Taxation in a Global Economy

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1 Introduction

1.1 Market integration

The years since 1980 have seen a worldwide acceleration in the process of integrating the goods and factor markets of different countries. Among the most important factors in this development are the integration of the former Communist countries into the world economy, trade liberalisation and market oriented reforms in many developing countries, and the formation or the strengthening of regional economic groupings such as the European Union (EU), the North American Free Trade Agreement (NAFTA), the Commonwealth of Independent States (CIS), the South American Free Trade Association (MERCOSUR) and the Association of South East Asian Nations (ASEAN). In the European Union, for example, the so-called 'four liberties' (the free flow of goods, services, capital and labour) form the cornerstone of the internal market programme, and NAFTA similarly grants mutual market access to producers and capital owners in the United States, Canada and Mexico.

The increasing degree of market integration has been most visible with respect to capital markets. In the period between 1983 and 1998, the annual flow of outbound foreign direct investment (FDI) has nominally increased by more than 1200 per cent worldwide, rising from less than $50 billion in 1983 to more than $600 billion in 1998. During the same time period, world commodity trade has more than tripled from a total export volume of $1667 billion in 1983 to $5377 billion in 1998 (International Monetary Fund, 1990, 1999). With respect to migration, the increase in mobility is generally less pronounced. In the period between 1981 and 1995 the share of foreigners in the total population increased only slightly in most OECD countries and remained below 10 per cent in all Western European nations, except the small countries Luxembourg and Switzerland (see OECD(SOPEMI), 1994, 1997).

From a trade perspective, the increasing international mobility of commodities and factors is generally seen as an efficiency-enhancing

increase in the international division of labour and the utilisation of scarce resources in places where they yield the highest marginal product. From the viewpoint of national tax policy, however, increased mobility constitutes a constraint, since it raises the elasticity of national tax bases and thus the excess burden of the tax system. In principle, the adverse effects of taxation on mobile commodity and factor tax bases could be neutralised by appropriate schemes of international taxation. The destination principle of commodity taxation and the residence principle of factor taxation have long been the dominant international tax principles. Both imply that taxes fall on consumption rather than production and thus they effectively shield national tax systems from international competition in goods and factor markets. Recent developments have made it more difficult, however, to enforce these desirable international tax schemes.

For the taxation of capital income, the growing international investment opportunities and the difficulties in monitoring foreign investment income have put increased reliance on source or withholding taxes levied in the country where capital is invested. A recent example is the switch of several European countries to source-based, flat taxes on capital income, which remain substantially below the top marginal tax rates on wage income. This 'dual income tax' breaks with the tradition of comprehensive, worldwide income taxation under the residence principle and many observers expect similar reforms in other countries as capital market integration proceeds.

At the same time, the increased mobility of consumers makes it more difficult to sustain the destination principle as a general scheme for international commodity taxation. This applies in particular in the European Union, where the abolition of internal border controls has removed most restrictions on private purchases abroad and cross-border shopping introduces elements of origin-based taxation into the overall mix of taxing trade. Cross-border shopping is also important in other parts of the world, for example at the Canada-US or the US-Mexican borders.

If taxes fall at least partly on the production of goods or the employment of factors, they affect the competition in global markets. Therefore, the developments outlined above have raised a complex set of problems for the taxation of international goods and factor flows. Following a traditional categorisation in international taxation, these problems comprise aspects of efficiency, interindividual equity and internation equity (Musgrave and Musgrave, 1989, ch. 33). To give just a few examples of questions that have arisen: first, given that pure destination- or residence-based taxation is no longer feasible, is it preferable to maintain

these principles for at least some transactions, or should they be abandoned altogether and be replaced by origin- and source-based taxes? Second, what are the effects of increased mobility of tax bases on the structure and the level of public sectors, the welfare costs of the tax system and the relative weights put on different tax instruments? Further, will these changes be dominated primarily by efficiency concerns, or will there be more complex equity–efficiency trade-offs as market integration simultaneously changes the income distribution within each country? And, finally, is it politically feasible and economically desirable to coordinate national tax policies when countries differ in some critical way and coordination must be restricted to a subgroup of countries while others remain outside the agreement?

