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International Tax Competition in Corporate Income Taxation

Recent trends from OECD Countries

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INTRODUCTION

Tax competition has both positive and negative side with respect to taxation policies for corporate income taxation. On one side, international tax competition and an average drop in corporate income tax rates lead to efficient investment and reduced costs for businesses in growing fast and spreading internationally. On the other side, such fierce competition among jurisdictions in setting low tax rates is significantly reducing the government revenue source provided by corporations, indeed forcing them to rely predominantly on indirect taxes (i.e. value-added tax) or personal income and other forms of taxation. Moreover, countries provide low tax rates to companies in order to foster the economy, to attract foreign direct investments from multinationals and to help companies to move internationally by offering them more advantageous tax conditions with respect to their resident country. This entire mechanism leads to a *race-to-the-bottom* of all countries as well as to a tax base enlargement, focused on attracting foreign companies inside their boundaries.

This dissertation has the aim to collect information from official European sources as well as big consultancy companies regarding OECD countries and their preferences regarding tax scheme development and the utilization of specific tax instruments with the aim of attracting foreign investments. The scope of the collection of such information is to understand if the international tax competition of the last decades has effectively pushed governments to implement more aggressive tax plans in order to become more competitive and to attract foreign investment.

The first chapter collects some literature evidence and authors' opinions about tax competition issues from various perspectives, firstly focusing on the basic tax competition model elaborated in the 1950s and then moving to economic distortions created by international tax competition.

The second chapter will be dedicated to the definition and the explanation of the main diffused tax policy instruments, focusing not only on their description but also on their valuation, hence positive and negative consideration regarding the use of such instruments are carried out. In addition, this chapter explains in detail the debt-equity bias, a financing-related decision influencing both investment decisions and taxation consequences of a firm.

The fourth chapter introduces the double taxation problem: the source-based and the income-based methodologies of taxation are compared, together with positive and negative sides of both as well as explicative examples. In addition to the literature part, the chapter provides a general overview of the OECD and UN attempts to reach an harmonization through bilateral treaties and public efforts.

Chapter 5 applies all the literature and economic theories explained in the previous chapters and shows how OECD countries develop and implement their tax schemes. This chapter firstly introduces the criteria and the set of data that have been collected, shifting then to a comparative analysis organized per macro region. The chapter is then organized per tax factor, each one analyze both providing the definition of the specific tax measure in consideration as well as giving information regarding the particular OECD countries' application.

The last conclusive chapter sums up the information obtained by the database and from the benchmark analysis, and the conclusion that we can draw from them.

1. TAX COMPETITION IN THE ECONOMIC LITERATURE

1.1. INTRODUCTION TO TAX COMPETITION

Corporate taxation has always been considered a hot issue in the public finance literature, but this topic has gained an increasing importance especially nowadays, with markets becoming more and more worldwide spread and companies moving business internationally. International trade and free capital mobility among countries increased capital investment taxation complexity, raising up further problems and difficulties and requiring a higher degree of cooperation among governments.

This scenario is the setting for *tax competition* which, under extreme conditions, can be considered as a force that drives down corporate income taxes across countries in a *"race to the bottom"*[1].

Several authors contribute to the analysis of such phenomenon by providing their opinion regarding which signs and measures can best describe this tax competition among countries. Evidences explaining such overall decrease in corporate income tax revenue collected by the government are mainly supported by either the decrease in the corporate tax rate but also by the widening of the corporate tax base. This scenario has become very common in the last decades since governments are more and more frequently introducing tax incentives and allowances in their tax schemes, in order to enlarge the taxable base of companies.

Indeed, one of the most evident indicator of this race to the bottom is the decline in the statutory tax rate applied by countries all over the world, as well as the implementation of several tax instruments and tax policies. The enforcement of multiple tax instruments by local governments is reflected through the decline of either the effective average tax rate (EATR) and the effective marginal tax rate (EMTR), measures that incorporate not only the applied statutory tax rate by a country but also all the tax measures provided to corporations in order to reduce their final tax liability.

The following graph shows data of European countries, from 1980s to 2006, expressed as effective average tax rate (EATR) and average effective marginal tax rate (EMTR). As it is possible to observe, the trend of EATR and EMTR is constantly decreasing year by year,

[1] S.M., A. A., Klemm A. (2013). A partial race to the bottom: corporate tax developments in emerging and developing economies. *International Tax Public Finance.*

supporting the thesis of the *race-to-the-bottom*. As we will further analyze in the subsequent chapter, the EATR – *effective average tax rare* – is the decisive measure for companies in the decision-making process for plant location while the EMTR – *effective marginal tax rate* – is a measure influencing the intensive margin, indeed it is fundamental when deciding how much to invest in a determined country.

In the bottom-right box, the average EATR falls dramatically in the considered period from 40% to 20%. This 50% reduction in the EATR is an explicit indicator of how much the tax competition has increased in those years and, in particular, indicates the extent to which governments were pushed by competition to cut corporate tax rates in order to be able to attract companies in their countries.

The same trend is mirrored by the EMTR, falling from 35% in the 1980s to 15% in 2006. Indeed, increased tax competition in the latest years have affected not only decision-making process of companies regarding where to locate their business plant, but also how much they would have to invest in such countries, given the offered corporate tax rate by the competing countries.

Figure 1: Trends in corporate taxation in Europe, 1983-2006

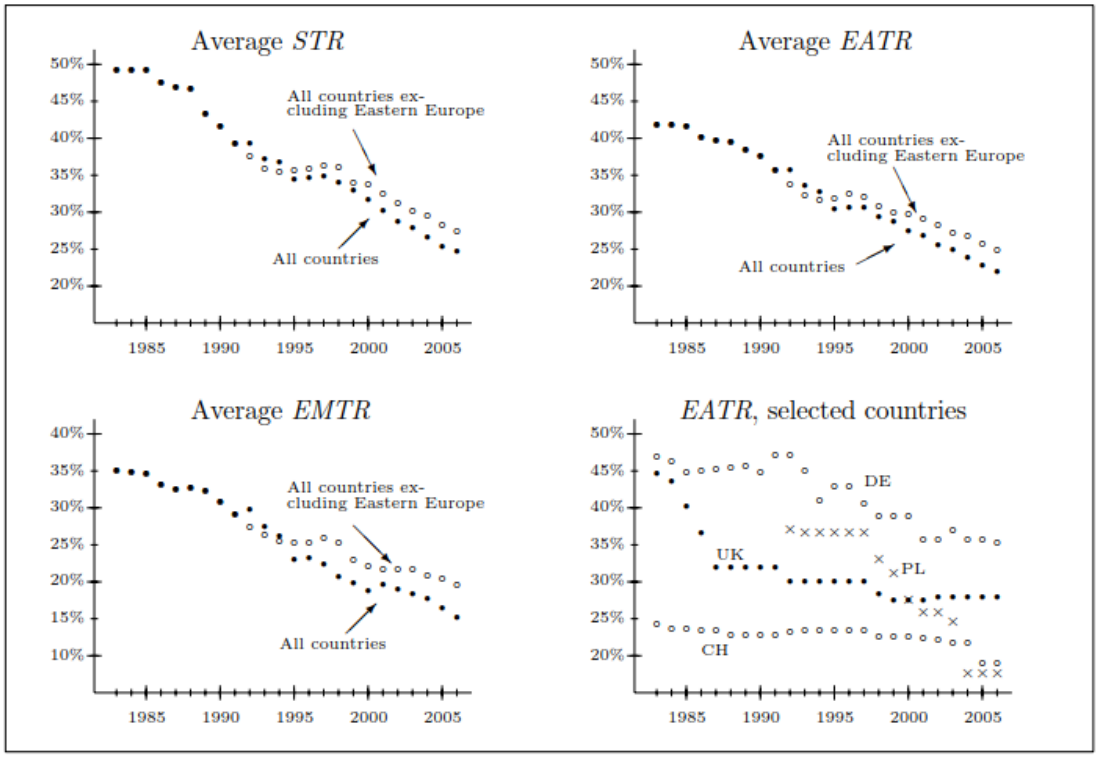

Figure 1 - Trend in Corporate Taxation in Europe.
Source: Wilson, J.D. (1999). Theories of tax competition. National Tax Journal, 52, 269-304.

Most countries hence reduce their capital income tax rates in order to be able to survive in this global competitive background, where tax revenues are threatened by sophisticated tax planning of multinational companies with the aim of taking advantage to the complicated interactions among jurisdictions and their relative tax systems. Countries are indeed forced to rely heavily on other form of tax income – labor income, consumption taxes, taxation on savings – because of the great cut off experienced by corporate income taxation.

In order to solve this fragile situation, all jurisdictions must communicate and cooperate to harmonize their different approaches in taxing businesses. Recently, small steps have been made towards this common goal: these initiatives take the form of both bilateral agreements between countries or some attempts to coordinate tax rules provided by OECD or by the European Union, in order to conciliate taxation practices with the aim of enhancing international trade and growing possibilities[2].

1.1.1. Theories of tax competition

The core of tax competition literature focuses on how independent governments engage in wasteful competition to attract scarce capital through reduction of tax rates and public expenditure levels. In particular, authors focus on the potential efficiency problems associated with competition for capital by local jurisdictions. When local governments attempt to keep corporate tax low, in order to attract business investment, they indirectly end up by allocating inefficient level of public resources to public services. In conclusion, this competitive behavior only causes inefficiencies and no one gains an actual real competitive advantage against others, indeed all governments are worse off than they would have been if they simply used the marginal cost rules in their decision making process.

Since the 1980s, many authors developed academic researches on tax competition, and this research continues nowadays. Interest in this topic has shown up because of US cases of tax competition between localities, including instances where governments have offered large subsidies to foreign and domestic automobile companies in order to influence their plant location decisions.

Several authors faced the fundamental issue of wasteful jurisdictional competition and, mainly, this debate has led to discussion concerning the appropriate degree of economic

[2] The Mirrlees Review. (2011). Tax by Design. *Oxford University Press.*

integration between countries. The main authors addressing this topic are **Tiebout**[3], supporting policies that allow free factor mobility and independent governments; white **Sinn**[4]**,** focuses on the adverse effects of government independence, arguing that it exists a "fundamental selection bias towards government activities that are unsuitable for private markets". **Oates**[5] instead, covers widespread aspects and focus on a broader perspective, developing a competition analysis through weaker environmental standards or reductions in welfare by states trying to avoid attracting poor households.

The **Tiebout** hypothesis provides a theory of efficient tax competition, and it is one of the first and most influential model regarding the tax competition theme and one of the most accurate in describing model considering suburban areas with many different independent communities. From this idealized world, further tax competition model has been developed which strongly depart from it, taking into account considering additional assumptions and conditions, reinforcing Tiebout's opinion or rather obtaining different results.

The Tiebout theory of local public good provision is based on a theory of efficient tax competition. It assumes that each country's government is controlled by its landowners: they seek to maximize their after-tax value of their land by attracting individuals to reside on their country and, in order to be able to attract them, the government offers public goods that are financed by local taxes.

The primary assumptions are that consumers are free to choose their communities, enjoying perfect mobility and perfect information. This essentially means that they can freely move from one community to another at no cost, and that they have complete information regarding services provided by local governments and the tax rates of all local governments. Moving between communities in these areas tends to have the lowest costs, and the set of possible choices is very diverse. The critical assumption underlying this model is the presence of many *utility-taking* regions, indeed no single country can alter the utilities that is offered to individuals to induce them to reside there.

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[3] Tiebout, C. (1956). A Pure Theory of Local Expenditure. *Journal of Public Economics, 64,* 416-24.

[4] Sinn, H. (1997). The Selection Principle and Market Failure in Systems Competition. *Journal of Public Economics, 66,* 247-74.

[5] Oates, W. (1972). Fiscal Federalism. *New York: Harcourt Brace Jovanovich.*

The Tiebout model, summarizing, relies on a set of basic assumptions[6]:

1. Mobile consumers, free to choose where to live and no costs associated with moving.
2. Complete information.
3. Many communities to choose from.
4. Commuting is not an issue.
5. Public goods do not create spillovers in terms of benefits/costs from one community to the next.
6. The optimal city size fully and perfectly exploits economies of scale.
7. Communities try to achieve "optimal size".
8. Communities are rational and try to keep the public "bad" consumers away.

The equilibrium of this model stands on the usual definition of efficiency, there is in fact a *non-political* solution to the free rider problem in local governance. Hence, the central authority cannot feasibly reallocate goods and resources by making some individual better off without making anyone worse off. Tax competition issue in this model is found on the tax level set by a country, which must be set low enough to induce individuals to reside in the country given the provided public goods. In this model, taxes are efficient "head taxes" collected from the residents and the optimal level of such head tax is when the tax payment equals the cost of providing him the chosen level of public goods (i.e. *marginal cost-pricing rule*).

The most important discussion regarding tax competition and its negative spillovers is the one developed by **Oates**, who noticed that local governments, when competing for mobile capital, usually attempt to keep taxes lower than other countries in order to attract business investments, both foreign and national. The results of this competition hence are not efficiency maximizing but rather create inefficiencies in the output level of local public services. In contrast, the **Tiebout** paradigm suggests that tax competition yields an efficient outcome, so that there are no gains from tax coordination. The results of the Oates literature contribution ended up in the "basic tax competition model" developed by **Zodrow** and **Mieszkowski** in which local government reliance on a source-based tax on capital income results in the underprovision of local public services.

Under **source-based** taxation, governments tax companies on the base of where their income is generated, hence where the production of goods and services takes place. Non-

[6] Wilson, J. D. (1999). Theories of tax competition. *National Tax Journal*, *52*, 269–304.

residents hence are taxed on local source-based income. The opposite **residence-based** taxation indeed, supposes that companies are taxed based on the location of their head office or effective place of management, taxing either their local and foreign income.

The assumptions underlying Zodrow and Mieszkowski's model are the following[7]:

1. A large number of homogeneous jurisdictions;
2. Perfectly competitive markets;
3. A Nash Equilibrium in which each jurisdiction takes as fixed the after-tax return to capital and the tax rates set by other jurisdictions;
4. Fixed population and land in each jurisdiction;
5. Identical tastes and incomes for all residents of all jurisdictions, with resident utility function $U(C, G)$[8];
6. A fixed national capital stock that is perfectly mobile across local jurisdictions;
7. A single good that is produced by capital and the fixed factor (labor/land) in each jurisdiction;
8. Government services that are publicly provided private goods, benefit only residents, have no spillover effects on other jurisdictions and can be modeled as purchases of the single private good;
9. Two local tax instruments: a *property tax* that applies to capital income and a *head tax*;
10. Local governments that act to maximize the welfare of their identical residents.

The model considers a system composed by many regions and, within each region, competitive firms produce a single output, using two factors of production: *mobile capital* and *immobile labor*. The immobile factor is inelastically supplied by the country's residents, who also own fixed capital which they are free to invest anywhere – giving the assumption of free capital mobility underlying the model.

Within this context, the result of the model shows that as the number of jurisdictions increases, interjurisdictional competition leads to the abandon of the property tax followed by the consequent and solely reliance on head taxes. Moreover, the model attempts to find some potential solution to this inefficiency competition problem, indeed by suggesting tax harmonization. Tax harmonization, given the constraint of head tax, will

[7] Zodrow, George R., Peter Mieszkowki. (1986) Pigou, Tiebout, Property Taxation, and the Underprovision of Local Public Goods. *Journal of Urban Economics. 19, 356-70.*

[8] Each country resident is identical and they have preferences that are represented as a function of C and G, where C is private consumption and G is the consumption of the public good.

result in a simultaneous and homogeneous benefit for all jurisdictions: if they simultaneously raise their capital taxes they will all benefit from an increase in the level of public services resulting in increasing efficiency as a whole. In addition, given the assumption of fixed capital and identical regions, this tax increase will have no detrimental effect on the level of capital or on the allocation of capital in the country. Indeed, the degree of the efficiency gain provided by tax harmonization is potentially significant.

The results of the basic tax competition model hence is that tax harmonization is way better off for all jurisdictions, as a coordinated and simultaneous tax increase would reduce inefficient provision of public services. On the other hand, from this original model, a vast literature provides different results in various directions. The main path explores the existence of *interregional externalities*, where the actions undertaken by one country's government influence the welfare of the residents in the other countries. Another perspective considers *fiscal externalities*, which occurs when one country public policies influence the government budget of another country[9]. Another perspective extending the basic Tiebout model is the *pecuniary externality*, taking into account that some regions are large enough to affect the product or factor prices also in other competitors' regions. Other common externalities adding up to the tax competition model are the result of inefficiencies in private markets, coupled with inefficiencies due to government failure in correcting them. Final additional perspective can be selfish government, making policy that are not in the best interest for citizens, giving rise to several interregional externalities.

Some extensions, departing from the original basic tax competition model, suggest instead that tax coordination or harmonization can be inefficient too. The main argument supporting this result is that capital income tax competition provide some benefits that can partially – or fully cope – the efficiency costs related to the underprovision of public services. Firstly, tax competition may restrain the tendencies of overexpansion of the public sector[10]; secondly, tax competition may threaten labor mobility and the advantages of economies of scale, thus limiting the efficiency gains from tax coordination. In addition, tax competition may result in limitations to subsidize firms competing in the international

[9] When a country reduces its tax rate on mobile capital, it gains capital at the expense of other regions, causing their tax bases to fall and hence their revenues to decline.

[10] Edwards, J. and M. Keen. (1996). Tax Competition and Leviathan. *European Economic Review* 40, 113–134.

markets and, consequently, reducing the potential tax revenue from capital income taxation by preventing new firms' entrance in the country.

Finally, the net effects of both positive and negative factors of tax competition are very difficult to estimate and in either cases the results of several computations and equilibrium models provide with relatively modest results, suggesting that tax coordination effects are generally positive but "*disappointingly small*"[11].

1.1.2. Externalities

Modern literature concerning with tax competition began with an analysis of the potential efficiency problems related to competition for capital by local different jurisdictions.

International tax competition is a very controversial issue, raising up different opinions because of its ambiguous results with respect to both corporations and individuals as well as depending on the single country analyzed[12].

Some authors argue that tax competition among country is beneficial because it forces governments to impose efficient tax prices on resident citizens for the provision of public services and goods. Efficiency in tax prices is due to the fact that tax competition leads to the use of less source-base taxation (as it will be explained in the following sections), improving the tax policy in competitive environments and guaranteeing efficient tax level when internationalization is considered.

With increased internationalization over time, mobility of capital and business inputs at international level have become a key factor for government when developing their tax policy. Corporate tax policies set by competing jurisdictions can influence the national environment when such policies include measures subsidizing or discriminating against foreign or domestic companies[13].

On the negative side, hence, different tax rates and policies imposed by different jurisdictions can create spillover costs or fiscal externalities on the rival country. This first scenario causes the so-called **tax-base flight**: the fiscal externality arising when corporate taxation in a jurisdiction causes the tax base to shift to foreign jurisdictions,

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[11] Sørensen, P. B. (2001b). Tax Coordination in the European Union: What are the Issues? *Swedish Economic Policy Review 8*, 143–195.

[12] Fuest, C., Huber, B., & Mintz, J. (2005). Capital mobility and tax competition. *Foundations and Trends in Microeconomics*, *1*(1), 1–62.

[13] Mintz. J. (1998). The Role of Allocation in a Globalized Corporate Income Tax. *International Monetary Fund*.

making the recipient of the tax base better off in terms of additional tax revenues. Several models and large studies have underlined the importance of the tax base flight as fiscal externality, been considered one of the most significant reasons explaining the lower tax rates imposed on businesses by government, indeed creating the tax competition phenomenon. The second type of fiscal externality created by uncoordinated tax rates among jurisdictions is the **tax exportation**, where countries have the incentive to tax foreign-owned businesses in their jurisdiction since such revenues result from goods and services resulting from benefits exploited by non-residents: governments will hence shift the tax burden of financing local public services to non-residents. Taxing foreign corporations creates a negative fiscal externality, resulting in lower welfare in foreign jurisdictions that is not compensated when the tax setting government chooses its international tax policy. In this case indeed, countries may tax capital too highly.

In conclusion, when governments do not coordinate and propose homogenous tax policies, they end up by choosing sub-optimal levels of public goods and services financed by inefficient taxes which are set either too high or too low because they neglect the spillovers imposed on, or by. other competing jurisdictions.

1.2. INTERNATIONAL DISTORTIONS

The last decades have been characterized by an increasing global trade, with free capital mobility and companies investing abroad in order to take advantage of the new potential environment in other countries all around the world.

Multinational firms are considered the result of the market internationalization and, at the same time, the ones being most significantly affected by differences among jurisdictions. Internationalization, indeed, has raised issued concerning potential distortions experienced by several jurisdictions regarding corporate income taxation and the copious difficulties in applying uniform tax schedules. The rationale under the internationalization concern relies on the fact that all countries want to ensure a conscious and unbiased decision-making process when companies face the decision where to locate their investment and how to avoid downward distortions regarding the scale of the investment.

Since corporate taxation creates distortions at international level, it is possible to categorize such distortions by following a **decision tree framework** [14] used by companies facing decision-making process in an international global environment.

1.2.1. Inbound or Outbound Production

First of all, companies need to decide whether to produce at home and then export abroad or to directly produce abroad. This decision is mainly driven by management issue rather than by tax consideration. Suppose a company is resident in its home country *H*, and is deciding whether to produce inbound or to offshore its production abroad, to host country *A*. Producing in-house in country *H* and selling abroad to country *A* will result in an increase of transport costs per unit of output produced inbound and sold outbound. On the other side, producing in country *A* will eliminate, or at least reduce, transport cost for selling purposes but will result in additional fixed costs for the set-up of a new plant and production facilities. Hence, the choice depends on the **scale** of the activity and on the size of the various incurred costs.

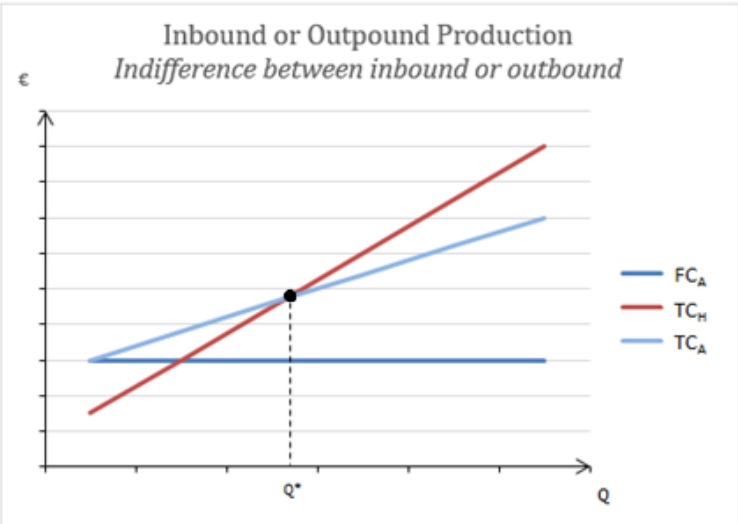

Figure 2 - Indifference in inbound or outbound production decisions.
Source: own elaboration

As it is possible to see from the previous graph, the fixed costs incurred in country *A* (FC_A) are the one related to the installment of the new production plant, while total costs in country *A* (TC_A) consists of fixed costs plus other costs incurred abroad. The choice of producing in country *H*, instead, implies costs related to transportation of produced goods

[14] Devereux, M.P. (2007). The Impact of Taxation on the Location of Capital, Firms and Profit: a Survey of Empirical Evidence, Oxford University Centre for Business Taxation Working Papers, 07/02.

from country H to country A. The production function of the home country H is steeper with respect to the one of the host country A. The company is indifferent whether to produce inbound or outbound if the production quantity is Q^* where $TC_A = TC_H$.

