Authorship Declaration

I hereby declare and confirm that this thesis is entirely the result of my own work except where otherwise indicated. I gratefully acknowledge the supervision and guidance I have received from Prof. Yoseph M. Edrey.

August 11th, 2006
Noam Kleiner

List of Abbreviations

<table>
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CBT</td>
<td>Common Base Taxation</td>
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<td>CEN</td>
<td>Capital Export Neutrality</td>
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<td>EATR</td>
<td>Effective Average Tax Rates</td>
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<td>ECJ</td>
<td>European Court of Justice</td>
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<td>ECOFIN</td>
<td>Economic and Financial Affairs</td>
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<td>EEC</td>
<td>European Economic Community</td>
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<td>EMTR</td>
<td>Effective Marginal Tax Rates</td>
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<td>EMU</td>
<td>European Monetary Union</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>HST</td>
<td>Home State Taxation</td>
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<td>IFSC</td>
<td>International Financial Services Centre</td>
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<td>MNE</td>
<td>Multi National Enterprise</td>
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<td>NEG</td>
<td>New Economic Geography</td>
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<td>PHTM</td>
<td>Potentially Harmful Tax Measures</td>
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<td>QMV</td>
<td>Quality Majority Voting</td>
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<td>TAG</td>
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1. **Introduction**

The issue of Tax Harmonization versus Tax Competition has been globally debated over the last decades and is considered extremely controversial at the European level, ever since the creation of the European Community with the Treaty of Rome in 1957. Mainly, the attempt to adopt directives creating a "level playing field" in this area by harmonization of tax rates was formally abandoned in 1990. The main reason was that the direct tax area has been traditionally viewed by member states as an internal matter and almost any attempt to draw initiatives at the EU institutional level has failed. The lack of consent is attributed mainly to the decision of member states to keep direct taxation matters under full unanimity, thus creating political obstacles on the way to harmonization.

During the last decade, the case for tax harmonization was reconsidered. In 1992, the Ruding Committee of tax experts published its report regarding whether differences in corporate tax systems among member states created major distortions for the functioning of the European internal market. The committee found that there were major differences in tax systems among the member states which were likely to affect the location of firms and create distortions in the EU. The Ruding Report included a set of recommendations to eliminate such distortions including harmonization of corporate tax bases and convergence of corporate tax rates. However, the European Commission viewed the scope of the recommendations as being unrealistic and far reaching, so most of the report was explicitly rejected or abandoned. The adoption of the "Subsidiarity principle" in article 5 of the Maastricht Treaty (hereinafter: “Treaty”) shows the reluctance of member states to undermine their sovereignty by granting additional legislative powers to the EU institutions. Accordingly, actions will be taken at the EU level, only when the same result can't be achieved via the member states.

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1. I will concentrate on direct taxation, see section 5 below.
2. In this paper, tax harmonization will refer to full harmonization of tax rates.
During the second half of the 1990's new efforts were made to curb harmful tax competition at the EU level, beginning with the Memorandum which stressed the need for coordination to avoid the erosion of mobile tax bases and the shifting of tax burden towards labor. Following, a High Level Group was formed by the Council of Economics and Finance Ministers of the EU (hereinafter: “ECOFIN”) in order to study the issue of harmful tax competition more closely and form the suitable actions together with the Commission. The report issued by the commission stressed the need for greater coordination to reduce the negative effects of tax competition. In 1997, the ECOFIN Council has adopted a comprehensive Tax package to tackle harmful tax competition in the European Union (Hereinafter: "Tax Package"). The Tax Package was composed of three basic elements: a Code of Conduct on Business Taxation, A proposal of a directive concerning the taxation of savings and a proposal for a directive concerning cross border interest and royalty payments between associated corporations. The Code of Conduct is a non binding "Soft Law" resolution among member states to avoid the preferential taxation of mainly highly mobile investment activities and to abolish non transparent administrative practices. The member states, adopting the code, have agreed to "Rollback" existing tax measures considered harmful and also to refrain ("standstill") from introducing such measures in the future.

In a recent study regarding "Company Taxation in the Internal Market", (hereinafter: “Study”) the Commission conducted a research to evaluate differences in the effective corporate tax burdens among member states as well as the various obstacles to cross border business cooperation in the EU. The commission found significant obstacles for corporations operating in more than one member state. For example, structural changes, such as cross border mergers and acquisitions are subject to taxation and there are high compliance and administrative costs as a result of having to deal with 25 different regimes. The Commission acknowledges two separate solutions to deal with the current situation. First it supports a multitude of targeted specific measures to enhance cross

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border cooperation. Second and more important, the Commission examined the implementation of general remedies in the form of a Common Tax Base in the EU. The two main methods brought up are Common Base Taxation (hereinafter: "CBT") where member states would harmonize their tax rules for computing profits of cross border activity of firms. Under Home State Taxation (hereinafter: "HST") individual member states will stick to their domestic rules to determine taxable profits, however, cross border activities would be taxed according to the location of the firm's headquarters.

Although we see that tax harmonization has been discussed at the EU level for many years, the above review reveals that the Commission has abandoned its goal of full rate harmonization and coordination attempts are currently more limited. The effects of tax competition have also been a source of academic debate among economists. The main fear that tax competition will lead to efficiency downfall was initially described by Oates as following:

"...The result of tax competition may well be a tendency towards less than efficient levels of output of local services.
In an attempt to keep taxes low to attract business investment, local officials may hold spending below those levels for which marginal benefits equal marginal costs..."

Proponents of tax harmonization argue that under the current era of globalization and due to several factors such as rapid technological developments and relaxation of exchange controls, capital became more mobile relative to labor. This is particularly evident in the EU which only recently reached a fragile agreement regarding the creation of European Monetary Union and the past creation of an internal market free of trade barriers. The result is that sovereign states reduce their tax rates in order to attract foreign investment, both passive and direct investment, within their borders. Under an extreme scenario, the developed countries will shift the tax burden to labor, which is less mobile than capital, and any taxation of capital will be abandoned. In this case, tax competition would lead to the "Race to the Bottom" effect in which each country

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12 See section 5.5.
dominant strategy\textsuperscript{15} would be to cut capital tax rates leading to equilibrium where none of the states tax capital. However, due to the already high tax rates on labor, such increase might prove politically unfeasible. Left with no other choice, the welfare state would have to reduce its level of public services, cutting on redistribution among the population. Therefore, to avoid global fiscal crisis, states must limit international tax competition as an immediate solution for the prevailing of the welfare state.

Zodrow and Mieszkowski\textsuperscript{16} formalized the above notion into an economic model where the reliance of local governments on source based tax of capital income would lead to the underprovision of public services. Their model, however, was based on a multitude of simplifying assumptions: large number of homogeneous states, perfectly competitive markets, a fixed national capital stock which is perfectly mobile, two tax instruments property tax applying to capital income and head tax and local benevolent governments acting to maximize the welfare of their residents. Under these conditions, the ZM model predicts that with a growing number of jurisdictions, each country faces a perfectly elastic supply of capital and is unable to affect the after tax return on capital. The main result is that tax on capital is avoided and shifted towards head tax, thus causing a race to the bottom effect. Furthermore, the ZM model imposes an external constraint on the amount of head taxation, leading to the under provision of public goods.

Although the above argument contains some merits, the empirical evidence fails to clearly indicate that race to the bottom is indeed a serious issue\textsuperscript{17}. Although statutory corporate tax rates have been declining in the past 20 years, the ratio of corporate tax revenues over GDP remained fairly stable, probably due to broadening of tax bases. A research\textsuperscript{18} committed recently further concludes that evidence indicates that corporate tax collections are remarkably persistent relative to Government revenues or GDP's.

Indeed, the current case for tax harmonization is flawed in many respects, other than the conflicting empirical evidence. I will show that once the simplifying assumptions, as shown in the ZM model, are relaxed, the grim outcome predicted by competition

opponents is far from conclusive. In reality, jurisdictions are heterogeneous and preferences exist towards different "packages" of public goods and taxes. Other adjustments to the ZM model are the presence of agglomeration economies, the imperfect mobility of capital\textsuperscript{19} and positive international spillovers from public goods. Following the implications of the well known Tiebout Model\textsuperscript{20}, in which the residents of different jurisdictions can "vote with their feet" by choosing jurisdictions which are competing for them in much the same way like competitive private firms, there might be a positive race to the bottom scenario by limiting the tendency of jurisdictions to overexpansion. Thus jurisdictions are forced to maintain more reasonable, efficient levels of public expenditures, taming the Leviathan effect\textsuperscript{21}.

In this paper I will show that the case for full tax harmonization in the EU is fairly weak and should be replaced with specific attempts of coordination between jurisdictions. For instance, if one accepts the common, prevailing notion that Capital Export Neutrality\textsuperscript{22} (Hereinafter: "CEN") increase global efficiency, than its achievement by effective residence taxation depends foremost on the exchange of information. As we shall see, the EU has already abandoned its past efforts at harmonizing tax rates among its member states, and focus instead on the creation of a level playing field, while the member states maintain full freedom to determine their tax rates and the general features of their fiscal policies. Finally, I will analyze the possible economic effects of the current Commission proposal to conduct a common tax base in the EU. Although the proposal was intended to remove the cross border activity within the EU, it would nevertheless create other distortions and also likely to meet substantial political opposition.

2. The Consequences of Tax Competition

In order to better understand the concept of capital tax competition among member states, it is important to understand the leading factors behind it. Mainly, the increasing globalization in commerce and investment as well as the economic integration among regions. The advent of technology and the use of electronic commerce followed by removing the barriers for capital movement such as exchange controls and other impediments led to an increase in the international mobility of capital. The volume of worldwide foreign direct investment (hereinafter: “FDI”) has increased significantly in the last two decades, thereby inducing governments to attract cross border investment by reducing capital taxes. The presence of supranational international organizations, such as the OECD and EU also led to flourishing of multinationals corporations and the pursuing cross border investments. In this scenario, capital tax policies gained a significant role also due to the recent lack of other means of competition such as interest rates and currency fluctuations. The effort of jurisdictions to attract capital and foreign investment will induce them to lower the direct tax burden and gain a higher share in the international division of capital.

In this section, I will analyze the theoretical case against capital tax competition. In section 2.1 I will define the concept of tax competition in order to focus on the issue of sovereign jurisdictions competing for foreign investments and capital. Next, in section 2.2, I will introduce the consequences of tax competition as presented in the ZM model. Although the ZM model is based on a number of restrictive assumptions, its results are considered influential and valid. Mainly, the ZM model shows that perfect capital mobility leads to a sub-optimal level of capital tax rates in equilibrium, and the underprovision of public services. The consequences of shifting the tax burden towards less mobile factors, such as labor will be discussed next. As we shall see, such a shift imposes a significant burden on the modern welfare state leading to severe redistribution problems. Finally, I will show how tax harmonization can increase the overall efficiency and lead to Pareto improvements.

