

Is Tax Competition Harming Developing Countries More Than Developed?

by Michael Keen and Alejandro Simone

Michael Keen and Alejandro Simone work in the Fiscal Affairs Department of the International Monetary Fund.

This paper is based on Section V of Keen and Simone (2004). The authors are grateful to Chris Sui Wu and Assi Woldemariam for research assistance. Errors and views are the authors' alone and should not be attributed to the International Monetary Fund. This version was completed in May 2004.

There has been much hand-wringing in the European Union and OECD during the last 20 years over the possibility that intensified international tax competition will result in a significant reduction in revenue from capital income taxes. It is widely recognized that this fear — or hope, to those who see tax competition as a discipline on spendthrift governments — has not been realized, at least regarding the corporate income tax. Statutory tax rates have fallen significantly in developed countries,¹ as can be seen from Figure 1 below (which relates only to the 1990s, though the process started earlier). Corporate tax revenues, however, have broadly held up, both as a share of GDP and regarding total tax revenues — that is the conclusion, for instance, of the careful analysis in Devereux, Griffith, and Klemm (2003), and can also be seen in Table 1 below, which shows that corporation tax revenues in high-income countries actually rose from an average of 1.9 percent of GDP at the start of the 1990s to 2.5 percent a decade later. In developed countries, the base of the corporation tax — calculated in the second column of Table 1 as corporate tax revenues divided by the basic rate of corporation tax — thus expanded by more than enough to offset the

revenue impact of the marked cut in statutory rates. Why the base has broadened in that way — whether as a result of reduced allowances in the tax law, or an increase in the share of corporate profits in GDP as a result of extraneous factors or the supply-side effect of the reforms themselves — is not well understood.² But at risk of oversimplification, the bottom line is clear, and in a sense reassuring: Corporation tax reform in the developed economies has been rate-cutting and base-broadening, with the two aspects as yet broadly offsetting, leaving revenue roughly unchanged.

Little attention has been given, however, to how international tax competition is affecting developing and emerging market economies. This paper takes a first look at those issues. Though the results are preliminary, resting on incomplete and imperfect data,³ the picture that starts to emerge is different from that which has been established for developed countries — and much more troubling.

Toward Some Stylized Facts

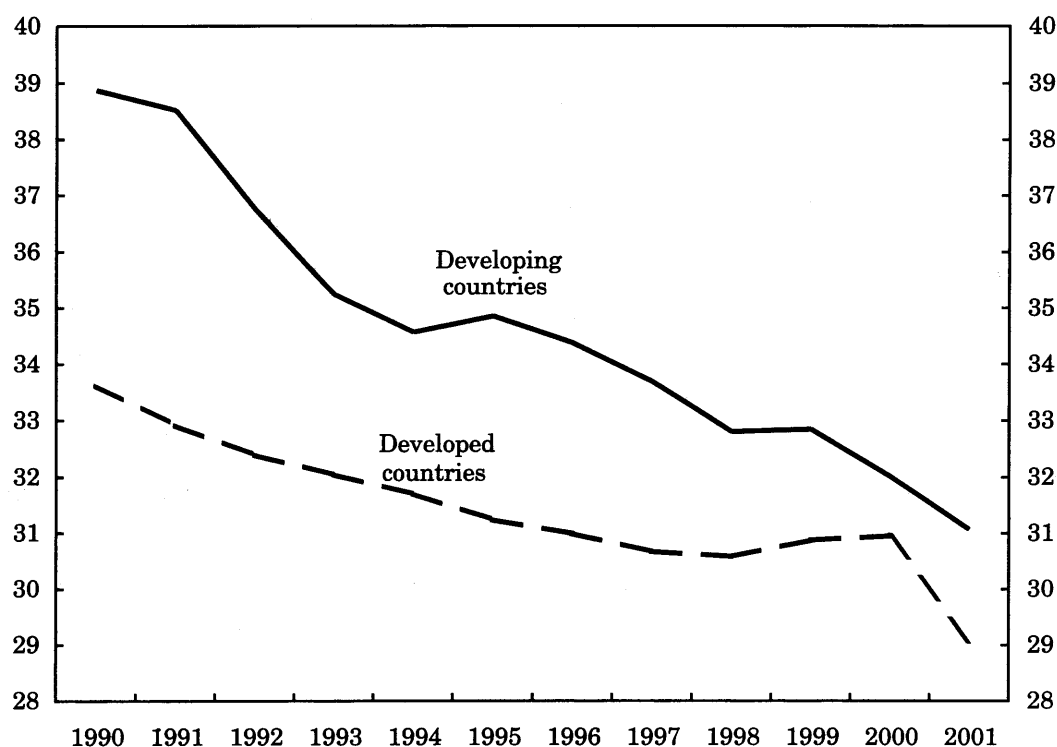
Figure 1 also shows that, as in the developed world, so too in developing countries the 1990s saw marked reductions in statutory rates of corporation tax. Tables 1 and 2 provide more information on developments in corporate taxation over that period (the former by income group, the latter by region). The reduction in statutory rates of corporation tax has typically been largest in the better-off developing countries, moderate in the poorest (around 4 percentage points, or one-tenth of the initial level), and greatest among the better off (about 8 points, about one-quarter of the initial level). Figure 2 and the second column of Table 2 show that average statutory rates have fallen in all regions of the developing world, with an especially

