Does the Enlarged European Union Need a Minimum Corporate Tax Rate?

The low statutory tax rates on corporate profits in some of the new EU member states have led to accusations of "fiscal dumping" and "unfair tax competition". This has given rise to demands from some of the old member states for the introduction of an EU-wide minimum corporate tax rate. Would such a move make economic sense?

Ruud de Mooij*

A Minimum Corporate Tax Rate in the EU Combines the Best of Two Worlds

In a recent interview with Dow Jones newswires, Dutch Finance Minister Gerrit Zalm called for the European Union to introduce a common minimum corporate tax rate of at least 20% to avoid unfair competition among EU countries. With this call, he joined the German Chancellor Gerhard Schroeder, who argued that Europe should agree on a "tax corridor" that would fix minimum and maximum corporate tax rates. Schroeder responded in particular to the accession of new member states to the EU, which adopt low corporate tax rates so as to attract foreign businesses. Zalm and Schroeder find support among public finance economists. In particular, the theory of tax competition reveals that strategic tax setting is typically inefficient from a European perspective. Indeed, independent governments do not take into account the welfare implications of their actions on neighbouring countries when deciding about their own tax rates. With capital freely moving across borders, they thus end up in a prisoner's dilemma in which fiscal externalities cause inefficiently low levels of public goods supply. Tax harmonisation, perhaps through minimum rates, can therefore be welfare improving.[1]

Not everyone shares this view, however. The new eastern EU member states consider tax competition a vital instrument to catch up with the income level of the old members. They aim to mimic the successful Irish experience. That country adopted a very low corporate income tax during the last decade and has been successful in attracting foreign businesses. This has helped it to converge to the income level in the rest of Europe. But also a number of politicians in the old member states maintain that decisions on the levels of tax must remain within the exclusive competence of the member states. Indeed, the level of tax is generally considered to be the heart of their tax sovereignty. Harmonisation is, therefore, considered undesirable. The opponents of a minimum tax rate find support among public choice theorists. This theory supports tax competition as a means of disciplining governments that would otherwise spend too much and impose too high tax rates. European Commissioner Frits Bolkestein therefore argues that a process of tax competition, which drives down corporate tax rates in the EU, is exactly what Europe needs to encourage economic growth.

This article claims that a minimum corporate income tax may actually reconcile the opposing views on tax competition. On the one hand, by putting a floor on the tax rate it provides a clear demarcation within which the process of tax competition can take place. Hence, it avoids a potential harmful tax race to the bottom. On the other hand, as long as the minimum is not too high, it does not remove the disciplining impact of corporate tax rates. In particular, experience with the European diesel excise supports the view that the disciplining impact of tax competition remains important after the introduction of a minimum tax.

Measuring Tax Competition

Before making a case for a minimum corporate income tax, one has to agree upon the importance of tax competition. Empirical studies on tax competition usually explore whether tax rates are decreasing over time in light of the increasing economic integration among countries. Devereux, Griffith and Klemm show

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[1] For a recent review of the literature, see G. R. Zodrow: Tax Competition and Tax Coordination in the European Union, in: International Tax and Public Finance, Vol. 10, 2003, pp. 651-671.

that the mean statutory corporate tax rate in 16 OECD countries gradually declined between 1982 and 2001.[2] The average in thirteen EU countries (excluding Denmark and Luxembourg) dropped from 48% in 1982 to 33% in 2001. Especially the late 1980s and the years around the new century show a decline in tax rates. In many countries, this reduction in rates was accompanied by a broadening of the tax base. For instance, Devereux et al. show that the net present value of fiscal depreciation allowances fell from 83% of the price of the capital good in 1982 to 74% in 2001. Nevertheless, also the average effective tax rate fell during the last two decades: for the 13 members of the EU, it declined from 40% in 1982 to 28% in 2001. These trends provide an indication that tax competition is indeed an important phenomenon in the EU.

Recently, a number of studies have tried to empirically assess the importance of tax competition between countries in an alternative way. In particular, these studies estimate so-called fiscal reaction functions. These measure the responsiveness of a country's tax rate to the rate of neighbouring countries. These studies typically show that countries in the OECD and Europe do indeed systematically respond to each other's corporate tax rates.[3] For instance, Devereux, Lockwood and Redoano find that strategic tax responses are strong and highly robust for both statutory tax rates and (marginal and average) effective tax rates in 16 OECD countries. For the European Union, Altshuler and Goodspeed find similar results for alternative specifications for the tax game, i.e. Nash and Stackelberg. Their results suggest that a 10 percentage points higher tax rate in neighbouring countries implies an 8 percentage points higher rate in a particular European country. These findings provide evidence for the claim that governments aggressively compete with their corporate tax systems for foreign direct investment.