24 J.R. Hines, supra note 18.
2.1. **Defining Tax Competition**

In order to evaluate the effects of capital tax competition, initially it is needed to define and clarify the concept of tax competition as used in this paper. Tax competition may be defined broadly as any form of non-cooperative tax setting by independent governments. Yet such broad definition encompasses too many phenomena to be of much interest to our discussion. A fundamental distinction is between vertical or intergovernmental tax competition and horizontal or interjurisdictional tax competition\(^{25}\). The former refers to tax competition among different levels within a country’s constitutional hierarchy while the latter is between sovereign states such as EU member states. Another distinction is between tax measures targeted at domestic business (outbound) and those targeted at foreign investors (inbound). Also this paper will ignore the models of “yardstick competition”\(^ {26}\), where voters in one region are allowed to make meaningful comparisons between the behavior of local decision makers and neighboring fiscal choices\(^ {27}\). Such models ignore the interdependencies of the fiscal policies among jurisdictions. Finally, this paper will not cover indirect tax competition among EU member states\(^ {28}\).

This paper will focus only on the consequences of horizontal tax competition on foreign capital resources. For this purpose, I will use the narrow definition of tax competition suggested by J.D. Wilson\(^ {29}\) as: “non-cooperative tax setting by independent governments, under which each government’s policy choices influence the allocation of a mobile capital among “regions” represented by these governments”.

2.2. **Standard Tax Competition Model**

In this section I will introduce the main arguments against the consequences of capital tax competition. For this purpose, I will focus on the application of the influential ZM\(^ {30}\) model\(^ {31}\). The model formalized the prevailing notion\(^ {32}\) that in the current era of

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\(^{26}\) “Yardstick competition” might improve welfare by disciplining government officials.


\(^{28}\) S. Cnossen, supra note 17. In 1977, the base and the workings of the VAT were substantially harmonized at the EU level. Yet, harmonization proposals for excise duties have made little progress.


\(^{30}\) For simplification I shall concentrate on the latter. See J.D. Wilson, supra note 29.

\(^{31}\) G.R. Zodrow & P. Mieszkowski, supra note 16.

\(^{32}\) W.E. Oates, Supra note 13.
increasing globalization, jurisdictions which are competing for mobile capital will keep
taxes low in order to attract capital investment resulting in sub optimal levels of public
services.

Nevertheless, the ZM model is based on rather restrictive framework and a number of
simplifying assumptions\textsuperscript{33}. First, a very large number of identical regions. Furthermore,
all residents in each jurisdiction are presumed to be equal, having the same preferences.
Second, local public services are financed by two tax instruments, either by source taxes
on capital\textsuperscript{34} or by a lump sum head tax\textsuperscript{35} levied on all residents. Third, capital is
perfectly mobile\textsuperscript{36} among jurisdictions so no country can impact the after tax return to
capital and the tax rates of other jurisdictions. Fourth, the size of population is fixed in
each state and the total amount of global capital supply is constant\textsuperscript{37}. Finally, local
governments of each jurisdiction act in a benevolent manner to maximize their
residents' welfare and the level of public services has no spillover effects on other
regions.

2.2.1. \textit{Perfect Capital Mobility and the Underprovision of Public Services}

Let us assume a member state decides to increase its local capital tax rates. Such an
increase would initially reduce the local after tax return to capital\textsuperscript{38}. Therefore, local
residents will have an incentive to shift their capital abroad to obtain the higher after tax
returns to capital\textsuperscript{39}. Since one of the main assumptions of the ZM model is a very large
number of homogeneous states which are unable to affect the after tax returns to
capital\textsuperscript{40}, so each jurisdiction faces a perfectly elastic supply of capital to tax rate.
Consequently, the capital outflow will reduce the marginal return to capital abroad\textsuperscript{41}
and come to a halt only when the increase (decrease) in the marginal return to capital will
equal the marginal increase (decrease) in capital tax rates.

\textsuperscript{33} G.R. Zodrow & P. Mieszkowski, supra note 16.
\textsuperscript{34} It is assumed that jurisdictions lack the ability to impose residence tax on capital. J. D. Wilson & D.E.
\textsuperscript{35} In this section, I will avoid the issue of head taxation.
\textsuperscript{36} Yet, capital investment may be immobile in the short run. See E. Janeba, “Tax Competition When
Governments Lack Commitment: Excess Capacity as a Countervailing Threat,” 90 \textit{American Economic
Review}, 1508 (2002).
\textsuperscript{37} Yet if we allow capital to be variable in supply, effects of tax competition will be mitigated. See E.
Project}, commissioned by the Norwegian Ministry of Foreign Affairs, 2003.
\textsuperscript{38} The gross return to capital will initially remain constant, thus reducing the after tax returns.
\textsuperscript{39} Such a positive externality is neglected by jurisdictions See E. Janeba & G. Schjelderup, supra note 36.
\textsuperscript{40} Next, the case of large and asymmetric regions will be examined.
\textsuperscript{41} Similarily, reducing the capital supply will increase the marginal return to capital.
Since the total supply of capital is constant, jurisdictions will compete for the fixed amount of capital by undercutting capital tax rates\textsuperscript{42}. Each region assumes that the capital tax rates in other jurisdictions remains constant\textsuperscript{43}. Yet, due to the outflow of capital, other regions will have the incentives to cut their capital tax rates as well. At equilibrium, the marginal cost of decreasing capital tax rates will equal the marginal benefit of the capital inflow. All jurisdictions will set an equal, low capital tax rates with the consequence of suboptimal levels of public services. Of course, such equilibrium is valid if no alternative taxes are imposed on immobile factor. Next I will examine the effects of “tax shifting” from mobile capital to immobile factors, mainly labor.

Under the restrictive assumptions of the ZM model, the inefficiency is related to the costs of increasing capital tax rates and the subsequent capital outflow\textsuperscript{44}. Such an increase would entail two indirect costs\textsuperscript{45}. First, under the ZM model, land and capital are the only factors of production in the economy. An increase in the capital tax rates and the resulting outflow of capital will lower the return to the factors of productions thus further reducing private consumption\textsuperscript{46}. Second, although capital tax rates will be higher on the margin, the tax base will decrease due to the capital outflow, bearing the consequence of lower public spending. Therefore, contrary to the case of immobile capital, in the ZM model, an increase in capital tax rates bears the additional indirect costs making the marginal cost of public expenditure much higher than otherwise. The member state faces higher marginal costs of increasing public spending with the consequences of the underprovision of public goods and services.

\textsuperscript{42} ZM model assumes statutory tax reductions without considering the effective tax rates. The latter includes the effects of tax base as well.
\textsuperscript{44} In the case of immobile capital, the marginal costs of public spending and private spending would equal since capital taxes are non-distortinaory. S. Krogstrup, "A Synthesis of Recent Developments in the Theory of Capital Tax Competition", EPRU Working Paper Series 2003.
\textsuperscript{45} This is in contrast with Samuelson condition. P. Samuelson, “Aspects of Public Expenditure Theory”, 40 Review of Economics and Statistics, 332 (1958)
\textsuperscript{46} In comparison with the case of immobile capital.
2.2.2. Shifting the Tax Burden and Distributional Issues

In reality, jurisdictions have not just a source based capital taxation but also alternative tax instruments. In case immobile factors are subject to taxation, and assuming it is suffices to finance the provision of public goods and services, the above problem regarding the provision of public services could be solved or mitigated. In theory, the optimal alternative is the utilization of lump sum taxes; i.e. non distortionary taxes that are invariant to all taxpayers decisions. Yet, the use of such taxes is rare due to equity, distribution and political issues.

Bucovetsky and Wilson show that in the case of many small jurisdictions, each region should meet all of its revenues needs by taxing only labor income, even though some distortions will be created. Under such scenario, governments will choose to tax only labor since each region faces an infinite elasticity of capital investment while the labor supply faces a finite elasticity. According to the traditional optimal taxation theory, tax levels should be inversely related to elasticity. Indeed, one implication of their model is that higher capital mobility leads to an increase in the elasticity of capital to the tax rate. In order to provide optimum levels of public services, each jurisdiction should shift the tax burden from source based capital to labor.

Yet, the shift of tax burden towards less mobile factors bears severe distributional implications, mainly since residents differ in the composition of their income. Generally, wealthier individuals obtain a larger share of income from capital, whereas low-income individuals obtain their income mainly from labor. Thus tax competition and a subsequent shift of the tax burden towards labor tends to make low-income people worse off, a fact which may explain the increasing opposition to globalization.

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47 G.R. Zodrow, supra note 19.
48 Such taxes are considered non distortionary since they are fixed and general. See J.D. Wilson, "Theories of tax competition" 52 National Tax Journal June 1999 & D. Shaviro, "Some Observations Concerning Multijurisdictional Tax Competition" in Regulatory Competition And Economic Integration: Comparative Perspectives, D. Esty & D. Geradin (eds.), Oxford University Press, 2000.
49 Wilson, supra note 48, gives the example of how Margaret Thatcher’s implementation of a poll tax in U.K. is widely viewed as a significant factor of deriving her out of office.
52 J. D. Wilson & D.E. Wildasin, supra note 34.
54 Although such taxes distort the residents choices.
55 J.R. Hines, supra note 18.
Prof. Avi Yonah argues that a decline in taxes on capital and a simultaneous rise in labor taxation carries severe equity implications\textsuperscript{56}. Taxes on labor are generally more regressive than capital taxes since the former impose a higher burden on low income individuals. In addition, such a tax shifting undercut the welfare abilities to redistribute funds from the wealthy to the poor. Consequently, distribution of income in a society will become more inequitable. On the expenditure side, high income residents and foreign investors will lobby for higher provision of public goods which can not be efficiently provided by the competitive markets such as security and infrastructure. Yet they will be less interested in the welfare functions of jurisdictions. Thus, capital tax competition will limit the redistributive function of taxes and curtail the significant role of the welfare state.

Additionally, a large fraction of public expenditures is currently designed to insure against specific risks such as unemployment, old age and illness\textsuperscript{57}. If capital tax competition constraints the ability of public sector to insure against these risks, private insurance markets may fail to provide adequate protection thus imposing severe social costs\textsuperscript{58}. Indeed some scholars predict that capital tax competition will foster the collapse of the welfare state\textsuperscript{59}. Due to ageing population and increasing life span in developed countries, the welfare state will soon face a fiscal crisis. The result is an immediate increase in the “dependency ratio”\textsuperscript{60}. Total expenditures on social insurance programs in all OECD countries will rise sharply. Since jurisdictions are limited in their abilities to impose higher levels of income taxes and consumption taxes\textsuperscript{61}, EU and OECD member states show great interest in curbing capital tax competition. Furthermore, reducing the role of the welfare state is not a viable option due to political consequences and ensuing pressure against globalization. Developed countries have no option but to existing social and welfare programs.

\textsuperscript{58} J.R. Hines, Supra note 18 & R.S. Avi Yonah supra note 14.
\textsuperscript{60} The ratio of the young (under twenty) and the elderly (above retirement) to the working population.
\textsuperscript{61} R.S. Avi Yonah argues that consumption taxes already impose a very high burden on residents among EU member states. A further increase will have the opposite effect of decreasing tax revenues.
2.2.3. Tax Harmonization and Pareto Improvements

The standard ZM model suggests that tax harmonization will increase efficiency. If all jurisdictions agree to raise their capital taxes simultaneously, all would benefit from an increase level of public services. Furthermore, since the ZM model assumes a fixed supply of capital and identical jurisdictions, the simultaneous tax increase will not affect the total supply of capital or its allocation. As a consequence, overall utility would increase leading to Pareto improvements since resources would shift back to public spending. In fact, higher tax rates would constitute Pareto improvements as long as the marginal utility from public spending is greater than that of private consumption.

