

TAX AND ECONOMIC GROWTH*

SUMMARY AND MAIN FINDINGS

* A study jointly undertaken by the OECD Economics Department and the OECD Centre for Tax Policy and Administration (CTPA), prepared by: Åsa Johansson, Christopher Heady, Jens Arnold, Bert Brys and Laura Vartia. For a copy of the complete study, please see: www.oecd.org/eco/working_papers.

TAX AND ECONOMIC GROWTH

1. Summary and conclusion

1. Tax systems are primarily aimed at financing public expenditures. Tax systems are also used to promote other objectives, such as equity, and to address social and economic concerns. They need to be set up to minimise taxpayers' compliance costs and government's administrative cost, while also discouraging tax avoidance and evasion. But taxes also affect the decisions of households to save, supply labour and invest in human capital, the decisions of firms to produce, create jobs, invest and innovate, as well as the choice of savings channels and assets by investors. What matters for these decisions is not only the level of taxes but also the way in which different tax instruments are designed and combined to generate revenues (what this paper will henceforth refer to as *tax structures*). The effects of tax levels and tax structures on agents' economic behaviour are likely to be reflected in overall living standards. Recognising this, over the past decades many OECD countries have undertaken structural reforms in their tax systems. Most of the personal income tax reforms have tried to create a fiscal environment that encourages saving, investment, entrepreneurship and provides increased work incentives. Likewise, most corporate tax reforms have been driven by the desire to promote competition and avoid tax-induced distortions. Almost all of these tax reforms can be characterised as involving rate cuts and base broadening in order to improve efficiency, while at the same time maintain tax revenues.

2. This paper focuses on the effects of changes in tax structures on GDP per capita and its main determinants. Focusing on tax structures rather than levels is desirable because cross-country differences in overall tax levels largely reflect societal choices as to the appropriate level of public spending, an issue that is beyond the scope of tax policy analysis. Conversely, investigating how tax structures could best be designed to promote economic growth is a key issue for tax policy making. Yet, in practice, it is hard to completely separate the analysis of the overall tax burden from that of tax structure: countries that have a relatively high level of taxes may also have a tax structure that differs from that of other countries, and the response of the economy to a change in the tax structure varies across countries, depending on their tax level. Even more importantly, fully disentangling the revenue-raising function of the tax system from its other objectives, *e.g.* equity, environmental or public health matters is difficult. In order to make the assessment of the effects of the tax structure on economic performance manageable, these objectives are not dealt with in great detail in this study, except when there is a clear trade off between them and tax reforms aimed at raising GDP per capita. Nevertheless, the ways in which governments use the tax system to achieve these other objectives have been extensively studied by the OECD (for instance, see OECD, 2005c, on equity and OECD, 2006d, on the environment).

3. Most of the discussion on the link between changes in the tax structure and economic performance focuses on the effects on GDP levels. This paper, however, recognises that in practice it may be difficult to distinguish between effects on levels and growth rates. Indeed, any policy that raises the level of GDP will increase the growth rate of GDP because effects on GDP

levels take time. Also, transitional growth may be long-lasting, and so it has not proved possible to distinguish effects on long-run growth from transitional growth effects, although some elements of the tax system are likely to have a bearing for long-run growth. For instance, it is possible that taxes that influence innovation activities and entrepreneurship may have persistent long-run growth effects, while taxes that influence investment also can have persistent effects on growth but these will fade out in the long-run. In contrast, taxes affecting labour supply will mainly influence GDP levels. In this spirit, this study looks at consequences of taxes for both GDP per capita levels and their transitional growth rates, with a large part of the empirical analysis devoted to assessing the effects of different forms of personal and corporate income taxation on total factor productivity growth.

4. In open economies the design of a national tax system will need to consider the design of tax systems in other countries, since countries are increasingly using their tax systems to improve their ability to compete in global markets. Globalisation may also increase the opportunities for tax avoidance and evasion especially as concerns mobile capital income tax bases. Therefore, the mobility of the tax base plays some part in the design of tax reforms at the national level, and increased international tax policy cooperation among countries may allow for efficiency gains in some areas (for a discussion on this see Box 1).

5. However, there are important issues that this study addresses only cursorily. First, optimal taxation, or how to minimise the excess burden of taxation, is an important topic that is largely outside the scope of this project, although some references are made to the main insights provided by research in this area. Likewise, tax incidence, or who bears the burden of a tax, is not explicitly addressed in this work, except when it has implications for the way the tax structure affects the determinants of growth.

