Company Tax Co-ordination in an Enlarged EU

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Abstract

The increasing integration of national economies in general and the accession of ten new member states in May 2004 to the European Union in particular are drivers of company tax competition and its recent intensification in the EU. The paper deals with current developments within company tax competition in the EU. Hereby special consideration is given to the development of the (effective) company tax burden in "old" and "new" member countries as well as to selected problems of company taxation in the EU. The paper concludes with a survey and a discussion of the proposals and current initiatives pursued at the EU level to harmonise company taxes in the EU against the background of the problems which are associated with company taxation in the EU.

1. Introduction[1]

The growing integration of national economies is increasingly intensifying competition between nation states for internationally mobile tax subjects and tax bases. Company taxes are one of the most obvious and debated competition instruments employed by national governments competing for mobile firms, investment, and profits. Several recent studies estimating tax reaction functions between countries (e.g. Brueckner/Savedra 2001; Devereux/Lockwood/Redoano 2002; Devereux/Griffith 2003) support the hypothesis of strategic interaction of national tax policies. In the EU – as the largest integrated economic area worldwide in which formal barriers to the mobility of tax subjects and tax bases are increasingly removed – this phenomenon can be expected to become even more pronounced in the future.

At the eve of the eastern enlargement of the European Union in May, 2004, the majority of the accession countries lowered their (in comparison to the "old" member countries) on average already low corporate tax rates. It is often anticipated that the considerable tax rate differential between the EU-15 and the accession countries will trigger further rounds of company tax rate reductions in all member countries of the enlarged EU and will thus intensify company tax competition between EU member states.

The paper starts with some considerations concerning the development of company taxation that may be expected in the enlarged EU which consists of two heterogeneous country clubs – the old and the new member states. Then some empirical results of selected studies on the development of the company taxation in the EU are presented, and various problems associated with company taxation in the EU are discussed. The paper concludes with a survey

[1] This paper draws extensively on Schratzenstaller (2004).

and a discussion of the proposals and current initiatives pursued at the EU level to harmonise company taxes in the EU. In particular, it will be examined whether the proposals and initiatives launched at the EU level are appropriate to deal with the problems which are associated with company taxation in the EU.

2. Development of company taxation in the EU – the theory

In the tax competition literature of the nineties, two hypotheses concerning the long-term effects of international company tax competition were put forward: The "race to the bottom"-hypothesis (e.g. Frey 1990; Sinn 1997) predicted the complete vanishing of capital and company taxes. This expectation was qualified by a "convergence"-hypothesis (Pluemper/Schulze 1999) according to which capital and therefore also company taxes are gradually moving downward towards a similar or identical level, but will not be disappear completely. At the bottom line, however, both hypotheses imply the alignment of corporate taxes across countries at a zero or at least at a low and decreasing level in the long run and therefore the elimination of cross-country tax rate differentials.

2.1 The basic tax competition model

The theoretical framework on which both hypotheses draw is the basic tax competition model as summarised recently by Zodrow (2003) and Wilson/Wildasin (2004).[2] The basic tax competition model was initially formulated for a scenario of interregional tax competition between a large number of identical jurisdictions within one country for capital, which, by assumption, is perfectly mobile across jurisdictions (Zodrow/Mieszkowski 1983 and 1986).

[2] See Krogstrup (2002), Zodrow (2003) and Wilson/Wildasin (2004) for a more detailed presentation of the model as well as for its assumptions and implications.

Ensuing theoretical work has applied the results of this model also to country groups or unions formed by independent jurisdictions (i.e. individual countries).

In this basic tax competition model governments can levy two kinds of taxes: a source-based property tax on capital income and a lump-sum tax on immobile production factors (land or labor) to finance public services. The model implies that international capital tax competition leads to a "race to the bottom" within capital taxation: Taxes on capital income disappear completely, and the tax burden is shifted onto the immobile factors. If governments are allowed to raise only a limited amount of lump-sum taxes and therefore also depend on the capital tax, public services will be underprovided as jurisdictions – for fear of tax-induced capital flight – will lower their capital tax rates and consequently their expenditures for public services to an inefficiently low level.[3]

Within this theoretical framework the downward pressure on tax rates and levels of public services increases with the number of competing jurisdictions (Hoyt 1991): Consequently the EU eastern enlargement which increased the number of competing jurisdictions considerably would accelerate the race to the bottom of company tax rates or at least their convergence predicted by the basic tax competition model.

2.2 Extensions of the basic tax competition model – tax competition between heterogeneous country clubs

The basic tax competition model rests on rather strong assumptions. For the case of the enlarged EU, particularly three extensions of the basic tax competition model are relevant. These extensions were suggested by Zodrow (2001 and 2003), who, however, does not apply the implications of the extensions of the basic tax competition model to the enlarged EU. The

[3] The same result is derived by Beck (1983) in a model where governments can only levy distortionary capital taxes.

extensions considered in what follows[4] take into account that several assumptions underlying the basic tax competition model do not hold for an economic area consisting of two heterogeneous country clubs and change its predictions with respect to the working of company tax competition itself and its effects on the levels of company taxation and public services provided accordingly: (1) jurisdictions of different size; (2) the existence of agglomeration economies; and (3) imperfectly mobile capital. .

2.2.1 Size differentials between countries

The basic tax competition model assumes a large number of jurisdictions which are identical in size. The reality in the enlarged EU, however, is characterised by a twofold asymmetry concerning the competing jurisdictions' size: First, and most obvious, individual member states' sizes differ largely in terms of GDP and population. Several new member states (the Baltic States as well as Malta and Cyprus) are particularly small and increase country size differentials in the EU considerably. Second, the club of old member states and the club of new member states can be conceived as a large jurisdiction competing against a small one, as the EU-15's total population and even more its overall GDP exceed those of the accession countries considerably.

In contrast to large countries, small ones cannot influence the international after-tax rate of return to capital through their corporate taxes but have to take it as fixed. This in turn implies a higher elasticity of the tax base in small countries as a tax-induced reduction of the national after-tax rate must be compensated by an increase of the before-tax rate, brought about by capital outflows (Krogstrup 2002). Therefore possible outflows of capital as a reaction to

[4] See Zodrow (2001 and 2003) for the extensions of the basic tax competition model and their implications considered in this section and for a number of additional extensions which will not be regarded in this paper.

company taxation are a larger concern for small countries than for large ones (Bucovetsky 1991; Wilson 1991). Consequently the former choose lower company tax rates than the latter. All other things equal, this would also imply lower levels of public services in small countries.

In turn tax rate reductions cause a larger inflow of capital in small countries, due to the prevailing higher tax base elasticity. From this perspective undercutting the large countries' company tax rate can be an effective instrument to support the catch-up process by increasing the inflow of FDI. Furthermore, tax rate reductions effected by these small countries will have relatively little effect on the large ones. Therefore the probability that the large countries cut their company tax rates as a reaction to the small countries' tax rate reductions is low; tax rate differentials thus will be sustainable.