3. Tax competition Reconsidered

As we shall see in section 4, there is hardly any evidence that the predictions made by the opponents of tax competition came true. Although statutory corporate tax rates have been declining during recent years, the effect has been roughly offset by a broadening of the corporate tax base, so corporate tax revenues have remained fairly stable as a portion of the EU states’ GDP during the last twenty years.

Consequentially, in recent years we see a shift in the general academic view regarding tax competition. At the beginning, most economists agreed with the ZM model’s prediction, i.e. that tax harmonization is necessary to avoid sub-optimal taxation of mobile capital resulting in the under provision of public services or the shifting of the tax burden towards less mobile tax bases, mainly labor. However, the theoretical case against tax competition is based on a number of restrictive assumptions which are not valid in reality. When allowing the amendments of the basic ZM model by relaxing some of its assumptions while adding others, the case for tax harmonization becomes far from being clear cut.

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63 See S. Krogstrup, supra note 44. Since tax competition leads to the underprovision of public goods, the marginal utility of public spending is much higher than the marginal utility of private expenditure. Shifting resources towards the former will increase the general utility levels and satisfy the Pareto criteria.
66 See J.D. Wilson, supra note 34.
67 G.R. Zodrow at supra note 19.
In this section I will review and analyze the main literature which offers a new framework regarding the case for tax competition. First, I will address the issue of "new economic geography" (hereinafter: "NEG") and its effects on tax competition. The main argument is that agglomeration economies cause the concentration of advanced, high end industries in developed, high income core states, which grant high levels of public services, advanced infrastructure, market access, and educated workforce in return for high levels of taxation on capital. In contrast with the basic assumption that independent governments are benevolent, public choice literature assumes that Leviathan governments act to maximize their own utility instead. Accordingly, tax competition will enhance efficiency by forcing bureaucrats to avoid wasteful spending.

Next, the basic assumption that there are an infinite number of small, competing states is relaxed, so the global, after tax return to capital might be influenced by the decision of the member states. In comparison, under the ZM model, the states are unable to influence the given after tax return to capital. I will review the alternative models showing how asymmetry in the size of competing states will affect the basic ZM equilibrium. Finally, a significant result of globalization and more capital mobility is an increase of income due to foreign investment. Independent States, acting to maximize their residents' welfare, have an incentive to shift the tax burden towards foreign investors. We shall see that this effect, known as "tax exporting", will lead to an opposite, balancing effect on tax competition.

Although some of the above amendments to the ZM model will not alter the final "race to the bottom" effect rather than mitigate its magnitude, we shall see that in some cases increasing capital mobility might lead to the opposite results. The amendments in the recent theoretical framework might explain the lack of strong empirical evidence of “race to the bottom” effect. Even the main opponents of tax competition admit the lack of conclusive empirical evidence concerning a destructive race to the bottom. In fact, some studies show that, as capital mobility increases, so do capital income tax burden.

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72 E. Baldwin & P. Krugman, supra note 68.
3.1. Agglomeration Economies

The basic ZM model shows that with increasing capital mobility, downward pressure in capital tax rates will lead to "race to the bottom" effect, undermining the power of the welfare state. In contrast, The NEG models show that highly developed, welfare states are able levy higher tax rates on capital, without causing an outflow of capital to less developed "periphery" countries. The former offer the benefits of external economies of scale, such as highly skilled and educated work force, established infrastructure and easier market access. NEG literature refers to the possibility of economic integration leading to an agglomeration of economic activity among integrating states. P. Krugman\(^\text{73}\) shows how economics of scale in manufacturing leads firms to concentrate their production in a single location, preferably a larger market in order to minimize trade costs\(^\text{74}\).

Baldwin & Krugman divide the EU into two parts\(^\text{75}\): the "core" states such as Germany, France and England and the "periphery" states such as Portugal and Greece. The former enjoy the benefits of agglomeration economies associated with being established centers. They show empirically that the average corporate tax rates are substantially higher in the "core" states compared with the "periphery". One explanation for the above difference is that due to the presence of agglomeration economies, gross return to capital in the "core" countries is higher than the potential return in the periphery. The gap in the gross returns allows the "core" states to set positive tax rates on capital without causing an incentive for capital outflow\(^\text{76}\).

3.1.1. New "core-periphery" equilibrium

Contrary to the basic ZM assumption, under agglomeration economies, capital outflow from one state to the other will further increase the gap in the net return to capital, so the recipient state will obtain even a higher return to capital. Thus, the previous basic assumption that capital outflows increase the return on capital in the origin state while reducing the return in the recipient state, restoring the equilibrium, doesn’t hold in the


\(^{75}\) E. Baldwin & P. Krugman, supra note 68.

\(^{76}\) S. Krogstrup, supra note 44.
case of agglomeration economies. Here the equilibrium is only achieved when all
capital is invested in the production of the core country\textsuperscript{77}.

Furthermore, even if the "core" country will set a positive tax on capital, the equilibrium
will remain stable if its gross return to capital is higher than in the "periphery" state. So
as long as the tax levied is below the gap in the gross return, net return to capital will
remain higher in the core state and the equilibrium will be stable. However, if the tax
rate on capital exceeds the above gap, the potential net return to capital will be higher in
the periphery. In that case, equilibrium will be achieved after all capital will flow from
the "core" state to the "periphery"\textsuperscript{78}. The case where capital taxes are set to zero and
capital is split evenly between the "core" state and the "periphery" doesn’t lead to a
stable equilibrium under the assumption of agglomeration economies. If, for example,
one state decides to levy positive capital tax the net return to capital will be different
between the two member states, causing a total capital flow from one state to the other.

\subsection*{3.1.2. Tax Harmonization under Agglomeration Economies}

Consider a case with two states: a "core" state benefiting from agglomeration economies
and a "periphery" state. Let’s assume the "core" state sets the initial capital tax rate to 1
while the periphery sets the initial\textsuperscript{79} tax rate to 0. Now suppose that under tax
harmonization both states were forced to set an intermediary tax rate which equals 0.5.
With equal tax levels, firms will still prefer to stay agglomerated in the “core” state
where net return to capital is higher due to agglomeration forces. Furthermore, the
common tax rate makes both states worse off compared to the initial equilibrium. The
"core" country prefers to set a higher tax rate to maintain its relative advantage with an
increase in public investment. The "core" state can do so without risking a capital
outflow to the "periphery". Similarly the latter state would also prefer to set the pre-
harmonization tax rate set to maximize its welfare. So, contrary to the ZM model, under
agglomeration economies harmonization doesn’t lead to Pareto efficiency rather makes
both states worse off\textsuperscript{80}.

\textsuperscript{77} E. Baldwin & P. Krugman, supra note 68.
\textsuperscript{78} S. Krogstrup, supra note 44.
\textsuperscript{79} E. Baldwin & P. Krugman describes a \textit{Stackelberg game model} in which the "periphery" state will
want to set low tax rates to induce a capital flow. However the "core" country would anticipate it and set
the tax rate so the "periphery" won't find it worthwhile to lower its tax rate. Therefore, the "core" state
engages in a "limited tax" game and the "periphery" state, knowing this, is unconstrained by competition.
\textsuperscript{80} E. Baldwin & P. Krugman, supra note 68.
Baldwin & Krugman further show that in such a "lumpy" world\(^\text{81}\) tax competition is rather one-side affair. The "core" state engages in a limited competition since its positive tax rate has an upper limit, while the "periphery" state is not bound by any constraints\(^\text{82}\). Therefore, unlike the basic ZM model, there is no mutual gain to cooperation. In addition, industrialized "core" states will levy higher tax rates on capital compared to "periphery" states without bearing the consequence of capital tax competition and "race to the bottom" scenario.

### 3.2. Tiebout, Taming the Leviathan and Locational Neutrality

The foundations to the economic analysis of tax competition were set by the Tiebout theory regarding efficient tax competition\(^\text{83}\). The argument is that competition for residents will enhance efficiency among local governments by making them more responsive to preferences concerning the provision of public goods. Similar to the market outcome for private goods, residents will "vote by their feet" and efficiently migrate to the states where their tax payment will equal the costs of providing them the chosen levels of public goods and services. Under such scenario, tax competition has positive effects, i.e., the region's taxes must be kept low enough so the residents will have incentive to remain in the region, given the local provision of public goods. One important implication of Tiebout model\(^\text{84}\) is that there are positive tax differences among regions, which enable the residents to satisfy their diverse preferences\(^\text{85}\).

However, Tiebout's model is based on several assumptions\(^\text{86}\), such as the existence of many small regions, so that one jurisdiction can not alter the overall utility levels offered by jurisdictions. Thus, similar to perfect competition, jurisdictions are "utility takers" and have no market power\(^\text{87}\); obviously such assumption is not valid in practice. Moreover, the model rests on two additional assumptions: one is that residents are

\(^\text{81}\) "Lumpy" refers to the accumulation of capital in the "core" state.
\(^\text{82}\) Basically, the "periphery state" will not be able to attract the capital from the "core" country, see supra note 68 for further analysis.
\(^\text{83}\) Charles M. Tiebout, Supra note 20.
\(^\text{85}\) See D. Shaviro, supra note 48.
\(^\text{86}\) See R.S. Avi-Yonah, Supra note 14.
\(^\text{87}\) J.D. Wilson, Supra note 48.
completely mobile\textsuperscript{88} between different regions where in practice immigration rules and language barriers prevent such movement. Second and more important, Tiebout assumes that the taxes collected are benefit taxes, meaning that the individual's tax payment equals the marginal cost of the public goods provided\textsuperscript{89}. Yet, in reality most public goods are non-excludable, so a direct user fee can not be charged in exchange. The taxes that are paid instead are unrelated at the margin to the value of the benefits provided.

Since taxes fail to represent the costs of the public goods provided, proponents of tax harmonization argue that unlike the Tiebout's model, jurisdictions differ from competitive markets and intervention is needed to avoid inefficiency. Intervention, in the form of tax harmonization, is intended to achieve locational neutrality so that taxes should not vary among different jurisdictions\textsuperscript{90}.

An important implication of the Tiebout model concerns the possibility that tax competition might lead to a positive race to the bottom effect\textsuperscript{91}. According to this view, which has its initials in public choice theory\textsuperscript{92}, policymakers are not benevolent and do not act to maximize welfare. These models view jurisdictions as a self serving "Leviathans", so in the absence of tax competition, a local government will be maximizing the size of the state and its bureaucrats using taxes which are sub-optimal\textsuperscript{93}. Therefore, tax competition might serve as an additional constraint on the Leviathan government tendency to engage in wasteful consumption. This argument is opposite to the basic ZM model which assumes that policy makers are benevolent. Edwards and Keen\textsuperscript{94} reconciled the two different views, benevolent and leviathan policy makers, in an "intermediate" model where the policy maker's utility functions positively depend both on its own consumption levels and their residents' utility.