¹Throughout this analysis, countries are classified by income group according to their per capita income at the start of the 1990s, following the classification of the World Bank. "Developed" countries are those that then had per capita income in excess of US \$7,000. "Developing" countries — the rest — are divided between low-income (per capita income less than US \$900 at the start of the 1990s), lower-middle-income (between US \$700 and US \$1,621), and upper-middle-income countries (US \$1,621 to US \$7,000).

²Devereux, Griffith, and Klemm (2004) explore this question for the U.K., concluding that broadening of the statutory base alone cannot fully explain the strong revenue performance of the corporation tax.

³See Keen and Simone (2004) for details of the data, country groupings, methodology, and results underlying the discussion here. Two points: the basic revenue data come from the IMF's *Government Financial Statistic*; and "BRO" in the figures and tables refers to the Baltics, Russia, and other countries of the former Soviet Union.

Figure 1. Average Statutory Corporate Rates, 1990-2001 (in %)



Source: World Tax Database (Michigan: Michigan University).

noticeable reduction in sub-Saharan Africa. The downward pressure on statutory tax rates that has been remarked on in the developed world has been just as marked — perhaps more so — in the developing world.

What about revenues from the corporation tax? Have they held up in developing countries, as they have in developed? The answer seems clear: They have not. Table 1 shows that they have fallen by about 20 percent on average, and by more in the low- and lower-middle-income countries. The regional experience, shown in Table 2, is more mixed. Revenue has risen sharply in the Americas and in North Africa and the Middle East. The most remarkable reduction is in Central Europe and the BRO, but that reflects in large part the circumstances of the transition. Less dramatic but still marked reductions are found in both Asia and the Pacific and, still more troublingly, in Africa, where revenues have fallen by around 20 percent.