These theoretical results may explain why statutory company tax rates in the large EU-15 states and - with some exceptions – also effective corporate tax rates tend to be larger or at least not smaller than the average rate, while a number of small countries are below average, an observation that can be made also in the majority of the small accession countries (see section 3 of this paper). Interesting in this respect is recent empirical work done by Grubert (2001) who studies the development of effective tax rates on US FDI for 60 countries between 1984 and 1992 and finds that effective tax rates in small, open, and poor countries declined to a larger extent compared to developed countries. Also Slemrod (2004) finds a positive correlation between tax ratios (corporate tax revenues as a percentage of GDP) and country size.

The different overall size of the two country clubs forming the enlarged EU – the old member states and the new member states – may be one factor to prevent the complete elimination of the existing tax rate differential between old and new member states: Which simultaneously could result in lower levels of public services in the club of new member countries. However, these conclusions apply only to a limited degree, as the size differential between old and new member countries certainly is not sufficiently large to correspond to the standard theoretical distinction of small and large countries. Within the two country clubs size differentials are of greater relevance. This would imply that existing company tax rate differentials across new member countries may be even more stable than the tax rate differential between the group of the old and the group of the new member countries. Moreover, the small accession countries should have greater chances to attract foreign capital by tax rate reductions than the larger ones.

2.2.2 Agglomeration economies

In the last few years several papers have analysed tax competition from a different theoretical perspective building on the framework of the new economic geography.[5] Incorporating trade costs in a model of international tax competition between countries of different size for foreign direct investment (FDI) which capture agglomeration effects, Haufler/Wooton (1999) show that although the large country sets a higher tax rate, it wins the competition for FDI as there is an incentive for firms to choose the larger market as location.

Baldwin/Krugman (2004) set out to explore the persistence of international corporate tax rate differentials in the European Union. In their model, the competing jurisdictions differ with respect to the degree of industrialisation: Simply put, there is a core country or a core group of countries where agglomeration economies exist, and a peripheral country or a peripheral group of countries with no (or lower) agglomeration rents. Agglomeration rents enable the core (within certain limits) to raise higher corporate taxes than the periphery without risking

[5] See Krogstrup (2002) for a review of papers arguing from a new economic geography perspective.

to drive capital abroad, as capital becomes a quasi-fixed factor. Borck/Pflueger (2004) show that this result does not only hold for the extreme case in which industry completely concentrates in the core, but also for partial agglomeration.

Applied to the enlarged EU in which the old member countries can be viewed as the core and the new member countries as the periphery, this implies the sustainability of a certain tax rate differential as long as the peripheral accession countries have not caught up to the established member states, i.e. cannot offer agglomeration rents of the same size to investors. Furthermore agglomeration effects decrease the effectiveness of international company tax competition as they restrict the cross-border mobility of capital.

2.2.3 Imperfectly mobile capital

International company tax competition can only take place if there are no political and technical restrictions for cross-border movements of capital and if investment is sensitive to company taxes, i.e. if cross-country tax rate differentials induce capital movements (Krogstrup 2004). The first condition is fulfilled in the enlarged EU where free movement of capital is given. Despite the absence of technical and political barriers for international capital mobility, it can be assumed, however, that the mobility of FDI between old and new member countries in effect is limited. One explanatory factor can be the agglomeration forces already mentioned. Location-specific rents, particularly rents created by public inputs provided for firms (e.g. Haufler 1998), are another factor which allow the taxation of mobile investment and the sustainability of international company tax rate differentials and in turn limit the options of countries with no or lower location-specific rents to attract FDI by lowering company tax rates. Given the prevailing deficits in public infrastructure in the accession countries, location-specific rents based on public services should be higher in the old member countries, allowing for higher company tax rates compared to the new member states.

Empirical evidence on the sensitivity of FDI towards tax rates and to international tax rate differentials is mixed (Blonigen 2005). The results obtained in empirical studies lie within a broad range (e.g. Hines 1999; Desai/Hines 2001; de Mooij/Ederveen 2003; Gorter/Parikh 2003; Mutti/Grubert 2004; Bénassy-Quéré/Fontagné/Lahrèche-Révil 2004). Several empirical studies show that FDI are rather insensitive to company taxation in transformation countries and in the accession countries, respectively (e.g. Carstensen/Toubal 2004; Smarcynska Javorcik 2004; Bénassy-Quéré/Lahrèche-Révil 2005), whereas company taxation plays a significant role for the attraction of FDI in the old member countries.

2.3 Conclusions

Based on the short theoretical discussion above of the development of company taxation in the EU that may be expected in the future two hypotheses may be formulated. First, a "convergence hypothesis" concerning the development of company taxation within the two country clubs – the old and the new member states: A downward convergence of tax rates may be expected in each of the two clubs consisting of rather homogeneous, integrated and close countries. Second, a "tax-rate-differential-persistence-hypothesis" for the two country clubs, i.e. substantial and sustained tax rate differentials between old and new member countries.

3. Is the corporate tax an "endangered species" within national tax systems? Some empirical evidence

Various company tax burden indicators have been proposed in the theoretical and empirical literature of the last two decades.[6] These tax burden indicators have been developed to tackle different questions: Backward-looking indicators use actual data on tax payments and tax bases to measure the actual tax burden firms carried in the past; they are measures for the distribution of the tax burden. Forward-looking indicators are based on current company tax codes and try to determine the tax burden which is to be expected for hypothetical investment projects or model firms. As they influence location and investment decisions, they are important to determine the allocative effects of company tax systems. Both groups of tax burden measures can also serve for international tax burden comparisons and the development of the company tax burden in individual countries over time, respectively, and may therefore also be used as indicators for international tax differentials and the development of the quantitative importance of company taxation over time.

This section of the paper reviews some company tax burden indicators and their empirical results for old and new member countries to identify current trends underlying the (long-term) development of company taxation in the EU. In particular, we will try to find empirical evidence for the two hypothesis stated above: the convergence hypothesis which expects tax rate differentials within homogenous country clubs to narrow, and the tax-rate-differential-persistence-hypothesis that expects tax rate differentials between heterogenous countries to persist.

[6] For an overview, see Schratzenstaller (2003 and 2005).

3.1 Statutory company tax rates

Statutory corporate tax rates are a simple and therefore popular and often-used measure of the corporate tax burden. Statutory corporate tax rates have declined in the old EU member states as well as in the accession countries (including Bulgaria and Romania) in the last few years.

Table 1 shows that the average corporate tax rate in the twelve (candidate) accession countries amounted to 21.5% in 2003 (21% for the ten new member states); it will decline to 17.8% in 2006 (17.8% for the ten new member states). The average corporate tax rate in the established member countries was 30.1% in 2003, thus having markedly decreased since the beginning of the 1980s when it reached about 45% (Schratzenstaller 2002). It will fall to 27.7% in the EU 15 in 2006, leaving an average tax rate differential of about ten percentage points compared to the (candidate) accession countries. Table 1 suggests that the accession of ten new member countries to the EU in 2004 triggered tax rate reductions particularly in the accession countries which are followed by tax rate reductions in several old member states.

Several of the old and two of the new member states levy additional business taxes at the local level. Table 2 presents the combined company tax rates (corporate income tax rates plus local business taxes) for the EU 25 countries for 2006. If local business taxes are taken into account, the average tax rate differential between old and new member countries is even larger.