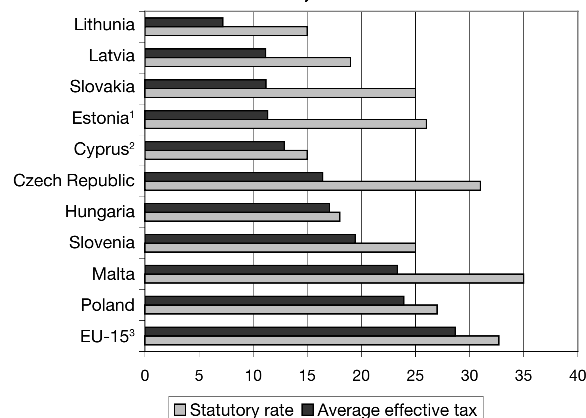
Corporate tax competition in the EU may further intensify in the future with the arrival of new member states. Indeed, most of the new member states have adopted relatively low corporate tax rates, as Figure 1 shows. On average, the statutory corporate tax rate in these countries is 9 percentage points below the average of the EU-15. The average effective tax rate is more than 15 percentage points lower, partly due to tax incentives and tax holidays. Recently, some of the new member states have announced further reductions in their corporate tax rates.

Lessons from Diesel Excises

The importance of tax competition has long been recognised in the EU in the field of indirect taxes. For example, differences in excise duties on commercial diesel between European countries have a potentially important impact on the fuelling behaviour of transport companies. Indeed, most trucks can cover between 1500 and 3000 kilometres on a single tank. As excise duties account for between 10 and 12 per cent of the running costs of road haulage companies, active fiscal planning of international transport routes can substantially save on production costs. As a response, European governments may strategically set their diesel excise rates so as to attract trucks to fuel in their country and thus maximise the fiscal revenue from their excise duties.

Interestingly, the European Union imposed a minimum excise rate on diesel in 1992. To avoid harmful competition in excise rates, the EU first introduced a proposal for harmonising mineral oil excises in 1987. This proposal has subsequently been modified into a policy of minimum excise rates. These harmonisation efforts seem to have affected the excise levels. Figure 2 illustrates this. It shows the development of the mean value for the excise ratio in the EU between 1978 and 2001. The excise ratio is defined as the excise in terms of the price inclusive of excise paid by com-

Figure 1
Corporate Tax Rates in the New Member States of the EU, 2003



[1] Estonia has a zero rate for retained earnings [2] Cyprus has a lower rate of 10% for profits up to 1.75 billion euro. [3] Figures for EU-15 for 2001.

Source: Company taxation in the new EU member states, Ernst&Young and ZEW, 2004.

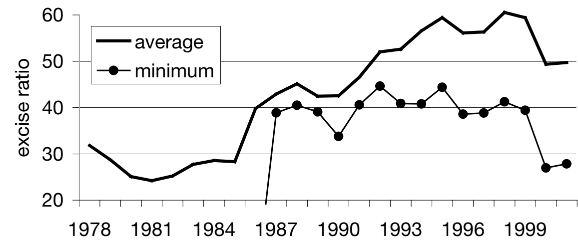
[2] M. P. Devereux, R. Griffith, A. Klemm: Corporate Income Tax: Reforms and Tax Competition, in: Economic Policy, Vol. 35, 2002, pp. 451-495.

[3] R. Altshuler, T. J. Goodspeed: Follow the Leader? Evidence on European and U.S. Tax Competition, mimeo Rutgers University, Hunter College and CUNY Graduate Center 2002; T. Besley, R. Griffith, A. Klemm: Fiscal Reaction Functions, mimeo, Institute for Fiscal Studies, 2001; M. Devereux, B. Lockwood, M. Redoano: Do Countries Compete over Corporate Tax Rates?, CEPR Discussion Paper No. 3400, 2002.

mercial users. The figure reveals that the excise ratio in Europe gradually increased over time. In particular, while excises made up around one quarter of the after-tax diesel price during the late 1970s, this share was more than doubled in the late 1990s. This rise was especially significant between 1985 and 1995. This is exactly the period in which the EU adopted its harmonisation policy regarding diesel excises. Since 1992, this minimum rate has remained unchanged at a level of €0.245 per litre. Because the excise involves a specific tax, i.e. per unit of consumption, the real value of this minimum excise rate has gradually fallen since 1992. This has made the minimum excise less important for the development of the excise ratio in European countries. Indeed, as most countries index their excises rates to inflation or increase them on a discretionary basis, the gap between the actual excise levels and the minimum level increased after 1992. In 2000 and 2001, we observe a sharp reduction in the excise ratio in Figure 2. This is due to an increase in the pre-tax diesel price, which pulls down both the excise ratio and the minimum rate. Overall, the figure suggests that the minimum excise rate has significantly reduced the intensity of tax competition, as measured by the development in the level of the excise ratio.[4] In 2003, the minimum was only binding for Greece, while Luxembourg was only slightly above the minimum rate at €0.253 per litre.

The question is whether these tax harmonisation efforts have also affected the strategic tax interactions between countries, i.e. the other way of measuring the intensity of tax competition. To explore this, Evers, De Mooij and Vollebergh have estimated Nash-type fiscal reaction functions for diesel excises using a panel of 17 European countries between 1978 and 2001.[5] Apart from exploring the magnitude of the strategic tax interactions, they also examine how strategic tax setting between countries is influenced by coordination efforts of the European Union, i.e. the imposition of the minimum rate. The results obtained by Evers et al. suggest that an increase of 10 percentage points in the excise ratio of neighbouring countries systematically increases a country's own tax rate by between 2 and 3 percentage points. This is consistent with the presence of tax competition in diesel excises. The strategic tax response is robust for alternative specifications and holds for the entire period between 1978

Figure 2
Mean and Minimum Diesel Excise Ratio in Europe, 1978-2001



Source: M. Evers, R. A. de Mooij and H. R. J. Vollebergh: Tax competition under minimum rates: the case of European diesel excises, CESifo Working Paper, forthcoming 2004.

and 2001, i.e. for both the pre-harmonisation and the post-harmonisation period. The regressions imply that the minimum tax rate has reduced the intensity of tax competition, although the strategic tax responses have not disappeared. Moreover, the coefficient for the impact of the minimum rate is not statistically significant at the 5% level. Hence, one cannot reject the hypothesis that tax competition has remained equally intense after the introduction of the minimum rate.