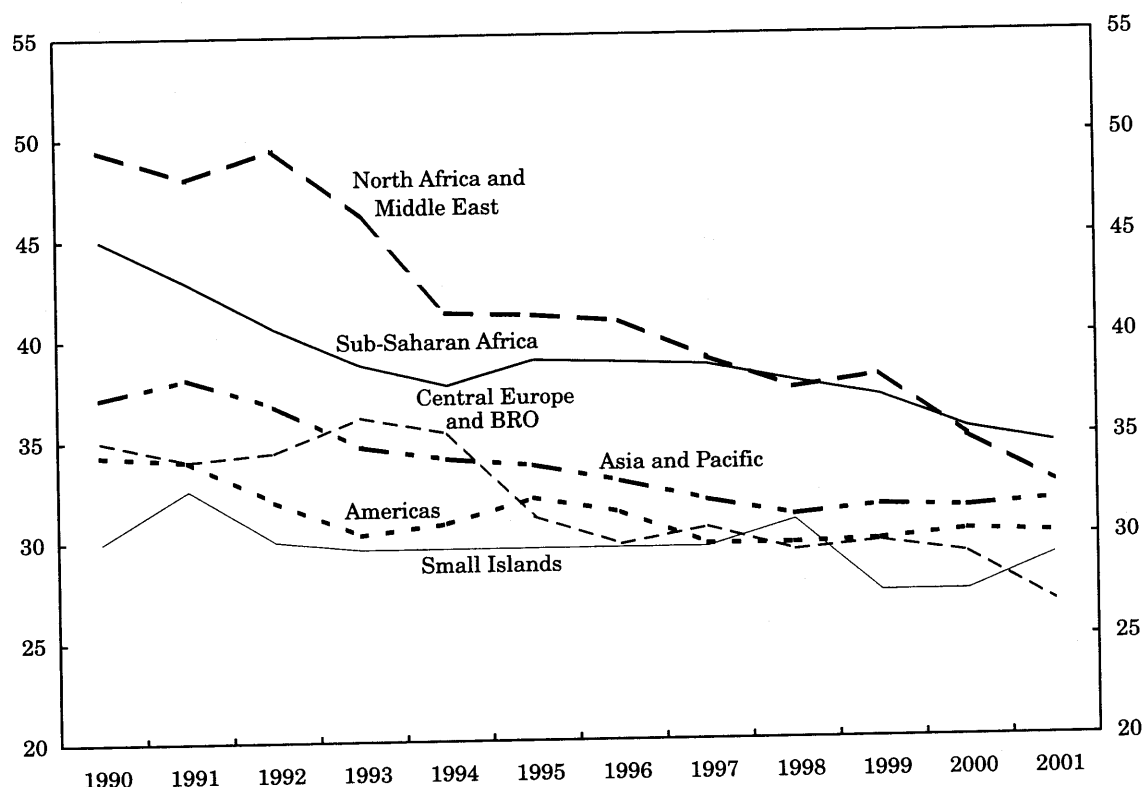
Clearly, the base of the corporation tax has not expanded enough to offset the revenue loss from the reduction in statutory tax rates. Table 2 shows that the base has, if anything, become smaller in developing countries, reinforcing the revenue effects of the

reduction in rates. Among low-income countries, the base has fallen by around one-quarter; among the higher-income developing countries, it has been broadly constant. Again there are important regional differences to note: In the Americas, and in North Africa and the Middle East, the corporate tax base has risen by enough to leave revenues unchanged or, in the Americas, substantially increased. But in other regions — including sub-Saharan Africa, and in Asia and the Pacific — there has been clear contraction. Thus, while corporate tax reform among developed countries has been rate-reducing and base-broadening, in some of the poorest and most vulnerable of the developing countries it is has been rate-reducing but also base-reducing (or, at best, base-neutral).

What Has Been Eroding the Base?

The poor performance of the corporate tax base in developing countries could reflect wider structural changes in the income share of the corporate sector, or just the weakness of hoped-for supply-side effects. But there is also evidence that it reflects, at least to some degree, widespread base-narrowing policy reforms.

Figure 2. Statutory Corporate Tax Rates of Developing Economies by Region, 1990-2001 (in %)



Source: World Tax Database (Michigan: Michigan University).

Figure 3 summarizes the spread of four kinds of tax incentive in a sample of 40 developing countries for which sufficient information can be gleaned (from tax guides) for both the start and end of the decade: tax holidays (widely regarded as the most pernicious form of incentive),⁴ reduced statutory rates for particular sectors or regions, direct tax breaks for exporters (WTO-inconsistent for all but the poorest countries), and free-trade zones.⁵

All forms of incentive became more common over the 1990s.⁶ The proportion of the sample offering tax

holidays rose from 45 percent to around 60 percent, for instance, while the growth of the other incentives was even more dramatic: Reduced rates were available in about 40 percent of the sample at the start of the period, for example, but in 60 percent by the end; tax breaks for exporters and free-trade zones increased from 33 percent and 18 percent of the sample, respectively, to about 45 percent. In short, and with the exception of free-trade zones and tax breaks for exporters, each of the incentives was offered only by a minority of countries in the sample at the beginning of the 1990s, but by a majority at the end.

Moreover, the spread of tax incentives has been especially marked in the poorest of the developing countries, as can be seen from Table 3. Among the lowest-income countries in particular, the proportion offering tax holidays increased by three-quarters of a percent to around 78 percent. In the lower-middle-income countries, on the other hand, the incidence of holidays remained broadly the same while that of tax breaks for exporters and free-trade zones increased noticeably.

There are again important differences in experience across region. In sub-Saharan Africa, although a small sample size (seven countries) limits the firmness of any

⁴For reasons spelled out in, for example, Zee, Stotsky, and Ley (2002).

⁵There is an important distinction between FTZs that offer only customs and indirect tax remission to exporters within the zone (this being essentially a particular way of implementing standard procedures), and those which also offer zone firms direct tax advantages of various kinds. Information available does not allow us to distinguish between these, so that the figures are for FTZs of all types.