The gradual decline of statutory company tax rates in the EU is certainly a direct consequence of an intensifying tax competition between member states: Even if statutory tax rates are no good proxy for the effective tax burden, as they do not take into account the rules to determine the tax base, they seem to have an important "psychological" function insofar as they are perceived as signals concerning a country's general tax environment for international investors.

Table 1: Statutory Corporate Income Tax Rates EU 15 and Accession (Candidate) Countries 2003 to 2006 in %[1)]

Country	**2003**	**2004**	**2005**	**2006**
Belgium	34	34	34	34
Denmark	30	30	**28**	28
Germany	27.9	**26.4**	26.4	26.4
Finland	29	29	**26**	26
France	35.4	**34.4**	**34.9**	34.9
Greece	25/35[3)]	25/35[3)]	**25/32**[3)]	**25/29**[3)]
Great Britain	30	30	30	30
Ireland	12.5	12.5	12.5	12.5
Italy	34	**33**	**34**	34
Luxembourg	22.9	22.9	22.9	22.9
Netherlands	34.5	34.5	**31.5**	**30.5**
Austria	34	34	**25**	25
Portugal	30	25	25	**20**[2)]
Sweden	28	28	28	28
Spain	35	35	35	35
Average EU 15	*30.1*	*29.6*	*28.3*	*27.7*
Standard deviation EU 15	*6.1*	*5.8*	*5.9*	*6.1*
Variation coefficient EU 15	*0.2*	*0.2*	*0.2*	*0.2*
Bulgaria	23.5	23.5	**19.5**	19.5
Estonia	0/26[4)]	0/26[4)]	**0/24**[4)]	**0/22**[4)]
Latvia	19	**15**	15	15
Lithuania	15	15	15	15
Malta	35	35	35	35
Poland	27	**19**	19	19
Romania	25	25	**16**	16
Slowak Republic	25	**19**	19	19
Slowenia	25	25	25	25
Czech Republic	31	**28**	**26**	**24**
Hungary	18	**16**	16	16
Cyprus	10/15[5)]	10/15[5)]	**10**	10
Average accession countr.	*21.5*	*19,6*	*18*	*17.8*
Stand. dev. access. countr.	*8.8*	*8.4*	*8.2*	*10.3*
Var. coeff. access. countr.	*0.4*	*0.4*	*0.5*	*0.5*
Average EU 27	***26.3***	***25.2***	***23.7***	***23.3***
Diff. Average EU 15/accession countries[6)]	***8.6***	***10***	***10.3***	***9.9***

1) Including surcharges; excluding local taxes.
2) Not yet adopted.
3) Lower rate für non-incorporated companies which are subject to corporate taxation in Greece; higher rate for corporations and financial institutions.
4) Retained profits/distributed profits.
5) 15% for profits over 1 mio. pounds.
6) In percentage points.

Sources: German Ministry of Finance (2003 and 2004); KPMG (2003 and 2004); Confederation Fiscale Europeenne (2004); own calculations.

Table 2: Statutory Combined Company Tax rates EU 15 and Accession Countries 2006 in %

Country	**Corporate income tax rate**[1]	**Local business tax**	**Combined company tax rate**
Belgium	34	-	34
Denmark	28	-	28
Germany	26.4	16.7[4]	38.7
Finland	26	-	26
France	34.9	-	34.9
Greece	**25/29**[2]	-	**25/29**[2]
Great Britain	30	-	30
Ireland	12.5	-	12.5
Italy	34	4.3	38.3
Luxembourg	22.9	7.5	30.4
Netherlands	**30.5**	-	**30.5**
Austria	25	-	25
Portugal	**20**[2]	2.5	22.5
Sweden	28	-	28
Spain	35	-	35
Mean EU 15	*27.7*	-	*29.5*
Estonia	0/22[3]	-	0/22[3]
Latvia	15	-	15
Lithuania	15	0.3-0.48	15.3-15.48
Malta	35	-	35
Poland	19	-	19
Slowak Republic	19	-	19
Slowenia	25	-	25
Czech Republic	**24**	-	28
Hungary	16	0-2	16-18
Cyprus	10	-	10
Mean accession countries	*17.8*	-	*18.4*
Mean EU 25	***23.3***	**-**	***25.1***
Diff. Average EU 15/accession countries[6]	***9.9***	**-**	***11.1***

[1] Including surcharges.
[2] Lower rate für non-incorporated companies which are subject to corporate taxation in Greece; higher rate for corporations and financial institutions.
[3] Retained profits/distributed profits.
[4] 2004.

Sources: Table 1; German Ministry of Finance (2004); own calculations.

The development of statutory company tax rates since 2003 does not clearly support the tax-rate-differential-persistence-hypothesis and the convergence hypothesis: Standard deviations as well as variation coefficients point at an increasing dispersion of statutory tax rates within both country groups. The average tax rate differential (the difference between the average statutory tax rate in the EU 15 and the accession countries) increased between 2003 and 2005, but will decline slightly in 2006.

3.2 Forward-looking effective tax rates

Forward-looking indicators measure the tax burden of a model investment project or of a model firm based on the existing tax code.[7] Table 3 contains the results of several studies for effective marginal taxes rates (EMTR) and effective average tax rates (EATR) for a hypothetical investment project for the old EU countries. Unfortunately, with the exception of the Devereux/Griffith/Klemm (2002) study, there are no studies on the long-term development of hypothetical effective tax rates.

EATR as well as EMTR have declined over time in most of the old EU member countries, although cross-country differences are still remarkable. According to the calculations done by Devereux/Griffith/Klemm (2002) for 13 EU countries, EATR and EMTR went down in almost all countries between 1982 and 2003. The same trend – albeit for a much shorter time period – is identified by Baker&McKenzie (1999 and 2001), comparing the EU 15 countries' EMTR in 1998 and 2001, and by the European Commission (2001) for member countries' EMTR and EATR for 1999 and 2001. The differences between the results of the different studies can be explained by different underlying assumptions.

Based on standard deviations and variation coefficients, there is no convincing evidence for a convergence of effective tax rates in the old member states in the last few years.

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[7] See e.g. Jacobs/Spengel (2001) for the model firm approach and European Commission (2001) for the methodology to calculate EMTR and EATR for hypothetical investment projects.

Table 3: Effective Marginal Tax Rates (EMTR) and Effective Average Tax Rates (EATR) for EU 15 countries in %