All these and many other questions have been addressed over the last decade in a large number of widely diversified contributions, making international taxation and tax competition one of the dominant themes in the recent public finance literature. While the research effort has been – and still is – intense, it is in the nature of a relatively new and rapidly expanding field that the focus is on analytical differences between individual models, rather than on the common elements and close links that exist between alternative settings and approaches. In particular, the analytically oriented literature dichotomises almost completely into models of either commodity or factor taxation and this distinction conceals the close similarities underlying many of the results. Furthermore, on the basis of individual articles with often conflicting results, it is generally quite difficult to draw any reliable policy conclusions for a specific tax competition scenario.

For these reasons, there are some clear advantages that a detailed monograph on international taxation and tax competition has over isolated articles in professional journals; in fact, it is precisely the wealth of articles on this subject that makes an integrated treatment interesting and potentially valuable. To date, there are still only a few monographs in this field which offer a sufficiently broad analytical framework to incorporate a larger share of the literature and the relevant policy issues.[1]

A first and prominent example is Frenkel, Razin and Sadka (1991), who focus on intertemporal aspects of international taxation and dedicate most of their analysis to the taxation of internationally mobile capital. In a two-period 'workhorse model' with endogenous savings and labour supply by a representative agent, they analyse the implications of capital tax competition for the costs of public funds, the optimal

[1] There are also several excellent survey articles, which will be introduced in chapter 3.

structure of capital taxation under conditions of perfect and imperfect capital mobility (when capital controls are permitted) and the desirability of tax harmonisation between a subgroup of countries.

A second monograph is Wellisch (2000), who incorporates household mobility and distinguishes between the mobility of firms and capital. Wellisch's work integrates the local public finance literature with a number of issues that arise equally in a context of international factor taxation. In this study taxes are used to provide public goods, redistribute income between different groups and internalise environmental externalities. The focus of the analysis is on the conditions under which decentralised tax policy leads to an efficient outcome, despite the presence of interjurisdictional tax competition.

Thirdly, Janeba (1997) focuses on game-theoretic aspects of capital income taxation. His analysis covers tax competition for internationally mobile portfolio capital and FDI and also extends to settings where firms operate in oligopolistic markets. A special feature of this work is the detailed modelling of capital tax instruments, in particular different forms of double taxation relief. The questions raised include the existence and efficiency of a non-cooperative tax equilibrium and the possibility to achieve Pareto improvements through various methods of fiscal cooperation.

There are also several policy oriented studies on the same subject. The book by Tanzi (1995) is a prime source in this field, combining theoretical concepts with a detailed discussion of policy experiences and likely further developments. The present book is complementary to Tanzi's work in at least two respects. First, the focus here will be more on theoretical contributions to international taxation, even though policy implications will not be neglected. The second difference is that the policy implications in the present book will be drawn primarily from the perspective of the European Union. This is particularly relevant for commodity taxation, where policy issues in the United States are quite different from those in Europe. Even in the area of capital taxation, however, the European Union is a unique example, since it offers an existing legal framework for trans-national – but geographically restricted – measures of tax harmonisation.

In comparison to the existing theoretical studies, the main distinguishing feature of the present analysis is that it includes a detailed treatment of both commodity and factor taxation. This incorporates the two main strands of the tax competition literature into the scope of our analysis and allows us to establish several links between two otherwise largely separated fields of analysis. We will discuss the interaction of commodity and factor taxation in an open economy context and also draw some

policy conclusions for the mix between direct and indirect taxation under conditions of increasing market integration.

A second theme that occurs repeatedly throughout this book is the strategic interaction between two asymmetric players (governments). If all countries were identical, then the implementation of tax coordination measures would be straightforward and tax harmonisation would involve no costs for each individual country. However, tax competition is a policy problem chiefly because countries differ in the level of taxation as well as in the structure of their tax systems. These differences may lead to diverging interests between countries, making it possible that some countries gain from tax competition and hence have no interest in participating in globally welfare improving reforms. Identifying such conflicts of interest is thus a first step in the search for policy solutions that overcome inefficient outcomes of tax competition.