Whereas the minimum rate has thus prevented a tax race to the bottom in European diesel excises, it has not significantly reduced the strategic tax setting behaviour of European governments. The minimum seems to combine, on the one hand, the benefits of tax competition in the form of maintaining the disciplining impact on governments and, on the other hand, the benefits of coordination in the form of avoiding too low tax rates.

Summing Up

Harmonisation efforts by the EU have contributed to raising the average diesel excise in Europe. This seems to suggest that the minimum excise rate has reduced the intensity of tax competition. Also the strategic tax interactions tend to decline in response to the minimum rate. The strategic tax responses do not disappear, however. Moreover, the impact of the minimum rate on the strategic tax responses is not statistically significant. Hence, we cannot reject the hypothesis that the minimum excise imposed since 1987 has not significantly reduced the intensity of tax competition as measured by the size of strategic tax interactions. This may yield an interesting lesson for corporate tax competition. Indeed, imposing a minimum rate may be effective in avoiding a tax race to the bottom (which is often seen as harmful), while at the same time maintaining incentives for governments to compete and thus to tame the Leviathan. Hence, a minimum rate may strike an optimal balance between the pros and cons of tax competition.

[4] In a recent proposal, the finance ministers of the EU agreed upon a proposal for a new Directive on Taxation of Energy Products, originally put forward in COM(1997)30. The aim is to increase the minimum excise duty to €0.33 per litre by 2012.

[5] M. Evers, R. A. de Mooij and H. R. J. Vollebergh: Tax competition under minimum rates: the case of European diesel excises, CESifo Working Paper, forthcoming 2004.

Clemens Fuest* and Winfried Fuest**

A Minimum Corporate Tax Rate Would be Harmful for both High and Low Tax Countries

The recent EU enlargement provides a good example of the consequences for national tax policies of increasing economic integration. In particular the new member states located in central and eastern Europe pursue a tax policy which emphasises the creation of favourable conditions for investment, especially foreign direct investment. This puts the tax policies of the old EU member states under competitive pressure. In 2003, statutory tax rates on corporate profits (retained earnings) in the new eastern European member states were between 0% in Estonia and 25% in Slovenia. The unweighted average was 16%. Among the old EU member countries, statutory tax rates ranged between 13% in Ireland and 40% in Germany, the average being 30%.[1] In addition to the low level of general tax rates, the new member countries offer numerous special tax incentives for investors, such as tax holidays and investment tax credits for investment in certain sectors or special economic zones.

The tax policy of the new member states has been criticised by leading politicians in particular in France and Germany. These critics argue that the new member states engage in "fiscal dumping" and "unfair tax competition". Moreover, the tax policy development in eastern Europe is quoted as an example of the adverse effects of tax competition in general. In this context, both the German and the French government have argued that the EU should introduce a minimum corporate income tax rate in order to limit corporate tax competition.

Is the Tax Policy of the New Member States "Unfair"?

The concept of unfair tax competition does not have a well-defined economic meaning. But there is an initiative by the EU (and a similar one by the OECD) in the field of corporate taxation which classifies certain types of tax regimes as potentially "harmful" or "unfair" if they satisfy one of the following criteria:[2]

- they give advantages only to non-residents or to transactions with non-residents;
- they are ring fenced from domestic markets;
- they grant tax advantages without real economic activity and substantial economic presence in the member state offering the tax advantage;
- they imply that rules for the profit determination of multinational firms or groups depart from internationally agreed principles;
- they lack transparency, including the case where legal provisions are relaxed at the administrative level in a non-transparent way.

On the basis of these criteria, the EU has established a list of potentially harmful tax measures in the member states, and the member states have committed themselves to eventually abolishing these measures. There is no doubt that preferential regimes for foreign investors do exist in the new member countries, and there will be considerable pressure to abolish these regimes. However, the question of whether there really are economic advantages from abolishing the tax regimes falling under the above-mentioned criteria is highly controversial. Moreover, it is far from clear whether abolishing these regimes will reduce the pressures of tax competition.

As Keen points out,[3] banning preferential regimes may well induce countries to pursue a more aggressive tax policy with the general tax system. As an example, Keen points to the case of Ireland. In 1999, Ireland had a general corporate tax rate of 32% but granted a 10% rate to manufacturing and financial services firms in the Dublin Docks Area. Under the pressure of the initiative against harmful tax regimes, Ireland has agreed to abolish this special tax regime. But at the same time, the general corporate tax rate has been reduced to 13%. It may well be that the eastern European countries will also have to abolish their special investment incentives and that they will react

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[1] Comparisons of effective tax burdens, which take into account both tax rates and tax bases, also lead to the result that the corporate tax burden in eastern Europe is lower than in the old EU member countries, see e.g. ZEW/Ernst&Young: Company Taxation in the New EU Member States, Frankfurt a.M. and Mannheim 2003.