Country	**EMTR**						**EATR**			
	BM (1999)	**BM (2001)**	**EC (2001)**		**DGK (2002)**		**EC (2001)**		**DGK (2002)**	
	1998	***2001***	***1999***	***2001***	***1982***	***2003***	***1999***	***2001***	***1982***	***2003***
Belgium	23.5	17.2	22.4	22.4	31.0	22.0	34.5	34.5	39.0	29.0
Denmark	22.8	19.8	21.9	21.6	n.a.	n.a.	28.8	27.3	n.a.	n.a.
Germany	37.0	23.8	31.0	26.1	47.0	30.0	39.1	34.9	56.0	35.0
Finland	18.1	18.6	19.9	21.3	43.0	20.0	25.5	26.6	53.0	25.0
France	40.7	36.8	33.2	31.8	26.0	22.0	37.5	34.7	41.0	29.0
Greece	13.7	4.9	18.2	16.9	33.0	13.0	29.6	28.0	39.0	26.0
Great Brit.	22.3	23.4	24.7	24.8	0.0	20.0	28.2	28.3	36.0	26.0
Ireland	22.3	10.6	11.7	11.7	0.0	10.0	10.5	10.5	6.0	11.0
Italy	17.7	11.5	-4.1	-15.9	18.0	20.0	29.8	27.6	30.0	31.0
Luxembourg	23.5	17.1	20.7	20.7	n.a.	n.a.	32.2	32.2	n.a.	n.a.
Netherlands	23.2	19.9	22.6	22.7	35.0	24.0	31.0	31.0	43.0	30.0
Austria	27.0	20.4	20.9	12.6	25.0	17.0	29.8	27.9	50.0	27.0
Portugal	22.5	16.6	22.5	21.0	48.0	19.0	32.6	30.7	52.0	27.0
Sweden	17.2	15.5	14.3	14.3	43.0	16.0	22.9	22.9	54.0	23.0
Spain	32.8	16.6	22.8	22.8	23.0	21.0	31.0	31.0	29.0	29.0
Average	*24.3*	*18.2*	*20.2*	*18.3*	*28.6*	*19.5*	*29.5*	*28.5*	*40.6*	*26.8*
Standard dev.	*7.1*	*6.8*	*8.3*	*10.7*	*15.2*	*4.9*	*6.6*	*6.0*	*13.2*	*11.4*
Variation coeff.	*0.3*	*0.4*	*0.4*	*0.6*	*0.5*	*0.3*	*0.2*	*0.2*	*0.3*	*0.3*

Sources: Baker&McKenzie (BM; 1998 and 2001); European Commission (EC; 2001); Devereux/Griffith/Klemm (DGK; 2002); own calculations.

Table 4 presents EATR for old and new member countries for an identical year (2003) and based on an identical methodology. The average tax rate differential between old and new member countries in 2003 was much smaller than that for statutory tax rates. Due to the statutory corporate tax rate reductions in a number of countries, EATR went down significantly in 2004. Based on the variation coefficients, the dispersion of effective tax rates between new member states increased. As only a few and insubstantial tax rate reductions were effected in the EU 15 countries, EATR should not have changed dramatically; therefore the average tax rate differential between old and new member states should have increased considerably in 2004. If special tax incentives, which are still granted extensively in the new member countries, are considered, the average tax rate differential widens further between old and new member states.

Table 4: Effective Average Tax Rates in the EU 2003[1)] in %

Country	EATR
Belgium	29.7
Denmark	27
Germany	36.1
Finland	27.3
France	33.1
Greece	n.a.
Great Britain	28.9
Ireland	14.4
Italy	32.8
Luxembourg	26.7
Netherlands	31.2
Austria	31.4
Portugal	n.a.
Sweden	23.4
Spain	n.a.
Average EU 12	*28.5*
Estonia	24.6 (22.5/16.8)
Latvia	23.4 (14.4/7.6)
Lithuania	15.4 (12.8/6.7)
Malta	34.7 (32.8/24.6)
Poland	29.8 (18/17.3)
Slowak Republic	27.4 (16.7/8.5)
Slovenia	33.4 (21.6/19.4)
Czech Republic	31.9 (24.7/16.3)
Hungary	24.9 (18.1/12.5)
Cyprus	16.7 (14.5/13.5)
Average accession countries	*26.2 (19.6/14.3)*
Standard deviation accession countries	*6.3 (5.7/5.5)*
Variation coefficient accession countries	*0.2 (0.3/0.4)*
Average EU 22	***27.5 (24.5/22)***
Diff. Average EU 15/accession countries[2)]	*2.3 (8.9/14.2)*

1) In parentheses: 2004; excluding special tax incentives/including special tax incentives.
2) In percentage points.

Sources: Jacobs et al. (2003 and 2004); Heinemann/Overesch (2005); own calculations.

3.3 Backward-looking effective tax rates

Forward-looking EMTR and EATR cannot confer any direct information on the development of the total corporate tax burden carried by the enterprise sector: Due to legal or illegal tax avoidance, discretionary administrative practices or the restrictive assumptions underlying forward-looking tax burden measures, actual tax payments may deviate markedly (Gorter/de Mooij 2001). These assumptions also preclude the inclusion of tax rules which in practice may reduce actual company tax payments considerably: For example, neither EMTR nor EATR account for the intertemporal tax treatment of losses (via loss carry-forward or carry-backward). Moreover, microeconomic effective tax rates on model investment projects or model firms are no adequate proxy for the total tax burden falling on the whole enterprise sector and thus for the quantitative importance of corporate taxes as a revenue source of public budgets. Therefore, several tax burden indicators based on actual tax payments by firms and thus capturing the factual tax burden are proposed in the literature.

It has been repeatedly pointed out by several authors arguing with company tax ratios – i.e. company tax revenues as a percentage of GDP or of total tax revenues – that falling statutory tax rates need not necessarily imply a shrinking importance of company taxes for public budgets (e.g. Quinn 1997): The core of the argument is that tax rate reductions were compensated by measures to broaden the tax base in many countries ("tax-cuts-cum-base-broadening") (e.g. Devereux/Griffith/Klemm 2002).

As table 5 shows, company tax ratios have been remaining stable or were even increasing in most of the EU 15 countries, at least until the end of the 1990s. Since then, a downward trend can be detected in a number of old member states. In the seven accession countries for which data are available no clear-cut trend can be identified since the middle of the 1990ies; however, it appears that in the majority of these countries company taxes are losing in weight.

Table 5: Taxes on income or profits of corporations[1] as a % of GDP and total taxes[2] (company tax ratios)