6. Second, the transition costs of tax reform are not considered. These include not only the costs to the public administration but also the costs to businesses in adapting to policy changes. In some circumstances, it might also include the costs of ‘grandfathering’ some of the old tax provisions (or some other form of compensation) if taxpayers have made substantial investments based on the expectation that these provisions would be maintained. The existence of these costs implies that tax reform will only be attractive if it can be expected to produce offsetting gains in economic performance.

7. Against this background, the analysis in the paper is organised as follows. First, it reviews tax structures and general trends in taxes that are particularly relevant for growth. Second, drawing on theory, existing and new evidence, and the practical experience of member countries, it investigates how the structure of the tax system can have an impact on GDP per capita through its components, labour utilisation and labour productivity. Taking a bottom-up approach, the impact on performance of each of the main categories of taxes (consumption, property, personal and corporate taxation) is discussed and some conclusions are drawn concerning efficient tax design in each of these areas. Third, in the light of this discussion, the final section sketches possible reform avenues for moving towards an overall tax structure that may enhance aggregate economic performance, conditional on the specificities of each country. The proposed framework for

describing the main channels through which tax structures affect GDP per capita could in the future be used to identify tax policy priorities in the context of the “Going for Growth” exercise.

1.1 Main findings

General tax trends

- Despite cross-country differences in the tax structure, most OECD countries rely on three main sources of tax revenues: personal and corporate income taxes, social security contributions and taxes on goods and services. During the past three decades there has been a reduction in the share of tax revenues accounted for by personal income tax while the revenue shares of corporate income taxes and social security contributions have increased. The share of consumption taxes in total revenues has declined, with the mix of taxes on goods and services changing noticeably towards greater use of general consumption taxes (mainly VAT) and away from taxes on specific goods and services. The share of property taxes and environment-related taxes has been fairly constant over time.
- In many OECD countries a change towards flatter personal income tax schedules has occurred, with one of the most pronounced changes in personal income taxation being the reduction in the top statutory income tax rates. In contrast, average workers have not seen their taxes being cut to the same extent. A number of countries have introduced various in-work tax measures to encourage work incentives of marginal workers.
- The reduction in the personal income tax rates has been accompanied by cuts in the corporate income tax rate, partly financed by base broadening in many countries. Likewise, the overall top marginal rate on dividends has decreased mainly as a result of the reduction in the corporate income tax rate. Several countries have introduced tax incentives for investment in research and development.

Broad policy options for reforming the overall tax mix

8. The tax policy changes that are most likely to increase growth in any particular country will depend on its starting point, in terms of both its current tax system and the areas (such as employment, investment or productivity growth) in which its current economic performance is relatively poor. The discussed reforms should be seen as small tax changes rather than suggesting that shifting the revenue base entirely to one particular tax instrument provides more of a growth bonus since it is probable that there are diminishing growth returns to adjusting taxes.

9. The analysis in this paper suggests some general policy options that could be considered:

- The reviewed evidence and the empirical work suggests a “tax and growth ranking” with recurrent taxes on immovable property being the least distortive tax instrument in terms of reducing long-run GDP per capita, followed by consumption taxes (and other property taxes), personal income taxes and corporate income taxes.

- A revenue neutral growth-oriented tax reform would be to shift part of the revenue base from income taxes to less distortive taxes. Taxes on residential property are likely to be best for growth. However, the scope for switching revenue to recurrent taxes on immovable property is limited in most countries both because these taxes are currently levied by sub-national governments and because these taxes are particularly unpopular. Hence, despite the advantages of drawing on an immovable tax base in a period of globalisation, few countries manage to raise substantial revenues from property taxes, with returns on housing generally taxed more lightly than returns on other assets.
- In practical policy terms, a greater revenue shift could probably be achieved into consumption taxes. However, with consumption taxes being less progressive than personal income taxes, or even regressive, a shift in the tax structure from personal income to consumption taxes would reduce progressivity. Similarly, shifting from corporate to consumption taxation would increase share prices (by increasing the after-tax present value of the firm) and wealth inequality as well as increasing income inequality by lowering capital income taxation. Such tax shifts therefore imply a non-trivial trade-off between tax policies that enhance GDP per capita and equity, which is likely to be evaluated differently across OECD countries.
- However, changing the balance between different tax sources should not be seen as a substitute for improving the design of individual taxes. Indeed, the reform of individual taxes can complement a revenue shift. For example, broadening the base of consumption taxes is a better way of increasing their revenues than rate increases, because a broad base improves efficiency while a high rate encourages the growth of the shadow economy. More generally, most taxes would benefit from a combination of base broadening and rate reduction.
- Looking within income taxes, relying less on corporate income relative to personal income taxes could increase efficiency. However, lowering the corporate tax rate substantially below the top personal income tax rate can jeopardize the integrity of the tax system as high-income individuals will attempt to shelter their savings within corporations.
- Focusing on personal income taxation, there is also evidence that flattening the tax schedule could be beneficial for GDP per capita, notably by favouring entrepreneurship. Once again, this implies a trade-off between growth and equity.