⁶Chia and Whalley (1996) reach a broadly similar albeit more impressionistic conclusion, for a smaller sample of countries and examining trends up to the early 1990s.

**Table 1. Corporate Tax Revenues, Rates, and Bases by Income Group,
2000-01 and 1990-91^a**
(In percent of GDP, unless noted otherwise)

	Corporate Tax Revenues	Average Statutory Corporate Rate ^b (In percent)	Average Corporate Tax Base
Early 2000s			
Low-income countries	2.0	34.6	5.8
Lower-middle-income countries	2.1	31.7	7.3
Upper-middle-income countries	2.6	29.8	8.7
Developed countries ^c	2.5	32.6	8.3
Unweighted average ^c			
Developing countries ^d	2.3	31.8	7.4
Developed countries ^c	2.5	32.6	8.3
Total unweighted average	2.3	32.1	7.7
Early 1990s			
Low-income countries	2.6	38.5	7.7
Lower-middle-income countries	2.9	37.0	8.6
Upper-middle-income countries	3.3	37.7	8.6
Developed countries ^c	1.9	35.8	5.5
Unweighted average ^c			
Developing countries ^d	2.9	37.8	8.3
Developed countries ^c	1.9	35.8	5.5
Total unweighted average	2.6	37.1	7.4

Sources: Government Finance Statistics (IMF), International Financial Statistics (IMF), World Economic Outlook (IMF); and World Tax Database (Michigan: Michigan University).

^aData used for early 1990s and early 2000s are average for two years 1990-91 and 2000-01 respectively for most countries. For countries for which these averages could not be calculated, some flexibility in the years taken to represent the early 1990s and early 2000s was used to avoid a significant reduction in sample size.

^bSince average corporate rates and corporate tax revenues are from different sources, this resulted in a reduction of the effective sample size.

^cFor each revenue classification, only countries for which data are available are included in the calculation.

^dDeveloping countries are defined to be low- and middle-income countries following closely the World Bank income classification of economies.

^eSee Keen and Simone (2004) for sample details.

conclusion, it is striking that whereas only one country offered tax holidays at the start of the decade, all did by its end.⁷ In the Americas, although two countries (from a more respectable sample size of 15) introduced holidays during the 1990s, four removed them — continuing an apparent broad movement away from

tax holidays in the region that was noted for an earlier period by Chia and Whalley (1996). In North Africa and the Middle East, there has been a modest movement in the direction of more incentives.

It is unclear why the thrust of corporate tax policy reform has been to broaden the base in developed countries but to narrow it in the developing world, especially in the poorest regions. The standard advice to developing countries has been against the kind of base erosion seen above. Perhaps developing countries have a smaller immobile base, offering less of a coun-

⁷Uganda, however, though not in the sample, withdrew tax holidays (grandfathering those already granted) in 1997.

Table 2. Corporate Tax Revenues, Rates, and Bases by Region, 2000-01 and 1990-91^a
(In percent of GDP, unless noted otherwise)

	Corporate Tax Revenues	Average Statutory Corporate Rate ^b	Average Corporate Tax Base
Early 2000s			
Americas ^c	1.8	29.2	6.2
Sub-Saharan Africa	1.6	36.5	5.1
Central Europe and BRO	1.8	28.2	6.8
North Africa and Middle East	3.2	35.6	10.1
Asia and Pacific	2.9	31.8	9.9
Small Islands ^d	3.7	35.0	9.6
Unweighted average ^e			
Developing countries ^f	2.2	31.8	7.4
Developed countries ^g	2.5	32.6	8.3
Early 1990s			
Americas ^c	1.2	32.7	4.6
Sub-Saharan Africa	2.0	43.6	5.3
Central Europe and BRO	4.8	33.0	14.3
North Africa and Middle East	3.1	47.1	7.0
Asia and Pacific	3.4	35.5	10.2
Small Islands ^d	3.4	35.0	11.1
Unweighted average ^e			
Developing countries ^f	2.9	0.4	8.3
Developed countries ^g	1.9	35.8	5.5

Sources: Government Finance Statistics (IMF), International Financial Statistics (IMF), World Economic Outlook (IMF); and World Tax Database (Michigan: Michigan University).