\textsuperscript{88} However, we care more about the revised application of the Tiebout Model regarding competition among jurisdictions for mobile firms. So firms are taxed according to the marginal cost of providing public goods & services to the marginal firm. See J. D. Wilson & D.E. Wildasin, supra note 34.
\textsuperscript{89} See D. Shaviro, Supra note 48.
\textsuperscript{90} See D. Shaviro, Supra note 48 suggesting that the case for uniformity is weakened when considering Ramsey's (1927) findings that tax rates should be inversely related to their elasticity.
\textsuperscript{91} See G.R. Zodrow, Supra note 16.
\textsuperscript{94} See J. Edwards & M. Keen, Supra note 69.
In the following section I will show that the Tiebout model still offers some important insights regarding the benefits of tax competition. Section 3.2.1 will deal with the issue of tax competition as a mean to increase locational efficiency. In section 3.2.2, I will relax the assumption of the policy maker as being benevolent and explore the implications.

3.2.1. *Locational Neutrality and Benefit Taxes*

As noted above, one implication of the Tiebout model is that tax competition enables jurisdictions to satisfy diverse consumer preferences, thus offering a choice between different combinations of taxes and public services. Proponents of tax harmonization emphasize that such an argument is based on two crucial assumptions: perfect mobility and benefit taxes, but when both assumptions are relaxed, the argument is much less appealing\(^95\). As we shall see, the empirical evidence shows us that homogenization of tax rates did not take place. The report released recently by the EU commission revealed an opposite trend\(^96\), showing corporate tax rates vary greatly among EU members.

Due to the lack of empirical evidence, arguments were made in favor of the validity of the Tiebout model. Mainly, it was stated that income taxes do serve as benefit taxes and investors choose among various jurisdictions according to different packages due to the following reasons\(^97\). First, a linkage exists between tax recipients and public services, even if such link is incomplete. Second, public goods entail positive marginal costs. Most people interpret non-excludability characteristic of public goods as akin to no marginal costs. Yet, even in the case of public goods, cost increases with usage. Thus even if we assume that tax competition will stop at the marginal costs levels, there is no reason to assume these costs will be similar among different jurisdictions. Furthermore, it is argued that marginal costs should not include only the costs of providing public services but should also take into consideration other factors such as economic environment and social conditions\(^98\). Finally, in the case of tax harmonization less developed countries would be deprived of what seems as an opportunity to attract more investments and to increase their wealth. With homogeneous level of taxes, such states will not be able to attract foreign investors.

\(^95\) See R. Avi-Yonah, Supra note 14
\(^97\) See J. Roin, supra note 15.
\(^98\) Car plant may impose larger costs on a heavily congested comparing to a rural area.
3.2.2. *The Leviathan Government*

Brennan and Buchannan have argued that tax competition may serve an important beneficial role limiting governments tendency to over expand, since politicians and bureaucrats seek to maximize their own objectives which are positively related to their budget\(^9^9\). Although it would be pointless to deny the flaws of the political system, some economists argue that fostering tax competition has the disadvantage of being a second best solution\(^1^0^0\). The efforts should be directed instead towards institutional reforms to eliminate distortions and not to foster an inferior alternative that creates other distortions. Although the above argument contains some merit; it is flawed in two basic ways. First, it might prove to be politically impossible to implement such reforms in practice. Indeed, although residents share a common interest in performing such reforms, public officials may prove reluctant to give up their rent seeking activities. Second, if we accept the above argument concerning locational efficiency and benefit taxes, tax competition will result in alleviating distortions rather than aggravating them.

3.2.2.1. *The Intermediate Approach*

J. Edwards and M. Keen constructed a model based on the ZM model, but they assume instead that policy makers act to maximize an objective function consisting of both the welfare of the residents and their rent seeking. They refer to a case where policy makers choose an intermediate approach; neither wholly benevolent nor unconcerned with maximizing welfare, and show that the benefits of tax harmonization hinges on the balance of two effects. First, there is an "income effect" which has positive implications: harmonization leads to tax increase which is akin to a lump sum transfer from the resident to the policy maker. The latter will spend at least part of the sum to raise the residents’ welfare. The second effect is on the "relative price" the policy maker perceives between wasting tax revenues and increase the resident's welfare. The direction of the "relative price" effect is ambiguous, but the authors make the presumption that coordination will damage the residents. The intuition is as follows: due to the income effect, the policy maker is likely to increase the provision of public goods which in turn will reduce the marginal utility of the resident from public services. As a

\(^9^9\) W.E. Oates studied the empirical link between fiscal decentralization and the size of the public sector and found no reinforcement for the above argument. Still, the empirical evidence remains inconclusive. See W.E. Oates, *supra note 93.*

\(^1^0^0\) P.B. Sorensen, *supra note 65.*
result, spending an extra dollar on wasteful consumption seems more attractive\textsuperscript{101} to the policy maker. Thus, although J. Edwards and M. Keen derive the condition under which tax harmonization benefits a representative resident, their model could not predict the effects of tax harmonization on citizen welfare in practice. But obviously, when taking into consideration that jurisdictions act also to in non-benevolent manners, the effects of tax harmonization seem less appealing.

3.3. \textit{Asymmetric Tax Competition and Tax Exporting}

The basic ZM model assumes an infinite number of homogeneous jurisdictions so that none can affect the after tax return to capital. Next, we relax this assumption and show the consequences of having a limited number of states, meaning each one setting its tax policy and has the power to influence the after tax return to capital. Furthermore, we will review a more realistic model\textsuperscript{102} where large and small jurisdictions engage in tax competition. As we shall see, such models predict that the race to the bottom effect will be mitigated, and there will be differences among jurisdictions in capital tax levels. Unlike the basic ZM model, tax harmonization here will not lead to a Pareto improvement. An implication of increased capital mobility and globalization is higher foreign investments. In contrast to the "race to the bottom" effect, domestic jurisdictions are likely to "export" some of the tax burden towards capital earned by foreigners. This is the "tax exporting" effect which was not present in the basic ZM model. As we shall see the tax exporting effect will also reduce the case for tax harmonization\textsuperscript{103}.

3.3.1. \textit{Limited number of Jurisdictions}

Although the basic ZM model of tax competition over capital among an infinite number of small jurisdictions bears valuable insights, it doesn’t hold in practice. A more realistic expansion of it is needed since tax competition occurs among limited number of jurisdictions which are large enough to influence the equilibrium after tax return to capital\textsuperscript{104}. The outcome of tax competition among a limited number of larger

\textsuperscript{101} J. Edwards & M. Keen show that issue can be reduced to a comparison between the marginal excess burden of taxation and the amount by which wasteful consumption would increase if the policy makers were given an extra dollar. Tax coordination is desirable if the former exceeds the latter since coordination makes the tax closer to lump sum which is unavoidable which is not distortionary. See: supra note 69.
\textsuperscript{102} See S. Bucovetsky, supra note 70.
\textsuperscript{103} Marginal cost of increasing the tax levels will be lower when foreigners share the tax burden, see S. Eijffinger, & W. Wagner, supra note 70.
\textsuperscript{104} See S. Bucovetsky, supra note 68, as well as J.D. Wilson, "Tax Competition with Interregional Differences in Factor Endowments", 21 \textit{Regional Science and Urban Economics}, 423 (1991).
jurisdictions is less severe; yet, capital tax levels remain sub-optimally low. The main difference is that with large, limited number of jurisdictions the elasticity of capital with respect to the tax rate is lower than under the ZM model. There are two reasons why the "race to the bottom" effect will be mitigated. First, the capital outflow resulting from higher tax levels will be mitigated since the larger jurisdiction can affect the after tax return to capital which will decrease due to the significant capital outflow. Second result, deriving from the previous effect\textsuperscript{105}, is that higher tax rates will increase the marginal costs of public spending by less than the case where jurisdictions are small and infinite\textsuperscript{106}. The economic models show that if tax competition among infinite number of small countries drives tax rates to zero, equilibrium tax rates will be positive if large regions compete; yet, tax rates remain too low in equilibrium\textsuperscript{107}.

3.3.2. Asymmetric Tax Competition

So far, we analyzed tax competition among homogeneous jurisdictions, but such symmetry bears no resemblance to the real world. In practice, jurisdictions differ in the size of their population and other characteristics as well. If we consider the case where two jurisdictions differ in their populations' size, the tax equilibrium will be different than under the ZM model\textsuperscript{108}. More specifically, when the large country increases its capital tax rates, the capital outflow will be much larger than when the small country sets higher tax levels. As a result, the larger jurisdiction has an impact on the global after tax return to capital and obtains a lower capital to tax elasticity levels\textsuperscript{109}.

Since the marginal cost of public spending differs among the two jurisdictions, capital tax levels can not be equal. More specifically, the larger state obtains a lower marginal cost of public spending and has an incentive to set higher tax rates relative to the smaller jurisdiction. The resulting tax equilibrium will be with the larger jurisdictions having higher tax rates relative to the smaller country. The gap in tax rates will cause a reallocation of capital to the smaller jurisdiction, which will be better off than the larger

\textsuperscript{105} The larger jurisdiction will face a lower marginal cost of public goods & services relative to the ZM model.
\textsuperscript{106} E. Janeba & G. Schjelderup, supra note 37.
\textsuperscript{107} S. Bucovetsky, supra note 68 as well as J.D. Wilson, supra note 29.
\textsuperscript{108} I will concentrate only on differences in populations among two jurisdictions. See S. Bucovetsky, supra note 68.
jurisdiction in equilibrium\textsuperscript{110}. In fact, a rise in the larger jurisdictions' tax rate is imposing a positive externality on the smaller jurisdiction by causing a capital outflow.

3.3.2.1. \textit{Pareto Improvement and Political Opposition}

In the case of the ZM model, all jurisdictions could benefit from tax harmonization\textsuperscript{111}. However, a tax harmonization policy applied to asymmetric regions will not necessarily make both regions better off, since it will remove the ability of small regions to exploit large regions by undercutting their taxes. Therefore, tax harmonization will not be Pareto improvement since Pareto efficiency criteria requires that no jurisdiction will be worse off. Furthermore, the above analysis bears political implications in the EU level, explaining why harmonization efforts face such strong opposition from some member states.

3.3.3. \textit{Tax Competition and Tax Exporting}

While tax competition may lead to inefficient equilibrium of low levels of capital taxes and public spending, “tax exporting” effect creates the opposite problem\textsuperscript{112}. Indeed, in the case of infinite, small jurisdictions and perfect capital mobility, jurisdictions could not impose higher taxes on foreign investors due to capital outflow. Yet, in practice foreign capital investment is not perfectly mobile, thus jurisdictions could levy source based taxes on foreign capital\textsuperscript{113}. Because the shareholders of a multinational enterprises (Hereinafter: “MNE”) cannot participate to the same extent in the political process, a jurisdictions can raise corporate income taxes to inefficiently high levels above the willingness to pay of the shareholders of MNEs. Sorensen acknowledges that economic integration leads to opposing forces: on the one hand, increasing capital mobility makes tax competition and the resulting race to the bottom effect, more likely. On the other hand, globalization increases the foreign ownership of investments and capital, thus increasing the incentives for tax exporting\textsuperscript{114}.

\textsuperscript{110} Other models which emphasize other asymmetries reach the same general conclusions. See J.D. Wilson, supra note 29.

\textsuperscript{111} Since tax competition causes the marginal utility of public spending to exceed the marginal utility of private spending, such reallocation would be Pareto improving until the marginal utility will be equal.