[2] See Code of Conduct Group: Report of the Code of Conduct Group to the ECOFIN Council, Press Release Nr. 4901/99, Brussels, 29.02.2000.

[3] M. Keen: Preferential regimes can make tax competition less harmful, in: National Tax Journal, Vol. LIV, No. 4, 2001, pp. 757-762.

by further reducing their ordinary corporate income tax rates.

However, irrespective of whether or not preferential regimes are thought to be harmful, it is clear that the low level of general corporate tax rates in the new EU member states does not reflect unfair tax measures because general tax rate cuts do not fall under the criteria for unfair tax competition established by the EU. In so far, the EU initiative against unfair tax competition does not provide a basis for minimum tax rate proposals.

A Race to the Bottom?

A widespread argument in favour of tax coordination is based on the idea that tax competition will lead to a "race to the bottom" in taxes and an erosion of tax revenue. As a result, governments may be unable to finance the provision of public goods and services. The main problem with this argument is that there is little empirical evidence to support it. It is true that corporate tax rates in the OECD have been reduced substantially over the last two decades, but there is a decline neither in overall tax revenue nor in public expenditures.[4] What can be observed is a restructuring of tax systems which involves a trend towards lower direct taxes and higher indirect taxes.

This is also true of the new EU member countries. Corporate tax rates are low compared to other EU countries but indirect taxes, in particular taxes on value added, are quite high: in 2003, value added tax rates were between 18% in Lithuania and 25% in Hungary, compared to 16% in Germany and 19.6% in France, which are both countries with relatively high corporate tax rates. The idea that tax competition is a matter of changes in tax structures rather than a race to the bottom in overall tax levels is also reflected in overall tax revenue. For instance, in the Czech Republic, in 2002, the share of taxes and social security contributions in GDP was 39.2% and thus almost identical, for instance, to the same indicator in the Netherlands (39.3%).

How can this trend toward indirect taxes be explained and how should it be evaluated? The direct-indirect tax mix a country chooses may be influenced by many factors, including issues of tax administration. One may well argue that the new EU member states prefer indirect taxes like the value added tax to direct taxes because of greater administrative simplicity. But there is little doubt that tax competition plays a role as well. The value added tax is a tax on domestic consumption and thus does not distort investment decisions. It is therefore attractive as a revenue raising instrument in a world where capital is internationally mobile.

Of course, to the extent that consumers also become more and more mobile, competition may also put pressures on value added taxes. In some countries or regions, cross border shopping motivated by tax differentials is indeed growing, but this is mostly due to large differences in excise taxes such as petrol taxes. For the time being, population mobility does not seem to put value added taxes under competitive pressures. Therefore, an overall race to the bottom in taxes which questions the ability of governments to raise sufficient tax revenue cannot be observed. The budgetary problems of some of the old EU countries like Germany or France are not primarily caused by tax competition but rather by the inability to limit the expansion of public expenditure.

Distortion of Competition?

Another argument in favour of more tax coordination points to the fact that differences in effective tax rates may distort competition among firms in the European internal market. This is undesirable because it would imply that certain types of investment would be located in eastern Europe just because taxes are low, not because the location is advantageous for the economy as a whole. In its most recent report on company taxation in the internal market, the EU Commission very much emphasises this aspect. The report shows that there are considerable differences in the effective tax burden on investment across EU member states and emphasises that this distorts competition in the internal market and that the existing tax systems distort the allocation of capital in Europe.[5]

According to this view, the best solution would be a uniform corporate tax system in all EU countries. It is clear that minimum tax rates would be insufficient to achieve a "level playing-field" where all firms face the same tax burden. There would have to be uniform tax rates or at least upper and lower limits, as suggested, for instance, by the Ruding Report. Moreover, tax bases would have to be coordinated as well. If harmonisation was limited to statutory tax rates, countries could undo the effects of the coordination agreement by offering attractive tax base arrangements.

On top of this, there would have to be a uniform type of integration between corporate and personal taxes. This would require the member countries to give up a large part of national autonomy in tax policy. Given that existing tax systems reflect differences in preferences and economic conditions across member

[4] Interestingly, the share of corporate tax revenue in overall tax revenue in the EU increased from 6.8 % to 8.9% during the period 1990-2001. One reason may be that the share of corporate income in overall income has increased.

[5] See Commission of the European Communities: Taxation in the Internal Market, COM(2001), 582final.

countries, the cost of giving up national autonomy in tax matters would be very high.

But there is a more fundamental objection to the idea of creating a level playing-field by harmonising tax rates. Competitive advantages or disadvantages of individual companies are influenced by public policy in many ways. They depend not only on taxes but also on public infrastructure, on tax enforcement, on regulations and the speed and costs of administrative procedures and requirements. If taxes are harmonised, countries will use other policy instruments to attract foreign investment, and firms will again operate under very different conditions. Currently, many low tax countries also offer fewer public services or a less well developed infrastructure, so that it is not clear whether firms in these countries really enjoy a policy induced competitive advantage relative to firms producing in other countries.