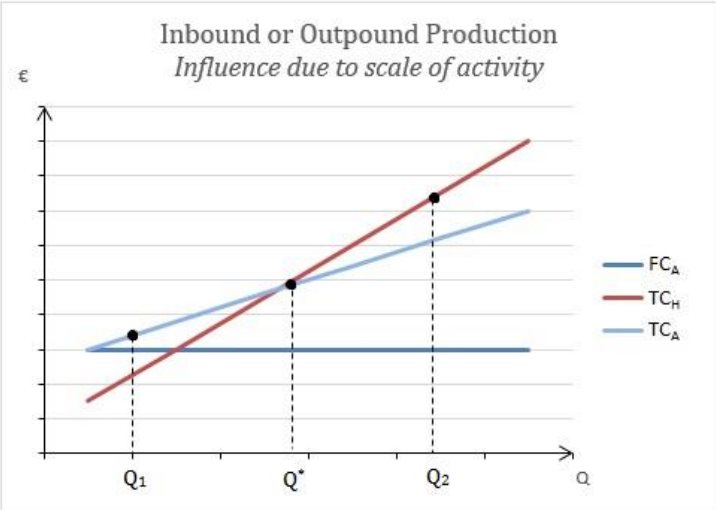

Figure 3 - Inbound and outbound production decisions influenced by the scale of activity.
Source: own elaboration.

As explained earlier, the choice whether to set production inbound or outbound depends on the **scale** of the activity and on the size of the various incurred costs. The previous graph is a clear representation of this specific case: if the company produces a quantity $Q_1 < Q^*$, it is better off for the company to set production in country H, as it will incur in lower costs. On the opposite site, if the company is able to increase production up to a quantity $Q_2 > Q^*$, and hence to be able to exploit the advantages of economies of scale, the company will be better off by deciding to locate its production plant abroad in country A, since this option is more convenient with respect to producing in-house.

In conclusion, this first step is about management and production choices, and it is not affected by tax considerations yet.

1.2.2. Distortion in company location

Once decided to shift the company production abroad, the next decision stands in the choice of the country in which to locate the foreign production. Many factors determine the location choice for foreign productive subsidiaries such as available market size, labor costs, productivity, legal environment, and proximity to the parent company country[15].

[15] Nicodème, G. (2009). Corporate Income Tax and Economic Distortions. Taxation Papers. European

Extensive research have shown that location choices – or extensive investments – are significantly affected by the role of local taxes in an international competitive environment as the one of the corporate income taxation. Tax schedules proposed by countries influence the behavior of multinationals by affecting their willingness to outsource business operations. Decision-making process regarding location choices depends heavily on the *effective average tax rate*[16].

For a company, the *effective average tax rate* (EATR) is a decisive measure when a country is in competition to become the location of foreign direct investments (FDI). EATR measures the net present value of tax payments as a proportion of the net present value of pre-tax capital income taking into account the capital depreciation and tax allowances[17]. It can also be expressed as a weighted average of the *effective marginal tax rate* (EMTR) and the adjusted statutory corporate tax rate, i.e. the percentage tax rate imposed by law[18].

A *low effective average tax rate* in the home country, compared to the one of other competitive countries, has the result of keeping mobile firms at home, reducing foreign direct investments abroad. A *high effective average tax rate* leads firms to relocate export production in foreign markets, as it happens for several multinational companies, locating their productive subsidiaries in those countries having higher EATR[19]. The rationale behind such relocation decision is driven by the deductibility of costs and the cut of the pre-tax income of corporations. Companies tend to artificially transfer expenses and costs in those countries with high corporate tax rates, in order to increase the potential obtained tax deduction with the aim of lowering the overall due tax liability. The same but opposite situation occurs with revenues, since multinationals have the incentive to shift positive elements of income in low-tax countries instead of higher one: the overall tax liability computed on the after-tax corporate income will be lower in the low-tax country with respect to high-tax country.

Commission, Centre Emile Berhei, (Solvay Business School), ECARES (ULB) and CESifo.

[16] Devereux, M.P. and Griffith, R. (1998). Taxes and the Location of Production: evidence from a panel of US multinationals, *Journal of Public Economics*, 68:335-367.

[17] Herger, N., Kotsogiannis, C., & McCorriston, S. (2011). International taxation and FDI strategies: Evidence from US cross-border acquisitions. *Economics Department discussion paper 11/09*, University of Exeter.

[18] Devereux, M.P. and Griffith, R. (2003). Evaluating Tax Policy for Location Decisions. *International Tax and Public Finance, 10,* 107-126.

[19] Keuschnigg, C. (2008). Exports, foreign direct investment, and the costs of corporate taxation. *International Tax and Public Finance*, 15, 460-477.

1.2.3. Distortion to investment

Third, conditioned on the two previous decisions, a company need to decide how much to invest. Related to EATR is the e*ffective marginal tax rate* (EMTR) which is the percentage of an extra unit of income that the recipient loses due to income taxes, payroll taxes, and any decline in tax credits and welfare entitlements. It differs from the standard *marginal tax rate,* which is the amount of tax paid on an additional dollar of income, because it also takes into account all those income deductions and tax instruments provided to corporations.

This measure influences investment decisions related to plant size – or intensive margin – hence regarding incremental investments in foreign firms rather than entry decisions measured by EATR[20]. Corporate tax affects the scale of multinational investment using the EMTR measure while, as said in the previous paragraph, location decision is sensitive to the EATR.

1.2.4. Profit Shifting and Transfer Pricing

The last distortion created by jurisdictional differences in corporate taxation is profit shifting across countries. Profit shifting occurs via several channels: **artificial transfer of debt** and **intra-group transfer pricing.**

Companies can **artificially transfer debt** from low-tax countries to high-tax countries: given that interest payments are deductible from taxable profits in most countries, the practice of locating more debt in high-tax countries and less debt in low-tax countries results in an efficient strategy for lowering the overall due tax liability. Moreover, if the subsidiary located in a low-tax country lends to the subsidiary located in a high-tax country, this lending creates an interest payment, taxed at a lower corporate tax rate to be paid by the borrower, as well as an interest deductions, subject to a high corporate tax rate. At group level, the tax saving exceeds the tax payment, resulting in a reduced tax burden due to this profit shifting[21].

Governments, especially those jurisdictions with higher corporate tax rates compared to neighbor competitor countries, seek to restrict such practices and limit the extent to which multinationals may take advantage in shifting taxable profits out of the income

[20] Herger, N., Kotsogiannis, C., & McCorriston, S. (2011). International taxation and FDI strategies: Evidence from US cross-border acquisitions. Economics Department discussion paper 11/09, University of Exeter.

[21] Nicodème, G. (2009). Corporate Income Tax and Economic Distortions. Taxation Papers. European Commission, Centre Emile Berhei, (Solvay Business School), ECARES (ULB) and CESifo.

source country. This counter-action usually takes the form of **thin capitalization rule** which settles a defined amount of deductible interests again taxable profits, in particular those related to interests paid to subsidiaries in other countries. Another adopted prevention is the so-called **interest allocation rule,** with the aim to limit interest deductibility to those form of borrowings used to finance business operations occurred within the jurisdiction[22].

Although these methods seem adequate and sufficient to avoid multinationals deterrence, such anti-avoidance rules are complex to design and limited to the extent of their implementation because of their high administration and compliance costs and several legal disputes. For this reason, jurisdictions enter in cross-country coordination mechanisms which takes the form of multilateral taxation agreements, in order to optimize costs and efforts while obtaining efficient results in reducing such distortions. The leading figure of these bilateral agreements are the **United Nations (UN)** and the **Organization for Economic Cooperation & Development (OECD)**, which draw up a several bilateral income tax treaties, composing in the current framework of the international tax regime.

The other important channel exploited by multinational in order to shift profit across jurisdictions is **transfer pricing**: by applying intra-group prices and tax rates which differ from the standard market conditions, multinational companies can increase – or decrease – reported profit in specific country according to a tax-minimizing strategy. The strategy consists in setting a higher price for a good produced in the low-tax country, which is purchased by a group affiliates in a high-tax country and then sold to the final customer. The multinational has the incentive to charge an higher price for the good produced in the low-tax country instead of in the higher one, because the company can get away of the good by selling it to its group affiliates. By doing this, multinationals shift taxable income out of the high-tax country and into the lower-tax country, reducing the total corporate income tax payment and indeed increasing the total after-tax profit.

Also in this case, high-tax countries' governments attempts to impose limits on the discretion given to companies to impose transfer prices used in related-party transactions within the group. The general applied rule is the **arm's length principle:** it must assess goods and services traded between group affiliates and related parties at the

[22] The Mirrlees Review. (2011). Tax by Design. *Oxford University Press.*

price observed in the market when the same goods and services are traded between unrelated parties in a standard transaction.

However, this principle has different limitations: it is difficult to apply when goods and services traded are highly specialized or tailor made or not traded by other parties. Intellectual property and intangible goods create significant problems concerning the application of the principle, increasing the complexity of establishing the arm's length price for that specific intangible and immaterial operation. Furthermore, the principle sometimes is inapplicable when the traded good is exchanged only between two related parties and hence it does not exist any other comparable standard transaction and related market price concerning that specific good.

In most cases the greatest difficulty in applying arm's length principle is to find appropriate prices, raising up many disputes between involved companies and tax authorities, resulting in high administrative and litigation costs.

2. How Countries Compete to Attract Foreign Investments?

"Tax incentives are defined as all measures that provide explicitly for a more favorable tax treatment of certain activities or sectors compared to what is granted to general industry"

(Klemm, A.) [23]

Nowadays, governments are facing an increasing competition for attracting foreign direct investments as well as maintaining local companies' investments inside the countries boundaries. As previously analyzed and supported with several evidence, the decrease in corporate tax rate in the last decades is constantly and increasingly employed by governments, which almost yearly implement corporate income tax rate reduction in their tax reforms. These jurisdictional measures are not the only responses to the international competition that directly affects potential foreign transactions. Governments, in addition to the large reduction in corporate tax rates, are more frequently developing tax reforms providing tax incentives, in order to enlarge the tax base on which tax liability is computed.

Regarding this double response provided by governments to international competition, the economic literature provides some arguments explaining such change in corporate tax systems, in terms of either corporate tax rate and tax base. They argue that countries are forced to reduce corporate tax rates in response to attempts by multinationals to enter in transfer pricing and profit shifting mechanisms in favor of the low-tax countries. Moreover, they state that countries simultaneously reduce the depreciation allowances provided to companies, hence tightening the taxable base, in order to offset the revenue loss occurred because of the reduction in corporate tax rate[24].

The rationale behind this argumentation is welfare maximizing[25] in terms of government revenue but what really happens in jurisdictions nowadays is different. Tax competition strongly influences tax schemes and hence governments must depart from the classic

[23] Klemm, A. (2010). Causes, benefits, and risks of business tax incentives. *International Tax and Public Finance*, *17*(3), 315–336.

[24] Egger, P., Raff, H. (2011). Tax Rate and Tax Base Competition for Foreign Direct Investment. *Kiel Institute for the World Economy.* Kiel Working Paper No. 1734

[25] Devereux, M.P., Lockwood, B., Redoano, M. (2008). Do countries compete over corporate tax rates? *Journal of Public Economics*, *91*, 1210—1235.

revenue-centered view while planning tax policies, taking into account the necessity of providing tax instruments that enhance the acquisition of foreign investments. Tax reforms that consider the narrowing of the corporate tax base should combine with lower tax rates on corporate income, in a way to maximize the government effort in persuading foreign investments. When introducing a deduction or an allowance for corporate taxable base, the government is certainly facing a *revenue cost*, because this will result in a narrow overall corporate taxable base and hence in lower corporate tax revenues. However, in the long run, any additional investment resulting from the presence of such allowances would generate additional taxable income profit and, indeed, partially retrieve the revenue cost.

2.1. TAX INSTRUMENTS

Policy makers, while designing their tax systems, have to make sure that they are internationally competitive, enhancing foreign investments but, at the same time, still collecting tax revenues on income derived in the host country. This issue raises some concerns regarding the appropriate design of a tax system, which must include tax incentive provisions to foster investments while limiting tax base erosion due to excessive tax relief instruments.

Economists have often discouraged tax incentives while supporting broad tax bases combined with low tax rates, but even though the rationale for such opinions is valid, countries still largely adopt tax incentives in their tax systems. The reasons behind the popular adoption of corporate tax incentives include mostly the fierce competition among jurisdictions and social goals, to the extent of encouraging economic activities in developing regions/countries. Indeed, even if such instruments are applied by almost all jurisdictions, tax incentives are particularly applied in developing countries in order to cope with structural weaknesses by offering incentives.

Popular tax incentives include:

1. *Tax holidays*, exempting newly-established firms from corporate income tax for a specified number of years. Partial tax holidays are also common, offering reduced tax obligations rather than full exemption;
2. *Statutory corporate income tax rate reduction*, decreasing the amount of host country tax levied on business income;

3. *Capital/Investment allowances*, indeed deductions of a certain fraction of an capital costs/investment from taxable profits, where the value of an allowance is the product of the allowance and the tax rate;
4. General or targeted *investment tax credits* providing a direct reduction to the corporate tax base. Different rules apply in case of excess credits and they include loss, carry-forward or (rarely) refund.
5. *Dividend withholding tax rate reduction* provides a financing incentive to corporate tax on distributed profits;
6. *Accelerated depreciation* at a faster schedule than available in normal economy: it may be implemented in different way such as through higher first year allowance or increased depreciation rates.

Evidence and debates shows that **tax holidays** remain a diffused form of tax incentive, mostly in developing countries, even though they are considered particularly harmful: by exempting some companies or activities from income tax, tax holidays push multinationals to shift taxable income to such qualifying companies, in order to minimize their overall tax liability. Moreover, they are very attractive only for short-term profitable investments as their benefits accrue only within the period of the tax holiday. We can recall from paragraph 1.2.2 and 1.2.3 that the effective marginal tax rate (EMTR) represent the extensive margin, influencing the decision of whether to invest or not; while the effective average tax rate (EATR) represents the intensive margin, influencing investment decisions related to plant size.

As it possible to see from the following graphical representation[26], the diminishing effect of tax holidays can be illustrated by the curve of the effective tax rates. For very profitable investments, EATR shows that the tax rate applied in the first year of the tax holiday period is about one third with respect to the tax rate applied to any other additional investment occurred over the remaining years, moving hence from 10% to almost 30%. For break-even investment instead, EMTR shows that the benefit of the implementation of the tax holiday is more limited, starting from about 17% the first year and then gradually raising up.

[26] The example represents a hypothetical country with a statutory corporate income tax rate of 30% and a tax holiday of 8 years.

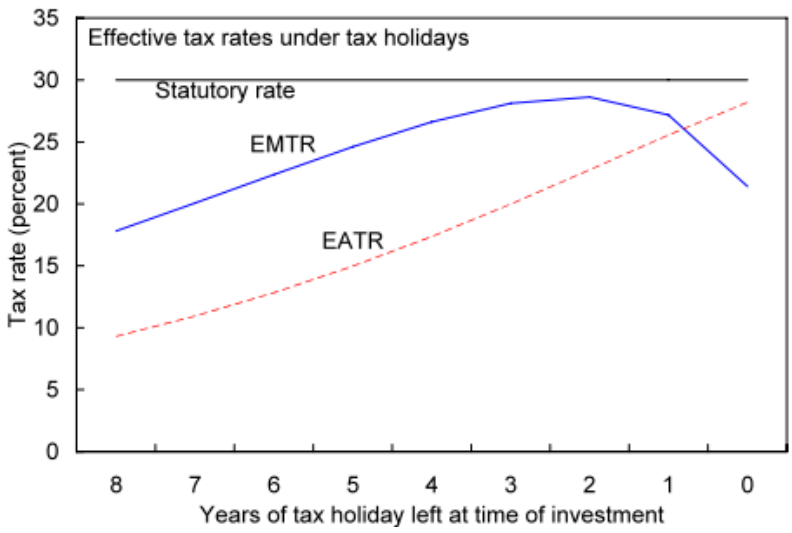

Figure 4 - Effective tax rates under tax holidays.
Source: Klemm, A. (2010). Causes, benefits, and risks of business tax incentives. *International Tax and Public Finance*, *17*(3), 315–336.

There is also considerable support in the **reduction in statutory corporate income tax rate** in order to lower the effective host country tax rate, even though several empirical works address the related problems of companies' financial structure. Evidence confirms that the company chosen debt-equity ratio is significantly influenced by the host country statutory corporate income tax rate: in particular, a high statutory corporate income tax rate encourages loans in the host country, resulting in the erosion of the corporate tax base[27].

Up-front incentives such as **investment allowances** and **tax credits** are easily implementable in a transparent way and are the most effective instruments for new capital purchases. On the other side, they will create distortions in the long run because such incentives distort the choice between capital and short-life goods in favor of the latter, because of the benefit received. A greater efficiency gain can be achieved by more precise identification of qualifying investments: one example of tailored tax instrument is the *incremental investment tax credit* which, differently from a flat tax rate, is earned only on that part of current investment that exceeds the average of past investments. An important issue concerning tax credit and capital allowance regards the carryovers and refund rules underlying such tax instruments. Tax credit refundability, in particular, offers immediate cash relief for that portion of credit that cannot be used to offset income

[27] This implication regards the deductibility of interests from the corporate income for tax purposes, which is explained in section 3.1 *"Source-based versus Residence-based Taxation"* where extended explanation of debt equity bias is provided.

tax liability in the current year, resulting in an immediate boost to companies' cash flow. The risk of the tax credit refund, however, is the creation of false business activities set up with the sole aim of receiving a refund cheque from the government. Further details regarding **capital and investments allowances** will be given in the chapter 2.2.1, where in-depth analysis of the Allowance for Corporate Equity (ACE) and the Thin Capitalization Rule (TC) is carried out.

Concluding, there are several difficult issues in tax design because of the large number of considerations linked to the use of incentives and resulting applications. The choice regarding the most suitable tax instruments strongly depend on the specific country circumstances. Evidence suggests to limit up-front tax incentives in case of high statutory tax rate coupled with refund provisions. Reduction in the statutory corporate income tax rate on one side simplifies tax planning but, simultaneously, can result in significant tax revenue loss on existing capital.

2.2. DEBT-EQUITY BIAS

One of the most common distortion while considering capital income taxation is the debt-equity bias when taxation is considered. This analysis will allow us to understand why some governments propose capital allowances in their tax scheme, as well as other tax incentives previously explained.

The standard tax base assumes that business income, subject to corporate income tax purpose, is calculated as following:

$$Earning\ before\ taxes = Revenues - Costs - Depreciation - Interests$$

Where the depreciation is the devaluation of assets according to their useful life and interests accrue with loans and financial borrowings.

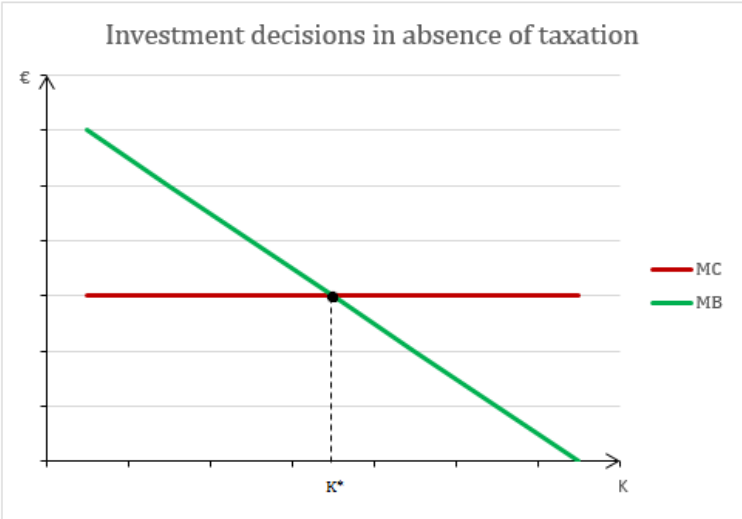

Figure 5 - Business investment decision in absence of taxation.
Source: own elaboration

Figure 5 shows the normal business investment decision faced by companies in a world *without taxation*: the marginal cost (MC) is the constant rate of return required by investors in order to finance the business; while the marginal benefit (MB) is the marginal productivity of capital K. The optimal investment choice is to expand investment until marginal return of investment equals its marginal cost:

$$K^* = MC = MB$$

The previous situation showed the investment decision problem faced by a company in a world without tax. When taxation is considered, business income and consequent capital investment are indeed affected by financing decisions because the choice whether to finance business investments with either internal or external capital have significant impact on the cost of capital. Firms can obtain capital in two ways: (1) financial investors can **lend capital**, upon which the company must pay an interest rate; (2) the company can **increase equity** either by issuing new shares or expand the existing shareholders' capital. In order for shareholders to invest more capital, they must earn a rate of return higher than the rate of return from alternative investments, such as bond or risk-free assets: it is hence a matter of **opportunity costs** for investors.

Investment decisions through debt

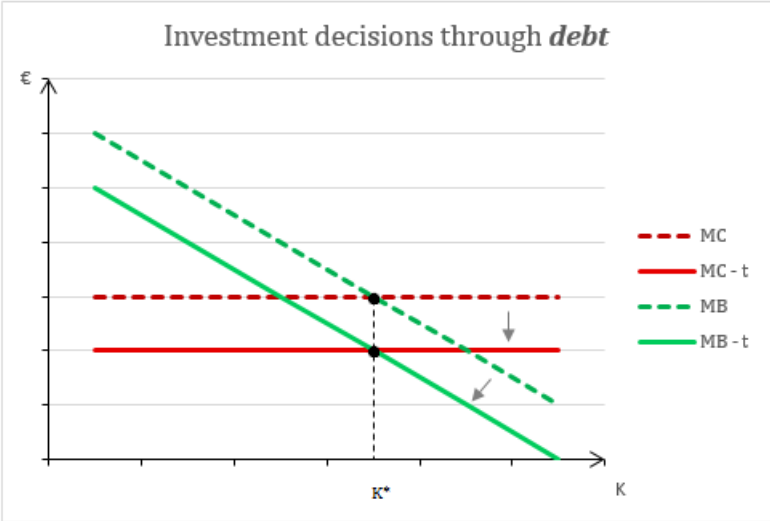

Figure 6 - Business investment decision through debt.
Source: own elaboration.

Through **borrowing of debt**, the company faces no distortion to capital investment. With corporate income tax applying on business income, interests paid on financial loans can be deducted from the taxable business profit. As it is possible to see from figure 6, companies face a reduction in the marginal benefit ($MB - t$) with respect to the marginal benefit in absence of taxation (MB). Deductibility of interest from the tax base, otherwise, also affects the marginal cost of the investment MC which decreases until $MC - t$, which is lower with respect to the world without taxation (MC). The function of the after-tax profit when a company is financed through debt is indeed the following:

$$P = F - wL - rK - t(F - wL - rK)$$

As it is possible to observe from the previous graph, both the marginal benefit and the marginal cost are sized down by the same measure t and hence the intersection point K^* remains the same[28].

$$F'k = MB = r$$

[28] From the after-tax profit function, we face a maximization problem. The computations which leads to the result of r are the following:

$\frac{\partial P}{\partial K} = F'k(1-t) = r(1-t) \xrightarrow{yields} F'k = r$

where F is the production function; k is the capital; r is the cost of capital and t is the tax rate.