\textsuperscript{113} S. Eijffinger, & W. Wagner, supra note 70. Marginal cost of additional capital tax will be lower when some of the tax burden is shifter towards foreigners.
Sorensen\textsuperscript{115} claims that this tendency might explain why effective capital tax rates remain fairly constant among OECD countries.

4. \textit{The Empirical Evidence}

There seems to be a consensus that tax competition is taking place at the EU, generating a race to the bottom effect on mobile capital taxed on source. In this section, we shall review the evidence of destructive tax competition in the EU. As we shall see, so far there is no solid empirical basis for "Doomsday Predictions" that corporate tax revenues are about to collapse due to fiscal competition. I shall focus on direct evidence for fiscal competition\textsuperscript{116}, thus seeking data in support of tax competition among jurisdictions. In section 3.1 I will review the empirical evidence concerning statutory corporate tax rates in the EU. Although statutory tax rates fell during the last decades, corporate tax reforms were accompanied by broadening of tax bases. In section 3.2, I will analyze the data regarding tax bases among member states. Integrating the two opposite trends is a difficult task. Next I will cover the alternative methods which exist to measure the effective tax rate. A critical review of the various methods results will follow. In section 3.4, two additional measures to incorporate the tax base effect, based on tax revenues, will be reviewed. Finally, I will try and relate the empirical evidence and the economic theory regarding tax competition in section 3.5. It is important to emphasize that most statistical data is based on the OECD databases, thus the empirical evidence mostly concerns OECD states in general and not only EU member states.

4.1. \textit{Statutory Tax rates}

During the last decades, major reforms of corporate tax rates took place. On average, statutory tax rates have fallen from 48\% in the 1980s to 35\% in the late 1990s\textsuperscript{117}. Devreux et al.\textsuperscript{118} notes that in 1992 the Ruding committee proposed a minimum 30\%.
corporate tax rate and at that time only Ireland had a lower corporate tax rate. Less than a decade later, one third of the OECD member states had lower tax rates. Statutory tax rate fell for most OECD countries, except Spain and Italy with minor increases only. The only countries, which still had a nominal corporate tax rate above 40% in 2000, were Germany and France. Still, Germany cut its company tax rate in 2001, applying a flat rate of 25% instead. Although a negative correlation might be expected between statutory tax rates and measures of capital mobility, most reforms among the OECD countries involved a simultaneous reduction in statutory tax rates and broadening of the corporate tax bases. In order to find the effective tax rates, we must analyze the trends in corporate tax base as well.

4.2. Tax Bases

The general picture among OECD and EU member states is that the falling statutory corporate tax rates were offset by the broadening of the corporate tax bases. Yet, defining the corporate tax base is a difficult task, covering a wide range of variations among jurisdictions, such as the allowances for capital and the valuation of assets. Another problem is that corporate taxes fall on both mobile and immobile activities, and separating the two might prove impossible. One solution, which will be reviewed

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119 Ireland was forced to abolish its preferential regime after the code of conduct was accepted by the member states.
later on, might be to measure to corporate tax revenues as a percentage of GDP, thus taking the tax base into account from a macro perspective.\footnote{As we shall see, such measures contain an opposite problem of being too broad. S. Krogstrup, "Are Corporate taxes racing to the bottom in the European Union?", \textit{The Graduate Institute of International Studies}, Switzerland 2005 and L. Chennels, & R. Griffith, "Taxing Profits in a Changing World", \textit{London: Institute of Fiscal Studies} 1997.}

To illustrate the broadening of the tax bases, we will focus on depreciation allowances for capital expenditures.\footnote{R. Griffith & A. Klemm, "What has been the Tax Competition Experience of the last 20 years?", 34 \textit{Tax Notes International} 1299, 2004.} So the higher is the values for allowances, the smaller is the tax base.\footnote{R. Griffith & A. Klemm argue that depreciation allowances for investments are the single most important factor for the determination of the tax bases.} Of the sixteen OECD countries analyzed above, ten cut their depreciation rates for plant and machinery between 1982 and 2001, thus broadening their tax bases. The reduction was most significant in Ireland and the UK, in which the latter reduced its allowance rates, for plant and machinery, from 100\% to 25\%\footnote{100\% allowances means the entire cost is written down in the same year.}. Five kept their depreciation rates unchanged and only Portugal increased it.\footnote{See M.P. Devereux, R. Griffith, & A. Klemm, supra note 118.}

The main conclusion so far is that two opposing trends are revealed: on the one hand, statutory tax rates have been declining among EU member states. On the other hand, corporate tax bases broadened. In theory, it is ambiguous whether the combination of reducing the corporate tax rates with the broadening of tax base will increase or reduce the effective tax rates faced by firms. In the next section we turn to integrate these findings by computing the \textit{effective} corporate tax rates.

\subsection*{4.3. \textit{Effective Corporate Tax rates}}\footnote{Effective tax rates enjoy the advantage of being forward looking measures. Thus effective tax rates are more reliable source of empirical evidence. See Study, supra note 11.}

Effective tax rates\footnote{S. Krogstrup, "Are Capital Taxes Racing to the Bottom in the European Union?", \textit{HEI Working Paper}, 2003.} take into account not only the statutory corporate tax rates but also other aspects of the tax systems which determine the amount of tax effectively paid, i.e., the tax bases.

The basic approach for the computation of effective tax rates is to consider an incremental "marginal" investment located in a specific country. A marginal investment is one whose expected rate of return is just sufficient to convince the investors that the
project is worthwhile. This is the minimum "break even" rate of return needed for the investment. Given a post-tax rate of return required by the company’s shareholder, it is possible to use the tax code to compute the pre-tax rate of return of the hypothetical investment that would be required in order to obtain the minimum post-tax rate of return. This is known as the cost of capital. The difference between the cost of capital and the required post tax rate of return is the effective marginal tax rate (hereinafter: "EMTR")\(^\text{129}\). The underlying presumption here is that firms will undertake investments which earn at least their required rate of return\(^\text{130}\).

The EMTR only captures the case where a project breaks even. Yet, a firm might need to choose between two profitable investments. In order to evaluate the impact of taxation, we need to calculate the proportion of total profit taken in tax. This is the effective average tax rate (hereinafter: "EATR")\(^\text{131}\).

M.P. Devereux et al. show that contrary to the case of statutory tax rates, in the period between 1982 and 2001 EMTR has decreased in some states and increased in others, but on average it remained fairly stable throughout this period. On the other hand, EATR fell during the same period, in all but three countries, from 41% in 1982 to 34% in 2001\(^\text{132}\). The reductions in EATR are greater the higher is the profitability of the investment and in very high levels it is equal to the reductions in the statutory rates. However, statistical data concerning EATR\(^\text{133}\) is not complete and very sensitive to errors. So, for example, Mendoza, Razin and Tesar\(^\text{134}\) found a stable or even an increase in the EATR burden.

In conclusion, the empirical data shows ambiguous results. Although statutory tax rates were reduced in the last decades, corporate tax bases were broadened. The two methods, analyzed above, to integrate these offsetting trends, EMTR & EATR, fail to reinforce tax competition predictions. In 1992 The Ruding Committee, concerning harmful tax

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\(^{129}\) The Study, supra note 11. Consider the following example, the minimum required rate of return is 5% and the firm must earn 6.67% return (before tax) to get it. The EMTR is 25% (6.67% - 5%/6.67%).


\(^{132}\) M.P. Devereux et al explain that EATR depend more on the statutory tax rates while investment projects at the margin are strongly affected by the value of depreciation allowances.


\(^{134}\) Supra note 131.
competition in the EU has summarized its evaluation of the empirical data as follows: "There is no evidence to suggest that independent action by national governments is likely to provoke unbridled general tax competition, leading to erosion of corporate tax revenues of member states.\textsuperscript{135}

4.4. Corporate Tax Revenues as percentage of GDP and Total Revenues

Two alternative measures intended to take the tax base into account from a macro perspective are corporate tax revenues as a share of GDP and as a share of total revenues. Corporate tax rates as a fraction of the GDP have remained stable in the period between 1980 and 2001. Moreover, small economies have even increased their proportional corporate tax revenues relative to larger economies. In the case of corporate tax revenues as a share of total taxation, no significant downward trend is apparent. However, if we extend the period from 1980 backwards to 1965, we see a decline in corporate tax revenues, and a simultaneous rise in personal income taxes, which stopped in the 1980s. This might reinforce tax competition theory, yet one might accept that the downward trend would be more significant after the 1980s when globalization increased substantially, especially with the creation of a single EU market and European Monetary Union. Sorensen\textsuperscript{136} notes that in some jurisdictions there was a simultaneous trend for the profit share of the GDP to increase in the 1990s and for the corporate sector to expand relatively to other sectors. Sorensen argues that such trends show that corporate tax revenues, as a share of GDP, should have increased rather than

\textsuperscript{135} Ruding report, supra note 5.
\textsuperscript{136} P.B. Sorensen, supra note 65.
remain constant. The Commission's recent Study regarding company taxation explicitly states\(^\text{137}\) that “corporate income tax has been fairly stable source of revenues for European governments in the past 10 years. Thus, at this point in time, from a macro perspective, there seems to be little empirical evidence of a "race to the bottom".

![Graph of Corporate Income Tax Revenue (% of GDP)](image)

4.4.1. Backward looking measure and other Drawbacks

Although the measure of corporate tax revenues as a share of GDP and total revenues is designed to take the tax base into account from a macro perspective, it entails some drawbacks, relative to the other measures: EMTR & EATR. Mainly since it accumulates aggregate data from the past and therefore it suffers from being a backward looking approach\(^\text{138}\). Using aggregate economic data of the past as a tool for comparison among different jurisdictions might prove imprecise. First, methods and definitions of accounting systems vary greatly among member states. Second, macroeconomic data might fail to distinguish between different sources of taxation\(^\text{139}\). Finally, the relative size of the corporate sector might vary according to macroeconomic cycles\(^\text{140}\). Yet, even when examined over very long terms, the revenue figures reveal no empirical basis for the economic theory regarding destructive fiscal competition.

4.5. Empirical Evidence v. Economic Theory

The empirical evidence shows that while statutory corporate tax rates declined, a simultaneous broadening of tax bases occurred. However the economic models concerning tax competition generally do not allow for the utilization of these two

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\(^{137}\) See Study, supra note 11 at page 22.

\(^{138}\) Study, supra note 11.

\(^{139}\) Corporate tax falls on both mobile and immobile activities and it is difficult to find data that disentangles the two from each other.

\(^{140}\) See S. Krogstrup, supra note 128.
instruments which are available for jurisdictions. In fact, M.P. Decereux et al.\textsuperscript{141} show that the ZM model results don’t hold if the jurisdictions can employ both tax instruments. For example, governments can choose a cash flow tax in which all capital expenditure is deductible in the period it incurred\textsuperscript{142}.

Several explanations might justify the lack of empirical evidence regarding tax competition. For instance, the location decision of MNE’s might be influenced not only by tax considerations but also by other factors such as infrastructure levels and access to educated workforce\textsuperscript{143}. Generally speaking, this means more public goods and services resulting in higher taxation. Furthermore, according to the NEG literature, in the presence of scale economies, agglomeration rents are taxable and allow nondistortionary taxation. The empirical research failed to consider the effect of agglomeration economies on capital mobility and tax rates. Yet, allowing for agglomeration rent to increase when capital mobility increases may reverse tax competition forces\textsuperscript{144}.