Country	Tax ratios[3]	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
Belgium	GDP	2,1	2,4	2,7	2,9	3,4	3,3	3,3	3,2	3,1	2,9
	TT	7,3	8,0	8,8	9,2	10,8	10,3	10,2	10,0	9,7	9,4
Denmark	GDP	n.a.	2,0	2,3	2,6	2,8	3,0	2,4	3,1	2,9	2,8
	TT	n.a.	4,1	4,8	5,3	5,8	6,1	5,1	6,6	6,1	5,9
France	GDP	n.a.	1,8	2,0	2,3	2,3	2,7	2,8	3,1	2,6	2,2
	TT	n.a.	7,0	7,7	8,4	8,0	9,2	9,8	10,9	9,5	8,1
Greece	GDP	n.a.	2,6	2,3	2,6	3,1	3,5	4,6	3,8	3,7	3,3
	TT	n.a.	11,8	10,2	11,1	12,6	13,6	17,2	14,9	15,1	14,0
Great Britain	GDP	4,0	2,8	3,2	3,9	3,8	3,4	3,4	3,3	2,8	2,7
	TT	13,1	9,5	11,0	13,2	12,6	11,1	10,9	10,8	9,5	9,3
Ireland	GDP	n.a.	2,8	3,1	3,2	3,4	3,8	3,8	3,6	3,8	3,8
	TT	n.a.	9,8	10,8	11,3	12,1	13,9	13,7	14,0	15,4	15,1
Italy	GDP	3,1	3,4	3,8	4,2	2,5	2,8	2,4	3,0	2,6	2,2
	TT	12,1	12,1	13,6	14,0	8,0	9,0	7,9	9,8	8,8	7,4
Luxembourg	GDP	6,5	7,5	7,7	7,9	7,8	7,1	7,2	7,5	8,4	7,9
	TT	21,7	24,1	24,5	25,5	26,1	23,6	23,9	25,3	28,2	26,4
Netherlands	GDP	n.a.	3,3	4,1	4,6	4,5	4,6	4,4	4,4	3,7	3,2
	TT	n.a.	13,4	16,2	18,3	18,2	17,8	17,4	17,0	14,6	12,8
Austria	GDP	1,5	1,6	2,1	2,2	2,3	2,0	2,2	3,3	2,4	2,3
	TT	5,5	6,2	7,7	7,5	8,0	6,8	7,7	10,9	8,3	7,9
Portugal	GDP	n.a.	2,5	2,9	3,3	3,3	3,8	4,1	3,6	3,6	3,2
	TT	n.a.	10,6	12,0	13,8	13,6	15,1	16,0	14,5	14,3	12,7
Sweden	GDP	n.a.	2,7	2,6	2,9	2,7	3,1	3,9	2,7	2,1	2,4
	TT	n.a.	7,3	6,9	7,5	6,8	7,6	9,8	7,3	6,0	6,6
Spain	GDP	n.a.	1,9	2,1	2,8	2,6	3,0	3,2	3,0	n.a.	n.a.
	TT	n.a.	9,0	9,5	12,5	11,6	13,0	13,9	13,1	n.a.	n.a.
Estonia	GDP	n.a.	2,4	1,6	1,8	2,4	2,0	1,0	0,7	1,2	1,7
	TT	n.a.	9,8	6,8	7,4	10,5	9,0	4,6	3,6	5,5	7,8
Latvia	GDP	n.a.	1,8	1,9	2,2	2,3	2,1	1,6	1,9	1,9	1,5
	TT	n.a.	8,6	9,2	10,1	10,0	9,5	7,8	9,7	10,0	7,4
Lithuania	GDP	n.a.	1,3	1,2	1,6	1,3	0,8	0,7	0,5	0,6	1,4
	TT	n.a.	6,0	5,9	7,4	5,7	3,6	3,3	2,7	3,0	7,0
Poland	GDP	n.a.	3,3	2,9	3,1	2,8	2,5	2,4	1,8	1,8	n.a.
	TT	n.a.	11,6	10,6	11,6	10,9	10,7	10,8	8,3	8,4	n.a.
Slovak. Rep.	GDP	n.a.	6,1	4,2	3,7	3,4	3,1	2,8	n.a.	n.a.	n.a.
	TT	n.a.	22,2	16,1	15,1	14,7	14,1	13,8	n.a.	n.a.	n.a.
Slovenia	GDP	n.a.	0,5	0,7	1,0	1,0	1,1	1,2	1,2	1,5	1,9
	TT	n.a.	2,3	3,1	4,1	4,0	4,3	4,9	5,0	6,1	7,5
Czech Rep.	GDP	n.a.	4,6	3,4	3,9	3,4	3,9	3,5	4,2	4,4	n.a.
	TT	n.a.	21,0	16,4	18,8	17,5	19,1	17,7	20,7	21,4	n.a.

[1] Including local profit taxes and other taxes.
[2] Excluding social security contributions.
[3] GDP: Taxes as a percentage of GDP; TT: Taxes as a percentage of total taxes.

Source: Eurostat New Cronos; own calculations.

From this finding it may be concluded that the reductions in statutory company tax rates obviously triggered by international tax competition did not result in the disappearance of company taxes, at least in the old member states. However, this conclusion seems to be too short-sighted. Company tax revenues are not only determined by tax legislation but also by the development of taxable profits. Therefore tax losses caused by company tax reforms could have been disguised by improved profits – more precisely, by an increased share of corporate profits in GDP (Genschel 2001). In turn, it may be assumed that the decrease of company tax ratios which can be observed in a number of EU-15 countries after 2000 is the result of weak growth and consequently falling corporate profits rather than of intensified tax competition. Finally, an upward trend in tax ratios may also be caused by an increasing weight of the corporate sector in the whole enterprise sector.

Moreover, no comprehensive long-term information is available on the development of EU countries' rules for the determination of taxable income. Devereux/Griffith/Klemm (2002) use only depreciation allowances as an indicator for the long-term development of the rules to define the tax base, thus neglecting all other elements within tax legislation which influence taxable profits. Therefore their finding that depreciation allowances were restricted in the majority of EU countries between 1982 and 2001 (from which they conclude that tax bases were broadened in this period) actually does not allow the conclusion of a general application of tax-cuts-cum-base-broadening strategies in EU member states.

Company tax ratios are no useful measures for cross-country comparisons of the tax burden, as their absolute level depends on the structure of the enterprise sector: Countries with a high share of corporations tend to have higher company tax ratios. Thus, company tax ratios cannot be used to help to answer the questions whether company taxation is converging or whether there are persisting international tax differentials.

Several studies try to determine factual tax rates by relating company tax payments to the tax base, i.e. company profits. Microeconomic backward-looking measures relate firm tax payments to some measure of firm profit for a sample of firms to calculate effective average tax rates. Macroeconomic backward-looking tax burden indicators use data on total corporate tax payments and total corporate profits from national accounts.[8]

Nicodème (2001) determines microeconomic effective average tax rates (ETR) for a sample of corporations for 11 EU countries[9] in the period from 1990 to 1999. The average effective tax rate is defined as the ratio of tax paid on gross operating surplus (from individual financial statements) (table 6). The ETR averaged across countries falls until 1993 and displays an upward trend from 1994 on. This trend holds for all countries regarded, if country-specific average ETR from 1990 to 1994 are compared with those from 1995 to 1999.

Gorter/de Mooij (2001), also using individual financial statements[10] and calculating average ETR for 14 EU-countries as the ratio of tax payments on pre-tax profits, derive more mixed results for the same period. In most countries average ETR 1990 to 1994 and 1995 to 1999 are quite stable. Few countries show a marked rise, others a considerable decrease of ETR.

These factual microeconomic effective tax rates are (similar to the hypothetical microeconomic effective tax rates presented above) of limited use for assessing the development of the total tax burden falling on an economy's enterprise sector. Apart from the problem of choosing the tax base to which tax payments should be related (i.e. whether gross operating profits or pre-tax profits are the adequate indicator for "true" firm profits), the results also depend on the sample of firms included and can vary significantly with firm size, branches, and the taxes included.

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[8] Also the tax ratios presented above are actually macroeconomic backward-looking measures.

[9] Nicodème uses data from the BACH-Database.

[10] These data are taken from the Worldscope Database.