Thus, a company faces no distortion in the investment decision process when it finances its investment through debt, since interests paid on loan are deducted from the tax base.

Investment decisions through equity

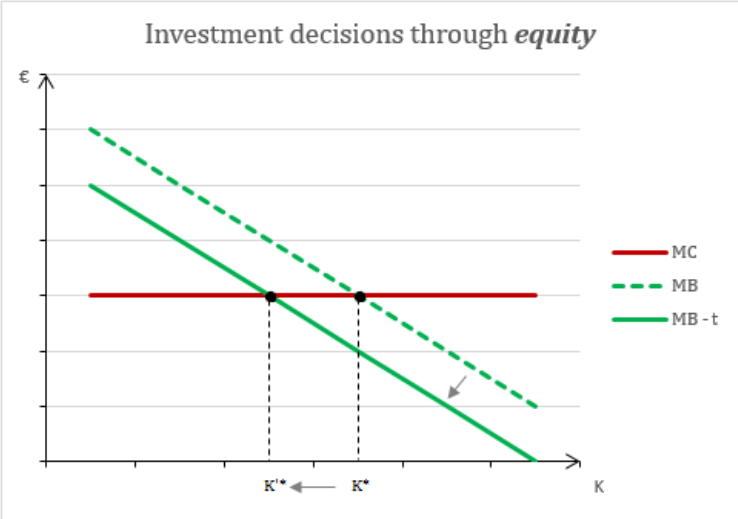

Figure 7 - Investment decision through equity.
Source: own elaboration.

In contrast to investment through debt, investment through equity creates a distortionary effect in investment decision since, differently from financial borrowing, interests cannot be deducted from the tax base. Consequently, as it is possible to see from figure 7, the marginal benefit still shifts downward because of the presence of taxation but the marginal cost remains fixed. Thus, the function of the after-tax profit is the following:

$$P = F - wL - rK - t(F - wL)$$

The taxable business income does not consider deduction of interests rK from the tax base since, being the company financed through equity, it is not possible to deduct shareholder remuneration. The new optimal choice for the firm shifts from K^* to K'^*, entailing a lower level of investment, making investment more costly[29].

$$F'k > r$$

[29] From the after-tax profit function, we face a maximization problem. The computations which leads to the result of $F'k > r$ are the following:

$$\frac{\partial P}{\partial K} = F'k(1-t) = r \xrightarrow{yields} F'k > r$$

where F is the production function; k is the capital; r is the cost of capital and t is the tax rate.

There exists thus a **debt bias** in financing investments because the cost of capital is higher for equity-financed than for debt-financed investments. Hence, companies face distortions when deciding between debt and equity financing but they face no incentive to carry out investments using equity-financing. The following paragraph will focus on corrective attempts undertaken by governments in order to reach a greater neutrality in financing decisions faced by companies.

2.2.1. Corrective measures for debt-equity distortions

The manner in which a company is capitalized can have a significant effect on the amount of profit it reports, and thus the amount of tax it pays. For this reason, country tax administrations often introduce rules that place a limit on the amount of interest that can be deducted in calculating the measure of a company's profit for tax purposes. Such rules are designed to cope with cross-border shifting of profit through excessive debt, and thus aim to protect a country's tax base. From a policy perspective, failure to tackle excessive interest payments to associated enterprises gives multinational companies an advantage over domestic businesses, unable to gain such tax advantages.

The more popular rule applied by jurisdiction is **Thin Capitalization Rule** which fixes limits to interest deductibility in order to reduce excess leverage and potential incentive to exploit intra-group loans to shift profits abroad. Thin capitalization rules typically operate by means of two approaches:

1. determining a maximum amount of debt on which deductible interest payments are available; or
2. determining a maximum amount of interest that may be deducted by reference to the ratio of interest (paid or payable) to another variable.

This method is often criticized because this fixed limit does not take into account the profitability of the firm, meaning that a fair debt bias solution should reflect also how much profitable the firm is in order not to discourage companies from entering in profitable investments.

In Italy, for example, the **Earning Stripping Rule** applies in order to cope with thin capitalization rule shortage. This rule sets a limit to the deductibility of interests whose amount varies according to the business profitability: the more profitable the firm is, the more it is allowed to get a higher deduction. Hence, business income subject to tax purposes can be expressed as following:

$$\pi = R + Interests\ received + \cdots - (min\ [Interests\ paid; Maximum\ allowed])$$

where $Maximum\ allowed = Interests\ received + 30\%\ EBITDA$. The difference between interests paid and maximum deduction allowed creates either unused allowance, which can be brought forward the following fiscal year, or undeducted interests, that can be carried forward as deductible interests.

An alternative corporate tax base applied by jurisdictions that attempts to tackle the debt-equity bias is the **Allowance for Corporate Equity (ACE)**, which allows companies to obtain a deduction for corporate equity (as well as the ordinary interest deduction for the part of debt). The basic idea of ACE is to provide an explicit tax relief for the opportunity cost of using shareholders' fund to finance the company's operations instead of debt-financed operations. The effect, hence, is to remove the return on equity-financed investment from the corporate tax base in a way to reduce the bias when choosing how to finance business opportunities and investments. Its implementation, moreover, preserves most of the structure of existing corporate income tax such as depreciation schedules and interest deductibility. The ACE is hence computed as follows:

$$ACE = \left(Equity_Y - Equity_{Y_0}\right)\ x\ ACE\ rate$$

The allowance for corporate equity rate is applied on the incremental equity and is then deducted from the corporate income tax base. The equity of the following year must always be compared to the initial equity value, and not to the equity of the previous year.

Suppose an Italian company C with an equity in 2010 equal to EUR 1.000, gaining profits for EUR 200 in the fiscal year 2016 and not distributing it as dividends, indeed with an equity in 2016 of EUR 1.200. Since the allowance for corporate equity is computed only on the incremental equity of the year, the total allowance in 2016 for company C is computed as follows:

$$ACE_Y = (1.200 - 1.000)\ x\ 4{,}75\% = 200\ x\ 4{,}5\% = 9$$

Suppose now that the same company will have, in the following year 2017, further positive profits and a resulting equity of EUR 1.500. The 2017 allowance for equity capital is computed as follows:

$$ACE_{Y+1} = (1.500 - 1.000)\ x\ 4{,}75\% = 500\ x\ 4{,}5\% = 22{,}50$$

As it is possible to see, the greatest the equity value, the higher the allowance that can be deducted from the taxable income and the less will be the total tax liability of the year.

As previously outlined, this mechanism is implemented with the aim of narrowing the tax base, in order to attract more foreign direct investments. A direct consequence of the ACE tax base is the revenue loss because of the reduced tax base. One solution improved by governments in order to mitigate such revenue loss if the gradual introduction of the ACE, adopting the **Incremental Allowance for Corporate Equity**. The characterizing feature of the incremental ACE is the allowance obtained only for increments in the net equity: the allowance is not provided in terms of remuneration of the overall equity but only to increments in the net equity, indeed new share issue or capital increase by shareholders.

With the adoption of such instruments, the tax reforms will enhance in the longer term potential new foreign investments. Although such instruments can significantly influence FDI, profit shifting and transfer pricing issues are not influenced by such alteration of the corporate tax base, since they are affected by statutory tax rate differences across jurisdictions.

3. TAX COORDINATION: HARMONIZATION EFFORTS AND BILATERAL TREATIES

In the last decades, governments have started recognizing the substantial loss of corporate tax revenue because of aggressive international tax planning which often results in profit shifting between locations to take advantage of reduced taxation. Moreover, there exists an on-going concern regarding the importance of recognizing where economic activities have been carried out and where resulting profits have been generated, in order to ensure that those profits are taxed where the value is created. Coordination among jurisdictions is often adopted in the form of multilateral taxation agreement for the avoidance of double taxation on income and the elimination of opportunities for non-taxation or reduced one. Such agreements ensure an effective mechanism of implementation of government coordination, eliminating the necessity of constant bilateral renegotiation of the agreement and creating a network with a common purpose.

The following chapters will analyze the source-resident taxation problem, which is one of the main issues at the basis of the double layer of taxation. Mainly, in a determined country, there exists both resident and nonresident countries, where nonresident countries are local subsidiaries of foreign companies. The corporate income generated by resident countries must be taxed locally, by the home country, but what about the income generated by the foreign subsidiaries? Should it be taxed accordingly to the host country or to its home foreign country? Debates relating to these issues are several and, in conclusion, there is no better taxation and both countries must have the right to collect tax revenues from the respective companies' income. Indeed, both taxation methods should apply, creating distortions and double layers of taxation that multinational companies are subject to. In order to avoid such taxation distortion, bilateral treaties have been developed between countries entering in international transactions. The largest part of such treaties are built following the OECD Model of Double Taxation Convention, whereby countries are allowed to impose tax on corporate income generated by foreign investments of multinational companies either applying a tax credit, an exemption or a deduction. This chapter will be dedicated to a detailed explanation regarding the condition under which double taxation occurs and the latest harmonization efforts reached by countries at a global level to solve it.

3.1. SOURCE-BASED VERSUS RESIDENCE-BASED TAXATION

As previously mentioned, a hot debating issue that countries faces in order to move towards international harmonization is whether to adopt a source-based corporate tax or a residence-based one.

Residence-based taxation supposes that a country can tax a company on the base of its head office, principal place of business or effective place of management. Resident companies are taxed on their worldwide income, both local and foreign. Residence taxation of income is based on the principle that people and firms should contribute towards the public services provided for them by the country where they live, on all their income wherever it comes from.

On the other side, under **source-based** taxation jurisdictions can tax a company on the base of where the income is generated, hence where the production of goods and services takes place. Non-residents are taxed on local source-based income. Passive income such as dividends would have a local source, being where the payer company is located; interest is sourced generally where the debtor resides; and royalties are generally sourced where the intellectual property is used or exploited. Source taxation is justified by the view that the country providing the opportunity to generate income or profits should have the right to tax it.

There exists pros and cons for both sources of taxation and there are several debates among economists regarding the two. Literature in favor of residence-based taxation considers the difficulties in establishing the source of an income, since it is often the result of more than one source; moreover, they promote economic efficiency of residence taxation since the extensive margin (where to invest) should not be affected by the tax rate. In addition, pure source taxation results in tax rate competition among countries, and related abusive transfer pricing and profit shifting problems. On the contrary, economists supporting source-based taxation state that pure residence taxation is unrealistic for several reasons. Firstly, countries would never give up their right to collect tax from foreigners entered in business within their jurisdictions; secondly, residence-based taxation plays against poor and developing countries in favor of rich ones; lastly, it is much easier to evade through channeling of international investment towards tax havens and low-rate countries.

To prevent this double source of taxation, the United Nations (UN) and the Organization for Economic Cooperation & Development (OECD) developed a series of models of

treaties that result in the set of several bilateral income tax treaties, creating the current framework of the international tax regime. The main effect of tax treaties hence is to reduce the potential impact of pure source-based taxation in favor of residence-based taxation by providing some tax adjustments. The degree of the tax adjustment allowed depends on the singular tax treaty between the two jurisdictions. Developed and richer countries, which are capital-exporting countries, are more favorable to residence-based taxation, hence supporting the OECD Model Treaty. On the contrary, developing and capital-importing countries benefit the most from the UN Model Treaty, which tends to favor the source-based jurisdiction. This allows developing countries to obtain tax revenues by taxing short investment projects or fees paid to foreign goods and services provided inside the country, even if they only entered in the country for short periods.

Through the establishment of a treaty, source-based and resident-based taxation reach a compromise and if infra-country transactions create double taxation because of simultaneous "right" of residence and source taxation, unilateral law or double tax treaties between involved countries may solve the problem.

For example, when income is taxed at source, the residence country experience a double taxation that must be offset either by a tax credit or by a tax exemption of the income in object. Additionally, the source country is given the right to tax business profits of foreign company's branches but it applies low rate (or zero rate at all) to payments to residents of the other country, such as on interest on loans, dividend on shares, on royalties or on intellectual property. Bilateral treaties indeed create a compromise which gives the primacy right to source-based taxation but providing residence-based solutions in an attempt to preserve the revenue base of both developed and developing countries.

3.2. OECD MODEL FOR DOUBLE TAXATION AGREEMENTS

The majority of countries enters in bilateral agreements in order to minimize taxation distortions. The greatest part of the existing double taxation agreements between countries follow the OECD Double Taxation Convention and the Model Double Taxation Convention on Income and Capital developed by OECD. According to this model, countries are allowed to tax income derived from foreign investment of multinational companies following either the **credit system** or the **exemption system**. In addition to these two systems, the **deduction system** will also be analyzed since it plays an important role in the theoretical debate on the taxation of multinational firms and it is applied in some countries where no double taxation agreement exists, always with the same purpose of

avoiding distortion problematics[30]. These three main systems can be explained by the aid of the OECD Model, a report developed by the Organization for Economic Cooperation & Development (OECD) which provide to jurisdictions an economic framework in order to better understand and consequently develop their own bilateral agreement, based on this OECD guidelines.

The OECD Model[31] considers two jurisdictions denoted as home country d and foreign country *f.* There is a multinational firm with its headquarter located in the home country d but its production is undertaken both domestically and abroad. The production output is stated through the standard linear production function with capital and labor as production factors. Indeed, the domestic output can be expressed as $Y^d = F^d(K^d, L^d)$ while output produced abroad is expressed as $Y^f = F^f(K^f, L^f)$, where K and L are respectively capital and labor. Profits of multinational firms are taxed using the domestic tax rate t^d in the home country, and according to the foreign tax rate t^f in the foreign country; the domestic and foreign wage rates for labor are respectively w^d and w^f. The effective tax rate applied on foreign investments is denoted as t^E.

Hence, after-tax profits of multinational can be expressed as:

$$P = \left(1 - t^d\right)\left(F^d(K^d, L^d) - w^d L^d\right) + (1 - t^E)\left(F^f(K^f, L^f) - w^f L^f\right)$$

Profits of multinational firms depend on the rules for the taxation of foreign income, in particular, on the tax regimes applied:

1. The exemption system;
2. The (full taxation after) deduction system;
3. The foreign tax credit system.

Table 1 summarizes and give a general overview over the final tax burden on profits that multinational companies face under the three analyzed tax systems. This measure expresses the tax revenue collected by the country and paid by companies accordingly to the implemented system.

[30] These are Portugal, Switzerland and Ireland, Egypt (see Ruding Report. (1992). "Report of the Committee of Independent Experts on Company Taxation." *Brussels and Luxemburg: Commission of the European Communities).* Moreover, Egypt, Lebanon and Peru apply the deduction system as their main method of double taxation relief.

[31] OECD. (1997). Model Double Taxation Convention on Income and Capital. *Report of the OECD Committee on Fiscal Affairs,* Paris.

Location of investment	Exemption	Deduction	Tax Credit
Home Country	$(1-t^d)$	$(1-t^d)$	$(1-t^d)$
Foreign Country	$(1-t^f)$	$(1-t^d)(1-t^f)$	$(1-\max[t^d,t^f])$

Table 1 - Tax burden on profits of domestic multinational firms.
Source: own elaboration from data

3.2.1. Exemption system

According to the **exemption system**, companies' foreign profits are exempt from domestic taxation and capital income is indeed taxed according to the source-based principle. After-tax profits of multinational firms are:

$$P = \left(1-t^d\right)\left(F^d(K^d,L^d) - w^d L^d\right) + \left(1-t^f\right)\left(F^f(K^f,L^f) - w^f L^f\right)$$

Where the domestic profit is taxed accordingly to the domestic tax rate t^d and the foreign profit is taxed according to the foreign tax rate t^f. The exemption system implements a source-based system for the taxation of capital income.

3.2.2. Deduction system

Under the **deduction system**, corporate income of multinationals earned abroad is subject to corporate taxation in the home country and corporate income taxes paid abroad can be deducted from the tax base. Hence taxes paid abroad are deductible but after-tax profits are subject to domestic tax rate t^d. After-tax profit under the deduction systems can be expressed as:

$$P = \left(1-t^d\right)\left(F^d(K^d,L^d) - w^d L^d\right)$$
$$+\left(1-t^f\right)\left(1-t^d\right)\left(F^f(K^f,L^f) - w^f L^f\right)$$

Both the deduction and the credit system imply that home countries tax profits generated from foreign countries but the difference between the two tax systems relies on the treatment of taxes that companies have paid abroad. According to the deduction system, taxes are deducted from the domestic corporate tax base which will be then fully taxed at the domestic tax rate t^d, they are indeed treated as deductible costs. Under the credit system, taxes paid abroad are credited against domestic taxes on income earned abroad but not against profits from domestic operations.

3.2.3. Foreign tax credit system

Alternatively to the exemption system, the OECD provides countries the option to tax international investments according to the **foreign tax credit system**. Under this tax scheme, both domestic and foreign profits are taxed at the domestic tax rate t^d but taxes on foreign profits paid abroad are subject to a tax credit at domestic rate t^d on foreign profits. However, notice that if $t^f > t^d$, the domestic government will not fully refund foreign taxes, but it will only refund foreign profits with the maximum tax rate t^d. After-tax profits under the credit system can be expressed as:

$$P = \left(1 - t^d\right)\left(F^d(K^d, L^d) - w^d L^d\right)$$

$$+\left(1 - \max\left[t^d, t^f\right]\right)\left(F^f(K^f, L^f) - w^f L^f\right)$$

Under tax competition, the domestic and the foreign country simultaneously set their tax rates to maximize domestic income and hence tax revenue. There are several international tax planning issues that result in either higher or lower costs of capital for multinational companies with respect to companies operating only in the domestic market. Thus, taxes could either favoring or discouraging foreign investments relative to domestic ones.

3.2.4. Double taxation of dividends

The term double taxation can also refer to the double taxation of some income or activity, the most recurring one being profits taxed twice, once when earned by the corporation and then again when the profits are distributed to shareholders as dividends. When dividends are paid from a subsidiary company to its parent company, there exists an additional layer of taxation in the country of the parent company.

When the subsidiary and the parent company are located in the same country, dividends paid by the domestic subsidiary are exempt from taxable income because the underlying profits, out of which dividends are paid, have already been subject to the same country's corporate income tax rate. If such exemption would not have been applied, the double taxation would have penalize companies operating in a domestic market through subsidiaries.

The situation differs when the subsidiary and the parent company are located in different countries and the latter receives dividends from the former. The underlying profits of the subsidiary company, from which dividends are paid out, are supposed to be already taxed in the source country, with probably different tax rate and different corporate tax base

with respect to the resident country of the parent firm. In such situation, taxing dividend income received from foreign subsidiaries will results in double taxation of the underlying profits. Normally, countries can decide whether to adopt the exemption method or the credit method, as it works for corporate profits from foreign countries explained in the previous paragraphs.

Indeed, the exemption method simply exempts dividends received from foreign subsidiaries from corporate taxation in the resident country of the parent company. The credit method, instead, supposes that foreign profits paid abroad are subject to a tax credit in the residence country (tax credit) and exempted in the country where it arises (withholding tax).

	Parent Company **UK**	Subsidiary Company **Ireland**	Subsidiary Company **Poland**	Subsidiary Company **Norway**
Dividend payout		87,50	87,50	87,50
Underlying profits	100,00	100,00	100,00	100,00
CIT rate	**28%**	**12,5%**	**19%**	**25%**
CIT	28,00	12,50	19,00	25,00
Tax liability	*28,00*	*15,50*	*9,00*	*3,00*

Table 2 - Dividends payout and parent company tax charge resulting from differences in CIT rate of countries of subsidiary companies.
Source: own elaboration

Table 2 summarizes a practical case where we assumed two companies, a parent company located in England having 3 foreign subsidiary companies[32]: one located in Ireland, jurisdiction applying a tax rate of 12,50%; another located in Poland, with a CIT rate of 19%, and the last one located in Norway, with a corporate income tax rate of 25%. We also assumed a dividend of GBP 87,50 paid out from an underlying profit of GBP 100,00.

For the subsidiary company located in **Ireland**, the corporate income tax computed on the underlying profit of the subsidiary company is EUR 12,50. As a result, since the Irish subsidiary has already paid income taxes for EUR 12,50, the English parent company will have to pay the remaining tax as if the corporate tax rate applied on the underlying profits

[32] We expressed values accordingly to the local currency even though we assume no exchange rate in order to simplify the example and to provide a better comparability among proposed numbers.

was the UK one. Hence, the tax charge for the London parent company relative to the Irish subsidiary will be:

$$Tax\ charge_{Ireland} = (100\ x\ 28\%) - (100\ x\ 12{,}5\%) = 28 - 12{,}5 = \mathbf{15{,}5}$$

The situation differs in the case of the foreign subsidiary located in **Poland**, where the national corporate income tax rate in force is 19%. In this case, the Polish subsidiary has already paid income tax on PLN 100,00 income for PLN 19,00, leaving the UK parent company with a smaller tax charge with respect to the one of the Irish branch, which amounts to:

$$Tax\ charge_{Poland} = (100\ x\ 28\%) - (100\ x\ 19\%) = 28 - 19 = \mathbf{9}$$

The last subsidiary, located in **Norway**, has a corporate income tax rate very close to the one in force in UK. As it is possible to see from the calculations, in this case the tax charge to be paid from the English parent company will be the lowest, due to the small gap between CIT rate of the parent and the subsidiary company's home country. In this case, the tax amount charged to the parent company will be:

$$Tax\ charge_{Norway} = (100\ x\ 28\%) - (100\ x\ 25\%) = 28 - 25 = \mathbf{3}$$

This example gives us a complete scenario of the problematic of double taxation of dividend, with evidence that the higher the corporate tax rate of the country of the subsidiary, the lower the tax charge for the parent company.

3.3. INTERNATIONAL TAX TREATIES

The OECD Model, otherwise, it is just a proposed guideline which countries can follow when drafting their own bilateral agreements. Nowadays, the main characteristics of the international tax treaties can be summarized as follow:

- Bilateral economic agreement between two nations;
- Aims to avoid or eliminate double taxation of the same income in two countries;
- Negotiated under public international law;
- Drafted accordingly either to the OECD Model or the UN Model

One of the most important project focusing on international tax cooperation is the **OECD/G20 Base Erosion and Profit Shifting (BEPS) Project**. It provides governments with solutions for closing the gaps in existing international rules that currently allow

corporate profits to "disappear" or be artificially shifted to low or no tax environments, preventing treaty shopping and double taxation.

Tax cooperation and tax coordination have been the central focus of several discussion related to international tax competition, especially among EU member states, which actually still operate independently and have very diverse corporate income tax systems. Three recent reports have been developed within the European Union, showing concern and expressing opinion regarding potential solutions to such inefficiency problems.

The **European Commission's Code of Conduct on Business Taxation**[33] is a non-binding agreement among member states to avoid preferential taxation on certain activities.[34] The goal of this Code of Conduct is mainly to limit tax competition, reducing the extent to which governments may reduce tax rates in highly mobile investment activities and foreign direct investments, even if it does not explicitly consider tax competition in the form of low corporate income tax rates.