In accordance with the economic literature, the empirical evidence shows that the fall in corporate tax rates was larger for smaller countries than larger countries\textsuperscript{145}, since the former perceive to have a higher elasticity of capital to the tax rate. Indeed the European commission report\textsuperscript{146} shows there is a considerable variation in the effective corporate tax burden among different member states. In general, Germany and France show the highest tax burdens while Ireland and Finland show the lowest. Contrary to the prediction of the ZM model regarding the convergence of capital taxes at a minimum level, such a trend was not reinforced by the empirical data.

Finally, there is also a practical incentive for policymakers to decrease statutory tax rates while broadening the corporate tax bases. Lower statutory tax rates make government revenues less vulnerable to profits shifting towards low tax jurisdictions.

\textsuperscript{141} See M.P. Devereux, R. Griffith, & A. Klemm, supra note 118.
\textsuperscript{143} S. Krogstrup, supra note 118.
\textsuperscript{144} S. Krogstrup, supra note 118.
\textsuperscript{145} E. Janeba & G. Schjeldrup, supra note 37.
\textsuperscript{146} See Study, supra note 11 at page 12.
(for example by manipulating prices via transfer pricing methods) and allocating MNE’s debt and deductions to high tax states (thin capitalization)\textsuperscript{147}.

5. \textit{The Legal Perspective}

Since the creation of the European Community in 1957, there were several attempts to harmonize direct tax rates throughout the EU. These efforts were targeted at eliminating the internal taxation differences among member states, which obstructs the functioning of the common Internal market. Yet the harmonization of tax policies proved to be a difficult and sensitive task. Fiscal policies as a tool for raising revenues underlies the national sovereignty of each member state and the latter were reluctant to give up their jurisdiction in this field. In addition, high levels of harmonization seem necessary in the area of indirect taxes, since they pose immediate obstacles for the free movement of goods and services within the Internal market. Direct tax matters seem to require only limited harmonization and can remain within the prerogatives of the member states. As we shall see, the Treaty does not entail explicit provisions for the harmonization of direct taxes and unanimity consent is needed to approve the enactment of legislative measures. Recently, the member states have agreed on the adoption of a “tax package” to curb harmful tax competition including a “code of conduct” on business taxation. This landmark agreement embodies a “soft law” process targeted at tackling specific measures, thus leaving behind the unsuccessful comprehensive attempts to gain harmonization. The latest proposal by the Commission addresses the tax obstacles that exist for companies operating in more than one member state. Specifically, the proposal argues for the adoption of a common EU tax base in order to mitigate cross-border obstacles and to remove the compliance costs of having to deal with twenty five different tax systems.

In section 5.1 I will analyze the European framework in the field of direct taxation. As we shall see, the initial presumption in the Treaty is in favor of decentralization in accordance with the Subsidiarity principle. Next, in section 5.2 I will review the past initiatives to harmonize direct tax policies. Such attempts proved unsuccessful and ultimately failed. In 1997, member states agreed on a new strategy of tax coordination by adopting a “tax package” including the “code of conduct” on business taxation. In section 5.3, I will explore the new strategy and the progress made in this area. As we

\textsuperscript{147} See P.B. Sorensen, supra note 65.
shall see, the adoption of the “code of conduct” serves as a milestone in the application of State aid rules designed to tackle distortionary tax competition. At the same time, the Commission has abandoned its harmonization efforts and acknowledged the beneficial role of tax competition. Next, I will examine this change of trend and relate it to the economic theory. Finally, in section 5.5 I will review the current proposal regarding the introduction of a common tax base within the EU. Section 5.6 will conclude with final remarks.

5.1. European Framework
Traditionally, tax cooperation in the EU was difficult to achieve since sovereign jurisdictions proved unwilling to accept external constraints on their power to tax. Accordingly, the EU has experienced a history of unsuccessful attempts of harmonization in the field of direct taxation. As a matter of principle, the Treaty ignored the issue of direct taxation, so member states enjoy almost full sovereignty in this field to choose the most suitable tax policies. From the procedural perspective, there is a continuing debate in the EU over the choice of majority rule versus unanimous treatment in direct tax matters. Articles 94 & 95 of the Treaty deal with the procedural means of achieving a common EU market. Generally, these provisions set the distribution of legal power between member states and EU institutions. According to article 95(2) of the Treaty, legislating directives in direct tax matters is not among the subjects in which only QMV is needed, so a unanimous consent of member states is required. Furthermore, most of the EU unification efforts were concentrated in indirect tax matters so to ensure fair competition among EU member states. Indeed, a high degree of harmonization of turnover taxes is crucial for the implementation of internal market and the ensuing free movement of goods and services.

5.1.1. Subsidiarity and Proportionality Principles
According to the Treaty, the initial presumption is in favor of decentralization. Unless explicitly stated otherwise, policy issues, including tax matters, are under the authority of the member states although they are obliged to consider the effects of their decisions

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150 See S. Cnossen, supra note 65.
on other jurisdictions. The presumption was introduced with the Subsidiaruty Principle contained in article 5 of the Treaty:\(^{152}\):

“….In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community…”

In conjunction with articles 94 & 95 of the Treaty, the Subsidiarity principle reflects the concerns of the member states from the Commission tendency to regulate EU policies while undermining their own fiscal sovereignty\(^ {153} \). Therefore, acting at the EU level will only be allowed when the member states lack the sufficient ability to achieve such objectives. Implementing the Subsidiarity rule in the fiscal area, member states should be able to determine their own fiscal policies since they do not fall within the EU exclusive competence\(^ {154} \). This is unless these policies have negative spillover effects on the entire union. An additional limit to actions at the EU level is in respect of the proportionality principle\(^ {155} \) set out in article 5(3). This provision states that even if the Commission action is deemed necessary according to the Subsidiarity principle, it still needs to be proportional to the objectives of the Treaty. Thus, the basic Treaty provisions approve of direct tax competition among member states which enjoy the sovereignty to choose their own fiscal policies.

5.2. **Harmonization Initiatives Prior to the Code of Conduct**

The notion that member states’ direct tax policies will disrupt the achievement of economic integration is not a new concern\(^ {156} \). Although since the founding of the European Community in 1957 several studies were conducted in the field of corporate taxation, past initiatives designed to achieve any level of harmonization proved

\(^{152}\) See R. Van Den Bergh, supra note 7.


\(^{155}\) See C.Pinto, supra note 151.

unsuccessful. Both the 1963 Neumark report\textsuperscript{157} and the 1971 Van Den Tempel report\textsuperscript{158} discussed the need for a harmonized corporate tax scheme throughout the European Community as a necessary tool for the successful establishment of the EEC. Although the members of the Neumark committee ultimately believed that any unification of tax systems would fail due to political obstacles, they recommended implementing a single corporate tax rate within the European Community. The Commission ignored the recommendation regarding the unification of corporate tax rates. In 1971, the Van Den Tempel committee recommended that the EEC would adopt the Dutch model of corporate taxation, so corporations residing in one member state but deriving income from another will be subject to double taxation. The report concluded that the Dutch model is characterized by neutrality and simplicity, thus serving as a starting point for future harmonized corporate tax system. Still in practice no decision was made to implement the report.

In 1975, the Commission\textsuperscript{159} proposed harmonization of corporate tax and withholding tax on dividends. Accordingly, capital income tax rates would be in the range of 45% to 55% for all member states and partial imputation on distributed profits by granting a personal income tax credit to individual shareholders. Due to the high diversity of corporate tax systems at the time, the proposal lacked the unanimous consent needed on the grounds that harmonization of tax bases was initially required and so it was finally repealed only in 1990. A draft proposal of 1988 for the harmonization of the tax base of enterprises was never tabled due to the reluctance of most member states\textsuperscript{160}.

In 1990, the Ruding committee\textsuperscript{161} was nominated by the Commission to examine whether the difference in corporate taxes lead to major distortions in the internal market. Indeed, the report found major differences in several aspects of corporate tax regimes\textsuperscript{162} and concluded that the significant differences in the cost of capital create major distortions. Furthermore, the report proposed the enactment of several directives and the

\begin{itemize}
\item \textsuperscript{159} Commission of the European Communities (1975), supra note 3.
\item \textsuperscript{160} See M. Peter, “Tax Harmonization and Competition in the EU”, 2 EJTR 2003.
\item \textsuperscript{161} Ruding report, supra note 5.
\item \textsuperscript{162} Ruding report concluded that differences exist in the tax rates and tax bases, methods to relieve double taxation and the treatment of dividend distributions.
\end{itemize}
extension of others in order to mitigate the distortions. Specifically, it was recommended to enact directives in order to eliminate withholding taxes on cross border payments between firms and the cross border offsetting of losses derived by EU corporations belonging to the same group. Additionally, it recommended that the existing Merger and Parent-Subsidiary directives\textsuperscript{163} will be extended in scope. Finally, it proposed the harmonization of corporate tax bases and the convergence of corporate tax rates in the future. Yet, most of these proposals were utterly rejected by the Commission\textsuperscript{164}. Mainly since the far reaching recommendations seemed too ambitious at the time and unrealistic due to the failure of past harmonization proposals\textsuperscript{165}. Furthermore, the recommendations were in conflict with Subsidiarity principle which was formulated recently in the Treaty.

The Commission resumed its activity in the field of direct taxation with the release of the Monti Memorandum\textsuperscript{166} in 1996. The Memorandum stressed that capital tax base erosion was leading to a higher tax burden on labor bearing the consequence of higher unemployment in the EU. In addition, the Memorandum called for more coordination since fiscal sovereignty has led to tax erosion on the more mobile tax bases. As a consequence, the Finance Ministers of the member states (hereinafter: “ECOFIN”) agreed to form a High Level Group, which was replaced later by the Taxation Policy Group (hereinafter: “TAG”) to examine the issue of harmful tax competition in the EU and find alternatives to cope with it. Contrary to past initiatives, the TAG was composed of representative from the member states’ financial ministers who cooperated with the Commission\textsuperscript{167}. In October 1996, a subsequent report was released by the Commission revealing a trend in the member states of an increase in tax burden on immobile labor and a simultaneous reduction of capital tax levels. Although the report acknowledged that such a trend is the cause of structural changes in Europe, another factor could be harmful tax competition.

\textsuperscript{164} The proposals to extend the scope of the Parent-Subsidiary directive and the taxation of intra-group payments and offsetting of losses were endorsed by the Commission.
\textsuperscript{165} See W.W. Bratton & J.A. McCarthy, supra note 148.
\textsuperscript{166} See supra note 8.
5.3. The Tax Package

As noted above, initiatives to create harmonization, in the field of direct taxation, through legally binding directives ultimately failed. In 1997, member states agreed on a new strategy to cope with the issue of tax competition. Under the direction of TAG, the ECOFIN agreed in 1997 on a “tax package” including a draft of the Code of Conduct on Direct Business Taxation (Hereinafter: “Code”). The “tax package” also included two proposals for directives guaranteeing a minimum level of taxation on savings and eliminating cross border payments between associated companies. The Commission further committed itself to publish guidelines on the application of State aid rules to measures relating to tax competition. In the following section, I will focus mainly on the consequences of adopting the Code as a “soft law” measure to tackle harmful tax competition. The adoption of such non binding political measure acknowledges that tax competition entails also positive effects which can be beneficial to the EU. Therefore, the Code was designed to tackle only those harmful tax measures that provide non residents and foreign entities a more favorable tax treatment in comparison with the general tax regime in the member state.