^aData used for early 1990s and early 2000s are average for two years 1990-91 and 2000-01 respectively for most countries. For countries for which these averages could not be calculated, some flexibility in the years taken to represent the early 1990s and early 2000s was used to avoid a significant reduction in sample size.

^bSince average corporate rates and corporate tax revenues are from different sources, this resulted in a reduction of the effective sample size.

^cRegional breakdown averages include only developing countries.

^dIsland economies of under 1 million.

^eFor each revenue classification, only countries for which data are available are included in the calculation.

^fDeveloping countries are defined to be low- and middle-income countries following closely the World Bank income classification of economies.

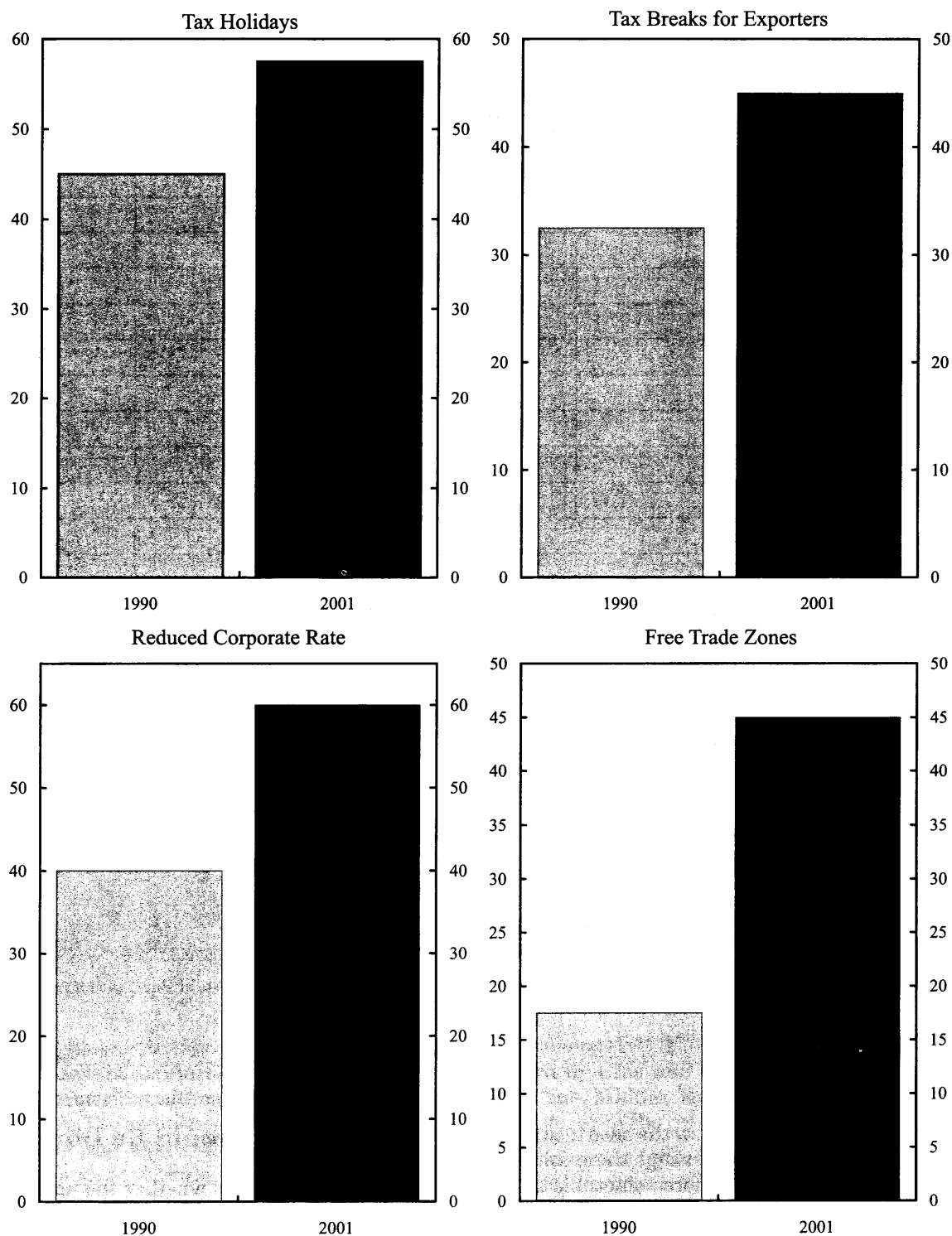
^gSee Keen and Simone (2004) for sample details.

terweight to the incentive to narrow the base to attract mobile inward investment. Or perhaps their political and institutional structures are more vulnerable to the exercise of influence by interest groups, including foreign multinationals. Why international tax competition appears to be taking such different forms in developed and developing countries is a puzzle, and one needing explanation.