Another important report has been issued by the **Organization for Economic Cooperation and Development** (OECD), which focuses on harmful tax competition and tax policies that enhance tax evasion and the development of tax heavens and preferential tax regimes[35]. The OECD study focus more narrowly on a reduced scope, by limiting its analysis on financial services and provisions of intangibles but, on the other hand, it includes in its research the use of low effectives tax rates, coupled with lack of transparency in tax scheme design and set of preferential tax regimes.

The most recent paper was published by the **European Commission** in 2001[36]: it proposes a wide variety of tax coordination approaches in EU, mainly based on tax base uniformity rather than tax rate harmonization. With this paper, the EU Commission departs from the classic analysis moving towards a study centered on a uniform tax base: it focuses on the high compliance costs that multinational companies have to deal with nowadays, in a system where mobility of finance, people and capital is encouraged and moving internationally is highly suggested. Various opinions respond to whether tax

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[33] European Commission. (1997). Towards Tax Co-Ordination in the European Union: A Package to Tackle Harmful Tax Competition, COM(97), 495.

[34] Activities where preferential taxation is avoided are mainly foreign investment and non-transparent administrative practices, which can achieve the same effect of reduced taxation scheme.

[35] OECD (1998). Harmful Tax Competition: An Emerging Global Issue. *Paris: Organization for Economic Cooperation and Development.*

[36] European Commission. (2001). "Company Taxation in the Internal Market," COM(2001), 582.

coordination is beneficial or not, and how this cooperation must be reached: harmonization of tax rates through bilateral tax agreements between member states[37]; minimum tax rate level coupled with rate harmonization measures; financial innovation and capital mobility push for a low flat tax rate for capital earnings[38]; and many others.

[37] Tanzi, V. and A. L. Bovenberg. (1990). Is There a Need for Harmonizing Capital Income Taxes Within EC Countries?. *In H. Siebert (ed.), Reforming Capital Income Taxation. Tubingen: J.C.B. Mohr.*

[38] Cnossen, S. (1996). Company Taxes in the European Union: Criteria and Options for Reform. *Fiscal Studies 17*, 67–97.

4. TAX LEGISLATION ACROSS OECD COUNTRIES

The previous chapters focused on detail on the most important economic literature with respect to the international tax competition topic. The last chapter regarding the tax instruments, in particular, gives an overview of the most common policy factors implemented by jurisdictions in order to attract foreign companies and investments.

The chapter firstly explain how the database has been populated and then the analysis moves to a detailed study of the current OECD countries and their main practices and adopted policy factors, summarizing data with key indicators, in a way to enhance comparison of data. This investigation will allow for a deep discussion regarding the main differences and similarities of these indicators as well as recognize the strengths and weaknesses of each jurisdictions.

This analysis is a strong evidence of the extent of this debate: it helps in clearly identifying the differences among tax sources and in understanding the effects of the tax competitions that governments face since the last decades. This analysis underlines the key importance of corporate taxation as a relevant source of revenue for a country and, therefore, the strong implications resulting from the jurisdictions' decisions to either cut off tax rates and to implement tax instruments in a way to narrow the corporate taxable base, significantly reducing the potential revenues they could collect from companies.

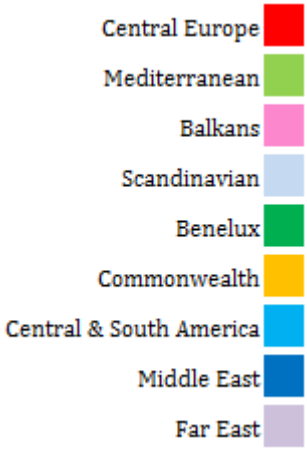
4.1. KEY INDICATORS AND DATA

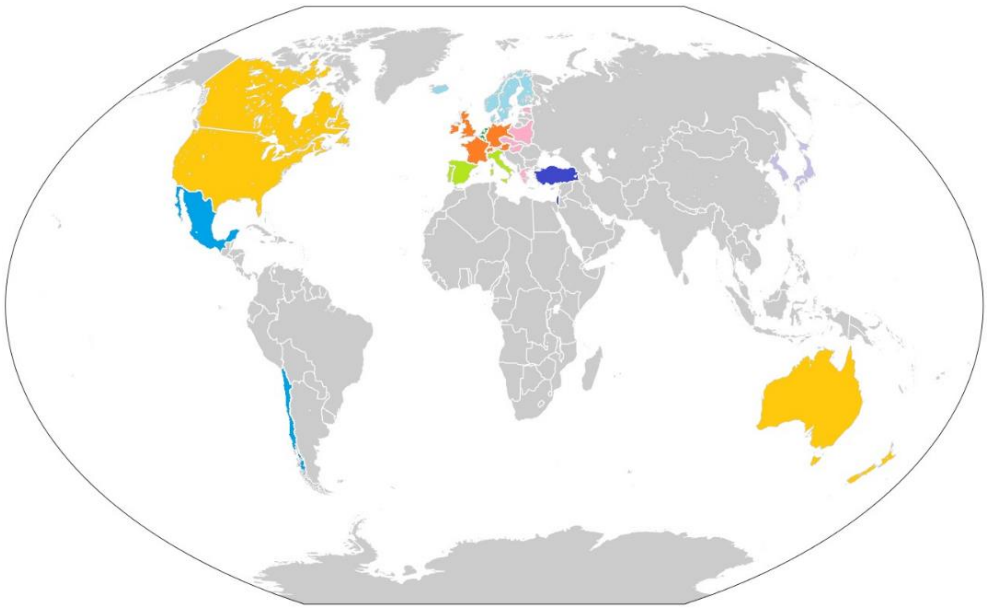
The constructed database is populated with data provided either by the OECD online database, by IFBD site or by big four's online database, in particular the Deloitte International Tax Guide and the PwC Worldwide Tax Summary. These online databases provides detailed information regarding European and extra-EU countries, with respect to statutory and effective corporate income tax rate, entities liable and exempted from taxation purposes, tax exemptions and tax credits provided to companies as well as international factors such as dividend or capital gains withholding tax in case of subsidiaries located abroad.

The greatest part of data regards the fiscal year 2016, while in case of shortage of 2016 results, the latest available data were used. Information are summarized in the database presented in the Appendix A, followed by detailed explanation of each single indicator in the footnote section below the Appendix.

The database is organized in nine macro geographical regions, in order to enhance a better comparability of information among similar competitive countries, in particular we identify these main regions:

- **Central Europe:** Austria, Germany, France, Switzerland, United Kingdom, Ireland
- **Mediterranean:** Italy, Spain, Portugal
- **Balkans:** Czech Republic, Estonia, Greece, Hungary, Poland, Slovak Republic, Slovenia
- **Scandinavian:** Denmark, Finland, Sweden, Norway, Iceland
- **Benelux:** Belgium, Netherlands, Luxembourg
- **Commonwealth:** Canada, Australia, New Zealand, United States
- **Central & South America:** Mexico, Chile
- **Middle East:** Israel, Turkey
- **Far East:** Japan, Korea





The following paragraphs are organized in policy factor, each one with a detailed analysis on the OECD trend per macro region. For the most descriptive information, such as the list of liable and exempted entities for tax purposes, complete disclosure of information is given on the footnote section after the database table, where all detailed information per country are provided.

4.1.1. Total Tax Revenue and Tax on Corporate Profit

Tax revenue is defined as the revenue collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes[39]. In the database table in Appendix A, it is reported the tax revenue as measure of percentage of GDP (% of GDP) instead of in the local currency value: this choice was made to the extent that the entire analysis should enable the comparison among jurisdictions instead of the volume of taxation collected by the governments. Total tax revenue specified as a percentage of GDP indicates the share of a country's output that is collected by the government through taxes. It can be regarded as one measure of the degree to which the government controls the economy's resources. This measure is useful for our purpose because it indicates a general and wide measure to further understand how the total amount of tax revenues are then split into several taxes on different individuals and activities.

Tax on corporate profit is defined as a tax levied on the net profits (gross income minus allowable tax reliefs) of enterprises. It also covers taxes levied on the capital gains of enterprises, while tax rates on dividends are analyzed separately in the following section. This indicator relates to government as a whole (all government levels) and is measured in percentage of total country GDP (% on GDP). This value can be compared with the total tax revenue measure, in order to understand how much of the total tax is represented by corporate income taxation paid by companies in a country.

The following table compares the total revenues collected as taxes by the government and the related percentage of tax revenue from corporate income collected by the government. Figure 8 shows the average values grouped per macro region, to give a general overview to the reader regarding the level of taxation collected by the government in terms of percentage of GDP. The following tables, instead, summarizes the singular value in percentage terms per country grouped per macro region.

[39] https://data.oecd.org/tax/tax-revenue.htm

Country name	Average Total Tax Revenue % of GDP	Average Tax on Corporate Profit % of GDP	Incidence
Central Europe	34,98%	2,38%	*6,81%*
Balkans	34,88%	3,29%	*9,42%*
Mediterranean	37,22%	2,55%	*6,84%*
Middle East	30,70%	2,36%	*7,69%*
Benelux	39,84%	3,50%	*8,78%*
Scandinavian	41,83%	3,05%	*7,29%*
Commonwealth	29,71%	5,29%	*17,79%*
Central & South America	19,07%	4,10%	*21,48%*
Far East	28,63%	3,75%	*13,11%*
OECD - Average	***34,41%***	***3,30%***	***9,59%***

Figure 8 - Summary per macro region of total tax revenue as % of GDP, Total Tax on Corporate Profit as % of GDP and incidence of CIT on total taxation revenue collected by the government.
Source: database Appendix A

The **OECD Average** tax revenue as a percentage of GDP is 34,41%; the region with the lowest values are the Central & South America, with a percentage of 19,07%, composed by the developing economies of **Mexico** with a percentage of 17,44% and **Chile** with a higher 20,70%. On the other side, the highest position of the rank is occupied by the region of **Scandinavian,** with values reaching a percentage of 46,62% in **Denmark** up to the lower percentage of the region in **Iceland** of 37,12%[40]. The following tables shows the single tax revenues percentage for each country: it is possible to see that each region group countries whose tax revenues collected by the local government are on similar level.

The **OECD Average** tax revenue on corporate profit as a percentage of GDP is 3,30%, hence about the 9,59% of the total tax revenue is represented by corporate income taxes. The highest tax revenue on corporate income, with a percentage higher than the OECD average, are collected in **Australia** close to half of its total tax revenue (11,40% on the national GDP and 41,04% on the total), followed by **Chile** (4,91% on national GDP and 23,74% on total tax revenue), **Greece** (5,90% on national GDP and 16,04% on total tax revenue) and **Poland** (4,60% on national GDP and 14,33% on total tax revenue). On the other side, with tax revenues on corporate income under 2% of the total GDP, there is

[40] Data from OECD Tax Tables: Tax levels and tax structure, 1965-2014, Part II.

Slovenia with a value of 1,47% on national GDP (4,03% on total tax revenue), **Turkey** with 1,71% (5,69% on total tax revenue) and **Germany** with 1,74% on national GDP (4,72% on total tax revenue).

Country name	Total Tax Revenue % of GDP	Tax on Corporate Profit % of GDP	Incidence
Central Europe	***34,98%***	***2,38%***	**6,81%**
AUSTRIA	43,46%	2,26%	5,19%
GERMANY	36,94%	1,74%	4,72%
FRANCE	45,50%	2,11%	4,64%
SWITZERLAND	27,89%	3,05%	10,93%
UNITED KINGDOM	32,52%	2,45%	7,55%
IRELAND	23,59%	2,69%	11,39%
Balkans	***34,88%***	***3,29%***	**9,42%**
CZECH REPUBLIC	33,47%	3,56%	10,63%
ESTONIA	33,59%	2,07%	6,17%
GREECE	36,78%	5,90%	16,04%
HUNGARY	39,40%	1,86%	4,71%
POLAND	32,10%	4,60%	14,33%
SLOVAK REPUBLIC	32,25%	3,54%	10,96%
SLOVENIA	36,60%	1,47%	4,03%
Mediterranean	***37,22%***	***2,55%***	**6,84%**
ITALY	43,34%	2,06%	4,75%
SPAIN	33,85%	2,42%	7,14%
PORTUGAL	34,49%	3,16%	9,16%
Middle East	***30,70%***	***2,36%***	**7,65%**
ISRAEL	31,37%	3,01%	9,60%
TURKEY	30,03%	1,71%	5,69%

Country name	Total Tax Revenue % of GDP	Tax on Corporate Profit % of GDP	Incidence
Benelux	***39,84%***	***3,50%***	**8,78%**
BELGIUM	44,81%	3,39%	7,56%
NETHERLANDS	37,75%	2,72%	7,22%
LUXEMBOURG	36,96%	4,38%	11,85%
Scandinavian	***41,83%***	***3,05%***	**7,29%**
DENMARK	46,62%	2,64%	5,67%
FINLAND	43,99%	2,17%	4,94%
SWEDEN	43,34%	2,99%	6,91%
NORWAY	38,07%	4,53%	11,89%
ICELAND	37,12%	2,91%	7,83%
Commonwealth	***29,71%***	***5,29%***	**17,79%**
CANADA	31,94%	3,13%	9,80%
AUSTRALIA	27,80%	11,40%	41,01%
NEW ZEALAND	32,76%	4,42%	13,48%
UNITED STATES	26,36%	2,20%	8,33%
Central & South America	***19,07%***	***4,10%***	**21,48%**
MEXICO	17,44%	3,28%	18,79%
CHILE	20,70%	4,91%	23,74%
Far East	***28,63%***	***3,75%***	**13,08%**
JAPAN	32,00%	4,26%	13,32%
KOREA	25,25%	3,24%	12,84%

Figure 9 - Summary per country grouped per macro region of total tax revenue as percentage (%) of GDP, Total Tax on Corporate Profit as percentage (%) of GDP and incidence of CIT on total taxation revenue collected by the government.
Source: database Appendix A

4.1.2. Tax Structure

This paragraph analyzes the statutory corporate income tax rate imposed by law and the eventual reduced/adjusted tax rate applied for small medium enterprises that some jurisdictions propose. Moreover, it is also considered the effective corporate income tax rate, which adds to the statutory income tax rate all the jurisdictional additional federal or local tax rate, which ends up to raise the overall effective tax rate with respect to the statutory tax rate imposed by law.

Statutory corporate income tax rate are central government corporate income tax rate imposed by law – by statute – expressed in percentage terms[41]. However, it is important

[41] Data regarding Statutory and Effective Corporate Income Tax Rate are updated to 2016 and are downloaded from the national OECD Database Table providing comparative dataset.

to distinguish the tax liability computed using this percentage and the actual amount a company is required to pay in taxes to the government. As explained, the former one is the **statutory tax rate**, which is applied on the corporate income of the period in order to derive the tax base for tax purposes.

Moreover, some jurisdictions provide to small and medium enterprises (SMEs) a reduced corporate income tax rate, provided to qualifying companies according to some specific parameters usually set with respect to *total turnover*, *total income* or *share capital*.

The table of figure 10 provide an indicator to the extent of analyzing the OECD trends regarding the statutory corporate income tax rate and the related effective corporate income tax rate. As it is possible to see from the table, the highest average statutory is set in **Commonwealth** regions as well as in **Central & South America**, with an average statutory CIT rate of the macro region of 27%. These macro regions also have the highest average effective CIT rate[42], reaching 32,50% CIT rate, which includes not only the statutory tax rate but also the federal and local income tax rate. The highest deviations between statutory and effective corporate income tax rate are realized in **Commonwealth** region, where the variation reaches 5,50%, followed by **Far East** region with a deviation of 4,40% and **Benelux** with 3,07%.

Country name	Average Statutory CIT Rate	Average Effective CIT Rate	# countries per macroregion	# countries applying reduced CIT for SMEs	Incidence
Central Europe	19,06%	21,81%	6	1	17%
Balkans	20,71%	20,71%	7	2	29%
Mediterranean	26,83%	27,33%	3	1	33%
Middle East	22,50%	22,50%	2	0	0%
Benelux	26,33%	29,40%	3	3	100%
Scandinavian	21,80%	21,80%	5	0	0%
Commonwealth	27,00%	32,50%	4	2	50%
Central & South America	27,00%	27,00%	2	0	0%
Far East	22,70%	27,10%	2	2	100%
OECD - Average	***23,05%***	***25,03%***	***34***	***11***	***32%***

Figure 10 - Summary per macro region of statutory corporate income tax rate and effective corporate income tax rate. Overview of the trends regarding reduced CIT rate for SMEs.
Source: database Appendix A

[42] In order to compute the Average Effective CIT Rate we used the highest value in case of various different CIT provided to SMEs. Singular values and ranges are disclosed separately in the tables in Figure 12 as well as in Appendix A.

The following table gives a detailed overview regarding the precise statutory and effective corporate income tax rate applied in each country. The largest variation between statutory and effective income tax rate is observed in **Canada**, where the statutory CIT rate is 15% and additional federal and provincial/territorial income tax must be added, with a range of 11%-16%. Also **Luxembourg** is characterized by a great variation between the two values, because it accounts for a 7% additional contribution to unemployment fund which is generally added to the statutory CIT rate.

Country name	Statutory CIT Rate	Effective CIT Rate	Tax rate for SMEs
Central Europe	***19,06%***	***21,81%***	**1**
AUSTRIA	25,00%	25,00%	✗
GERMANY	15,00%	30% - 33%	✗
FRANCE	33,33%	34,43%	15,00%
SWITZERLAND	8,50%	7,80%	✗
UNITED KINGDOM	20,00%	20,00%	✗
IRELAND	12,50%	12,5% - 25%	✗
Balkans	***20,71%***	***20,71%***	**2**
CZECH REPUBLIC	19,00%	19,00%	✗
ESTONIA	20,00%	20,00%	✗
GREECE	29,00%	29,00%	✗
HUNGARY	19,00%	19,00%	15,00%
POLAND	19,00%	19,00%	✗
SLOVAK REPUBLIC	22,00%	22,00%	✗
SLOVENIA	17,00%	17,00%	Lump sum
Mediterranean	***26,83%***	***27,33%***	**1**
ITALY	27,50%	27,50%	✗
SPAIN	25,00%	25,00%	✗
PORTUGAL	28,00%	29,50%	17,00%
Middle East	***22,50%***	***22,50%***	**0**
ISRAEL	25,00%	25,00%	✗
TURKEY	20,00%	20,00%	✗

Country name	Statutory CIT Rate	Effective CIT Rate	Tax rate for SMEs
Benelux	***26,33%***	***29,40%***	**3**
BELGIUM	33,00%	33,99%	24,25%
NETHERLANDS	25,00%	25,00%	20,00%
LUXEMBOURG	21,00%	29,22%	20,00%
Scandinavian	***21,80%***	***21,80%***	**0**
DENMARK	22,00%	22,00%	✗
FINLAND	20,00%	20,00%	✗
SWEDEN	22,00%	22,00%	✗
NORWAY	25,00%	25,00%	✗
ICELAND	20,00%	20,00%	✗
Commonwealth	***27,00%***	***32,50%***	**2**
CANADA	15,00%	26% - 31%	✗
AUSTRALIA	30,00%	30,00%	28,50%
NEW ZEALAND	28,00%	28,00%	✗
UNITED STATES	35,00%	39,50%	Varies
Central & South America	***27,00%***	***27,00%***	**0**
MEXICO	30,00%	30,00%	✗
CHILE	24,00%	24,00%	✗
Far East	***22,70%***	***27,10%***	**2**
JAPAN	23,40%	30,00%	19,00%
KOREA	22,00%	24,20%	7,00%

Figure 11 - Summary per country grouped per macro region of statutory corporate income tax rate and effective corporate income tax rate. Overview of the trends regarding reduced CIT rate for SMEs.
Source: database Appendix A.

Tables in figure 10 and figure 11, provide also a summary of the major trends of OECD countries by summarizing the number of countries per macro region and the number of countries applying a reduction in the corporate income tax rate for SMEs. On average, only 32% (11 countries) out of the total analyzed population of 34 countries are recognizing a reduced corporate income tax rate for SMEs.

In particular, such reduction in tax rate is available in **Korea**, applying 7% of reduced CIT to SMEs, **France** and **Hungary**, which provide for 15% of corporate income tax rate to

SMES, **Portugal** applies 17%, **Japan** applies 19%, **Netherlands** applies the 20% while **Belgium** apply the 24,25%[43]. None of the countries classified in the Scandinavian region and in the Middle East region applies a reduced tax rate for SMEs.

Slovenia differs from the other countries because it provides to qualifying companies[44] the possibility to obtain a lump sum deduction equivalent to 80% of annual revenue. This tax base assessment has to include revenues recognized for tax purposes and lump-sum expenses amounting to 80% of these revenues. If a taxpayer decided to comply under this scheme, no tax relief can be claimed or tax loss declared.

Another exception to the standard reduced rate for SMEs applies in **United States**, where the corporate income tax rate is based on a progressive rate schedule rather than a specific reduced tax rate. A corporation's taxable income not exceeding USD 335 thousands is taxed at marginal rates ranging from 15% to 39%. Corporations with taxable income between USD 335 thousands and USD 10 million are effectively taxed at 34% on all taxable income. Corporations with taxable income exceeding USD 10 million are taxed at 35%, with amounts exceeding USD 15 million but not exceeding USD 18,3 million subject to an additional tax of 3%. As a result, corporations with taxable income in excess of USD 18,3 million are effectively subject to tax at a rate of 35% on all taxable income. Figure 10 provides a schematic and synthetic representation of the United Stated progressive tax schedule.

2017 taxable income		CIT		
Over (USD*)	But not over (USD)	Pay (USD) +	% on excess	of the amount over (USD)
0	50,000	0	15	0
50,000	75,000	7,500	25	50,000
75,000	100,000	13,750	34	75,000
100,000	335,000	22,250	39	100,000
335,000	10,000,000	113,900	34	335,000
10,000,000	15,000,000	3,400,000	35	10,000,000
15,000,000	18,333,333	5,150,000	38	15,000,000
18,333,333			35	0

Figure 12 - US corporate income tax progressive rate schedule.
Source: EY Global Tax Guide

[43] For specific threshold limit up to which SMEs conditions are applied see Appendix A, Footnotes section.

[44] Qualifying companies are those companies whose revenue in the previous year does not exceed EUR 50 thousands (or EUR 100 thousands if employing at least one full-time employee for at least 5 months)

We observed from the previous chapter how the statutory corporate income tax rate historically experienced a significant drop, in order to cope with the increase tax competition. The following graphs show the trend which the corporate income tax rate experienced in the last decades, from 2000 to 2016. Figure 13 shows the OECD average statutory corporate income tax rate: it is possible to observe the difference between the initial average OECD CIT rate in 2000, which was around 30,42% compared to the actual 22,82%. The next graph, figure 14, shows a comparison among the various OECD countries in terms of statutory corporate income tax rate in 3 years, i.e. 2000, 2008 and 2015. It is possible to observe the significant variation in the tax rate from 2000 to 2008, while from 2008 to 2015 the variation is quite smaller with respect to the previous period's one. The few countries that have not experienced a reduction in corporate income tax rate from 2008 to 2015 are **Greece**, **Island** and **Slovak Republic**, whose tax rate has raised up between the two periods.