Thirdly, similar to Wellisch (2000) and Janeba (1997) we distinguish between the mobility of capital on the one hand, and the mobility of firms on the other. In the context of this study, the introduction of firm mobility serves two main purposes. First, it makes clear that taxes which are neutral in conventional models of capital mobility – in particular, taxes on pure profits or rents – lead to interregional tax competition when the set of mobility scenarios is extended. Second, the incorporation of firm mobility links the tax competition literature to the new trade theory, where the location decisions of firms operating in imperfectly competitive markets have also become a prominent field of research.

We also emphasise that, unlike Wellisch (2000), the present analysis explicitly addresses international issues, even though links to federally organised nation states will be drawn occasionally. This international focus derives from the mobility scenarios underlying the present study, as well as the specific constraints and policy options analysed. For example, the choice between destination- and origin-based commodity tax principles arises primarily in an international context, since only very few nation states operate decentralised multi-stage commodity tax systems. Similarly, the evasion of capital income taxes is a particularly relevant constraint in an international setting, because all measures to reduce international capital flight require the cooperation of legally independent tax authorities. Furthermore, we ignore labour mobility in the present study, a restriction that is primarily dictated by the need to specialise in a rapidly expanding field. As we have seen above, the assumption of interregional immobility of labour may still be a reasonable approximation in an international context, whereas it is clearly not justified when analysing tax policy in a federal state.

Finally, at least since Brennan and Buchanan's (1980) work on the 'Leviathan' model of government, it is well known that the answers given to almost any public finance issue very much depend on one's view of government behaviour. This is also true for international taxation. Although some progress has been made in defining a more realistic middle ground between the two polar views of completely benevolent and completely selfish government behaviour, most of the literature is still based on either the one or the other view of government. The present book largely works with the assumption of welfare-maximising governments and it does not model the political process in any detail. A complementary work in this respect is Lorz (1997), who analyses the effect that competition for internationally mobile capital has on the decisions made by different interest groups in the economy.

1.2 Plan of the book

The study begins in part 1 with two introductory chapters: in chapter 2 we survey some current policy problems and developments in both international commodity and capital taxation. Most of the discussion will focus on the policy issues in the European Union, but we also take a brief look at developments in other parts of the world. After this policy oriented introduction, chapter 3 gives a brief theoretical introduction to the tax competition literature. The discussion in this chapter focuses on some basic analytical distinctions in tax competition models that are independent of the specific mobility scenario analysed and play an important role in the remainder of the study. The chapter also gives a brief overview of some of the strands in the international tax literature that are not further pursued below.

The main body of the book falls in three parts: part 2 (chapters 4–7) addresses selected issues of factor taxation and part 3 (chapters 8–9) is concerned with isolated models of commodity taxation. Part 4 (chapters 10–12) brings together the different tax instruments and analyses their interaction. Most of the chapters are structured in a similar way: we start out with an introductory section that surveys the fundamental contribution(s) in the particular field. This is followed by our own analysis, where the extensions or modifications of the existing literature are made explicit. Finally, we compare our results with those obtained in related work, with the aim of emphasising analytical links on the one hand and complementary (or conflicting) policy implications on the other.

Part 2 of the book starts out with factor taxation. Chapter 4 gives an overview of some fundamental theoretical results and empirical issues that underlie large parts of the literature on capital tax competition. We

first introduce and discuss alternative international principles for the taxation of mobile capital. This is followed by the presentation of two theoretical benchmark results in this literature, the zero taxation of capital income by a small open economy and the underprovision of public goods as a result of symmetric tax competition. Finally, we survey some of the empirical evidence on the development of capital vs. labour taxation since 1980.