The idea that firms should operate under the same tax burden in all member states is also questioned by the empirical observation that many national tax systems treat different types of investment differently, depending on the sector, the region or the firm's organisational form (incorporated vs. unincorporated). For instance, in Germany, there is a local business tax (Gewerbesteuer) which has a nationally uniform tax base but different tax rates in each community. In Switzerland, the tax burden on investment also differs considerably across communities and cantons. If these differences are thought to be problematic, a first and necessary step would be to eliminate the discriminatory elements in national tax systems.

Tax Harmonisation as a Way of Reducing Compliance Costs?

Another, more pragmatic argument in favour of corporate tax coordination points to the fact that firms operating in all EU member states face high compliance costs because they have to deal with 25 different national tax systems. Moreover, the principle of separate accounting forces governments and businesses to deal with complicated rules in transfer pricing, the allocation of overhead costs, loss offsets and border-crossing mergers and acquisitions. Often, the taxation of border-crossing investment gives rise to double taxation and thus discriminates this type of investment relative to purely national economic activity.

Interestingly, the reform proposals made by the EU Commission in its 2001 report do not tackle the problem of differing effective tax burdens on investment but focus on the double taxation of corporate profits and the reduction of compliance costs. But this requires above all a coordination of tax bases rather than tax rates. Some measures which are targeted to specific problems in this field have already been taken. Firstly, the "Parent-Subsidiary Directive" which was enacted in 1990 rules out withholding taxes on dividend payments between associated companies residing in different member states. The scope of the directive is limited, though, because it applies only to holdings of 25% or more and does not cover all companies subject to corporate tax. The second measure is the "Merger Directive" which is aimed at avoiding the triggering of capital gains tax liabilities by border-crossing mergers in cases where purely domestic operations do not. This directive was also enacted in 1990. Last year, a third measure was adopted: the "Interest Directive". It bans source taxes on intra-group interest payments.

These targeted measures have solved some specific problems of double taxation and partly removed the discrimination of border-crossing investment compared to national investment. But the problem of having to deal with 25 different national tax systems and the difficulties of allocating profits to individual member countries via separate accounting has not been solved. According to Mintz,[6] the most promising approach would be to introduce a common consolidated tax base.

Under this concept, multinational companies would determine their consolidated "European profits" on the basis of uniform rules and the tax base would be allocated to the member states according to some allocation formula. Each member state would then be allowed to apply its national tax rate to its part of the tax base. It is even possible, and probably also desirable, to allow for country-specific tax allowances and tax credits. This approach would reduce the burden of tax compliance, but it would not require uniform or minimum corporate tax rates. Therefore, the idea that there may be benefits from more tax coordination in the EU is certainly correct, but this coordination should not imply the introduction of minimum tax rates.

Minimum Tax Rates, Cohesion and Competitiveness

The most important objection to the introduction of minimum corporate tax rates, however, is related to two fundamental aims of European economic policy which go beyond specific issues of corporate taxation: Firstly, it is a declared objective of the EU to support the process of economic cohesion in Europe, i.e. the EU wants to limit the differences in per capita incomes and standards of living within the Union. In this context, the most important challenge is to trigger a process of economic growth and recovery in eastern Europe. Currently, per capita income in the new

[6] See J. Mintz: Corporate tax harmonization in Europe: It's all about compliance, in: International Tax and Public Finance, Vol. 11, 2004, pp. 221-234.

eastern European member states is less than half of the EU average in the old member states. GDP growth rates are on average above those of the old EU, but there is no guarantee that this will continue in the years to come. During the last decade, the privatisation process in eastern Europe, which was a consequence of transition from centrally planned economies to market economies, attracted a lot of foreign investment. In most of the new member countries, this process has come to an end. Next to this, increasing wages reduce the cost advantage of these countries as a location for foreign investment. Moreover, most of these countries face the geographical disadvantage of being located at the periphery of the EU. Finally, many of these countries continue to have a poorly developed public infrastructure. Given this, it is by no means obvious that the new EU member states will be able to maintain growth rates which are high enough to reduce the gap to the old EU member countries.

For this reason, the EU directs a large and growing part of its budget to structural and regional policies which try to support economic growth and development in poor EU countries. The ability of the eastern European EU countries to offer favourable conditions for investment by having low corporate tax rates is an important complement to the EU strategy of supporting economic development and growth in this region. Introducing a minimum corporate tax rate would be inconsistent with this policy. The EU would subsidise the new member states in order to encourage firms to invest in these countries and at the same time enforce higher tax rates which reduce investment. This would act as a brake on the process of economic convergence. A slowdown of economic growth in eastern Europe would not only be harmful for the eastern European EU countries themselves, it would also be against the interests of the old EU member countries. For instance, less investment and less economic growth in eastern Europe would increase the incentives of people living in eastern Europe to migrate to the old EU countries. While a limited amount of migration is certainly unavoidable and also desirable from an economic point of view, mass migration caused by bad economic prospects in eastern Europe would create serious difficulties in the immigration countries. Moreover, a positive economic development in eastern Europe would also create demand for goods and services produced in the old EU countries.

