions. The resolution on a Code of Conduct for business taxation adopted by the EU Council moves in this direction but it is not expected to produce results over the short term.

The issue of tax reform in European countries is also examined by Luigi Bernardi. The paper describes the main features of revenue trends and tax reforms in the Nineties. It notes that tax convergence has so far been rather limited and that persisting divergences in tax systems prevent the efficient working of the single market, as the movement of goods, people and capital is still subject to tax interference. The paper concisely surveys the literature concerning the effects of taxation on growth concluding that high tax wedges on labour and high tax rates for corporations may contribute to the European declining growth rate and increasing unemployment. Bernardi argues that tax cuts on labour and corporate capital should be large and well targeted. Given the budgetary constraints set by the Stability and Growth Pact and the difficulty of cutting spending, the main feasible policy option is that of shifting part of the tax burden to consumption, rents and environmental externalities. The author also argues that reforms should pay greater attention to equity issues both in vertical and horizontal perspectives. The tax system should contribute to ensure equal opportunities and should support human capital formation.

The paper by Ivan Matalík and Michal Slavík examines the problems and prospects of the Czech tax system in the context of the growing integration of the country with the European Union. The paper briefly outlines the evolution of the system since it was set up in the early Nineties. At that stage, the main concern was that of designing tax rules compatible with a market economy. Several factors now call for a reform of the Czech tax system. First of all, there is a need to reverse the decline of revenues and reduce the current fiscal imbalances. The authors stress that this action should be complemented by tighter spending control. The reform should also aim at rationalising the funding of the different levels of government and at limiting the role of off-budget funds. There is also a need to adjust the tax system to the increasing openness of the economy, which is limiting the government's control of tax bases. Taxation has become one of the main factors affecting the competitiveness of the country. In this context, the burden of taxation on labour should be reduced. At present this burden discourages work in the regular economy. The complexity of the tax system, which depends on several incremental changes introduced in legislation over the last decade should also be tackled. Simplification would reduce administration costs and close opportunities to avoid taxation. Finally, tax reform should also aim at strengthening automatic stabilisers.

Luca Barbone and Luís-Alvaro Sánchez examine the political economy of tax reform in the CIS region. First, the paper surveys the development of tax systems of the area in the Nineties and considers their main policy problems, such as the need to finance relatively high expenditure levels in an environment of incomplete institutions, weak enforcement regimes and shrinking economic activity. The paper examines the role of the main policy actors, pointing to the weakness of tax agencies, the decentralised revenue collection and the role of public and private enterprises. Interest groups frequently used tax policy to protect and extend their interests. The second part of the paper focuses on the Ukrainian tax policy debate and, more specifically, on the attempts to introduce a comprehensive reform streamlining existing tax legislation, broadening tax bases, and clarifying the relationship between tax authorities and taxpayers. Political instability and interest groups burdened the reform effort. Barbone and Sánchez compare the case of Ukraine with that of Russia's more successful experience in introducing tax reforms. The analysis of the reforms introduced in Russia allow them to draw some general indications about the factors mostly relevant in the implementation of tax reforms in CIS countries. They point both to political factors, such as the relationship between Parliament and the President, and to economic factors, such as a privatisation process.

Ricardo Martner and Varinia Tromben examine tax policy in Latin America in the fiscal policy context of the area. They describe the structure and the recent evolution of tax systems in Latin America pointing to similarities and national peculiarities. During the Nineties the revenue to GDP ratio increased substantially in most countries but remained much lower than in the OECD area. VAT became the main source of tax collection in the area, while the role of income taxation remained relatively small. In spite of the substantial progress of tax systems in the last decade, in several countries the situation of public finances remains problematic. The deceleration of economic growth and the reversion of capital flows contributed to the significant increase in public spending. In several countries a large proportion of fiscal revenues has been absorbed by interest payments, while the primary balance is significantly worse than that required for stabilising the debt. Moreover, policies targeting the short-term deficit has frequently given rise to pro-cyclical public expenditure policies. According to Martner and Tromben, fiscal consolidation can only be attained with a substantial increase of tax levels, particularly through the reduction of tax evasion, tax exemptions and tax expenditures. Given the significant vulnerability of tax collection to the economic cycle and the high volatility of output in Latin American countries, it would also be necessary to adopt a fiscal policy rule which combines medium-term credibility and short-term flexibility. Significant budgetary safety margins would be required.