What Should Be Done?

The first question is whether the apparent erosion of the corporate tax in developing countries is to be regretted or welcomed. It is a robust result of optimal tax theory that economies that are small in world capital markets should set a marginal effective rate of corporation tax — that is, a rate on the investment that

**Figure 3. The Spread of Tax Incentives in Developing Countries,
1990 and 2001**
(percent of developing countries in sample)



Source: *Corporate Taxes 2003-04, Worldwide Summaries* (PricewaterhouseCoopers).

Table 3. Tax Incentives in Developing Countries^{a,b}
(in percent of total number of countries in category)

	Tax Holidays		Reduced Corporate Rate		Investment Allowance		Tax Breaks for Exporters		Free Trade Zones	
	Early 1990s	Early 2000s	Early 1990s	Early 2000s	Early 1990s	Early 2000s	Early 1990s	Early 2000s	Early 1990s	Early 2000s
Low income	44.8	77.8	44.4	66.7	11.1	11.1	44.4	77.8	33.3	55.6
Lower middle income	58.3	58.3	33.3	33.3	0.0	0.0	33.3	50.0	16.7	41.7
Upper middle income	36.8	42.1	42.1	68.4	26.3	21.1	26.3	21.1	10.5	42.1
All developing countries	45.0	57.5	40.0	60.0	15.0	15.0	32.5	45.0	17.5	45.0
Total number of countries in sample	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Total number of low-income countries	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Total number of lower-middle-income countries	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total number of lower-upper-income countries	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0

Source: *Corporate Taxes 2003-2004 Worldwide Summaries* (PricewaterhouseCoopers).

^aFor most countries, early 1990s means 1990 and early 2000s means 2001. For transition countries, data for year 1993 are used for early 1990s.

^bDue to data availability issues, the sample of developing countries is more reduced than the one used for the main tax data. (See Appendix Table 6 for details.)

just breaks even after tax — of zero. That is essentially a production-efficiency argument, an intertemporal analogue to that for an absence of trade taxes in developing countries:⁸ Small economies should trade at world prices for capital, just as they should for atemporal commodities. With the required after-tax return on capital fixed on world markets, the burden on any tax that a small economy imposes on capital must be shifted to immobile factors of production, most obviously labor, with a distortionary increase in the relative domestic cost of induced capital along the way. That suggests that the developing world may have been responding optimally to the liberalization of the capital account of the 1990s, moving toward what is now (even if it was not when capital was less mobile) an efficient tax structure.

That, however, seems to be too optimistic a view. To the extent that the corporate tax imposed by a developing country bears on rents — or attracts a tax credit in the country from which the investment comes — it does not distort investment decisions, and so is not optimally zero. It may be that part of the reduction in base and revenues does represent a loss of revenue from those rents, either (through bad policy) location-specific rents that could in principle be taxed at up to 100 percent without driving investment abroad or (through competition for footloose firms) rents that can be taken in any of a variety of countries. In either case, the result is the loss of an attractive source of revenue.

What makes the apparent pressure on corporate tax revenues in developing countries especially troubling is that developing countries have traditionally relied more heavily on corporate tax revenues than have developed countries; at the start of the 1990s, they accounted for around 17 percent of tax revenue in developing countries, compared to 7 percent in developed. That in turn seems to reflect the relative administrative ease of collecting corporate tax revenue, which is typically highly concentrated in a small number of large (and, perhaps, also relatively honest) firms. Any erosion of the corporate tax in developing countries thus jeopardizes a convenient and much-needed tax handle.

What is the proper policy response to those pressures, apparently from intensified international tax competition, on corporate tax revenue in developing countries? Some say downward pressure on tax revenues from tax competition should be welcomed as

a further means of disciplining governments prone to spend wastefully, and that has been an influential view in the formation of policy in the OECD. In the context of low-income and developing countries, however, the most common policy prescription, as noted earlier, is for an increase in revenues (even while recognizing that some would be wasted). That implies that there would be merit in measures of cooperation intended to bolster corporate tax revenues.