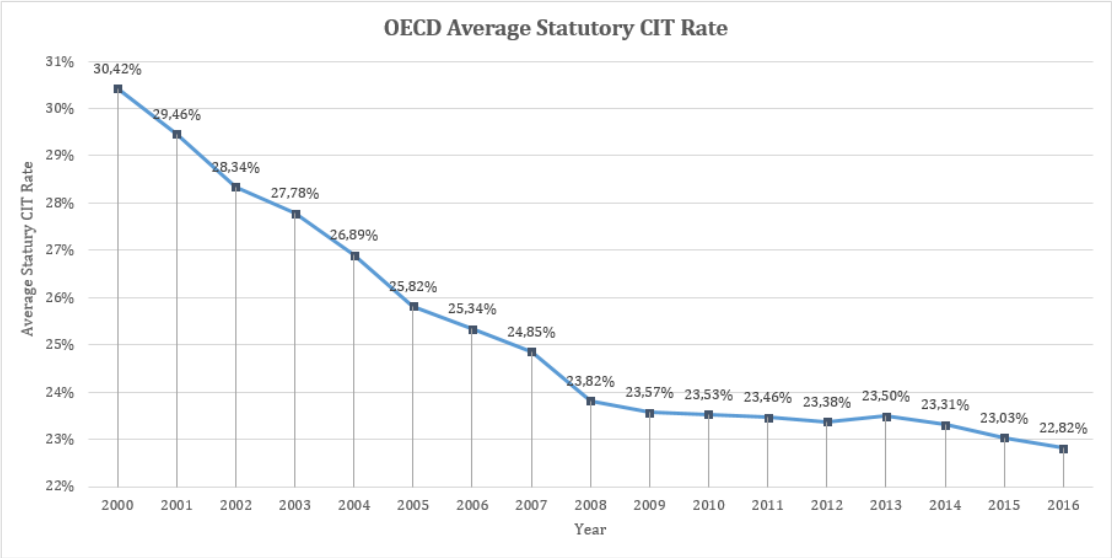


Figure 13 - OECD average statutory corporate income tax rate trend from 2000 to 2016.
Source: Dataset: Table II.1. Corporate income tax rate from OECD website.

In the graphs below, there is a comparison among the OECD average CIT rate and some major countries. Each country has experienced a drop in the corporate income tax rate except from **France**, which had an average CIT rate around 37,5% in 2000, that has experienced a light decrease from 2002 until 2012, followed by a further increase of 1,5% reaching again 37,5%. On average, the *race-to-the-bottom* trend is significantly supported by data confirming the great reduction in tax rate in the last decades.

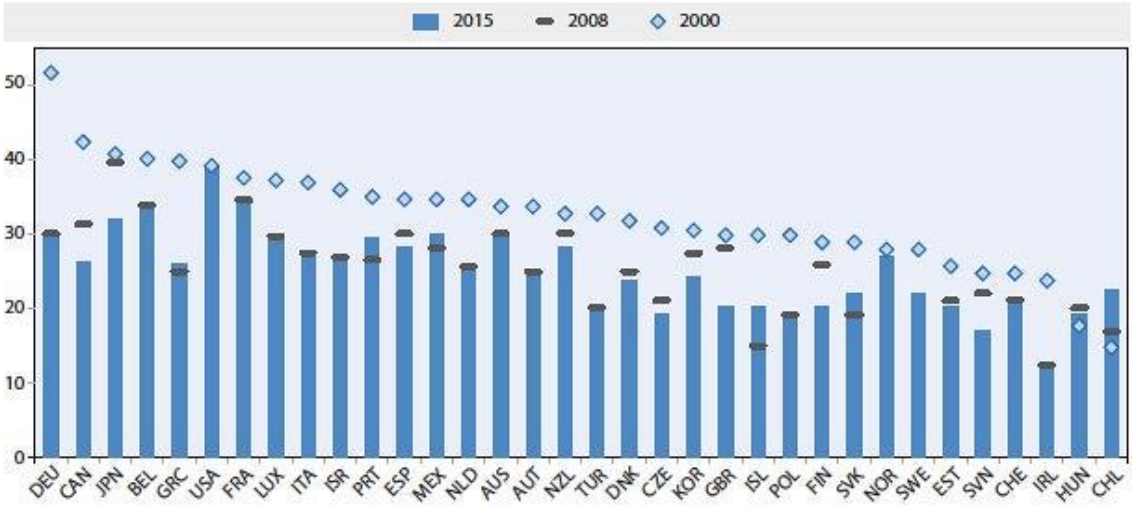
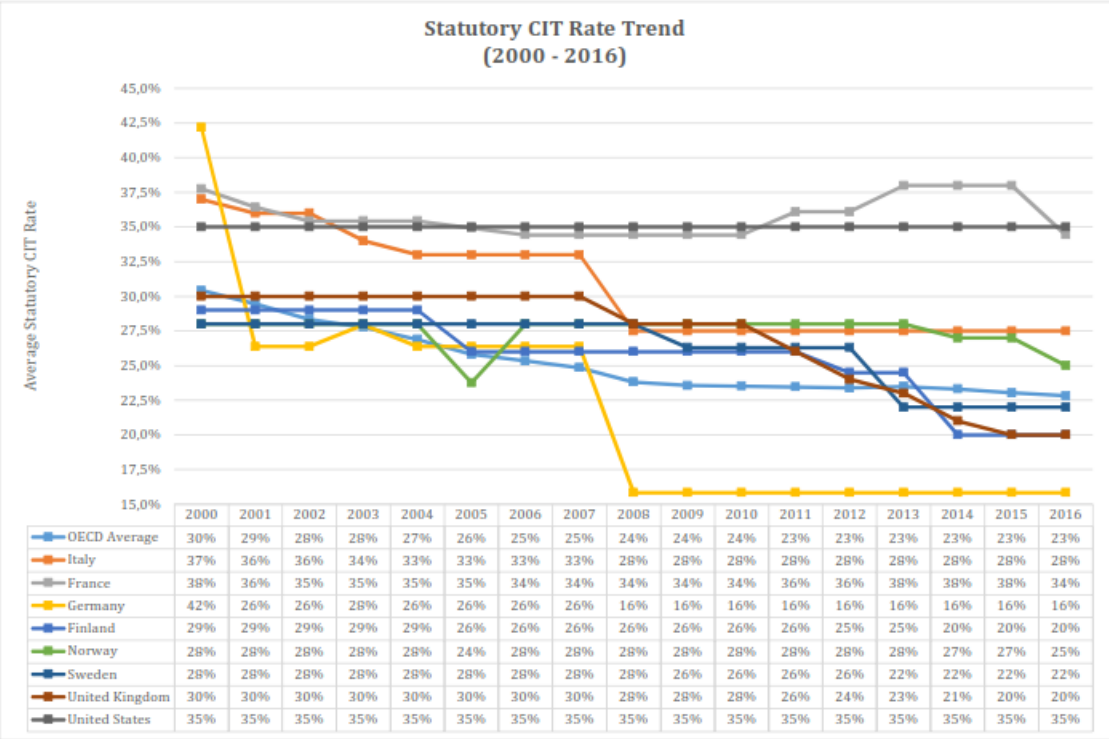


Figure 14 - OECD corporation tax rates (%) since 2000.
Source: OECD



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
OECD Average	30%	29%	28%	28%	27%	26%	25%	25%	24%	24%	24%	23%	23%	23%	23%	23%	23%
Italy	37%	36%	36%	34%	33%	33%	33%	33%	28%	28%	28%	28%	28%	28%	28%	28%	28%
France	38%	36%	35%	35%	35%	35%	34%	34%	34%	34%	34%	36%	36%	38%	38%	38%	34%
Germany	42%	26%	26%	28%	26%	26%	26%	26%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Finland	29%	29%	29%	29%	29%	26%	26%	26%	26%	26%	26%	26%	25%	25%	20%	20%	20%
Norway	28%	28%	28%	28%	28%	24%	28%	28%	28%	28%	28%	28%	28%	28%	27%	27%	25%
Sweden	28%	28%	28%	28%	28%	28%	28%	28%	28%	26%	26%	26%	26%	22%	22%	22%	22%
United Kingdom	30%	30%	30%	30%	30%	30%	30%	30%	28%	28%	28%	26%	24%	23%	21%	20%	20%
United States	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%

Figure 15 – Statutory corporate income tax rate trend in OECD countries from 2000 to 2016.
Source: Dataset: Table II.1. Corporate income tax rate from OECD website

4.1.3. Tax payers

OECD classify these main categories of tax payers for tax collection purposes:

- Legal persons
- Organizational units having no legal entity
- Tax capital groups
- Associations
- Foundations
- Companies having their seat or office in other countries, provided that in their country they are treated as legal persons subject to tax on income
- Public corporations

Although this list contains the more frequent legal persons liable for tax purposes, every country present some exceptions, either for entities liable or for entities exempted from taxation. Among the entities exempted from corporate income taxation there are:

- Public corporations
- Non profitable organizations
- Charitable organizations or churches
- Associations or foundations
- Hospitals
- State, public departments and municipalities
- Political parties
- Agricultural cooperatives and small fisheries

4.1.4. Tax base for revenue collection

As general rule, taxable income for CIT extent includes in its calculation the following tab objects:

- Interests
- Royalties
- Dividends
- Capital gains

The corporate income taken into consideration is usually source-based rather than resident-based, hence including resident companies' worldwide income while non-resident are taxed only on income derived from host country source. In order to prevent the double taxation of income, jurisdictions usually apply unilateral reliefs, providing

exemption or ordinary foreign tax credit, or apply tax treaty network, providing reliefs from double taxation on all types of income[45].

The following table summarizes how different companies set their tax base for tax revenue collection, in particular how they tax domestic-source income of non-resident companies and whether they consider worldwide or domestic income of resident countries. Moreover, information regarding double-taxation relief has also been collected, in a way to understand how jurisdictions respond to double taxation issues.

Country name	Tax base for revenue collection		
	Domestic-source income of non-resident	Resident income considered	Double-tax relief
Central Europe			
AUSTRIA	Taxed	Worldwide	✓
GERMANY	Taxed	Worldwide	✓
FRANCE	Taxed	Domestic	✗
SWITZERLAND	Taxed	Worldwide	✓
UNITED KINGDOM	Taxed	Worldwide	✓
IRELAND	Taxed	Worldwide	✓
Balkans			
CZECH REPUBLIC	Taxed	Worldwide	✓
ESTONIA	Taxed	Worldwide	✓
GREECE	Taxed	Worldwide	✓
HUNGARY	Taxed	Worldwide	✓
POLAND	Taxed	Worldwide	✓
SLOVAK REPUBLIC	Taxed	Worldwide	✓
SLOVENIA	Taxed	Worldwide	✓
Mediterranean			
ITALY	Taxed	Worldwide	✓
SPAIN	Taxed	Worldwide	✓
PORTUGAL	Taxed	Worldwide	✓
Middle East			
ISRAEL	Taxed	Worldwide	✓
TURKEY	Taxed	Worldwide	✓

Country name	Tax base for revenue collection		
	Domestic-source income of non-resident	Resident income considered	Double-tax relief
Benelux			
BELGIUM	Taxed	Worldwide	✓
NETHERLANDS	Taxed	Worldwide	✓
LUXEMBOURG	Taxed	Worldwide	✓
Scandinavian			
DENMARK	Taxed	Worldwide	✓
FINLAND	Taxed	Worldwide	✓
SWEDEN	Taxed	Worldwide	✓
NORWAY	Taxed	Worldwide	✓
ICELAND	Taxed	Worldwide	✓
Commonwealth			
CANADA	Taxed	Worldwide	✓
AUSTRALIA	Taxed	Worldwide	✓
NEW ZEALAND	Taxed	Worldwide	✓
UNITED STATES	Taxed	Worldwide	✓
Central & South America			
MEXICO	Taxed	Worlwide	✓
CHILE	Taxed	Worldwide	✓
Far East			
JAPAN	Taxed	Worldwide	✓
KOREA	Taxed	Worldwide	✓

Figure 16 - Summary per country grouped per macro region of preferences of tax base for tax revenue collection.
Source: database Appendix A

Such information has been collected and summarized in the above table. The common preference of OECD countries is to adopt a source-based income tax base for tax purposes, even if some deviations from such general line do exist.

In **France** only profits made by companies operating in France are liable for taxation purposes, whatever their nationality. This means that profits made by a French company

[45] Wide explanation of double-tax relief is given in Chapter 3 "Tax Coordination: Harmonization Efforts and Bilateral Treaties"

in companies operating in other countries are not liable to French Corporation tax; likewise, a foreign company is liable to French corporation tax only on the profit made from enterprises operating in France. No double taxation relief is provided but most tax treaties provide for a tax credit mechanism.

4.1.5. Capital gains and withholding tax

A **capital gains tax** (**CGT**) is a type of tax levied on capital gains/profits that an investor realizes when he sells a capital asset for a price that is higher than the purchase price. Capital gains taxes are only triggered when an asset sale is realized, not while it is held by an investor.

A **withholding tax**, or **retention tax**, is a government requirement for the tax payer of an income item to withhold or deduct tax from the payment, and pay that tax to the government. Many countries require withholding tax on payments of interest or dividends. Moreover, in most jurisdictions there are additional withholding tax obligations if the recipient of the income is resident in a different jurisdiction, and in those circumstances withholding tax usually applies to royalties, rent or even the sale of real estate.

We have analyzed hence, the withholding tax applied in each OECD country. Generally, withholding tax rate on payments of interests are usually the lower ones; followed by withholding tax applied on royalties and on dividends. All those expenses are generally deducted from the income taxable base and, in case of companies who are resident in different countries with respect to the source of income, those companies apply such percentage rate on the specific expense payments.

Country name	Capital gains tax rate	Withholding tax		
		Dividends	Interests	Royalties
Central Europe	23,58%	23,15%	26,48%	26,48%
Balkans	16,00%	17,00%	17,14%	19,29%
Mediterranean	26,83%	26,67%	26,67%	29,67%
Middle East	22,50%	20,00%	17,50%	22,50%
Benelux	26,33%	20,00%	15,00%	10,00%
Scandinavian	21,70%	24,40%	9,00%	13,00%
Commonwealth	19,63%	28,75%	20,00%	25,00%
Central & South America	27,00%	22,50%	37,50%	35,00%
Far East	22,50%	21,05%	21,05%	21,05%
OECD - Average	***22,90%***	***22,61%***	***21,15%***	***22,44%***

Figure 17 - Summary per macro region of capital gains tax rate and withholding tax provided to companies by jurisdictions.
Source: database Appendix A

From the above table[46] we can observe great diversification regarding the withholding tax rate set for each type of expense payments. Generally, tax treaties and bilateral agreements can reduce the due amount of withholding tax from one country to the other, overriding the standard withholding tax rate hereby summarized. A lower withholding tax implies lower tax on sources of income and hence, i.e., a larger dividend income to be brought home: this means that usually companies should consider such parameters when deciding in which country to locate their foreign subsidiary, in order to maximize dividend gains when withholding taxation is applied.

On average, **Central & South America** applies a withholding tax rate above the OECD average for each withholding tax considered, 35% with respect to royalties (against 22,44% for the OECD average), 37,50% with respect to interest payments (against 21,15% for the OECD average). On average, **Scandinavian** countries and the is the macro region with the lower withholding tax rate for type of expense payments. This is due to the fact that the five Scandinavian countries cooperate under a single multilateral treaty, the *Nordic Income and Capital Tax Treaty*, under which transaction parties can obtain

[46] In order to compute the OECD average withholding tax rate and the capital gains tax rate we used the highest value in case of a range of available rate. Singular values and ranges are disclosed separately in the tables in Figure 17 as well as in Appendix A.

benefits and reduced withholding tax rate by applying it. Although they apply a unique treaty, there exists differences in standard withholding tax rate applies for each expense payment. In **Norway**, for example, without the application of a treaty, payments to a nonresident company are not subject to withholding tax; while on **Iceland**, withholding tax to nonresident is set at 10%.

Hungary instead, do not provide any withholding tax neither for dividends, interests nor royalties. Moreover, the absence of withholding tax combined with the participation exemption available for capital gains, makes Hungary an attractive location for holding and licensing companies.

Also **Netherlands** is considered an attractive location for multinational firms and their international businesses: among the tax aspects that make this country attractive is the participation exemption and the absence of withholding taxes on interests and royalties as well as the innovation box regime providing a significant reduction of CIT rate on profits derived from intellectual properties.

Country name	Capital gains tax rate	Withholding tax		
		Dividends	Interests	Royalties
Central Europe	***24%***	***23%***	***26%***	***26%***
AUSTRIA	0% - 25%	0% - 27,5%	0% - 25% - 27,5%	20%
GERMANY	15%	25% - 26,375%	0% - 25% - 26,375%	15% - 15,825%
FRANCE	4,56% - 19% - 33%	0% - 30%	0%	33%
SWITZERLAND	0% - 8,5%	35%	0% - 35%	0%
UNITED KINGDOM	0% - 20%	0%	0% - 20%	0% - 20%
IRELAND	0% - 33% - 40%	0% - 20%	0% - 20%	0% - 20%
Balkans	***16%***	***17%***	***17%***	***19%***
CZECH REPUBLIC	0% - 19%	15% - 35%	15% - 35%	15% - 35%
ESTONIA	20%	0%	0%	10%
GREECE	15%	15%	15%	20%
HUNGARY	10% - 19%	0%	0%	0%
POLAND	19%	19%	20%	20%
SLOVAK REPUBLIC	22%	7% - 35%	19% - 35%	19% - 35%
SLOVENIA	17%	15%	15%	15%

Mediterranean	***27%***	***27%***	***27%***	***30%***
ITALY	27,5% (with exceptions)	0% - 1,375% - 26%	0% - 12,5% - 26%	0% - 30%
SPAIN	25%	19%	0% - 19%	19% - 24%
PORTUGAL	28%	0% - 25% - 35%	25% - 35%	25% - 35%

Middle East	***23%***	***20%***	***18%***	***23%***
ISRAEL	25%	5% - 10% - 25%	15% - 25%	25%
TURKEY	20%	15%	0% - 10%	20%

Country name	Capital gains tax rate	Withholding tax		
		Dividends	Interests	Royalties
Benelux	***26,33%***	***20,00%***	***15,00%***	***10,00%***
BELGIUM	0% - 25% - 33%	0% - 1,6995% - 10% - 15%- 20% - 30%	0% - 15% - 30%	0% - 15% - 30%
NETHERLANDS	0% - 25%	0% - 15%	0%	0%
LUXEMBOURG	0% - 21%	0% - 15%	0% (15%)	0%
Scandinavian	***22%***	***24%***	***9%***	***13%***
DENMARK	0% - 23,5%	0% - 15% - 27%	0% - 25%	0% - 25%
FINLAND	0% - 20%	0% - 20%	0%	0% - 20%
SWEDEN	0% - 22%	0% - 30%	0%	0%
NORWAY	0% - 25%	0% - 25%	0%	0%
ICELAND	18%	20%	10% - 20%	20%
Commonwealth	***20%***	***29%***	***20%***	***25%***
CANADA	15%	25%	25%	25%
AUSTRALIA	30% - 28,5%	0% - 30%	10%	30%
NEW ZEALAND	0%	0% - 15% - 30%	15%	15%
UNITED STATES	35%	30%	30%	30%
Central & South America	***27%***	***23%***	***38%***	***35%***
MEXICO	30%	10%	4,9% - 10% - 15% - 21% - 35% - 40%	25% - 35% - 40%
CHILE	24%	0% - 35%	4% - 35%	15% - 30%
Far East	***23%***	***21%***	***21%***	***21%***
JAPAN	23%	20% - 15% plus 2,1% surtax	20% - 15% plus 2,1% surtax	20% plus 2,1% surtax
KOREA	10% - 22%	20% plus surtax	14% - 20% plus surtax	20% plus surtax

Figure 18 - Summary per per country grouped per macro region of capital gains tax rate and withholding tax provided to companies by jurisdictions.
Source: database Appendix A

4.1.6. Deductions, allowances, credits, exemptions

Countries do not only reduce their corporate income tax rate in order to attract more foreign investments: in addition to a general downward trend of corporate income tax rate they also design tax scheme where deductions, capital allowanced and tax credits are provided to companies. The governments' scope for such tax base widening is to provide companies tax advantages, either with the exemption of some expenses and also with reduced taxation for some sources of income.

Interest deduction is provided in almost all OECD Countries but some exception applies to deductibility of interests, different from thin capitalization rule. Examples are:

- the restriction of interests deriving from intra-group loans;
- financing costs related to acquisitions of participations within a group;
- reduction of the deductibility of interests up to the value of interests received;
- application of the thin capitalization rule or the earning stripping rule[47];
- restriction of deductibility up to a maximum percentage over the EBITDA or the EBIT, in order to limit the extent of interest deductibility.

Generally, as it is possible to see from figure 19, almost all countries apply a restriction on the deductibility of interest except for Commonwealth countries, Middle East and Central & South Africa: in these countries, the most common interest deductibility limit is the thin capitalization rule, further explained in details in chapter 4.1.8.

The database also provide information regarding those countries where an allowance for corporate equity[48] is provided, even if such tax instruments are rarely used, only in **Italy, Portugal** and **Belgium**. As summarized in figure 20, ACE rate is applied in **Italy** at 4,75% for tax year 2016, raised up with respect to the 4,5% of the 2015 and the 4% of the tax year 2014. **Portugal** provide an allowance of 5% while **Belgium** provide a rate of 1,63%.

Moreover, some countries provide exemptions from taxable income: the most popular exemptions applied in almost every countries are the exemption of income from participation and patents income as well as capital gains from fixed assets of long-term equity securities.

In addition, the table below summarizes the types of tax credit and incentives provided to companies. Tax credits generally and most commonly can be provided to companies that

[47] See chapter 2.2.1 for earning stripping rule details.

[48] See chapter 2.2.1 for allowance for corporate equity details.

invest in research and development activities, technological innovation and green investment, but also for job creation as well as training activities and donation to charitable organizations or voluntary associations. Specific analysis of R&D incentives provided to companies is carried out in chapter 4.1.9 and in the table disclosed in Appendix B.

Country name	# countries per macroregion	Deductions, allowances, credits, exemptions							
		Limits to interest deductions (other than TC)		ACE Rate		Exemptions from taxable income		Tax credits	
Central Europe	6	6	100%	0	0%	6	100%	6	100%
Balkans	7	2	29%	0	0%	7	100%	6	86%
Mediterranean	3	3	100%	2	67%	3	100%	3	100%
Middle East	2	0	0%	0	0%	2	100%	2	100%
Benelux	3	3	100%	1	33%	3	100%	3	100%
Scandinavian	5	3	60%	0	0%	5	100%	5	100%
Commonwealth	4	0	0%	0	0%	4	100%	4	100%
Central & South America	2	0	0%	0	0%	2	100%	2	100%
Far East	2	1	50%	0	0%	2	100%	2	100%
OECD - Average	**34**	**18**	**53%**	**3**	**9%**	**34**	**100%**	**33**	**97%**

Figure 19 - Summary per macro region of deductions, allowances, credits and exemptions provided to companies.
Source: database Appendix A

Generally, from the above table 19, we can identify that all countries provide in their tax schemes some form of exemptions from taxable income and tax credits. The numbers expressed in the first column are the total number of countries belonging to the macro region, while the following columns of the tables sum up all the countries that do apply that specific condition; moreover, the incidence over the total number of country in percentage terms in calculated.