Calixto Mateos-Hanel examines the recent debate on tax reform in Mexico. He outlines the evolution of the Mexican tax system since 1980 and considers the current structure of the main taxes. He points to the progress in making the system more equitable and efficient, but also to its remaining weaknesses. He notes that tax collection is notably lower than in other countries, both in Latin America and in the OECD area, even though the tax system seems to be well designed and based on a small number of taxes with a broad tax base. The unsatisfactory revenue level depends on extensive exemptions and special regimes and on widespread tax evasion. Incremental changes in legislation have generated a complex tax system, difficult to administer and with a number of opportunities to elude payments. According to Mateos-Hanel, a tax reform is required in order to provide the resources necessary for infrastructure, education and health services while keeping sound public finances. Several proposals formulated in recent years advocate a comprehensive tax reform eliminating special regimes and exemptions and enhancing tax administration. In 2001, the Ministry of Finance presented to the Congress initiatives for extensive reforms in consumption and income taxes. A uniform VAT rate and a uniform corporation tax rate were proposed. In the end, because of the opposition of pressure groups, the comprehensive reform proposals were rejected. The objective of significantly boosting revenues has not been achieved.

Drawing on the papers of the session and on French tax policy, Carine Bouthevillain draws some considerations on the issue of tax reforms. She notices that tax systems are entrenched in a country's history, that they pursue multiple objectives, and that they tend to become complex. Economists and politicians frequently ask for radical reforms, but these reforms are often hampered by differences in policy views. In the end, incremental changes may be introduced. Therefore, there is a risk that the system lacks overall coherence. She stresses that a permanent debate on tax reform and frequent tax changes may create uncertainty. She argues that reforms should aim at widening tax bases and reducing rates and that tax policy should be defined jointly with expenditure policy. She concludes by pointing to the risk that the taxation of mobile factors is gradually reduced while the burden shifts to non-mobile tax bases.

Mark Chandler focuses his comments on the papers concerning transition economies in Central and Eastern Europe. In drawing some lessons for tax reform, he points to the need for relying on value added taxation because of its efficiency in collection. He notices that the fragmentation of tax collection may make it less effective. He argues against the abolition of corporate income tax, noting that it is better to exempt dividends and capital gains to avoid double taxation, but to retain the tax on profits to prevent earnings going untaxed. Finally, Chandler stresses that more empirical research is needed, especially in the area of tax evasion. This research could provide the opportunity for cost-benefit analysis of administrative measures to combat evasion, such as increasing auditing.

Walpurga Köhler-Töglhofer examines first the issue of tax competition in advanced economies. She notices that Gabriella Briotti argues that no strong conclusions can be drawn on purposeful tax competition practices, but she adds that the reduction of corporate tax statutory rates suggests that governments are taking action against income shifting strategies by companies. She comments on the problems of small highly integrated countries, such as the effects of high tax rates on the labour market and the impact of economic integration on mobile tax bases. Köhler-Töglhofer highlights the specific context of tax policy in less advanced areas, as examined in the papers about Eastern Europe and Latin America. She recalls that the papers stress the need to introduce appropriate institutional structures, to strengthen tax administrations and to reduce the influence of specific interest groups. She notes the difficulties stemming from levying taxes, particularly income taxes, where the informal sector is large and the economic and political power is very much concentrated. She concludes that while in advanced countries reductions in distortionary taxation can boost long-run growth, in Latin America higher revenues are required to finance expenditure programmes and to avoid fiscal imbalances.