That cooperation might take several forms. One minimalist possibility, for instance, is agreement on a code of conduct, proscribing, and seeking to roll back particular forms of tax incentives; that might include a prohibition, for example, on the issuing of new tax holidays. A code of that sort — not enforced legally, but by peer pressure — has been adopted by the EU,⁹ and proposed for the South African Development Community and in other regional blocs in the developing world. That strategy may be appealing for emerging customs unions, since the elimination of internal tariff barriers can be expected to enhance firms' mobility between participating countries, and increase the incentive that each perceives to offer more favorable tax treatment than do the others. The difficulty with that and any other form of coordination among a subset of countries, however, is that by increasing their levels of corporate taxation, those countries party to the agreement may find themselves more vulnerable to tax competition from those outside it.¹⁰ Nor is it even clear that a wide regional coverage will deal with the problem, because potential competitor countries may be geographically far removed from one another: Mauritius may compete for investment with Fiji, for example. Only a genuinely global arrangement avoids the problem, and that remains far from political reality. How vulnerable more limited regional agreements would be to competition from third countries, and how much political will can be mustered to enter into and abide by those arrangements, are likely to prove important issues for the future of corporate taxation not only in developed, but perhaps especially in developing, countries. The experience that there has been with agreements of this kind in the developing world — for example, with the draft investment code of the West African Economic and Monetary Union, still awaiting adoption — is not encouraging.

⁸As such, it is subject to a range of qualifications: it presumes that pure profits are fully taxed, and that there are no constraints on the other tax instruments that can be deployed. Further qualifications arise in the international context: see Keen and Wildasin (2003). Nevertheless, this remains an important benchmark for policy design.

⁹There it is also supplemented by binding state aid rules, which are proving even more effective in unwinding tax practices containing incentive elements.

¹⁰Konrad and Schelderup (1999) establish conditions under which tax coordination amongst a subset of countries is welfare-improving for the participants.

Conclusions

The results reported here are preliminary. They may be contaminated by data inaccuracies or incompleteness of country coverage or reflect the dates chosen for the comparisons. The first lesson is that, even more than usual, more work is needed to confirm the story beginning to emerge. The second lesson is that the results, taken at face value, are disturbing: Downward pressure on corporation tax revenues appears to be more marked in developing economies than in developed, for reasons — and this is a third lesson — that must be better understood. Given the greater reliance of those countries on the corporation tax as a source of revenue, the downward pressures on customs revenues that they are also likely to experience in the coming years, and the urgency of the fiscal needs that many of them face, this could be serious cause for concern — more so, perhaps, than the implications for developed countries that have received so much attention. ♦

References

- Besley, Timothy, Rachel Griffith, and Alexander Klemm (2001), "Empirical Evidence on Fiscal Interdependence in OECD Countries," mimeo, Institute for Fiscal Studies (London).
- Chia, Ngee Choon, and John Whalley (1996), "Patterns in Investment Tax Incentives Among Developing Countries," pp. 437-454 in Anwar Shah (ed.) *Fiscal Incentives for Investment and Innovation* (World Bank and Oxford University Press).
- Devereux, Michael, Rachel Griffith, and Alexander Klemm (2002), "Corporate Income Tax Reforms and International Tax Competition," *Economic Policy*, pp. 451-495.
- Devereux, Michael, Rachel Griffith, and Alexander Klemm (2004), "Why Has the UK Corporation Tax Raised So Much Revenue?", Working Paper 04/04 (Institute for Fiscal Studies, London).
- Keen, Michael and David Wildasin (2004), "Pareto Efficient International Taxation," forthcoming in the *American Economic Review*, pp. 259-275.
- Keen, Michael and Alejandro Simone (2004), "Tax Policy in Developing Countries: Some Lessons from the 1990s, and Some Challenges Ahead," forthcoming in Sanjeev Gupta, Ben Clements, and Gabriela Inchauste (eds): *Helping Countries Develop: The Role of the Fiscal Policy*.
- Konrad, Kai and Guttorm Schelderup (1999), "Fortress Building in Global Tax Competition," *Journal of Urban Economics*, pp. 1556-1567.
- Zee, Howell, Janet Stotsky, and Eduardo Ley (2002), "Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries," *World Development*, pp. 1497-1516.