From table 20 instead, it is possible to observe that tax credits are provided to companies in all countries, except for Estonia, where no tax incentives are provided since Estonia applies corporate income tax only to distributed profits.

Country name	Deductions, allowances, credits, exemptions			
	Limits to interest deductions (other than TC)	ACE Rate	Exemptions from taxable income	Tax credits
Central Europe	6	0	6	6
AUSTRIA	✓	✗	✓	✓
GERMANY	✓	✗	✓	✓
FRANCE	✓	✗	✓	✓
SWITZERLAND	✓	✗	✓	✓
UNITED KINGDOM	✓	✗	✓	✓
IRELAND	✓	✗	✓	✓
Balkans	2	0	7	6
CZECH REPUBLIC	✗	✗	✓	✓
ESTONIA	✗	✗	✓	✗
GREECE	✓	✗	✓	✓
HUNGARY	✗	✗	✓	✓
POLAND	✗	✗	✓	✓
SLOVAK REPUBLIC	✓	✗	✓	✓
SLOVENIA	✗	✗	✓	✓
Mediterranean	3	2	3	3
ITALY	✓	4,75%	✓	✓
SPAIN	✓	✗	✓	✓
PORTUGAL	✓	5,00%	✓	✓
Middle East	0	0	2	2
ISRAEL	✗	✗	✓	✓
TURKEY	✗	✗	✓	✓

Country name	Deductions, allowances, credits, exemptions			
	Limits to interest deductions (other than TC)	ACE Rate	Exemptions from taxable income	Tax credits
Benelux	3	1	3	3
BELGIUM	✓	1,63%	✓	✓
NETHERLANDS	✓	✗	✓	✓
LUXEMBOURG	✓	✗	✓	✓
Scandinavian	3	0	5	5
DENMARK	✓	✗	✓	✓
FINLAND	✓	✗	✓	✓
SWEDEN	✓	✗	✓	✓
NORWAY	✗	✗	✓	✓
ICELAND	✗	✗	✓	✓
Commonwealth	0	0	4	4
CANADA	✗	✗	✓	✓
AUSTRALIA	✗	✗	✓	✓
NEW ZEALAND	✗	✗	✓	✓
UNITED STATES	✗	✗	✓	✓
Central & South America	0	0	2	2
MEXICO	✗	✗	✓	✓
CHILE	✗	✗	✓	✓
Far East	1	0	2	2
JAPAN	✓	✗	✓	✓
KOREA	✗	✗	✓	✓

Figure 20 - Summary per country grouped per macro region of deductions, allowances, credits and exemptions provided to companies.
Source: database Appendix A

4.1.7. Loss carry-forward and backward

In many countries, losses can be carried forward to offset the tax base of the following fiscal year, generally with fewer constraints than loss carry-backward but often up to a limited amount or with some time constraints. In addition to loss carry-forward, some countries also provide the possibility of loss carry-backward generally with time limit of one or maximum 2 years: these countries are **Germany**, **France**, **Norway**, **United States**, **Canada**, while **Far East** countries (**Japan**, **Korea**) allows loss carry-backward only for small-medium enterprises.

Country name	Loss relief	
	Carry-forward	Carry-backward
Central Europe		
AUSTRIA	Indefinite/ 75% limit on utilization	No
GERMANY	Indefinite	1 year
FRANCE	Indefinite (but size limit)	1 year (limit EUR 1mln)
SWITZERLAND	7 years	No
UNITED KINGDOM	Indefinite	1 year
IRELAND	Indefinite	1 year
Balkans	**7**	**7**
CZECH REPUBLIC	5 years	No
ESTONIA	N/A	N/A
GREECE	5 years	No
HUNGARY	Indefinite (but size limit)	No
POLAND	5 years	No
SLOVAK REPUBLIC	4 years	No
SLOVENIA	Indefinite (but size limit)	No
Mediterranean	**3**	**3**
ITALY	Indefinite	No
SPAIN	Indefinite	No
PORTUGAL	5 years/SMEs: 12 years	No
Middle East	**2**	**2**
ISRAEL	Indefinite	No
TURKEY	5 years	No

Country name	Loss relief	
	Carry-forward	Carry-backward
Benelux	**3**	**3**
BELGIUM	Indefinite	No
NETHERLANDS	9 years	1 year
LUXEMBOURG	Indefinite	No
Scandinavian	**5**	**5**
DENMARK	Indefinite (but size limit)	No
FINLAND	10 years	No
SWEDEN	Indefinite	No
NORWAY	Indefinite	2 year (only liquidation losses)
ICELAND	10 years	No
Commonwealth	**4**	**4**
CANADA	20 years: noncapital Indefinite: capital	3 years
AUSTRALIA	Indefinite	No
NEW ZEALAND	Indefinite	No
UNITED STATES	20 years	2 years general/ 10 years for specific losses
Central & South America	**2**	**2**
MEXICO	10 years	No
CHILE	Indefinite	No
Far East	**2**	**2**
JAPAN	9 years	No / SMEs 1 year
KOREA	10 years	No / SMEs 1 year

Figure 21 - Summary per country grouped per macro region of deductions, allowances, credits and exemptions provided to companies.
Source: database Appendix A

Focusing more on loss carry-forward, the information on the database can be further analyzed and the time limit of the loss carry-forward can be studied. Among the 34 analyzed countries, 18 jurisdictions do not set any time limit on the carry-forward but 5 out of 18 do impose a size constraint: **Austria, France, Hungary, Slovenia, Denmark**. The most frequent lime limit set by countries is 5 years, followed by 10, 20 and 9 years. The region with the most rigid time limit is the **Balkan** region, where almost all countries provide a 4-5 time limit for loss carry-forward, apart from Slovenia and Hungary with indefinite time limit but adopting a size constraint.

The last column is referred to Estonia, to which this analysis is not applicable since it applies corporate income tax only to distributed profits.

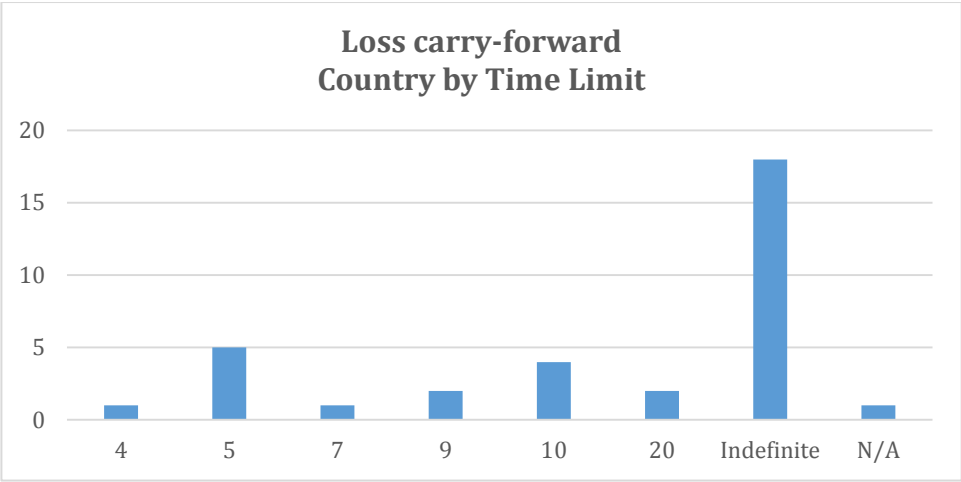


Figure 22 – Loss carry-forward - Country by Time Limit.
Source: own elaboration from data in appendix A.

4.1.8. Thin Capitalization and Transfer Pricing Rule

Thin capitalization rule adoption is not homogenous across OECD countries: several countries do apply the TC rule but with different parameters, ratios and conditions while some other countries have completely abolished and replaced it.

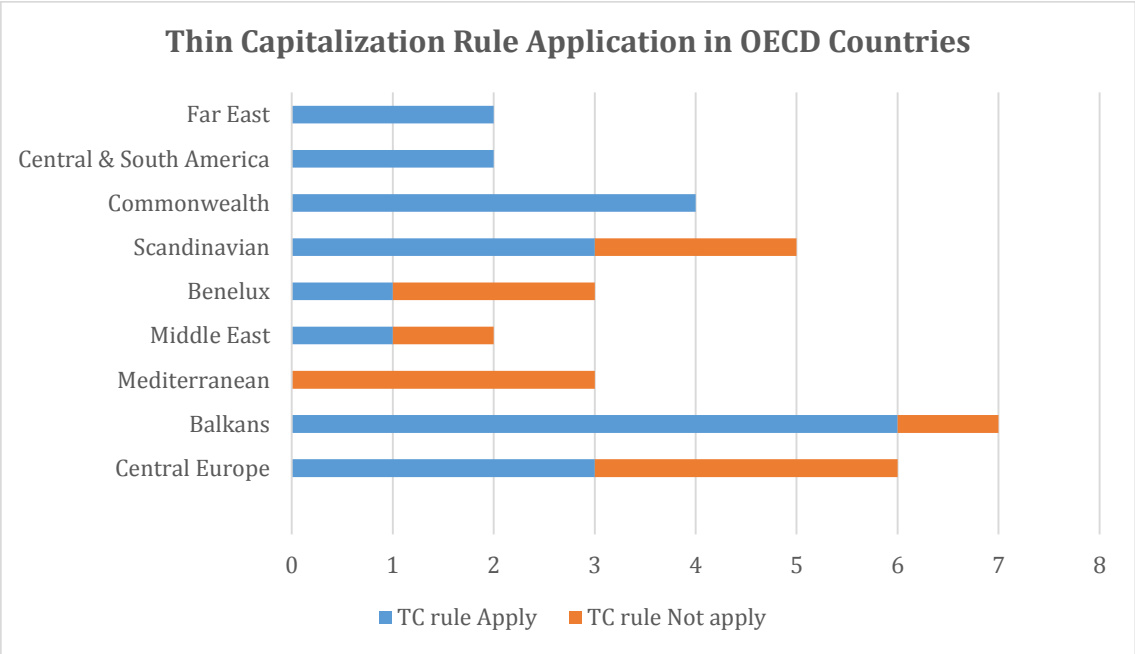


Figure 23 - Thin capitalization rule application in OECD countries.
Source: own elaboration from database information in Appendix A.

Figure 23 gives a clear understanding regarding the application of the TC rule in each macro region. European jurisdictions where the TC rule is not in force are:

- **Austria, Germany, Ireland** (Central Europe);
- **Italy, Spain, Portugal** (Mediterranean);
- **Finland, Sweden** (Scandinavian);
- **Netherlands, Luxembourg** (Benelux);
- **Estonia** (Balkans) and
- **Israel** (Far East).

In **Spain**, TC rule is not in force since 2012 and it has been replaced by the *earning stripping rule* providing deduction of financial expenses up to the 30% of the EBIT (or EBITDA in case of consolidated groups). The same applies for **Italy**, where thin capitalization rule was abolished in 2008 and right now Italian tax law only provides an *earnings stripping rule*[49]. **Sweden**, instead, has no thin capitalization rules and interests on loans are deductible on an accrual basis. Thin capitalization rule in **Netherlands** were in force until 2013 and, before their abolition, they limited the deductibility of interests to related parties to total net debt up to debt-equity ratio of 3:1.

Switzerland has no formal thin capitalization rule but safe harbor rule applies, requiring a minimum equity ratio for each asset class and safe heaven interest rate applies. These rates are used by the Swiss Federal Tax Administration (FTA) to determine the arm's length nature of interest on intragroup loans receivable or payable. The circular prescribes the minimum interest rates for loans granted by a Swiss company to its shareholders or related parties, as well as the maximum interest rates for loans granted by the shareholders or related parties to a Swiss company in Swiss francs or a foreign currency[50].

Regarding the remaining countries where the thin capitalization rule is applied, this rule is typically implemented in 2 ways:

1. by determining a maximum amount of interest that may be deducted with respect to a ratio (usually debt-to-equity ratio) or to another variable (such as the after-tax adjusted EBITDA); or
2. by determining a maximum amount of debt on which deductible interest payments are available.

[49] In Italy, under the *earnings stripping rule*, the deduction of net interest expenses is allowed up to 30% of the EBITDA. The excess can be carried forward with no time limitations.

[50] Information from article "Swiss safe harbor intercompany interest rates for 2016 announced" posted on 24/02/2016 on Deloitte Tax Blog

The first method is usually the most commonly used and countries usually set a limit of interest deductibility equal to 25-30% of EBITDA or a debt-to-equity ratio of 3:1 or 4:1 (even 2:1 in **Japan**).

Country name	Profit shifting		Number of tax treaties
	TC rule	Transfer pricing rules	
Central Europe	**3**	**6**	**97**
AUSTRIA	✗	✓	90+
GERMANY	✗	✓	90+
FRANCE	✓	✓	123
SWITZERLAND	✓	✓	80+
UNITED KINGDOM	✓	✓	125
IRELAND	✗	✓	73
Balkans	**6**	**7**	**68**
CZECH REPUBLIC	✓	✓	70+
ESTONIA	✗	✓	57
GREECE	✓	✓	57
HUNGARY	✓	✓	80
POLAND	✓	✓	90+
SLOVAK REPUBLIC	✓	✓	66
SLOVENIA	✓	✓	58
Mediterranean	**0**	**3**	**89**
ITALY	✗	✓	100+
SPAIN	✗	✓	99
PORTUGAL	✗	✓	68
Middle East	**1**	**2**	**72**
ISRAEL	✗	✓	60+
TURKEY	✓	✓	83

Country name	Profit shifting		Number of tax treaties
	TC rule	Transfer pricing rules	
Benelux	**1**	**3**	**87**
BELGIUM	✓	✓	90+
NETHERLANDS	✗	✓	95+
LUXEMBOURG	✗	✓	77
Scandinavian	**3**	**5**	**66**
DENMARK	✓	✓	75
FINLAND	✗	✓	70
SWEDEN	✗	✓	80+
NORWAY	✓	✓	85+
ICELAND	✓	✓	40
Commonwealth	**4**	**4**	**64**
CANADA	✓	✓	92
AUSTRALIA	✓	✓	44
NEW ZEALAND	✓	✓	40 + 18
UNITED STATES	✓	✓	60+
Central & South America	**2**	**2**	**45**
MEXICO	✓	✓	55
CHILE	✓	✓	32 + 2 new
Far East	**2**	**2**	**73**
JAPAN	✓	✓	65
KOREA	✓	✓	80+

Figura 24 - Summary per country grouped per macro region of application of thin capitalization rule (TC), transfer pricing rule and the number of engaged tax treaties per country.
Source: database Appendix A

From figure 24, it is possible to see that transfer pricing rule, differently from thin capitalization rule, is instead applied uniformly in every country. The general applied rule is the **arm's length principle:** governments must be sure that goods and services are traded between group affiliates and related parties at the price observed in the market.

Transfer pricing is strongly related to international businesses and multinationals, who engage constantly in trading operation with foreign parties, creating problems of double taxation. As stated multiple times, jurisdictions usually engage in bilateral agreements or tax treaties, in order to provide fiscal advantages to companies and to attract them to engage in foreign investment in their country. The greater the number of tax treaties

agreed upon among countries, the larger possibility of attracting foreign investment. **United Kingdom**, **France** and **Italy** are the countries with a larger network (more than 100 engaged treaties) while **Chile, Iceland** and **Australia** are the one entered in less tax treaties among the selected panel of countries.

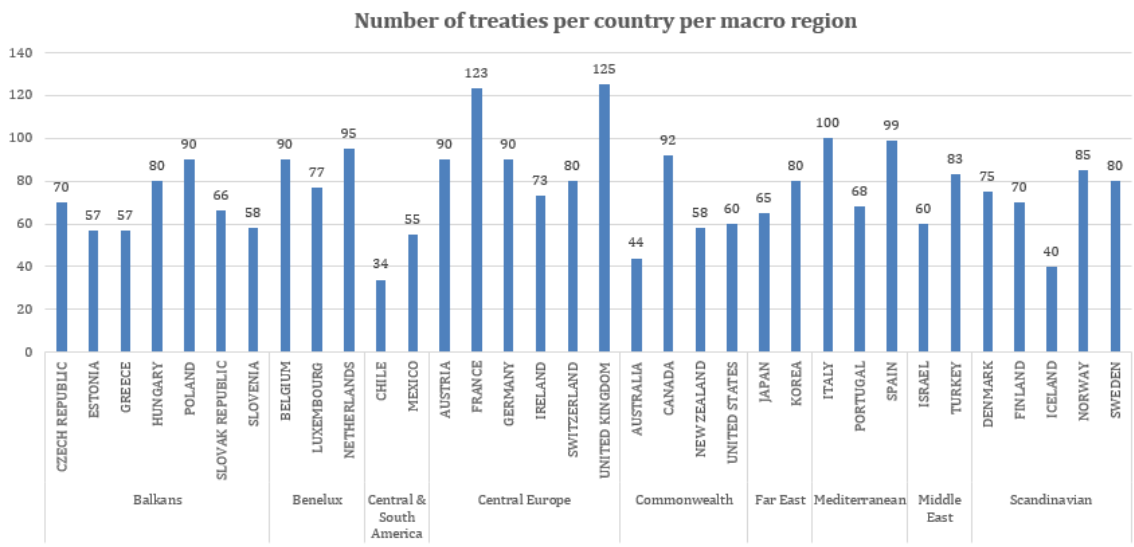


Figure 25 - Number of treaties per country per macro region.
Source: own elaboration from data in Appendix A.

4.1.9. R&D and Innovation

Governments of almost all countries try to push R&D investments by offering preferential tax treatment to qualifying R&D expenditures, especially those incurred by firms. In 2016, 29 of 35[51] OECD Countries, 22 of 28 EU countries provided tax relief on R&D expenditures.

In the current scenario of international tax competition, it is very important for OECD countries' governments to design a specific tax relief plans intended to support and enhance R&D activities carried out by firms.

The first step is the definition of R&D activities and of the typologies of expenditure which are eligible for tax relief: qualified expenses differs across countries but figur26 aims to sum up and give an overview of the OECD trend, following the OECD Frascati Manual definition[52].

[51] Our analysis comprehend 34 countries instead of 35 because OECD data considers also Latvia, that we excluded from our analysis.

[52] OECD (2015), Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development, The Measurement of Scientific, Technological and Innovation Activities, 7th edition, OECD Publishing, Paris, http://oe.cd/frascati

	All countries (49 in total)	OECD (41 in total)	EU-28 (30 in total)
Current R&D expenditure			
R&D labour			
Wages and salaries of researchers	44	37	27
Wages and salaries of other R&D personnel	42	35	25
Subcontracted, collaborative R&D			
Payments to on-site consultants/contractors	34	27	18
Payments to off-site consultants/contractors	36	29	20
Payments for R&D services provided by third parties	36	29	20
Payments for other services	17	11	10
Contributions to R&D carried out by third parties	29	25	15
Other current R&D expenditure			
Purchase of materials and other consumables	37	30	21
Overheads	25	20	13
Capital R&D expenditure			
Acquisition of plant and machinery	19	18	15
Acquisition of software, licences and IP rights	24	22	19
Acquisition of land and buildings	14	13	10
Depreciation / amortisation of R&D assets	19	16	10

Figure 26 - Types of eligible R&D expenditure in OECD, EU and other major countries
Source: OECD, R&D Tax Incentive Indicators, http://www.oecd.org/sti/rd-tax-stats.htm

The target expense of a tax relief is often closer to the financial cost of R&D than to the costs of the R&D occurred internally within the firm, hence independently from who carries out the R&D activity. Indeed, most OECD, EU and other major countries identify as R&D eligible expenses all R&D activities performed internally, subcontracted to outbound consultants, contractors or other third parties. However, the treatment of subcontracted R&D expenses varies across jurisdictions, and eligibility criteria are related to the contractual relation between parties as well as on the type of service provider and on the location where the research activity is performed. For example, in **United Kingdom,** companies can request a R&D tax relief only in the subcontractor is a recognized organization (i.e. scientific research organization). The previous figure shows all types of potentially eligible R&D expenses against which a tax relief may be requested by firms. Generally, countries prefer to consider as eligible R&D expenses those costs linked to labor and other current expenditures rather that long-run expenses such as the acquisition of capital assets for R&D purposes (less than 24 countries on a bundle of 44).

Tax relief can take the form of an **allowance, exemption, deduction** or **credit**. **Tax allowances, exemptions** and **deductions** effectively subtract from the tax base before the tax liability is computed, reducing the taxable amount before assessing the tax. A **tax credit** is an amount subtracted directly from the tax liability due from the beneficiary unit after the liability has been computed. The choice between credits and allowances is largely a formal one, as they can be converted and made equivalent. However, the value of the tax benefit will react differently to changes in the tax rate, the value of R&D tax allowances being directly linked to the level of the corporate income tax rate.

The utilization and the impact of all tax incentives can be influenced the temporary or permanent feature of these tax programs. The greater part of R&D tax support schemes initially came into being as temporary measures: in United States, for example, the federal research and experimentation (R&E) credit has been introduced in 1986 as a temporary measure and after 17 extensions, since 2016, became permanent.

From appendix B, summarizing the most frequent forms of incentives provided to countries, it was possible to elaborate the diagram of figure 27, that help us to understand which are the most frequent tax instruments provided to companies entering in R&D activities.

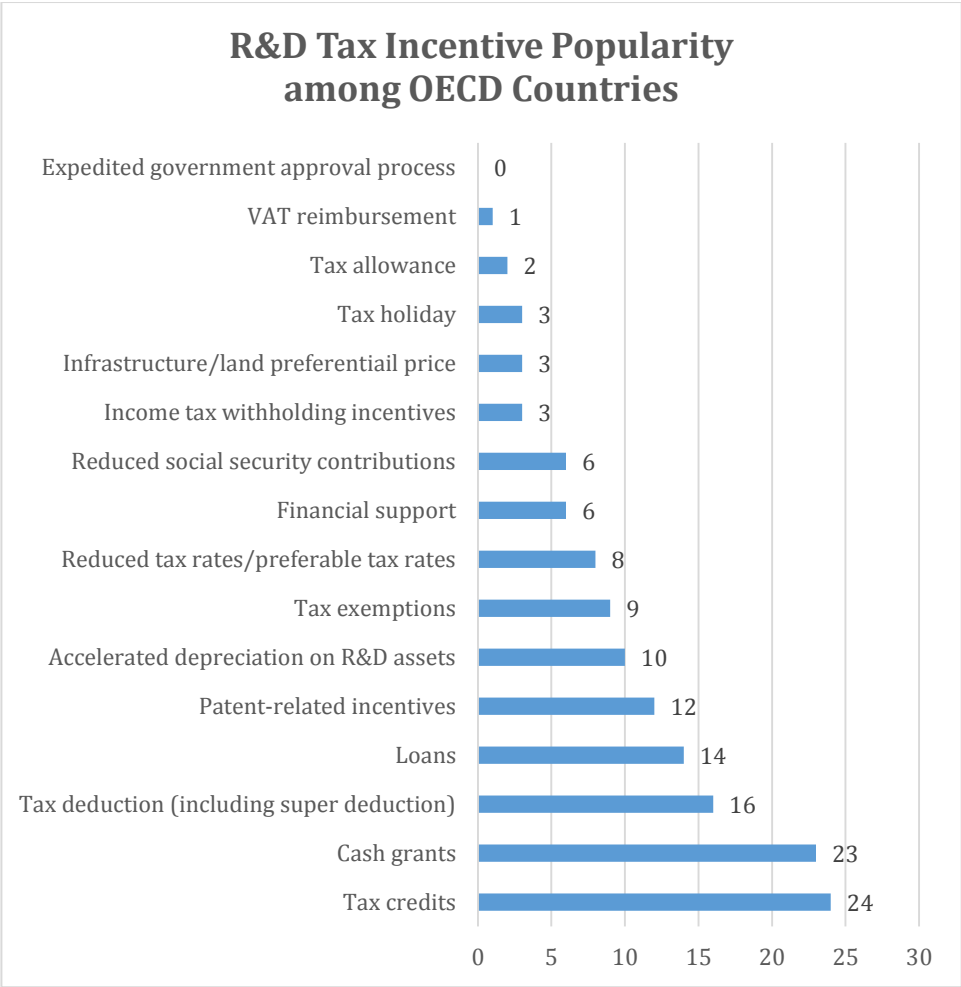


Figure 27 - R&D tax incentive popularity among OECD countries.
Source: own elaboration of EY Worldwide R&D Incentives Reference Guide 2017

All countries may provide different types of tax instrument to companies that invest in R&D but, from figure 26, it is easily understandable that tax credits and cash grants are the R&D tax instruments most frequently implemented by governments. Also programs enhancing and relieving companies from the development and the acquisition of intangible assets are common, such as loans, patent-related incentives and accelerated depreciation on R&D assets.