Table 6: Factual Microeconomic Effective Tax Rates (ETR) for old EU countries for sub-periods 1990-1994 and 1995-1999 in %

Country	**Nicodème (2001)** **1990-1994**		**Gorter/de Mooij (2001)** **1995-1999**	
Belgium	10.6	12.1	20.2	21.4
Denmark	15	18.3	31.4	31.4
Germany	20.2	20.6	46.2	40.6
Finland	7.1	15.5	33.2	27.8
France	11	15	33	37
Greece	n.a.	n.a.	20.8	33.8
Great Britain	n.a.	n.a.	31	29.4
Ireland	n.a.	n.a.	19.6	22
Italy	17.7	21.8	44	43.6
Luxembourg	n.a.	n.a.	n,a.	n.a.
Netherlands	15.9	19.1	31.4	31
Austria	9.8	10.7	18	22.2
Portugal	11.8	13.3	21.8	23
Sweden	9.4	10.4	28	27.8
Spain	12.3	13.5	27.2	26.2
Average	*12.8*	*15.5*	*29*	*29.8*

Sources: Gorter/de Mooij (2001); Nicodème (2001; own calculations.

Macroeconomic tax burden indicators appear to be more useful in this respect, as they include tax payments and profits of the whole enterprise sector of an economy. The European Commission (2004a) calculates (based on the the methodology proposed by Mendoza/Razin/Sadka 1994) so-called implicit tax rates on corporate income (table 7). The implicit corporate tax rates are calculated by relating taxes on the income or profits of corporations including holding gains[11] to corporate income.[12]

[11] In some countries, e.g. Italy, also local business taxes are included.

[12] Defined as corporations' net operating surplus, the difference between received and paid interest and rents, and a specific definition of dividends minus property income from insurance companies and pensions funds attributed to policy holders

Table 7: Implicit tax rates on corporate income for 12 old EU countries 1995 to 2002 in %

Country	1995	1996	1997	1998	1999	2000	2001	2002	Aver. 1995-2002	Change[1] 1995-2002	Diff.[2] 1995-2002
Belgium	14.3	16.1	17.5	19.8	19.4	19.2	20.1	21	18.4	4.8	6.7
Denmark	21.6	23.5	23.8	25.9	27.6	18.4	19.4	16.8	22.1	-4.1	-4.8
Finland	16.7	19.6	21.6	23.6	25	29.6	19.1	22.7	22.2	3.6	6
France	16.4	19.5	21.2	20.5	24.6	25.9	29.1	26	22.9	7.2	9.7
Greece	15.1	13.1	18.5	21.9	26.1	31.5	23.7	23.4	21.7	9.3	8.2
Great Brit.	17.4	20.7	26.6	21.4	30.2	31.4	34.9	29.4	26.5	8.5	11.9
Italy	14	16.1	18.5	14	16.4	14.6	17	15.8	15.8	0.7	1.8
Netherl.	19	23.3	24.8	25.3	25.6	22.6	23.7	21.7	23.2	0.9	2.6
Austria[3]	16	17.8	17.3	18.3	18	18	24.9	23	19.2	5.2	7
Portugal[3]	14.9	17.2	18.4	17.5	19.3	23	20.6	n.a.	18.7	5.7	5.7
Sweden	15.7	18.2	20	20.5	25.2	34.2	29	n.a.	23.2	11.9	13.3
Spain	12.7	14.1	18.6	17.5	21.4	23.3	21	25.5	19.3	9.2	12.7
Average	*11.6*	*13.1*	*14.7*	*14.9*	*16.3*	*17.3*	*16.6*	*16.3*	*15.1*	*4.95*	*4.7*

[1] Estimated annual growth rate in %.
[2] In %-points.
[3] Including self-employed.

Source: European Commission (2004a).

Table 7 contains ITR on corporate income for each year from 1995 to 2002 and – to smooth out the influence of loss carry-forward and loss carry-backward – the average ITR on corporate income for this period. On average, ITR on corporate income increased in the twelve countries regarded. This may partly be explained by the broadening of the tax base. However, the European Commission points out that it must also be noted that these ITR are very sensitive to cyclical fluctuations. Therefore it does not make sense to compare yearly ITR on corporate income across countries and their development over time for single countries, respectively.

3.4 Conclusions

The development of statutory as well as hypothetical microeconomic effective tax rates points to a declining weight of company taxation in old as well as in new member states. This provides some justification for the recently expressed fears that the ongoing tax competition may cause some erosion of company taxation in the EU. There is also some evidence for a quite large tax rate differential between old and new member states; although due to the lack of long-term data this is no strong evidence to support the tax-rate-differential-persistence-hypothesis. As to the convergence hypothesis, also no clear answer can be given. The few data available rather rather indicate a slightly increasing dispersion of tax rates within old and new member states. However, in the long run the downward trend in tax rates should also lead to their convergence.

4. Problems of company taxation in the EU

Company taxation in the EU faces several challenges and problems which are located at different levels and comprise different issues. Some of these aspects are addressed in this section of the paper.

4.1 Complexity of company tax systems in the EU

Despite a certain common trend of tax-cuts-cum-base-broadening which undoubtedly appears to characterise the development of national company tax systems, national company tax codes still show remarkable differences, as international comparisons show (e.g. European Commission 2001; Jacobs et al. 2003 and 2004). This is associated with considerable transaction, information, and compliance costs for transnational companies as well as tax administrations. Since 2004, companies that are active in the EU have to deal with 25 different company tax systems. Moreover, as the above survey of different studies on the effective tax burden should have made clear, international tax burden comparisons are rather difficult to make and lead to different results, depending on the methodology applied. This bears the danger of wrong decisions of transnational companies on the location of investment or of headquarters and therefore may cause the misallocation of capital.

4.2 Tax-related obstacles to capital mobility

Several tax provisions, which can be found in a number of national company tax systems, may limit the international mobility of capital and of companies as well as the freedom of establishment in the EU: for example the tax treatment of cross-border losses or exit taxation (European Commission 2001 and 2003). Up to now, there is no co-ordinated and comprehensive approach to remove such tax-related provisions. Past initiatives of the European Commission to tackle these issues have not been successful up to now.[13] Currently the main and most influential actor in this field is the European Court of Justice that decides on a case-to-case basis (the European Commission calls this "peace-meal-approach"; European Commission 2003) on the admissibility of such provisions.

4.3 Profit shifting

The existing international tax rate differentials induce profit shifting by transnational companies, which can not only be shown theoretically, but is also confirmed by empirical analyses (e.g. Devereux/Griffith/Klemm 2002; Clausing 2003; Kind/Midelfart/Schjelderup

[13] In 1990, the European Commission put forward a proposal for a directive on cross-border losses (European Commission, 1990) which it withdrew in 2001 as it was not supported by the Council. Currently the European Commission is working on a relaunch of this initiative. Currently the European Court of Justice is also dealing with this issue in the case Marks&Spencer; a decision is expected for autumn of this year only, it is, however, likely that the European Court of Justice will outlaw provisions which allow the consolidation of profits and losses between associated companies located in the same member state only, but do not allow to take into account also cross-border losses.

2005): taxable profits are shifted from high- to low-tax-countries via transfer pricing or thin capitalisation to reduce transnational companies' overall company tax burdens. Thus, transnational companies use public inputs in high-tax-countries, but escape taxation, which constitutes a violation of the pay-as-you-use principle and erodes the revenue potential of high-tax member countries.

4.4 Economic effects of company tax competition

As shown above, there seems to be some empirical evidence for a downward trend of company tax rates in old and new member states. This downward trend may be intensified in the future, as the new member states agreed to abolish special and "unfair" tax incentives[14] in the long-term, so that it can be expected that they will intensify tax competition via their general tax systems in the near future (Keen 2001).