A second fundamental objective of EU economic policy is to make sure that the European Union as a whole will continue to be attractive as a location for production and investment compared to other regions in the world economy. Internal tax competition is a very effective way of making sure that Europe will have tax systems which are favourable for growth and employment. Enforcing minimum corporate tax rates, in contrast, would imply that the EU countries would be at a disadvantage compared to countries outside the EU, and real investment as well as book profits would be shifted to other countries.

Conclusion

The corporate tax policy of the new EU member states does create pressures for some of the old member states to reduce their corporate taxes, in particular statutory corporate tax rates. But reacting to this pressure by enforcing mimimum tax rates in the EU would be counterproductive. It would slow down the economic catching up process in eastern Europe and question the competitiveness of the entire EU as a location for investment compared to other countries and regions in the world economy. There are potential benefits from more coordination in the field of corporate taxation, but this coordination should aim at removing tax obstacles to border-crossing investment and at reducing the compliance costs of the tax system. This requires targeted measures in the area of tax base coordination. Introducing minimum corporate tax rates, in contrast, would be harmful for both high and low tax countries in the EU.

Alexander Klemm*

A Minimum Rate without a Common Base?

Across the world corporate income tax rates have been falling over the last two decades. The countries of the EU are no exception to this. After the last round of EU enlargement, the average EU tax rate fell from 31% to 26% because of the very low tax rates in most new member states, which are as low as 0% in Estonia, at least for retained earnings. This has already led to reactions in old member states, most notably Austria, which has decided to reduce its tax rate from 34% to 25% from 2005 onwards. Even though so far tax revenues in industrialised countries have remained

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remarkably stable despite all tax cuts,[1] a new round of tax cuts might change that.

This brings up the often-suggested solution of imposing a minimum tax rate, which would be the collusive solution to a prisoner's dilemma. But would this be sensible? This question is an extremely difficult one to answer as it can be approached from numerous angles. Even if one restricted oneself to approaching it from the background of the tax competition literature, predictions are rather ambiguous. Depending on the assumptions made, tax competition can be shown to be harmful,[2] beneficial[3] or irrelevant. The case for a minimum tax rate clearly depends crucially on the first of these three possibilities being true. Approaching the subject from the optimal tax literature, it might be concluded that corporate income taxes are unnecessary if great importance is placed on intertemporal neutrality and consumption-based taxation is thus preferred. Proponents of comprehensive income taxation however will argue that corporate income taxation is essential to prevent tax evasion on capital income by saving inside corporations. Clearly in the former case a minimum tax rate can be harmful, as it might help the corporate income tax to survive, while in the latter it would be beneficial for the same reason.

A short paper such as this one cannot hope to do justice to all of these issues. It will therefore instead focus on a question of limited scope, but nevertheless great practical importance: can it ever make sense to have a minimum corporate income tax rate without a common tax base or at least minimum requirements for the tax base?

Bearing in mind the discussion above, this paper will make the working assumptions that in principle a minimum tax rate would be useful. Two reasons for that will be considered: first, to minimise distortions to the efficient location of capital, and second, to combat tax avoidance via profit shifting into low-tax countries.

This paper first compares the importance of tax bases and statutory tax rates for effective tax rates. It then analyses how the imposition of minimum tax rates may affect effective tax rates in the EU. First a static approach is taken, in which countries simply apply the minimum tax rate without changing any other aspect of their tax system, then a behavioural effect is allowed, which would shift competition from tax rates to other tax rules. Finally the findings are interpreted.

Current Effective Tax Rates

In order to describe the complex tax systems of the 25 EU countries in easily comparable measures, this paper will use effective tax rates. There are two versions of these: the effective marginal tax rates (EMTR)[4] and the effective average tax rate (EATR), which is an extension of the EMTR to discrete rent-earning investments, i.e. investments earning more than required return.[5] Both measures combine the statutory tax rate with the value of investment allowances and the treatment of financial flows into a single measure. Special regimes, such as regional or industry specific tax incentives are generally ignored, so that the tax rates represent a rate faced by a typical firms.

As effective tax rates depend on a multitude of factors, such as the assets invested in, the sources of finance used and the timing of revenue streams, each firm, and even each project may face a different effective tax rate. It is thus not possible to calculate a single representative effective tax rate. The approach taken in this and other papers is to present a few stylised examples. Actual effective tax rates faced by firms are then likely to lie between the ones presented.

The first fact to establish is how different effective tax rates are at the moment. Figure 1 presents three important measures of tax rates for all EU member states. The countries are ordered by the level of the statutory tax rate.

As can be seen from Figure 1, EATRs depend strongly on the statutory tax rate. Particularly the EATR for equity-financed investments follows the statutory rate very closely. While the ranking is sometimes changed by differences in the generosity of investment allowances, the effect of allowances is comparatively small. The EATR for debt-financed investment is less closely linked to the statutory tax rate. This is because with interest deductibility, the share of returns to capital, which are taxed, is smaller and investment allowances are thus relatively more important. For such investment the rankings often change and the difference between high and low-tax countries diminishes.

[1] See inter alia M. Devereux, R. Griffith, A. Klemm: Corporate income tax reforms and international tax competition, in: Economic Policy, Vol. 17, Issue 35, 2002.