4.1.10. Foreign Direct Investment

FDI financial flows are cross-border transactions between affiliated parties (direct investors, direct investment enterprises and/or fellow enterprises) recorded during the

reference period (typically yearly or quarterly[53]). Figure provides both an inward and an outward measure of financial flows due to foreign direct investments.

Country name	FDI flows	
	Inward as % of GDP	Outward as % of GDP
Central Europe	5,09%	5,43%
Balkans	2,72%	1,20%
Mediterranean	2,34%	2,10%
Middle East	2,79%	2,20%
Benelux	20,20%	26,40%
Scandinavian	2,10%	4,11%
Commonwealth	2,24%	1,53%
Central & South America	3,63%	1,78%
Far East	0,51%	2,51%
OECD - Average	***4,43%***	***4,89%***

Figure 28 - Summary per macro region of FDI financial inflows and outflows as percentage (%) of the country's GDP.
Source: database Appendix A

Benelux region, comprehending **Luxembourg,** is the country with the highest level of both inward and outward financial flows for FDI, measured as percentage of total country GDP, reaching a level of respectively 44,79% and 52,77%. These high values are justifiable because Luxembourg is a popular location for investment and private equity funds, headquarters, holding companies, financing companies, and securitization vehicles as well as providing a favorable tax regime for expatriates. Luxembourg offers a wide variety of tailored investment incentives for new foreign ventures: governments provide support in funding specific projects for SMEs, companies entering in R&D and innovative investments as well as environmental production or efficient energy use.

Switzerland follows with 10,50% for inward financial flows but only 6,05% financial ouflows. Switzerland is an attractive and popular location investment location for a variety of multinationals and enterprises because of liberal policies, lack of controls over

[53] Data for Database disclosed on Appendix collected by OECD Database and they refer to 2016 results, with exception for some countries where data from 2015/2014 were used in absence of latest data. See also OECD Statistics.

the repatriation of capital and profits, and federal and cantonal incentives for new investors mean that Switzerland. The country frequently is chosen by multinationals as the location for international headquarters, trading companies and other entities coordinating international functions and sales. Foreign companies are, in principle, treated in the same way as local companies, but they can often take advantage of fiscal and financial incentives (e.g. no need for formal approval for direct investment in Switzerland, and no particular office oversees investments).

Netherlands, instead, experience almost 23% of financial outflows in FDI and 8,73% of FDI inward flows. Netherlands has an important international orientation and a liberal policy with respect to FDI. Foreign companies can freely repatriate capital, profits, royalties and fees, borrow locally and on international markets and engage in all types of trade-related payments.

Country name	FDI flows	
	Inward as % of GDP	Outward as % of GDP
Central Europe	***5,09%***	***5,43%***
AUSTRIA	0,97%	2,65%
GERMANY	0,43%	1,15%
FRANCE	1,39%	2,13%
SWITZERLAND	10,50%	6,05%
UNITED KINGDOM	9,68%	N/A
IRELAND	7,58%	15,15%
Balkans	***2,72%***	***1,20%***
CZECH REPUBLIC	3,50%	0,51%
ESTONIA	3,76%	2,07%
GREECE	1,61%	1,09%
HUNGARY	5,57%	2,71%
POLAND	2,43%	1,38%
SLOVAK REPUBLIC	0,06%	0,42%
SLOVENIA	2,09%	0,22%
Mediterranean	***2,34%***	***2,10%***
ITALY	1,56%	1,23%
SPAIN	2,50%	4,37%
PORTUGAL	2,95%	0,68%
Middle East	***2,79%***	***2,20%***
ISRAEL	3,95%	4,01%
TURKEY	1,63%	0,39%

Country name	FDI flows	
	Inward as % of GDP	Outward as % of GDP
Benelux	***20,20%***	***26,40%***
BELGIUM	7,09%	3,91%
NETHERLANDS	8,73%	22,52%
LUXEMBOURG	44,79%	52,77%
Scandinavian	***2,10%***	***4,11%***
DENMARK	0,32%	4,77%
FINLAND	0,68%	5,65%
SWEDEN	3,83%	4,47%
NORWAY	1,46%	1,55%
ICELAND	4,22%	N/A
Commonwealth	***2,24%***	***1,53%***
CANADA	2,21%	4,34%
AUSTRALIA	3,34%	0,00%
NEW ZEALAND	1,28%	0,05%
UNITED STATES	2,13%	1,71%
Central & South America	***3,63%***	***1,78%***
MEXICO	2,51%	0,93%
CHILE	4,76%	2,64%
Far East	***0,51%***	***2,51%***
JAPAN	0,24%	3,07%
KOREA	0,77%	1,94%

Figura 29 - Summary per country grouped per macro region of FDI financial inflows and outflows as percentage (%) of the country's GDP.
Source: database Appendix A

CONCLUSIONS

The aim of this dissertation was to collect information from various countries with respect to corporate income taxation data, in order to understand if the international tax competition of the last decades has effectively encouraged countries to implement more aggressive tax scheme in order to be competitive and attract foreign investment.

We started our analysis by constructing a large database of 34 OECD countries grouped in nine macro regions: Central Europe, Mediterranean, Balkans, Scandinavian, Benelux, Commonwealth, Central & South America, Middle East and Far East, and we collected information regarding their corporate income taxation trend, updated at fiscal year 2016. We selected all those tax factors which could influence companies' decisions regarding foreign investment. We first analyze the tax structure of each country, where potential differences started to come to light: we observe a great diversification among corporate income tax rate followed by a further difference regarding additional surtax to be added which constitutes the final effective corporate income tax rate to which companies are liable to. Moreover, we noticed that only some countries apply a reduced corporate income tax rate for small-medium enterprises, thus influencing the decision of an entrepreneur operating in small realities.

We moved to the analysis of the tax base for revenue collection purposes and we observed that the corporate income taken into consideration is homogenous across OECD countries, with a preference towards source-based income. Generally, countries tax resident companies on their worldwide income and nonresident companies on their source-based income, providing tax relief in case of double taxation.

The analysis moves towards the consideration of capital gains and withholding tax, where once again we observed great variety in results across the bundle of selected countries. Generally, withholding tax rate on interests payments are the lower one compared to tax rate on dividends and on royalties. However, the summarized withholding tax rates are frequently override by withholding tax separately established through tax treaties and bilateral agreements between countries, which usually are characterized by favored and lower tax rate.

The analysis shifts towards the tax incentives provided to companies, which includes all deductions, allowances, tax credits and exemptions that governments provide to firms. We observed that interest deduction is provided by all jurisdictions, either through the

thin capitalization or the earning stripping rule or by setting other restrictions with respect to infra-group loans or size limit of interest deductibility. Also tax credits are provided in almost all countries for those companies which invest in R&D activities or technological and green investments.

Thin capitalization rule and its adoption among OECD countries has also been analyzed: 12 countries out of 34 do not apply thin capitalization rule and the remaining 22 has implemented TC rule with different parameters and conditions. The most common alternative to thin capitalization rule is the earning stripping rule, while other alternatives include the determination of size limit up to which interests can be deducted.

The last two analyzed parameters are R&D and innovation incentives and foreign direct investment openness. Regarding the former we can state that every country have different criteria to evaluate R&D expenses eligible for tax relief and, in addition, there exists several different tax instruments through which the government can subsidize companies. The most common tax instruments provided to innovative firms are tax credits and cash grants as well as accelerated depreciation on R&D assets and other patent-related incentives. Regarding the latter factor, FDI financial flows are expressed as a measure of each country's GDP and the OECD average is about 4,5%. Luxembourg is the country whose FDI financial flow stands out with respect to both the OECD average and the competitor countries: it reaches a level of about 50% both for inflows and outflows FDI, due to the its popularity for investments and private equity funds because of its favorable tax regime for expatriates and the offered tailored investments.

As stated from the beginning, corporate income taxation is not homogenous neither at the OECD level nor at global level, and this analysis represent a supporting evidence of such strong diversification. This heterogeneity in tax schemes among countries will be further magnified, since the phenomenon of race-to-the-bottom and tax base widening carries on due to the continuous competition among countries and the consequent tax reforms to respond to such competition. OECD and UN should increase cooperation in order to improve their attempts to individuate an harmonization method among countries, in a way to flatten the imbalances among countries and hence prevent a more pronounced revenue loss for the government.

APPENDIX A

Country name	Enter date in OECD	Total Tax Revenue % of GDP (2015)	Tax on Corporate Profit % of GDP (2015)	Statutory CIT Rate 2016	Effective CIT Rate	Tax rate for SMEs	Entities liable for CIT	Entities exempted from CIT
Central Europe								
AUSTRIA	29 September 1961	43,46%	2,26%	25,00%	25,00%	✗	*Appendix A*	✓
GERMANY	27 September 1961	36,94%	1,74%	15,00%	30% - 33%	✗	*Appendix A*	✗
FRANCE	7 August 1961	45,50%	2,11%	33,33%	34,43%	15,00%	*Appendix A*	✓
SWITZERLAND	28 September 1961	27,89%	3,05%	8,50%	7,80%	✗	*Appendix A*	✓
UNITED KINGDOM	2 May 1961	32,52%	2,45%	20,00%	20,00%	✗	*Appendix A*	✓
IRELAND	17 August 1961	23,59%	2,69%	12,50%	12,5% - 25%	✗	*Appendix A*	✓
Mediterranean								
ITALY	29 March 1962	43,34%	2,06%	27,50%	27,50%	✗	*Appendix A*	✓
SPAIN	3 August 1961	33,85%	2,42%	25,00%	25,00%	✗	*Appendix A*	✓
PORTUGAL	4 August 1961	34,49%	3,16%	28,00%	29,50%	17,00%	*Appendix A*	✓
Scandinavian								
DENMARK	30 May 1961	46,62%	2,64%	22,00%	22,00%	✗	*Appendix A*	✗
FINLAND	28 January 1969	43,99%	2,17%	20,00%	20,00%	✗	*Appendix A*	✓
SWEDEN	28 September 1961	43,34%	2,99%	22,00%	22,00%	✗	*Appendix A*	✗
NORWAY	4 July 1961	38,07%	4,53%	25,00%	25,00%	✗	*Appendix A*	✗
ICELAND	5 June 1961	37,12%	2,91%	20,00%	20,00%	✗	*Appendix A*	✗
Benelux								
BELGIUM	13 September 1961	44,81%	3,39%	33,00%	33,99%	24,25%	*Appendix A*	✓
NETHERLANDS	13 November 1961	37,75%	2,72%	25,00%	25,00%	20,00%	*Appendix A*	✓
LUXEMBOURG	7 December 1961	36,96%	4,38%	21,00%	29,22%	20,00%	*Appendix A*	✓
Balkans								
CZECH REPUBLIC	21 December 1995	33,47%	3,56%	19,00%	19,00%	✗	*Appendix A*	✗
ESTONIA	9 December 2010	33,59%	2,07%	20,00%	20,00%	✗	*Appendix A*	✗
GREECE	27 September 1961	36,78%	5,90%	29,00%	29,00%	✗	*Appendix A*	✓
HUNGARY	7 May 1996	39,40%	1,86%	19,00%	19,00%	15,00%	*Appendix A*	✓
POLAND	22 November 1996	32,10%	4,60%	19,00%	19,00%	✗	*Appendix A*	✓
SLOVAK REPUBLIC	14 December 2000	32,25%	3,54%	22,00%	22,00%	✗	*Appendix A*	✗
SLOVENIA	21 July 2010	36,60%	1,47%	17,00%	17,00%	Lump sum	*Appendix A*	✓
Commonwealth								
CANADA	10 April 1961	31,94%	3,13%	15,00%	26% - 31%	✗	*Appendix A*	✗
AUSTRALIA	7 June 1971	27,80%	11,40%	30,00%	30,00%	28,50%	*Appendix A*	✗
NEW ZEALAND	29 May 1973	32,76%	4,42%	28,00%	28,00%	✗	*Appendix A*	✗
UNITED STATES	12 April 1961	26,36%	2,20%	35,00%	39,50%	CIT scheduled	*Appendix A*	✓
Central & South America								
MEXICO	18 May 1994	17,44%	3,28%	30,00%	30,00%	✗	*Appendix A*	✗
CHILE	7 May 2010	20,70%	4,91%	24,00%	24,00%	✗	*Appendix A*	✓
Middle East								
ISRAEL	7 September 2010	31,37%	3,01%	25,00%	25,00%	✗	*Appendix A*	✗
TURKEY	2 August 1961	30,03%	1,71%	20,00%	20,00%	✗	*Appendix A*	✗
Far East								
JAPAN	28 April 1964	32,00%	4,26%	23,40%	30,00%	19,00%	*Appendix A*	✗
KOREA	12 December 1996	25,25%	3,24%	22,00%	24,20%	7,00%	*Appendix A*	✗

Country name	Tax base for revenue collection			Capital gains tax rate	Withholding tax		
	Domestic-source income of non-resident	Resident income considered	Double-tax relief		Dividends	Interests	Royalties
Central Europe							
AUSTRIA	Taxed	Worldwide	✓	0% - 25%	0% - 27,5%	0% - 25% - 27,5%	20%
GERMANY	Taxed	Worldwide	✓	15%	25% - 26,375%	0% - 25% - 26,375%	15% - 15,825%
FRANCE	Taxed	Domestic	✗	4,56% - 19% - 33%	0% - 30%	0%	33,33%
SWITZERLAND	Taxed	Worldwide	✓	0% - 8,5%	35%	0% - 35%	0%
UNITED KINGDOM	Taxed	Worldwide	✓	0% - 20%	0%	0% - 20%	0% - 20%
IRELAND	Taxed	Worldwide	✓	0% - 33% - 40%	0% - 20%	0% - 20%	0% - 20%
Mediterranean							
ITALY	Taxed	Worldwide	✓	27,5% (with exceptions)	0% - 1,375% - 26%	0% - 12,5% - 26%	0% - 30%
SPAIN	Taxed	Worldwide	✓	25%	19%	0% - 19%	19% - 24%
PORTUGAL	Taxed	Worldwide	✓	28%	0% - 25% - 35%	25% - 35%	25% - 35%
Scandinavian							
DENMARK	Taxed	Worldwide	✓	0% - 23,5%	0% - 15% - 27%	0% - 25%	0% - 25%
FINLAND	Taxed	Worldwide	✓	0% - 20%	0% - 20%	0%	0% - 20%
SWEDEN	Taxed	Worldwide	✓	0% - 22%	0% - 30%	0%	0%
NORWAY	Taxed	Worldwide	✓	0% - 25%	0% - 25%	0%	0%
ICELAND	Taxed	Worldwide	✓	18,00%	20%	10% - 20%	20%
Benelux							
BELGIUM	Taxed	Worldwide	✓	0% - 25% - 33%	0% - 1,6995% - 10% - 15%- 20% - 30%	0% - 15% - 30%	0% - 15% - 30%
NETHERLANDS	Taxed	Worldwide	✓	0% - 25%	0% - 15%	0%	0%
LUXEMBOURG	Taxed	Worldwide	✓	0% - 21%	0% - 15%	0% (15%)	0%
Balkans							
CZECH REPUBLIC	Taxed	Worldwide	✓	0% - 19%	15% - 35%	15% - 35%	15% - 35%
ESTONIA	Taxed	Worldwide	✓	20,00%	0%	0%	10%
GREECE	Taxed	Worldwide	✓	15,00%	15%	15%	20%
HUNGARY	Taxed	Worldwide	✓	10% - 19%	0%	0%	0%
POLAND	Taxed	Worldwide	✓	19,00%	19%	20%	20%
SLOVAK REPUBLIC	Taxed	Worldwide	✓	22% (21% in 2017)	7% - 35%	19% - 35%	19% - 35%
SLOVENIA	Taxed	Worldwide	✓	17,00%	15%	15%	15%
Commonwealth							
CANADA	Taxed	Worldwide	✓	15,00%	25%	25%	25%
AUSTRALIA	Taxed	Worldwide	✓	30% - 28,5%	0% - 30%	10%	30%
NEW ZEALAND	Taxed	Worldwide	✓	0%	0% - 15% - 30%	15%	15%
UNITED STATES	Taxed	Worldwide	✓	35,00%	30%	30%	30%
Central & South America							
MEXICO	Taxed	Worldwide	✓	30,00%	10%	4,9% - 10% - 15% - 21% - 35% - 40%	25% - 35% - 40%
CHILE	Taxed	Worldwide	✓	24,00%	0% - 35%	4% - 35%	15% - 30%
Middle East							
ISRAEL	Taxed	Worldwide	✓	25,00%	5% - 10% - 25%	15% - 25%	25%
TURKEY	Taxed	Worldwide	✓	20,00%	15%	0% - 10%	20%
Far East							
JAPAN	Taxed	Worldwide	✓	23,40%	20% - 15% plus 2,1% surtax	20% - 15% plus 2,1% surtax	20% plus 2,1% surtax
KOREA	Taxed	Worldwide	✓	10% - 22%	20% plus surtax	14% - 20% plus surtax	20% plus surtax

	Deductions, allowances, credits, exemptions				Loss relief	
	Limits to interest deductions (other than TC)	ACE Rate	Exemptions from taxable income	Tax credits	Carry-forward	Carry-backward
Central Europe						
AUSTRIA	✓	✗	✓	✓	Indefinite/ 75% limit on utilization	No
GERMANY	✓	✗	✓	✓	Indefinite	1 year
FRANCE	✓	✗	✓	✓	Indefinite (but size limit)	1 year (limit EUR 1mln)
SWITZERLAND	✓	✗	✓	✓	7 years	No
UNITED KINGDOM	✓	✗	✓	✓	Indefinite	1 year
IRELAND	✓	✗	✓	✓	Indefinite	1 year
Mediterranean						
ITALY	✓	4,75%	✓	✓	Indefinite	No
SPAIN	✓	✗	✓	✓	Indefinite	No
PORTUGAL	✓	5,00%	✓	✓	5 years/SMEs: 12 years	No
Scandinavian						
DENMARK	✓	✗	✓	✓	Indefinite (but size limit)	No
FINLAND	✓	✗	✓	✓	10 years	No
SWEDEN	✓	✗	✓	✓	Indefinite	No
NORWAY	✗	✗	✓	✓	Indefinite	2 year (only liquidation losses)
ICELAND	✗	✗	✓	✓	10 years	No
Benelux						
BELGIUM	✓	1,63%	✓	✓	Indefinite	No
NETHERLANDS	✓	✗	✓	✓	9 years	1 year
LUXEMBOURG	✓	✗	✓	✓	Indefinite	No
Balkans						
CZECH REPUBLIC	✗	✗	✓	✓	5 years	No
ESTONIA	✗	✗	✓	✗	N/A	N/A
GREECE	✓	✗	✓	✓	5 years	No
HUNGARY	✗	✗	✓	✓	Indefinite (but size limit)	No
POLAND	✗	✗	✓	✓	5 years	No
SLOVAK REPUBLIC	✓	✗	✓	✓	4 years	No
SLOVENIA	✗	✗	✓	✓	Indefinite (but size limit)	No
Commonwealth						
CANADA	✗	✗	✓	✓	20 years: noncapital Indefinite: capital	3 years
AUSTRALIA	✗	✗	✓	✓	Indefinite	No
NEW ZEALAND	✗	✗	✓	✓	Indefinite	No
UNITED STATES	✗	✗	✓	✓	20 years	2 years general/ 10 years for specific losses
Central & South America						
MEXICO	✗	✗	✓	✓	10 years	No
CHILE	✗	✗	✓	✓	Indefinite	No
Middle East						
ISRAEL	✗	✗	✓	✓	Indefinite	No
TURKEY	✗	✗	✓	✓	5 years	No
Far East						
JAPAN	✓	✗	✓	✓	9 years	No / SMEs 1 year
KOREA	✗	✗	✓	✓	10 years	No / SMEs 1 year

	Profit shifting			FDI flows	
	TC rule	Transfer pricing rules	Number of tax treaties	Inward as % of GDP	Outward as % of GDP
Central Europe					
AUSTRIA	✗	✓	90+	0,97%	2,65%
GERMANY	✗	✓	90+	0,43%	1,15%
FRANCE	✓	✓	123	1,39%	2,13%
SWITZERLAND	✓	✓	80+	10,50%	6,05%
UNITED KINGDOM	✓	✓	125	9,68%	N/A
IRELAND	✗	✓	73	7,58%	15,15%
Mediterranean					
ITALY	✗	✓	100+	1,56%	1,23%
SPAIN	✗	✓	99	2,50%	4,37%
PORTUGAL	✗	✓	68	2,95%	0,68%
Scandinavian					
DENMARK	✓	✓	75	0,32%	4,77%
FINLAND	✗	✓	70	0,68%	5,65%
SWEDEN	✗	✓	80+	3,83%	4,47%
NORWAY	✓	✓	85+	1,46%	1,55%
ICELAND	✓	✓	40	4,22%	N/A
Benelux					
BELGIUM	✓	✓	90+	7,09%	3,91%
NETHERLANDS	✗	✓	95+	8,73%	22,52%
LUXEMBOURG	✗	✓	77	44,79%	52,77%
Balkans					
CZECH REPUBLIC	✓	✓	70+	3,50%	0,51%
ESTONIA	✗	✓	57	3,76%	2,07%
GREECE	✓	✓	57	1,61%	1,09%
HUNGARY	✓	✓	80	5,57%	2,71%
POLAND	✓	✓	90+	2,43%	1,38%
SLOVAK REPUBLIC	✓	✓	66	0,06%	0,42%
SLOVENIA	✓	✓	58	2,09%	0,22%
Commonwealth					
CANADA	✓	✓	92	2,21%	4,34%
AUSTRALIA	✓	✓	44	3,34%	0,00%
NEW ZEALAND	✓	✓	40 + 18	1,28%	0,05%
UNITED STATES	✓	✓	60+	2,13%	1,71%
Central & South America					
MEXICO	✓	✓	55	2,51%	0,93%
CHILE	✓	✓	32 + 2 new	4,76%	2,64%
Middle East					
ISRAEL	✗	✓	60+	3,95%	4,01%
TURKEY	✓	✓	83	1,63%	0,39%
Far East					
JAPAN	✓	✓	65	0,24%	3,07%
KOREA	✓	✓	80+	0,77%	1,94%