Economists do not agree on the welfare effects of tax competition imposing constraints on national tax and budget policy.[15] One strand of the literature – inspired by the well-known contribution by Brennan/Buchanan (1980) – expects positive efficiency-enhancing effects, particularly with regard to the performance of the public sector. Here the potential of international tax competition to impose budgetary discipline on wasteful governments ("Leviathans") is emphasised. From this perspective company tax competition (as well as competition within other taxes levied on mobile tax bases) is beneficial: It intensifies the pressure on EU countries to cut wasteful public expenditures and to reduce the overall size of the public sector to compensate for tax losses caused by tax competition.

[14] Based on the code of conduct for business section; for details see below.

[15] See e.g. Wilson (1999), Oates (2001), or Wilson/Wildasin (2004) for a review of the controversial views discussed in the literature.

Another branch in the literature, however, conceiving governments as benevolent dictators rather than as revenue-maximising Leviathans, focuses on various potentially harmful economic consequences of international company tax competition. One specific concern relates to the potential erosion of the national tax base which may endanger the long-term sustainability of public finances. From this perspective tax competition is harmful as it may necessitate welfare-reducing expenditure cuts, i.e. cause the under-provision of public inputs (Zodrow/Mieskowski, 1986).

At the same time, tax rate differentials between old and new member countries appear to be quite substantial. This may be explained by barriers to the mobility of foreign investment which allow the old member states to keep up higher company tax rates; there is also empirical evidence that FDI are not very sensitive to taxation in the accession countries. Form this perspective the lower company tax rates currently offered by the accession countries may be viewed as a "tax rebate" compensating for lower levels of public services and lower levels of location-specific rents, respectively.

A strategy of undercutting the old EU countries' company tax rates further, however, may not be successful, however, due to the existing mobility barriers between old and new member countries. Further reductions of company tax rates may force the accession countries to cut public expenditures which may prevent them from the creation of own location-specific rents or entails the reduction of already existing ones. A slowdown of the catch-up process could be the result.

5. Proposed reforms for company taxation in the EU

Unlike indirect taxes, the EC Treaty provides no direct legitimation and provisions for the alignment of direct taxes in the EU. According to Article 94 (combined with Article 308) of the EC Treaty, national laws on direct taxation may be approximated if they impact on the functioning of the common market, i.e. if they affect the four freedoms enshrined in the EC Treaty (free movement of goods, services, persons, and capital). Up to now, only few measures have been adopted by EU member states in the field of company taxation,[16] as company taxation belongs to the few policy areas in which unanimous decisions of member states are required.

Besides the European Commission, the most important player seeking to advance company tax co-ordination in the EU with a view to removing existing tax obstacles to the freedom of establishment and the free movement of capital is the European Court of Justice: Its judicature is increasingly shaping national tax regimes.

The discussion whether – and if so, how – national company tax systems in the EU should be harmonised or co-ordinated started more than four decades ago. Initially, the debate had focussed on the potential need to harmonise regular company taxation schemes under the condition of increasingly integrating capital markets within the EU. The European Commission repeatedly launched harmonisation initiatives which were supported by scientific expertises pointing out the danger that liberalised and open capital markets may trigger unbridled tax competition with potentially harmful economic effects (Patterson 2001): the "Neumark-Report" (1962), the "Tempel-Report" (1970), and the report presented by the "Ruding Committee" in 1992 (Ruding Committee 1992). In 1975 the European Commission put forward a proposal for a directive on the harmonisation of corporate tax systems. It aimed at the introduction of partial imputation systems and statutory corporate income tax rates

[16] The parent-subsidiary-Directive (Council Directive 90/435/EEC of 23 July 1990, amended by Council Directive 2003/123/EC of 23 December 2003); the merger Directive (Council Directive 90/434/EEC of 23 July 1990); the Council Directive concerning payments between associated companies of different Member States (Council Directive 2003/49/EC of 3 June 2003); the Convention concerning the elimination of double taxation (Convention 90/436/EEC of 23 July 1990).

between 45 and 55%, but was drawn back in 1990, as well as two proposals for loss compensation issued in 1984 and 1985. The latest suggestion concerning the harmonisation of company systems was presented in 1992 by the Ruding Committee which proposed a minimum statutory tax rate between 30 and 40% as well as the harmonisation of the tax base. However, no consensus on the necessity, the extent and the mode of harmonisation of national corporate tax systems could be reached among member states.

After the rejection of these initiatives by the member states, there were hardly any discussions on a comprehensive harmonisation of European company tax systems during the nineties. Gradually the focus of the debate shifted away from a comprehensive harmonisation approach. Instead, "unfair" tax competition via preferential tax regimes (i.e. tax privileges which are exclusively granted to foreign investors and which often do not require real economic activities) has emerged as one of the primary concerns of the European Commission (European Commission 1997 and 2001a). Meanwhile, member states have agreed on a code of conduct on business taxation aiming at the stand-still and the roll-back, respectively, of harmful tax practices, which commonly is regarded as quite successful.

Besides, the main objective of the European Commission in the field of company taxation is to remove the tax obstacles to cross-border activities of transnational companies already mentioned and to introduce a harmonised consolidated corporate tax base (e.g. European Commission, 2001, 2003, and 2005).

In its report of 2001 (European Commission 2001b), the European Commission lists four harmonisation concepts for national company tax systems in the EU, two compulsory and two optional ones. Only one of these concepts – the European Corporate Income Tax (EUCIT) – includes a common tax base as well as a single EU-wide corporate tax rate. The other three concepts – the "Compulsory Harmonised Tax Base", optional "Home State Taxation" (HST) and optional "Common Consolidated Base Taxation" (CCBT) – aim exclusively at the harmonisation of the tax base. The theoretical and political discussion following the European Commission's report mainly concentrated on the two optional harmonisation concepts (which go under the headline "Optional European Consolidated Company Tax"), because compulsory harmonisation concepts – especially if they include a harmonised corporate tax rate – do not seem to have a realistic chance of implementation due to political resistance by the majority of member states and because the European Commission itself does not support the introduction of a harmonised corporate tax rate: After the release of the report the European Commission explicitly stressed that the right to set statutory corporate tax rates should be completely left to the member states themselves. Therefore, the introduction of a common corporate income tax rate almost completely vanished from the political agenda in the last few years. Most recently, however, the accession of the new EU member countries inspired demands for the introduction of a minimum corporate tax rate by several old member states (most prominently France and Germany) who fear that the on average low tax rates offered by the new member states will put their own corporate tax rates under pressure and who accuse the accession countries of "tax dumping".

Since the publication of the European Commission's report most progress has been achieved concerning the HST project. The European Commission together with a group of tax experts is working on the development of a pilot scheme to introduce HST for small and medium-sized enterprises for a limited period of time; due to the lack of support by a number of member states possibly only for a group of eight member states only, using the option of "enhanced co-operation" (European Commission 2004b).

This section provides a short discussion of the harmonisation proposals suggested by the European Commission in 2001, taking into account the problems associated with European company taxation in the context of an enlarged EU mentioned above.