[2] This is true both of the classical tax competition papers, which predict tax rates will be too low (J. D. Wilson: A theory of interregional tax competition, in: Journal of Urban Economics, Vol. 19, 1986; or G. R. Zodrow, P. Mieszkowski: Pigou, Tiebout, property taxation, and the underprovision of local public goods, in: Journal of Urban Economics, Vol. 19, 1986) and of models which predict that tax rates can be too high, because of tax-exporting (e.g. E. W. Bond, L. Samuelson: Strategic behaviour and the rules for international taxation of capital, in: Economic Journal, Vol. 99, 1989).

[3] This can e.g. follow by allowing government as well as market failure or by using economic geography arguments, i.e. that periphery countries must be allowed to compensate for their less attractive location. An example of the former is J. Edwards, M. Keen: Tax competition and Leviathan, in: European Economic Review, Vol 40, 1996; the latter argument is made in R. Baldwin, P. Krugman: Agglomeration, integration and tax harmonisation, in: European Economic Review, Vol. 48, 2004.

[4] See M. A. King, D. Fullerton: The taxation of income from capital, Chicago 1984, University of Chicago Press.

[5] See M. P. Devereux, R. Griffith: Evaluating tax policy for location decisions, in: International Tax and Public Finance, Vol. 10, 2003.

As the choice of the rate of economic rents chosen is somewhat arbitrary, it would be interesting to know how the pattern would be affected by different rates. If we increase the rate of rents, we find that both EATRs approach the statutory tax rates even further, as the value of allowances will proportionally play a smaller role. If we look at smaller rates of profitability, the extreme case of which is the EMTR with zero rents, we find that in the case of equity finance, the rate is still strongly affected by the statutory rate, although in the case of debt-finance, the EMTR is negative and lower the higher the statutory rate. In order to benefit from such negative effective tax rates, firms must not be tax-exhausted, i.e. they need other profitable projects.

We can then conclude from the above that currently EATRs differ mainly due to differences in the tax rate, although tax bases also play some role. It would thus seem that the variability of effective tax rates could be much reduced by imposing a minimum tax rate, even if tax bases continued to be different.

Effective Tax Rate with Minimum Rate

This section provides an analysis of how effective tax rates would be affected by the imposition of a minimum tax rate.

First we assume away any behavioural effects, i.e. we assume that countries whose tax rate is below the minimum tax rate start to charge the minimum rate but leave other aspects of their tax system unchanged. The effect of the imposition of a minimum tax rate is shown in Figure 2 for a selection of possible minimum rates.

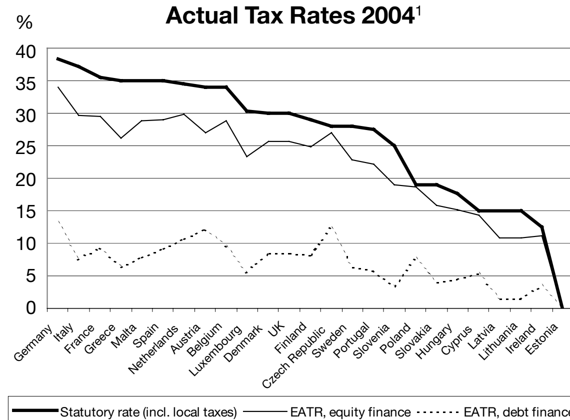
Figure 2 clearly shows that variability of effective tax rates would be markedly reduced by imposition of minimum tax rates, although even with a high minimum rate of 30% there would still be differences in excess of 10 percentage points in the chosen EATR. For EATRs with higher economic rents, the harmonisation achieved would be even greater, while with lower rents less harmonisation could be achieved. Even with zero rents though, i.e. in the case of EMTRs, the range of tax rates would be reduced compared to the current one.

In the short run it thus appears that a minimum tax rate could reduce differences in effective tax rates. But there is no guarantee that countries whose tax rates were increased by a minimum rate would keep their allowances constant. A country that deliberately chose a low tax rate may well decide to use other means to achieve its low tax policy.

Allowing for Behavioural Effects

Assume now that countries can react to the imposition of minimum tax rates by changing other tax rules. There are of course innumerable ways to react, such as special tax breaks, subsidies etc. Many of these, however, would either be in breach of state aid rules or the code of conduct on business taxation. A simple way to react would therefore be to narrow the tax base by increasing investment allowances for all firms. What range of effective tax rates would countries be able to reach by varying investment allowances? In principle they could achieve any effective tax rate, but for simplicity, we will consider allowances of up to 100% only. This implies that 100% of the asset value can be depreciated for tax purposes in the year of acquisition. Even though higher rates are possible in theory and have been implemented in practice, it is likely that countries would not implement such rates on a large scale to prevent being threatened by legal action on the basis of state aid rules and to prevent new regulations prohibiting this.

Figure 1
Actual Tax Rates 2004[1]



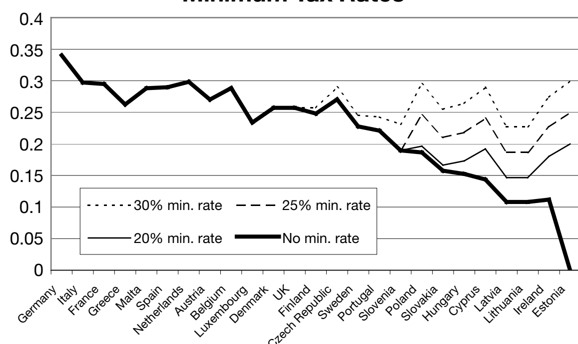
[1] The statutory tax rate includes local taxes and surcharges. In the case of Estonia the statutory tax rate for retained earnings is shown, the rate for distributions is 26%. The EATR assumes a rate of economic rents of 10%, investment in plant and machinery, inflation of 3%, real discount rates of 10% and an economic depreciation rate of 12.25%. Taxation at the shareholder level is not included. See M. Devereux, R. Griffith: Evaluating tax policy for location decisions, in: International Tax and Public Finance, Vol. 10, 2003, for formula.