Possible avenues for tax reforms to enhance the performance of the various drivers of GDP

Labour utilisation

10. Reforms of labour income taxation will generally have to differ depending on whether the aim is to raise participation or hours worked. Reducing average labour taxes could be desirable for raising participation, while lowering marginal rates may be preferable for increasing hours worked. Any such reform should, however, take into account joint effects with existing benefits,

which could affect the effective average and marginal tax rates, particularly for low-skilled workers or second-earners. Also, reductions in the marginal tax rate will lead to greater income inequality. Moreover, the effects of changes in labour taxes on employment are also likely to be dependent on labour market institutions, such as wage-setting mechanisms and minimum wages, which affect the pass through of taxes on to labour cost.

11. There may also be gains, both in the quantity and the quality of labour supply, from reducing the progressivity of the personal income tax schedule. Estimates in this study point to adverse effects of highly progressive income tax schedules on GDP per capita through both lower labour utilisation and lower productivity (see below) partly reflecting lesser incentives to invest in higher education. Again, this implies a potential trade-off between growth-enhancing tax policies and distributional concerns. However, there may be win-win labour tax reforms in this area. For example, “in-work benefits” increase the income of low-income households, thus reducing inequality, and may also improve efficiency if the gain in labour force participation outweighs the adverse incentives on hours worked by job-holders (as benefits are withdrawn) and on human capital formation (as the returns from up-skilling are reduced) as well as the distortionary costs of the tax increases that are needed to finance the in-work benefits.

Investment

12. Reducing corporate tax rates and removing special tax relief can enhance investment in various ways.

- Especially, if the primary aim is to reduce distortions that hold back the level of domestic investment and to attract foreign direct investment, reducing the corporate tax rate may be preferable to reducing personal income taxes on dividends and capital gains.
- Evidence in this study suggests that favourable tax treatment of investment in small firms may be ineffective in raising overall investment.
- Lowering the corporate tax rate and removing differential tax treatment may also improve the quality of investment by reducing possible tax-induced distortions in the choice of assets.
- Providing greater certainty and predictability in the application of corporate income taxes may lead to higher investment, which in turn, could enhance growth performance.

Productivity

13. There are several ways in which tax policy can influence productivity:

- One option is to reduce the top marginal statutory rate on personal income since it has an impact on productivity via entrepreneurship by affecting risk taking by individuals. While empirical research has pointed to conflicting ways in which entrepreneurship could be affected, in this study a reduction in the top marginal tax rate is found to raise

productivity in industries with potentially high rates of enterprise creation. Thus reducing top marginal tax rates may help to enhance economy-wide productivity in OECD countries with a large share of such industries, though the trade off with equity objectives needs to be kept in mind. It is also possible that cutting top marginal tax rates could increase economy-wide productivity through composition effects, by increasing the share of industries with high rates of enterprise creation.

- A second option is to reform corporate taxes, as they influence productivity in several ways. Evidence in this study suggests that lowering statutory corporate tax rates can lead to particularly large productivity gains in firms that are dynamic and profitable, *i.e.* those that can make the largest contribution to GDP growth. It also appears that corporate taxes adversely influence productivity in all firms except in young and small firms since these firms are often not very profitable. One possible implication is that tax exemptions or reduced statutory corporate tax rates for small firms might be much less effective in raising productivity than a generalised reduction in the overall statutory corporate tax rate. This reduction could be financed by scaling down exemptions granted on firm size as they may only waste resources without any substantial positive growth effects.
- A widely-used policy avenue to improve productivity is to stimulate private-sector innovative activity by giving tax incentives to R&D expenditure. This study finds that the effect of these tax incentives on productivity appears to be relatively modest, although it is larger for industries that are structurally more R&D intensive. Nonetheless, tax incentives have been found to have a stronger effect on R&D expenditure than direct funding.
- Lower corporate and labour taxes may also encourage inbound foreign direct investment, which has been found to increase productivity of resident firms. In addition, multinational enterprises are attracted by tax systems that are stable and predictable, and which are administered in an efficient and transparent manner.

Again, it needs to be emphasised that policymakers will need to examine very carefully the trade-off between these growth-enhancing proposals and other objectives of tax systems – particularly equity.