5.3.1. The Code of Conduct

The main layer of the “tax package” which was designed specifically to tackle harmful tax competition is the Code. From a legal perspective, the Code was adopted as a resolution without legally binding enforcement mechanism as part of the EU “soft law” serving instead as a political commitment. Yet, the main advantage of the Code, was the need for QMV rather than unanimity voting rule. By adopting the Code, member states have agreed both to “rollback” existing tax measures that constitute harmful tax competition and “standstill” by avoiding the introduction of such measures in the future. The scope of the Code concerns only corporate taxation and more

170 The EU Savings Tax Directive of 2003/48/EC which was in force as of July 2005 and Directive 2003/49/EC on a common system of taxation applicable to interest and royalty payments made between associated companies of different member states.
172 C.Pinto, supra note 151.
specifically tax measures which might have significant impact on the location of business activity in the EU. The Code lists the criteria for identifying potentially harmful tax measures (hereinafter: “PHTM”). For instance, whether the tax benefits are reserved only for non residents and the existence of tax incentives for activities which are isolated from the domestic economy (“ring-fencing”) or the lack of transparency regarding tax measures 173.

In 1998, the ECOFIN established a group, chaired by the UK paymaster general at the time, Mrs. D. Primarolo, composed of representatives from the Commission and high level experts (hereinafter: “Group”). Its main task was to assess the current PHTMs of the member states under the Code 174. In 1999, the group released a report containing a “black list” of 66 PHTMs identified in member states’ fiscal regimes 175. Due to political disagreement, the report was not formally approved by the ECOFIN, yet finally in 2003, member states have agreed on the outcome of the report and the adoption of the 66 PHTMs recommended, probably due to a compromise which extended the validity of 5 of the measures. Member states reached a consensus to roll back the 66 PHTMs and to report back to ECOFIN on the revised measures put forward to replace the PHTMs 176. In addition, the agreement granted the extension of validity of four PHTMs until 2010 and one until the end of 2011. Furthermore, “grand-fathering” clause was enacted to extend the benefits of the overall PHTMs regime until the end of 2005.

One of the several categories of PHTMs concerns special tax regimes applying to income derived from financial activities. Specifically, the International Financial Services Centre (hereinafter: “IFSC”) in Ireland granted favorable tax regimes for income, derived from financial services to third parties, in comparison with the general corporate tax rate applicable. The Irish IFSC featured a minimum tax burden at the rate of 10% on eligible financial activities. Furthermore, the tax benefits were available only for resident entities which were part of MNEs established in the center 177. These features have caused the IFSC to be included as part of the PHTMs regimes within the

173 See. J.R. Blue, supra note 156.
175 The report has adopted a classification of PHTMs into six categories. More important, each category was based on explicit criteria of what constitutes PHTMs. See Report by the Code of Conduct Group (Business Taxation), SN 4901/99, Brussels 1999.
176 See: http://ec.europa.eu/taxation_customs/taxation/company_tax/harmful_tax_practices/index_en.htm#code_conduct
177 See. J.R. Blue, supra note 156.
meaning of the Code. Yet, the report failed to acknowledge that according to the Code, a valid justification for the existence of PHTMs might be provided in the Treaty State aid rules meant to encourage the development of lagging areas within the EU. Next, I will examine the link between the Code and the State aid rules. Moreover, we shall see that these provisions serve as a significant legal tool against harmful tax competition.

5.3.2. State Aid Rules
The issue of State aid has gained a significant role in the EU recently due to the increasing economic integration and globalization trend. Consequently, member states were left with no alternative policy instruments to protect their local economies, other than fiscal incentives. This suggests that close supervision of State aid was needed to maintain undistorted competition within the internal market. The basic rule is provided in article 87(1) of the Treaty stating that “any aid granted by the state which distorts or threatens to distort competition by favoring certain undertakings... shall, in so far as it affects trade between member states, be incompatible with common market”. Yet, article 87 further provides exemptions in some cases where State aid is inspired by economic or social objectives which inflict a positive externality on the EU. The State aid rules do not explicitly apply in the field of direct taxation. Still, any tax incentive, which is a relief from the regular tax burden and is financed from state resources, is under the frame of article 87. State aid rules play a significant role with regard to preferential tax regimes and the establishment of tax free areas. In 1998, the Commission issued recommendations regarding the IFSC regime and the preferential 10% rate for “manufacturing” activities in Ireland. These recommendations serve as a milestone of the Commission’s attitude towards harmful State aid using the Treaty provisions as an instrument to counter harmful tax competition. As a compromise, it

178 See W.W. Bratton & J.A. McCahery, supra note 148.
179 A broader analysis is beyond the scope of this paper. In a nutshell, the Treaty provides both automatic exemptions such as aid to compensate in the case of natural disasters. In addition, the Treaty provides exemptions that need a prior analysis by the Commission such as regional aid to promote underdeveloped areas.
180 See: http://ec.europa.eu/taxation_customs/taxation/company_tax/harmful_tax_practices/index_en.htm#code_conduct
was stated that both regimes constitute a violation of the State aid rules but a “grandfathering” provision was applied in favor of current companies.\textsuperscript{183}

Furthermore, as a consequence of the “tax package”, a notice was released in 1998 regarding the application of State aid rules to corporate taxation in order to reduce distortions of competition in the internal market.\textsuperscript{184} The notice further specifies that the accumulative conditions of Article 87, as interpreted by the Commission and the ECJ will also apply with respect to corporate tax area.\textsuperscript{185} In 2001, the Commission launched investigations into 12 member states’ corporate tax regimes which might be in breach of State aid rules, mainly with regard to preference regimes designed for MNEs. The investigations resulted in the decision that some regimes were incompatible with the State aid rules.\textsuperscript{186} In addition, the Commission explicitly stated that the decisions serve as a key element in the fight against harmful tax competition. In 1998, new guidelines on the scope of the State aid exemptions were approved by the Commission. Their main aim was to reduce the scope of the exemptions under article 87(3) of the Treaty.\textsuperscript{187}

The change of policy regarding State aid rules must be viewed in conjunction with the “tax package” approved in 1997. Since the latter constitute a “soft law” measure, the above change might seem as a compensatory tool to enforce measures against harmful tax competition. The implementation of “ring-fenced” measures, for instance, constitutes forbidden State aid. Recently, the Commission approved a 5 year reform of the State aid rules meant to encourage member states to reduce their aid levels while redirecting resources at objectives that are of common Community interest.\textsuperscript{188}

5.4. From Harmonization to Coordination: A Link to Economic Theory

Prior to the adoption of the “tax package”, as a new strategy to ensure cooperation in the field of direct taxation in 1997, the initiatives to enact legally binding directives towards

\begin{itemize}
\item \textsuperscript{183} Ireland made a tax reform that went into effect as of 2003, in which all income from trading activities will be taxed at a flat rate of 12.5%.
\item \textsuperscript{185} Four terms needed to apply Article 87: (1) advantage conferred on a firm (2) from public resources (3) resulting in distortion of competition & impact on intra-Community trade (4) “specific” tax measures which are not part of the “benchmark” system.
\item \textsuperscript{186} See C. Pinto, supra note 151.
\item \textsuperscript{187} The guidelines were intended to reduce the amounts of regional State aid allowed.
\item \textsuperscript{188} A further analysis is beyond the scope of this paper. See: http://ec.europa.eu/comm/competition/state_aid/others/
\end{itemize}
harmonization in the area have ultimately failed. Indeed, a distinction can be made between harmonization efforts in the past and the current attempts to create specific cooperation\textsuperscript{189}. The former means the international equalization of effective tax rates while the latter aims to prevent specific distortions and inequities resulting from cross border activities. In addition, tax harmonization implies some loss of fiscal sovereignty, yet with tax coordination, jurisdictions are generally left to choose their fiscal policies and the size of their public sectors\textsuperscript{190}.

It is remarkable that in the past, the Commission expressed concern that international tax competition bears the severe consequences such as shifting the tax burden from capital towards labor\textsuperscript{191}. Therefore, it recommended the implementation of urgent measures to prevent such consequences. Yet, more recently it stated\textsuperscript{192} that “…a reasonable degree of tax competition may strengthen fiscal discipline to the extent that it encourages member states to streamline their public expenditure, thus allowing a reduction in the overall tax burden…” As noted above, member states proved reluctant to give up sovereignty on tax matters and the adoption of the Subsidiarity principle in the Treaty marked the end of the era of grandiose harmonization proposals. Yet, the changes in tax competition theory also came into circulation to justify the change of trend.

Most notably, the Commission explicitly acknowledged that tax competition might serve an important role in restricting the over expansion of jurisdictions with the consequence of a lower tax burden and an increase of overall welfare\textsuperscript{193}. Thus the beneficial role of tax competition as “taming the Leviathan” governments was officially recognized.

Furthermore, as emphasized, in order to adopt directives in the field of direct tax, a unanimous approval of the representatives of member states is required. Proponents of tax harmonization argue that due to the past failures, a movement to QMV should be in


\textsuperscript{190} For instance each member state is able to choose its corporate tax levels.

\textsuperscript{191} See P.B. Sorensen, supra note 77.

\textsuperscript{192} See the Study, supra note 11.

\textsuperscript{193} See P.B. Sorensen, supra note 189.
place\textsuperscript{194}. Yet the unanimous requirement satisfies the Pareto criteria for increasing welfare. Accordingly, only when none of the member states would suffer a loss of welfare, while at least one member state will gain, such initiatives should be implemented. Indeed, although harmonization of corporate tax rates across the EU might increase the overall levels of welfare, some member states might nevertheless lose\textsuperscript{195}. Specifically, low tax countries would tend to lose from a harmonization of corporate tax rates set around an average. First, by adhering to the international standards, low tax countries would lose their appeal as a center for foreign investment and capital. Second, the terms of international harmonized standards will most likely be set by multilateral negotiations. In such bargaining, the larger, more developed jurisdictions will have greater negotiation powers than smaller, less developed countries. This preferred bargaining power may be used to obtain a more favorable tax rates in an agreement. Finally, the NEG literature\textsuperscript{196} reveals that the "core" member states enjoy the "locational" advantage of being established centers, thus allowing them to charge higher tax rates on capital. The small, peripheral economies might have a legitimate need for a lower corporate tax rate to compensate for their relative disadvantage.

Yet, the adoption of "soft law" measures, like the Code, also suffers from some drawbacks. First, the lack of enforcement mechanism might render it as ineffective. Second, and related to the first drawback, although the Code was meant to serve as a non-binding commitment, the Commission began in practice to make use of the State aid rules as an enforcement mechanism. Such a change of policy might prove to be inappropriate tool to tackle the issue of tax competition. Finally, the Code lacks a clear definition of what constitutes harmful tax competition and the scope of its framework. For instance, the Code does not cover generalized corporate tax regimes at a very low tax rate, thus the Irish tax reform reducing the corporate tax rate to 12.5\% is not considered as a PHTM.