Sources: Updated data from M. Devereux, R. Griffith, A. Klemm: Corporate income tax reforms and international tax competition, in: Economic Policy, Vol. 17, Issue 35, 2002. Calculations for new member states updated using data published in O. H. Jacobs, C. Spengel, M. Finkenzeller, M. Roche: Company taxation in the new EU member states, Frankfurt 2003, Ernst & Young and ZEW.

Figure 3 shows the variability of the equity-finance effective tax rates, assuming a statutory tax rate of 30% and allowances of between 0% and 100%.

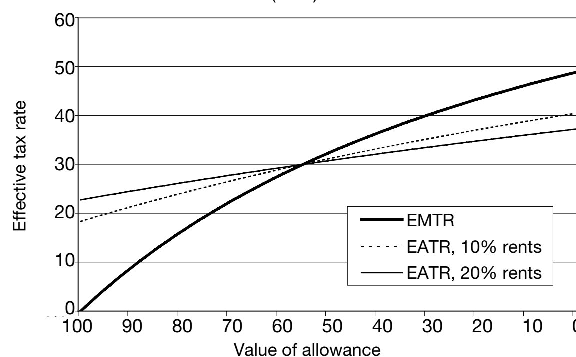
The figure shows that by varying investment allowances, countries would be able to change effective tax rates, although this effect is smaller for projects earning high rents. The three effective tax rates shown cross at the point where the value of allowances equals (assumed) economic depreciation and hence (equity finance) effective tax rates equal statutory

Figure 2
Effective Average Tax Rates with Different Minimum Tax Rates[1]



[1] The EATR presented assumes finance by equity or retained earnings and is based on the same assumptions as in the previous figure.

Figure 3
Effective Tax Rates for Different Values of Investment Allowances
(in %)



rates. Any allowance in excess of this reduces the effective tax rate to a rate below the statutory one.

Hence, allowing for behavioural effects, effective tax rates can remain very different across countries and continue to be much lower than the imposed minimum rate.

Interpretation

What does this imply for the imposition of a minimum rate without tax base harmonisation? First we note that behavioural effects, such as increases in investment allowances may wipe out some of the achievable alignment of effective tax rates. Countries which currently have a low tax policy would thus be able to continue such a policy. But even if the effective tax rates of low tax countries can be kept low, the fact that these countries will have a narrower tax base and higher statutory rate will have effects on tax competition.

Regarding the efficient location of capital, we might expect few improvements. If these are based on effective average tax rates, and these rates stay lower in current low tax countries, then distortions are likely to continue, unless there is also agreement on common tax bases. Only for investments of very high rents would there be an improvement, as for those the effective tax rate is determined mainly by the statutory rate and less by the value of allowances.

Concerning profit shifting, however, we might expect improvements. This is because any profit that is shifted from one jurisdiction to another, e.g. through the manipulation of transfer prices, is not affected by allowances, but by the statutory tax rate. If the statutory tax rate is more similar across countries, there will be fewer incentives to artificially shift profits within the EU.[6]

But before concluding we need to consider the world outside the EU. While capital is certainly mobile on a worldwide basis, it can be argued that the EU as the largest economy can attract capital even if its tax rate is high. For the location of capital it might then well be the case that many firms will locate in the EU, whatever the tax rate, but that where they locate inside the EU will depend on taxes. Therefore the harmonisation of effective tax rates within the EU may have advantages, even if the rest of the world does not participate. However, as shown above, simply imposing a minimum tax rate is unlikely to achieve that, as countries will find other ways to keep their effective tax rates low as long as tax bases are not harmonised.

Concerning the profit shifting argument however, the situation is different. Unlike productive capital, the productivity of which will depend on numerous local factors, paper profits can be shifted into any jurisdiction from a business point of view. As long as minimum statutory rates do not apply on a worldwide basis, very little can thus be achieved, unless it is desired to impose extremely tight controls on any transactions with non-EU countries.

So neither can a minimum statutory tax rate without base harmonisation much reduce tax distortions of intra-EU location decisions, nor can it prevent worldwide shifting of profits. In conclusion, then, a minimum tax rate without base harmonisation is unlikely to do much good, even if the assumption is accepted that a minimum tax would be useful in principle. Interestingly, the harmonisation of tax bases is also the current objective of the European Commission.[7] While they stress that this does not imply future harmonisation of tax rates, it would nevertheless provide a prerequisite.

[6] On the other hand, narrow bases increase the chances of tax exhaustion, which could provide a strong incentive to shift profits from regions with tax profits to those with tax losses.

[7] See European Commission: Towards an internal market without tax obstacles, Communication from the European Commission COM (2001) 582 final, Brussels 2001.