Chapter 5 extends and combines the benchmark analyses of chapter 4 to analyse capital tax competition between two countries of different size. We first derive the basic theoretical result that small countries undercut the capital tax rates of their larger neighbours and discuss the parameters that influence the small country's welfare in the Nash equilibrium. This is followed by a numerical specification of the model, which evaluates the conditions under which small countries can be better off in the asymmetric Nash equilibrium, as compared to the case of policy coordination. Finally, we discuss the scope for the regional coordination of capital income taxes when capital flight to third countries can occur.

Chapter 6 introduces distributional motives within each country and analyses the optimal mix of capital and wage taxation when two competing governments maximise the political support from workers and capitalists. In representative consumer models capital market integration leads to an unambiguous shift in the tax structure, reducing the taxation of capital and increasing the tax on wages. In a two-class model it is shown that the opposite can be true in a capital exporting country when income groups try to maintain their net income position and the government is forced to use tax policy to compensate workers for the market-induced fall in gross wages.

In chapter 7 the focus of the analysis shifts from the level to the structure of capital taxation. Corporate tax reforms since the 1980s have combined significant cuts in the tax rate with a broadening of the corporate tax base. A model is set up that explains this pattern of reform as an optimal adjustment to the increased possibilities for multinational firms to shift paper profits between countries. Based on these results we discuss reform measures for the current international system of taxing the profits of multinational corporations.

In part 3 we turn to the analysis of commodity taxation. Chapter 8 analyses asymmetric tax competition under a mixed commodity tax scheme where producer transactions are taxed under the destination principle while cross-border purchases by consumers are taxed under the origin principle. In this setting consumers in high-tax regions have an incentive to shop abroad, creating fiscal externalities that distort commodity tax choices in the Nash equilibrium. Starting from this asym-

metric equilibrium we analyse the effects of coordination measures to limit cross-border shopping on the welfare levels in the high-tax and the low-tax region.

Chapter 9 analyses the consequences of switching to a general origin-based system of commodity taxation. This scheme is shown to be equivalent to a general destination principle in the long run, even if capital is mobile internationally. However, the switch in the tax principle will cause anticipation effects that lead to temporary distortions of investment and savings decisions. The discussion identifies several other settings in which origin- and destination-based commodity taxes are equivalent, and where they have differential effects.

The analyses in part 4 incorporate both factor and commodity taxes. Chapter 10 studies the interaction of source-based capital taxes and commodity taxes in a two-good trade model of a small open economy when capital is internationally mobile. Starting from the benchmark case where rents accruing to fixed factors can be taxed by separate instruments, we then introduce both domestic and international constraints on the set of available taxes and study the implications for the optimal tax mix. This analysis forms the starting point for a more detailed discussion of the production efficiency theorem in open economies and for the efficiency of tax competition in models with a broad set of tax instruments.

Chapter 11 simultaneously introduces imperfect international mobility of firms and cross-border shopping by consumers. In this setting a clear-cut efficiency argument against an origin-based commodity tax emerges, since this tax can be duplicated by an appropriate combination of taxes on wages and firms' profits. In contrast, a destination-based commodity tax performs an independent role in the government's tax mix when some capital income escapes direct taxation. The optimal tax mix features a combination of positive taxes on wages, profits and consumption.

Chapter 12 discusses firm mobility in an alternative setting where two countries of different size compete for the location of a single, foreign-owned monopolist. Trade costs for the monopolist's exports introduce a 'home market effect' that gives a location rent to the larger region. In equilibrium, the firm always settles in the large country, reversing the advantage that small countries have in attracting capital in perfectly competitive markets. In the case where both countries dispose of an additional tax on imported goods, it is very likely that the large country can extract a positive profit tax from the monopolist. Policy conclusions are drawn for the need to harmonise corporate taxation in the European Union as a way to capture location rents from foreign firms.

Chapter 13 summarises the results of the study. On the basis of these findings, it evaluates the arguments for tax harmonisation in the European Union in the fields of both commodity and capital income taxation. The chapter concludes with a brief outlook on the optimal mix of direct and indirect taxation in a world characterised by increasingly mobile tax bases.