\textsuperscript{194} See W.W. Bratton & J.A. Mccahery, supra note 148. 
\textsuperscript{195} T. Dagan, supra note 56. 
\textsuperscript{196} E. Baldwin & P. Krugman, supra note 75.
5.5. **Future Strategic Goals: A European Common Tax Base**

In 2001, the Commission released a comprehensive Study\(^{197}\) on corporate taxation in the EU. The mandate given to the Commission was to examine whether the differences in the effective level of corporate taxation in member states have an impact on the location of investments and on economic activity\(^{198}\). In addition, the Commission should identify the main tax provisions that constitute obstacles to cross-border economic activities in the Internal Market. Finally, the Commission should set recommendations for appropriate remedies. It is important to emphasize that the Study does not contradict the findings of the Ruding report, but concludes that the problems raised are still relevant\(^{199}\). Furthermore, in recent years the EU witnessed the creation of EMU, increasing globalization and the setting of internal market while a relative lack of progress was made on company tax issues. Therefore, the problems raised by the Ruding report became more acute. The Study entails a comprehensive qualitative analysis of EU tax systems and an extensive quantitative comparison of effective tax burdens in member states\(^{200}\). The qualitative analysis shows major differences remain regarding the structures of member states’ corporate tax systems, for instance statutory tax rates are in the range of 12.5% to 40%\(^{201}\). Generally, it was found that jurisdictions with higher tax rates obtain narrower tax bases and vice versa. The quantitative analysis compared the EMTR & EATR regarding domestic and cross-border investment among member states\(^{202}\). In both cases, the Study reveals major differences in the effective tax burden among member states. Generally speaking, the Study concludes that these differences may influence the competitiveness of EU companies and create distortions. Thus, firms have an incentive to choose the most tax favored location which might prove less efficient otherwise\(^{203}\). Specifically, the Study identified a number of areas in which corporate taxation has hampered cross-border activities in the internal market. Mainly, there are major limits on cross-border loss relief which may lead to double taxation. Also, source withholding taxes are still levied on payments between associated companies and cross-border restructuring operations give rise to substantial capital gains.


\(^{198}\) For more info see P.B. Sorensen, “To Harmonize or not To Harmonize?”, CESifo Forum, 1/2002.

\(^{199}\) See the Study, supra note 11 at pages 21-22.

\(^{200}\) See the Study, supra note 11 at page 31.

\(^{201}\) C. Pinto, supra note 151 at page 45.

\(^{202}\) See M.P. Devereux, R. Griffith, & A. Klemm, supra note 118.

\(^{203}\) S. Cnossen, supra note 17.
tax. Finally, the Commission emphasized the high compliance costs due to different sets of rules of each member state.\(^{204}\)

Although the Study acknowledges that the findings anticipated by the Ruding report remain valid, it explicitly states that currently “there seems to be little empirical evidence of a race to the bottom effect”. Additionally, the Study concludes that corporate income taxes have been a fairly stable source of revenue for the past 10 years. Consequentially, the Commission states that there is no need to implement specific actions on the approximation of the national corporate tax rates or even the fixing of a minimum tax rate. The Commission emphasized that according to the Subsidiarity principle, the level of taxation in this area is a matter for member states to decide.\(^ {205}\)

5.5.1. **Comprehensive Approaches to mitigate distortions**

The Commission identified several steps which could be taken to remove tax obstacles to cross border trade in the internal market.\(^ {206}\) Basically, two alternatives were suggested to mitigate the distortions. First, the Commission recommended specific measures in targeted areas as a first step for the short run by improving the current legislation and its application.\(^ {207}\) Such measures include the extension of the coverage of the parent-subsidiary directive\(^ {208}\) so it will cover both indirect and direct shareholding and apply with a lower minimum holding threshold. Another proposal was to extend the scope of the merger directive\(^ {209}\) which provides for tax deferral in the case of cross border restructuring, so it would cover a larger range of companies. Refined versions of both proposals were subsequently adopted by the ECOFIN later on.\(^ {210}\)

Secondly and more important, the Commission proposed a number of comprehensive remedial measures at the EU level to remove the obstacles to cross border activity and

\(^{204}\) For other distortions see the Study, supra note 11 at page 10.

\(^{205}\) See the Study, supra note 11 at page 22.


\(^{207}\) Current updates available at: http://ec.europa.eu/taxation_customs/taxation/company_tax/gen_overview/index_en.htm


\(^{210}\) See: http://ec.europa.eu/taxation_customs/taxation/company_tax/gen_overview/index_en.htm
to reduce the compliance costs with the tax laws of each member state. Specifically, the Commission calls for the establishment of a common tax base so corporations could calculate their EU profits while member states will keep their fiscal sovereignty by setting their corporate tax rates. The two main proposals in this field are the HST and the CBT. Under HST, the tax base of MNEs will be determined according to the tax rules where its headquarters are located. Such a system relies on the mutual recognition of tax rules by member states. The tax base will be allocated to each member state where the MNE has presence, according to a well accepted formula apportionment.

Finally, each member state will apply its own tax rates on the profits attributed to it. In contrast to the former proposal, CBT goes further by creating a harmonized set of rules defining the tax base for those companies interested in consolidating their EU wide profits. Similar to the HST proposal, the consolidated profits would be shared by the relevant member states according to an agreed formula apportionment. Please note that under CBT, national rules would be maintained for domestic firms. Also, each company would have the choice to be taxed under the approved proposal or to opt out and choose the “ordinary” tax system instead.

5.5.2. Comprehensive Measures and Tax Competition

Although both HST and CBT are likely to mitigate the effects of cross border obstacles, such measures might lead to opposite effects regarding tax competition. Under HST, member states would compete by offering generous tax base rules to attract corporate headquarters. Such competition creates negative externalities since a narrow tax base in one member state would apply not only to income with a source from the same state but also to income earned throughout the EU. Furthermore, HST would create distortions within member states since members of different MNEs operating in one member states will be subject to different tax base rules depending on their headquarters. For example, an Irish firm operating in Sweden would still use Irish rules to compute its tax base.

212 Initially the Commission proposed two more alternatives: European Union company income tax and a single compulsory harmonized tax base. Yet these proposals were far reaching and considered politically unfeasible. See J. Mintz, supra note 206.
214 The main advantages of both alternatives are, among others, reducing the compliance costs, mitigate the transfer price problems, and allow for the offsetting and comprehensive consolidation of profits and losses on an EU basis. See, the Study, supra note 11.
215 See P.B. Sorensen, supra note 189.
216 S. Cnossen, supra note 17.
while a local Swedish company would use Swedish rules. This would increase the distortions by impeding the creation of a level playing field within the EU. Such distortions would be exacerbated as a consequence of the different treatment of EU multi-corporations and local firms operating in the same state.

In addition, under both HST and CBT, the coexistence of two different tax base rules would lead to extensive tax planning due to arbitrage opportunities\textsuperscript{217}. Cnossen notes that firms could cooperate to make use of a more favorable tax rules in another member state or the consolidated regime in the case of CBT. For example, the restructuring of firms through M&A in order to take advantage from the allocation of revenues, through formula apportionment, to jurisdictions with low tax rates\textsuperscript{218}. Finally, both alternatives might lead to unbridled competition of tax rates among member states since tax base can not serve as a fiscal instrument to attract investments. Thus the comprehensive measures further leads to tax driven decision which distort competition and create a misallocation of resources.

5.6. An Agenda for EU Legislator

Before concluding this paper, I wish to emphasize a critical point; mainly the above analysis is not designed to prove the lack of any need to take measures against tax competition within the EU. Rather, this paper reveals, through an array of economic literature and the empirical evidence, that tax competition may have also beneficial effects on the competing member states. It is hard to predict on aggregate, whether tax competition causes mainly beneficial or harmful effects. Still, the empirical evidence fails to confirm the “Doomsday Predictions” regarding an extensive “race to the bottom” effect among EU members. The Commission acknowledges the beneficial role of tax competition and the lack of empirical evidence by waiving its past efforts of harmonization. Although the new approach, regarding “soft law” method and specific measures, suffers from some drawbacks\textsuperscript{219}, it represents the changed Commission’s approach of promoting limited coordination rather than harmonization in the direct tax area. The limited intervention seems appropriate as it preserves most of the fiscal sovereignty of member states, thus granting the flexibility needed to adjust their tax regimes.

\begin{footnotes}
\footnote{\textsuperscript{217} S. Pinto, supra note 157 at page 390.}
\footnote{\textsuperscript{218} See P.B. Sorensen, supra note 189.}
\footnote{\textsuperscript{219} See section 4.4.}
\end{footnotes}
Finally, increasing efforts should be focused on enhancing information exchange among member states as a way of enforcing residence based capital taxes\(^\text{220}\). If all the states could agree on such information exchange, each jurisdiction should not fear capital flight since the tax payer will face the same marginal tax on his domestic and foreign income. Capital will be invested according to pre-tax rates of return and the CEN principle will be achieved. However, implementing an effective information exchange network may prove impractical for political obstacles, incentive problems and technical difficulties\(^\text{221}\). Yet, the adoption of the Savings directive\(^\text{222}\), as part of the “tax package”, proves that the exchange of information is feasible despite the political barriers\(^\text{223}\).

6. **Conclusion**

The policy debate regarding the issue of tax harmonization versus tax competition is likely to stay on the European agenda during the upcoming years. The main fear is that mobile tax base will not contribute to the financing of the European welfare state anymore. In this paper, I reviewed the main theoretical arguments regarding the impact of tax competition on capital tax rates, the provision of public services and distribution issues. When allowing for the amendments of the ZM model, the theoretical case in support of tax harmonization is far from being clear cut. Moreover, the arguments from the theoretical analysis were confronted with the empirical evidence regarding European tax competition. Although MNEs choices of location probably depend upon tax considerations\(^\text{224}\), corporate taxes have remained a fairly stable source of income as a fraction of member states’ GDP. Moreover, the Commission abandoned most of its past efforts at creating full harmonization through legislation and focus on minimum coordination instead. The recent proposal by the Commission focuses mainly on tax base uniformity rather than rate harmonization, thus leaving member states with full discretion in setting their corporate tax rates. Although CBT & HST might reduce transaction costs and remove internal barriers within the EU, such measures might increase the negative aspects of tax competition and impede the creation of a level playing field in the Continent. Specifically, this paper encourages the Commission and

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\(^{220}\) J. Roin, supra note 15.  
\(^{221}\) See P.B. Sorensen, supra note 189.  
\(^{223}\) According to the directive, member states agreed to exchange information on interest payments. Belgium, Luxemburg and Austria will introduce an exchange system after a transitional period in which they will levy an increasing withholding tax on interest. See: http://ec.europa.eu/taxation_customs/taxation/personal_tax/savings_tax/rules_applicable/index_en.htm  
\(^{224}\) See J.R. Hines, supra note 18.
member states to accept the lack of strong empirical evidence and further acknowledge the beneficial role of tax competition in limiting the over-expansion of EU jurisdictions.

Further research should concentrate on additional extensions of the basic ZM model such as income uncertainty, the spillover effects of changes in the levels of public services and political economy issues. In the legal perspective, the role of the ECJ should be carefully examined as well as unilateral measures taken by member states to counter tax competition within the EU. The OECD efforts to counter harmful tax competition should be thoroughly analyzed and compared with the EU initiatives. Finally, the findings concerning interjurisdictional tax competition in other regions, mainly between the states of the U.S., should provide some lessons for the benefit of the EU as a whole.
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