5.1 Compulsory harmonisation concepts

5.1.1 European Corporate Income Tax (EUCIT)

The most far-reaching harmonisation concept proposed in the European Commission's report is the European Corporate Income Tax (EUCIT). It would provide for a single tax base and a single corporate income tax rate; the proceeds would go to the EU budget. As an alternative to this complete harmonisation of corporate taxation, it is suggested that member states retain the right to set the corporate tax rate according to their own preferences and needs.

A uniform corporate tax rate for all members of an economic union consisting of two heterogeneous country clubs does not appear as an optimal solution, judging from the considerations presented above. A harmonised corporate tax rate would probably have to be set somewhat between the average tax rate of the old and that of the new member countries, therefore forcing a number of established member countries to lower their corporate tax rate: Thus they may end up with insufficiently low levels of public services (Zodrow 2003). For many new member countries a harmonised tax rate would mean that they have to raise their corporate tax rates. This would preclude the option to compensate for existing disadvantages with respect to many other locational factors by offering tax rebates to foreign investors (Wilson/Wildasin 2004).

If member states were granted the right to set their own corporate tax rate, a race to the bottom and the complete elimination of the corporate income tax was rather likely, as the corporate tax revenues would be used to finance the EU budget instead ot national budgets, so that there would be an incentive for member states to act as free-riders.

5.1.2 Compulsory harmonised tax base

The second compulsory harmonisation concept is the introduction of a compulsory harmonised tax base, i.e. the design of a common tax code which would replace national ones. The tax base of transnational companies would be determined on the basis of these common rules (including the consolidation of profits and losses). This tax base would be allocated to all member states in which a transnational company is active based on a formula which may contain wages, property, and turnover ("formula apportionment"), and is taxed at the national tax rate which would be set freely by member states.

There are a number of advantages of this concept: The effective tax burden would become obvious, and information costs as well as the danger of wrong decisions on the location of investment would be minimised. Company taxation in the EU would be made transparent; and compliance costs for transnational companies and tax administrations could be reduced considerably (Mintz 2004). Transnational companies would also have the option of cross-border consolidation of profits and losses; thus one of the tax-related obstacles to the free movement of capital and the freedom of establishment would be eliminated.

The suggested formula apportionment of profits to the member states involved in the operations of transnational companies gains in appeal with the eastern enlargement, particularly if the current diversity of statutory tax rates should persist in the future. As pointed out above, tax rate differentials provide an incentive to shift taxable incomes from high-tax- to low-tax-countries. Within the EU-25, this would particularly hurt the old member countries with their on average high corporate tax rates and high levels of public services, if profit shifting forces them to decrease the tax rate differentials and therefore also public spending. At the same time formula apportionment is an adequate way to realise the pay-as-you-use-principle: Taxable profits are allocated to the jurisdictions where they are earned by transnational companies using public services, which would benefit both old and new member states.

However, there are also some caveats. The transparency of effective tax rates may intensify tax competition via the statutory tax rate, which then would be the only competition parameter left for national governments to compete for internationally mobile companies and investment. There would be an incentive for national governments to attract tax base (i.e. the activities on which the formula used to allocate the total tax base to member states) via undercutting the other member states' statutory tax rates. Harmonising the tax base only could therefore intensify corporate tax rate competition in the EU as a whole and in the two country clubs, respectively, and may accelerate the downward trend already observable in old and new member states.[17]

In practice, also the design of the formula used to distribute the consolidated tax base among member states may prove as difficult,[18] and depending on the factors included in the formula different distortions may result (Weichenrieder 2002): If wages were used, a redistribution of tax revenues would result from low-wage- to high-wage countries. If turnover was included, the transfer-pricing problem could not be eliminated completely. Including property in the formula may distort investment decisions, as firms may shift property from high-tax- to low-tax-countries to benefit from lower tax rates. Finally, the definition of the group whose income is to be consolidated may pose further practical problems (Sorensen 2004).

[17] Gordon/Wilson (1986) in a formal ananalysis show that formula apportionment leads to a stronger competition via tax rates.

[18] Weiner (2002) gives a detailed explanation of formula apportionment. For a critical discussion of formula apportionment see Hellerstein/McLure (2004) and the literature cited herein.

5.2 Optional corporate tax base harmonisation: European Consolidated Company Tax

5.2.1 Home State Taxation (HST)

Under the HST system, transnational companies could optionally calculate the tax base for all their EU operations according to the tax code of the member states where their headquarters are located (the home state).[19] Again, for those companies making use of this option transaction costs would be lowered, and the complexity of company taxation would be reduced considerably. However, as this is an optional system only, national tax codes would not be eliminated so that overall complexity and intransparency of European company taxation would rather be increased. If all countries participate in the HST system, there would be 25 different tax bases in the EU, and 25 different tax bases could potentially exist within a single EU country (Mintz/Weiner 2003).

It can also be expected that countries would compete for headquarters by offering attractive rules for the determination of the tax base (Mintz/Weiner 2003). This would imply that the tax-cuts-cum-base-broadening trend that could be observed in a number of member states during the last years and which may well be considered as efficiency-enhancing would be reversed. Also this reform proposal contains a free-riding incentive (Weichenrieder 2002): Narrowing the tax base in one country would not only affect its own corporate tax revenues but also those of the other member states which are allocated a portion of the consolidated tax base. Moreover, subsidiaries may carry different tax burdens in one country, depending on the home state of their parent companies, which may distort competition in that country. Finally, also this concept may increase the pressure on corporate tax rate.

[19] For a more detailed exposition of the two optional concepts see e.g. Lannoo/Levin (2002).

5.2.2 Common Consolidated Base Taxation

Under the CCBT system, common rules for a consolidated tax base would be established which would be adopted by all member states and which could be optionally applied by transnational enterprises to determine their taxable profits (instead of the rules provided by national company tax codes). Also this concept would – as an optional one – only reduce the complexity of the European company tax system if adopted by all member states (Mintz/Weiner 2003). It would also suffer from possible problems already mentioned, particularly concerning an intensifying pressure on tax rates.

6. Some tentative conclusions

Given the existing economic divergencies between old and new member countries, the existing corporate tax rate differentials can be expected to prevail for some more time. The established EU countries will be able to maintain their on average comparatively high corporate tax rates even after the accession of ten countries offering on average considerably lower corporate tax rates. At the same time a scenario in which company tax rates converge downwards in both country clubs cannot be excluded, however. Therefore in old as well as in new member states the current levels of company taxation and public services may be put under increased pressure. This is particularly bad news for the accession countries which may not be able to satisfy their spending needs through increasing the tax burden on enterprises or at least keeping it at the current level. This stresses the necessity of subsidies for the accession countries to compensate for possible negative effects of too low corporate tax rates on public spending (Wildasin 1989). Moreover, the considerations presented in this paper support the current harmonisation strategy followed by the European Commission, aiming at the harmonisation of corporate tax bases. It might be considered to complement tax base harmonisation by the introduction of minimum tax rates. In contrast to recent suggestions (e.g. de Mooij 2004), the introduction of a uniform statutory tax rate does not seem advisable. To leave accession countries the option to grant tax rebates as a compensation for locational disadvantages, a two-tier approach may make sense, which provides for a higher minimum tax rate for old and a lower minimum tax rate for new member states: at least for a limited period of time, until the existing economic disparities have been substantially reduced.

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