APPENDIX B

Summary of available R&D incentives

Country	Accelerated depreciaiton on R&D assets	Cash grants	Expedited government approval process	Financial support	Income tax withholding incentives	Infrastructure/ land preferential price	Loans
Central Europe							
Austria		✓					✓
Germany		✓					✓
France	✓	✓					✓
Switzerland	✓			✓			✓
United Kingdom	✓	✓					✓
Ireland	✓	✓		✓			
Mediterranean							
Italy							
Spain	✓	✓					✓
Portugal		✓					✓
Scandinavian							
Denmark							
Finland		✓					✓
Sweden							
Norway		✓		✓			✓
Iceland							
Benelux							
Belgium	✓	✓					✓
Netherlands	✓	✓			✓		✓
Luxembourg	✓	✓					✓
Balkans							
Czech Republic		✓					
Estonia							
Greece							
Hungary		✓					
Poland		✓					
Slovak Republic		✓				✓	
Slovenia		✓		✓		✓	✓
Commonwealth							
Canada	✓	✓		✓			✓
Australia							
New Zealand		✓					
United States							
Central & South America							
Chile	✓	✓					
Mexico		✓					
Middle East							
Israel		✓		✓	✓		
Turkey		✓			✓		
Far East							
Japan							
Korea						✓	

Summary of available R&D incentives

Country	Patent-related incentives	Reduced social security contributions	Reduced tax rates/preferable tax rates	Tax allowance	Tax credits	Tax deduction (including super deduction)	Tax exemptions	Tax holiday	VAT reimbursement
Central Europe									
Austria					✓				
Germany									
France	✓	✓	✓		✓			✓	
Switzerland								✓	
United Kingdom	✓				✓	✓			
Ireland	✓				✓		✓		
Mediterranean									
Italy	✓				✓	✓			
Spain	✓	✓			✓		✓		
Portugal	✓				✓	✓			
Scandinavian									
Denmark				✓	✓				
Finland									
Sweden			✓				✓		
Norway		✓			✓				
Iceland			✓		✓	✓			
Benelux									
Belgium	✓		✓		✓	✓			
Netherlands	✓	✓	✓		✓	✓			
Luxembourg	✓						✓		
Balkans									
Czech Republic						✓	✓	✓	
Estonia									
Greece					✓	✓			
Hungary	✓	✓	✓	✓	✓	✓			
Poland					✓	✓	✓		
Slovak Republic					✓	✓			
Slovenia						✓			
Commonwealth									
Canada			✓		✓				
Australia					✓		✓		✓
New Zealand					✓				
United States					✓	✓			
Central & South America									
Chile					✓	✓			
Mexico					✓				
Middle East									
Israel	✓		✓			✓			
Turkey	✓	✓				✓	✓		
Far East									
Japan					✓				
Korea					✓		✓		

FOOTNOTES

1. **Australia** [54]
   a. **Entities liable to CIT:** Public companies (Limited of Ltd), private companies (Private Limited or Pty Ltd), partnerships, corporate limited partnerships, trust, superannuation fund and branches of a foreign company.
   b. **Exemptions from taxable income:** Expenses that can be deducted from the taxable base include interests, royalties, management fees paid to nonresidents while dividend payments are not deductible.
   c. **Tax rate and tax base structure:** Resident companies are liable for company income tax on its worldwide income, even if some types of foreign-source income are exempt from tax purposes. A nonresident company generally pays taxes only on Australian source-based income. For small businesses, with annual turnover less than AUD 2 million, the applicable tax rate is 28,5%.
   d. **Loss carry-forward and –backward:** Tax losses may be carried forward indefinitely to offset future assessable income, while loss carry-backward is not allowed.
   e. **Tax credits:**
      – R&D tax incentive programs[55] are provided to companies according to their aggregated group turnover: up to AUD 20 million it is provided a 43,5% refundable tax offset, for larger turnover it is provided a 38,5% nonrefundable tax. The maximum expenditure eligible for R&D tax incentive is AUD 100 million and the incentive is deducted from the basic income tax liability, and excessive eligible nonrefundable amount may be carried forward.
      – Australia's Investment Manager Regime (IMR) provides to nonresidents with an Australian income tax exemption for returns or gains in respect of the disposal of their investments that otherwise may be subject to Australian tax. Nonresidents qualify for the IMR exemption for an income

[54] Australia data from Deloitte International Tax Guides – last update fiscal year 2017.

[55] The definition of eligible R&D activities focuses on experimental activities whose outcome is not known in advance. Various integrity measures may apply to increase the tax liability where the products of R&D activities are sold or the costs are took back, or a government grant is received.

year if they invest in an "IMR financial arrangement" directly in Australia or invest in Australia via an Australian fund manager.

f. **Thin capitalization rule:** Thin capitalization rules operate to limit interest deductions claimed against Australian assessable income for both foreign-controlled Australian investments (inward investors) and Australian entities investing overseas (outward investors), where an entity's debt exceeds a prescribed level. Taxpayers that, together with their associates, have interest deductions of less than AUD 2 million, or outward investing entities with 90% or more of the total average value of assets consisting of Australian assets, are exempt from the thin capitalization rules. Taxpayers are able to determine their maximum allowable debt by choosing one of the following tests:
   - "Safe harbor" test: This test effectively applies a prescribed debt-to-equity ratio of 60%. Different ratios apply to financial institutions;
   - Worldwide gearing test: This test allows taxpayers to use debt levels equivalent to those of its worldwide group, broadly determined by reference to the group's consolidated accounts;
   - Arm's length debt test: This test requires an analysis of the maximum amount of debt the entity could reasonably have borrowed from commercial lending institutions subject to specific assumptions and conditions set out in the law.

   The thin capitalization rules generally follow the approach of accounting standards in valuing assets, liabilities and equity capital (even if an entity is not otherwise required to prepare accounts). For income years commencing on or after 1 January 2009, taxpayers are required to prepare accounts based on the Australian equivalent of IFRS (AIFRS), with some modifications.

g. **Transfer pricing rule:** The Australian Taxation Office (ATO) has the authority to undertake a review or audit of a company in relation to its transfer pricing. In practice, the ATO typically will initiate a "client risk review" including a component reviewing transfer pricing arrangements to determine the risk to Australian tax revenue that may arise from non-arm's length dealings. Where the ATO views a taxpayer's dealings as being of sufficiently high risk, the ATO may proceed to a transfer pricing audit.

h. **International factors:** Australia has undertaken more than 44 international tax treaties.

2. **Austria** [56]

a. **Entities liable for CIT:**

- Legal persons
- Orgs with no legal personality
- Tax capital groups
- Associations
- Foundations
- Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
- Public corporations

b. **Entities exempted from CIT:**

- Public corporations
- Non profit
- Charitable/Church organizations

c. **Limits to interest deductions:** there are no formal thin capitalization rule and interest expenses are generally tax deductible although Austria's Administrative Court of Justice has developed case law using the concept of "equity-substituting shareholder loans", which is used in order to determine if equity funding is sufficient, which must not exceed a debt-to-equity ratio of 4:1.

d. **Exemptions from taxable income:** The income is the total of income derived balanced against losses. The taxable income of corporations is computed in a similar manner as stated for assessed income tax. Income from all seven sources of income is included. In general deductible expenses are those which are incurred wholly and exclusively in acquiring, securing and maintaining of income. Deductible items are, for example, salaries including employee fringe benefits (cars, meals), depreciation, interests on loans or debts to third parties, royalties, financing costs related to acquisitions of participations within a group are not deductible as of 2011. Deductible accruals are severance payments, future and current pensions

[56] Austria data from Taxes in Europe Database – last update 24th August 2016

and uncertain obligations and possible losses resulting from pending transactions.

e. **Tax credits:** for R&D investments

f. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

g. **International factors:**

- *Repatriated profits:* Austria applies the exemption method for dividends received by a foreign subsidiary in case the participation is at least 10% and the participation is held for at least 1 year. Austria does not provide for a CFC legislation; however, if profits are distributed from a foreign subsidiary that is subject to an effective tax rate of 15% or less and predominantly generates passive income, the application of the exemption method for the dividends received is denied; instead, the credit method applies to these profit distributions;
- *Outgoing dividends*: Dividends are in general subject to a 27,5% withholding tax according to Austrian domestic law. This withholding tax may be reduced under the applicable tax treaty with the residence state of the foreign recipient of the dividends or under the EU-parent-sub-Directive.
- *Foreign losses*: Under the Austrian group taxation regime losses of foreign subsidiaries that are members of the Austrian tax group can be set-off from the domestic group income under the condition that these loss have to be recaptured when the foreign group member leaves the tax group or offsets the losses abroad.

3. **Belgium** [57]

a. **Entities liable for CIT:**

- Tax capital groups
- Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
- Public corporations
- Inter-municipal Associations

b. **Entities exempted from CIT:**

[57] Belgium data from Taxes in Europe Database – last update on 31st August 2016

– Legal persons
– Orgs with no legal personality
– Associations
– Foundations
– Hospital or institutions for war victims

c. **Limits to interest deductions:** There are four cases in which interest on loans is not deductible:
   – attributed to associates or directors in respect of advances granted to the company (considered as dividends)
   – exaggerated interests
   – application of thin capitalization rule
   – consequence of failure to comply with the permanency condition in the matter of participation exemption

d. **Exemptions from taxable income:** Income from participations (dividends), patents income, tax shelter for audiovisual work investment reserve, exempt regional aid.

e. **Tax credits:** Companies have to choose between the R&D tax credit and the investment allowance for patents or for *green* R&D investments. The tax credit fully applies to corporation tax and it can be carried over successively to the four subsequent tax years.

f. **Thin capitalization rule:** Tax capitalization rule in force since 1992, introduced as part of CIT law. Test for TC consists in ratio 5:1. It depends on shareholding and the direct substantial shareholding threshold 50,01%. The automatic remedy applied is the non-deductibility of interest and the reclassification as dividend, applying to all companies, with no distinction between EU or non-EU companies.

g. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

h. **International aspects:** Repatriated profits are taxed differently according to whether belonging to treaty or non-treaty countries. Internal law applies for the rates concerning outgoing dividends withholding tax and outgoing interest payments withholding tax. When taxable, foreign income is subject to tax only on its net amount (after deduction of expenses and foreign taxes).

4. **Canada** [58]

   a. **Entities liable to CIT:** Corporations, unlimited liability companies, sole proprietorships, partnerships, joint ventures, trust and branches of foreign companies.

   b. **Exemptions from taxable income:** Dividends received from a taxable Canadian company are deductible from the corporate taxable income. Instead, dividends received from a foreign company are subject to taxation but then deductions are provided with respect to dividends from foreign affiliates. When the tax payers is not a foreign affiliate, a withholding tax is provided as tax credit. Capital gains are included in taxable income and subject to the normal corporate income tax rate for the 50% of the capital gains, less allowable capital losses.

   c. **Tax rate and tax base structure:** Resident companies are taxed at the federal and provincial/territorial levels on their worldwide income. Non resident companies are taxed on certain type of Canadian source-based income – source based taxation is hereby applied. The federal general corporate income tax rate is set at 15% while provincial and territorial corporate income tax rate ranges from 11% to 16%.

   d. **Loss carry-forward and –backward:** Trading losses may be carried forward for 20 years but with no size limit while capital losses can be carried forward with either no time or no size limit. Moreover, trading and capital losses can be both carried backward for the three years.

   e. **Tax credits:**

      – Foreign income tax paid in another country may be offset against Canadian tax on the same profits with provided foreign tax credits. Excess foreign business income tax already paid that cannot be credited, can be carried over for 10 years and carried back for 3 years.

      – A *refundable investment tax credit* (ITC) up to 35% of qualified expenses for scientific experimental R&D is provided for qualified Canadian-controlled private corporations. A *non refundable investment tax credit* up to 15% is available for Canadian-controlled private corporations, when they are not qualified for the refundable ITC, and for the non-Canadian-controlled private corporations.

[58] Canada data from Deloitte International Tax Guides – last update year 2017.

– A federal tax credit is provided for qualified Canadian labor expenditure incurred for production of films and videotapes.

f. **Thin capitalization rule:** here are limitations on the deductibility of interest on outstanding debts to specified nonresident persons. The amount of interest-bearing debt owed by a Canadian corporation to related nonresident persons can be no greater than 1,5 times the amount of its equity, or a portion of the interest deduction will be disallowed.

g. **Transfer pricing rule:** When a taxpayer enters into transactions with a non-arm's length nonresident, the transaction price should be the price that would have been set between persons dealing at arm's length. If the price charged differs from an arm's length price, upward or downward adjustments will be made to ensure the price charged reflects an arm's length price. Proper documentation must be maintained to support the transfer pricing methodology used. If contemporaneous documentation is not prepared, penalties may apply if adjustments exceed specified amounts.

h. **International factors:** Canada has 92 income tax treaties.

5. Chile [59]

a. **Entities liable to CIT:** Corporations, company limited by shares, general partnerships, limited liability partnerships, limited partnerships, individual enterprise with limited liability, association and branch of a foreign corporation.

b. **Exemptions from taxable income:** Preferential tax regimes are available for businesses operating in specific regions and/or carrying out specific activities.

c. **Tax rate and tax base structure:** From 2017, first category income tax is set at a rate of 25% under the fully integrated regime. Under the partially integrated regime, the rate is 25,5% for 2017 and will be 27% as from 2018.

d. **Loss carry-forward and –backward:** Tax losses may be carried forward indefinitely. The carryback of losses is not permitted. Tax losses are nontransferable and may be used only by the taxpayer that incurred the losses.

e. **Tax credits:** In absence of a tax treaty, income taxes paid abroad on foreign profits derived from companies in which a participation is held or a branch

[59] Chile data from Deloitte International Tax Guides – last update 2017.

and from royalty payments, technical service fees, other income of a similar nature and exported services are creditable against Chilean income taxes.

f. **Thin capitalization rule:** Thin capitalization rules apply to related party loans, the interest on which: (1) is subject to the reduced 4% additional withholding income tax rate for interest paid abroad (i.e. loans granted by foreign or international banks or financial institutions); (2) is not subject to additional withholding income tax; or (3) is subject to an additional withholding income tax rate lower than 35% under a tax treaty or under domestic law. If the debt-to-equity ratio exceeds a 3:1 threshold, the excess interest is subject to an additional 35% tax payable by the borrower (reduced by any withholding tax paid on the interest). Certain third party financing is deemed to be related party financing.

g. **Transfer pricing rule:** Chile's transfer pricing rules are in line with the OECD guidelines. The following methods may be used: comparable uncontrolled price, resale price, cost plus, profit split, comparable profit split and residual methods. The tax authorities may challenge and reassess transfer prices between related parties where the terms and conditions of transactions are not at arm's length

h. **International factors:** Chile has 32 active tax treaties, and two additional treaties have been signed that are not yet in force.

6. Czech Republic [60]

a. **Entities liable for CIT:**

- Legal persons
- Orgs with no legal personality
- Associations
- Foundations
- Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
- Public corporations

b. **Exemptions from taxable income:** Income exempt pursuant to the Parent Subsidiary Directive and Interest and Royalties Directives of 2008:

[60] Czech Republic data from Taxes in Europe Database – last update 10th January 2017

- Participation exemption was introduced of dividends from non-EU countries and capital gains arising on the sale of shares if the shareholder has a share of more than 10%
- As of 2014, inheritance tax and gift tax were abolished, inheritance has been exempted from income tax
- Income of charities

c. **Loss-carry forward:** with time limit fixed at 5 years

d. **Tax credits:** for R&D investments, for training and for donation to charities

e. **Thin capitalization rule:** Tax capitalization rule in force since 1993, introduced as part of CIT law. Test for TC consists in ratio 1:4. It depends on shareholding and the direct substantial shareholding threshold is 25%.

f. **Transfer pricing rule**: In force. Arm's length principle is applied and the remedy consists in the tax base increase

g. **International aspects:** Repatriated profits are taxed differently according to whether belonging to treaty (exemptions and tax credits instruments) or non-treaty countries (deduction mechanisms). Moreover, rate for outgoing dividends, royalty payments and interest payments can be 0% or 15%; in case of outgoing interest payments rate can reach also 35%. Foreign losses of permanent establishments can be set off but this possibility is not available in case of subsidiaries.

7. Denmark [61]

a. **Entities liable for CIT:**
   - Legal persons
   - Tax capital groups
   - Associations
   - Foundations
   - Companies with offices abroad
   - Public corporations

b. **Limits to interest deductions:** The corporation may, on a yearly basis, deduct net financing expenses equivalent to a maximum of 80% of EBIT. Net financing expenses of less than DKK 21.3 million (limit is not regulated) are always deductible.

[61] Denmark data from Taxes in Europe Database – last update 12th December 2016

c. **Exemptions from taxable income:** Corporation tax is imposed on a company's profits, which consist of business/trading income, passive income and capital gains. Business expenses may be deducted in computing taxable income.

d. **Tax credits:** A full deduction may be claimed in the year of acquisition for all types of intangible acquired for R&D purposes, especially for patents, know-how. A special tax credit is available for R&D activities that enables companies to obtain a cash refund of tax losses relating to R&D activities, up to DKK 1,25 million.

e. **Tax rate and tax base structure:** Companies are considered resident in Denmark when the company is registered in Denmark or when the place of management is situated in Denmark.

f. **Loss carry-forward:** With effect from 1 July 2012, restrictions to carry forward the losses apply. The restrictions entail that losses carried forward can be used to set off against future positive net income of up to 7,852,500 DKK, but the remaining losses may reduce the remaining net income only by 60%. The restrictions also affect the losses from the previous years.

g. **Thin capitalization rule:** Tax capitalization rule has been introduced as part of CIT law. Test for TC consists in both Arm's length principle and the ratio applied is $\frac{total\ (internal)\ debt}{total\ equity} = \frac{4}{1}$. It depends on shareholding and the indirect substantial shareholding threshold is 50%. No automatic remedy is applied.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:** No distinction is made between treaty and non-treaty countries concerning the taxation of repatriated profits.

8. Estonia [62]

a. **Entities liable for CIT:**

– Legal persons

[62] Estonia data from Taxes in Europe Database – last update 13th June 2016

– Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income

b. **Exemptions from taxable income:** Income from participations (dividends).

c. **Loss carry-forward:** Since Estonia applies corporate income tax only to distributed profits, the possibility to carry losses forward is irrelevant.

d. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

e. **International aspects:** Since Estonia applies corporate income tax only to distributed profits, the possibility to carry losses forward is irrelevant. Foreign losses can be set off within the legal person; consolidation of the legal person's tax base is not allowed. Estonian CFC rules apply only to natural persons.

9. Finland [63]

a. **Entities liable for CIT**

– Legal persons

– Associations

– Foundations

– Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income

– Public corporations

b. **Entities exempted from CIT:** The State and its departments pay taxes to the municipalities on certain income from real estate and business income. The municipalities pay taxes to other municipalities on the income that they receive from the area of the other municipality. Religious communities pay taxes to the municipalities on business income and certain income from real estate. The municipalities and religious communities do not pay taxes to the State.

c. **Limits to interest deductions:** Deductibility of interest on intra-group loans is restricted to 25 % of fiscal EBITD subject to certain safe harbors from 2014 onwards. Exceptions are available:

[63] Finland data from Taxes in Europe Database – last update 4th August 2016

- Net interest expense up to EUR 500.000 is fully deductible
- The limit does not apply to interest expense not exceeding the interest income derived by the company paying the interest
- The limit does not apply if the company can demonstrate that its equity balance sheet ration is equal to or greater than that of the group

d. Exemption from taxable income:

- Dividends are, as a rule, tax exempted with some exceptions.
- Income from participation
- Capital paid up by shareholders
- Refunds of income taxes
- Connection charges collected by companies that maintain electricity, telephone, water, sewage or district heating systems, provided that the charges are refundable
- Capital gains from fixed asset shares received by corporations not engaged in investment activity are tax exempt under certain conditions. The capital losses from transfer of such shares are non-deductible
- Payments received from disposal of company's own shares.

e. Tax credits: Finnish incentive programs typically focus on assistance for SMEs and on technology. Moreover, the Finnish funding Agency for Technology and Innovation (Tekes) provide grants and risk loans for R&D, aiming to produce internationally competitive products, production processes or services. Tekes' contribution is determined based on the nature of the project in question, and may be in the form of a loan or a grant, depending on the stage of the innovation and the nature of the proposed project.

f. Loss carry-forward: with time limit fixed at 10 years

g. Transfer pricing rule: In force. Arm's length principle is applied and the remedy consists in the tax base increase.

h. International aspects: In a non-treaty situation, the amount of withholding tax is 20 % when dividend is paid to a corporation.

10. France [64]

a. Entities liable for CIT:

- Legal persons

[64] France data from Taxes in Europe Database – last update 7th September 2016

– Organizational units having no legal personality

b. **Entities exempted from CIT:**

– Entities with no lucrative business

c. **Tax rate and tax base structure:** Only profits made by companies operating in France are liable for taxation purposes, whatever their nationality. This means that profits made by a French company in companies operating in other countries are not liable to French Corporation tax; likewise, a foreign company is liable to French corporation tax only on the profit made from enterprises operating in France. No double taxation relief is provided but most tax treaties provide for a tax credit mechanism.

d. **Limits to interest deductions:** The limit is set to 75% of net interest expenses.

e. **Exemption from taxable income:** Income from participation, patents income and capital gains on long-term equity security. Patents income is exempted at 15% rate. Dividends, income from agriculture and capital gains on long-term equity security are widely exempted.

f. **Loss carry-forward and -backward:** Size limit for loss carry-forward is equal to EUR1 million + 50% of taxable profit over EUR 1 million. Loss carry-backward also exists: the time limit is fixed at 1 year, with size limit of EUR1 million.

g. **Tax credits:** for R&D investments, for training, for competitiveness and employment.

h. **Thin capitalization rule:** Thin capitalization rule in force since 1979, not part of CIT law but as single explicit Thin Capitalization Rule. Test for TC consists in the ratio $\frac{advances}{equity}$ of 150:100 but also in the enforcement of the Arm's length principle. It depends on shareholding and the direct substantial shareholding threshold is 50%.

i. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

11. Germany [65]

a. **Entities liable for CIT:**

– Legal persons

[65] Germany data from Taxes in Europe Database – last update 8th August 2016

- Associations
- Foundations
- Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
- Public corporations

b. **Limits to interest deductions:** The "Interest Barrier" ("IB") limits the deduction of the net interest expenditures to 30% of the EBITDA. The IB is waived if net interest expenditures are less than EUR3 million, the company doesn't belong to a group of related companies or the company is part of a group of companies, but the ratio of equity to total assets of the company is equal to or higher than the same ratio for the group. These exceptions only apply for corporations if no more than 10% of the net interest expenses were paid to major shareholders.

c. **Tax credits:** incentive programs are available for certain start-ups and for SMEs. No tax incentives for R&D but cash grants are offered for R&D in the energy sector.

d. **Exemptions from taxable income:** Intercompany dividends and profits from the sale of shares are tax exempt. The only exemption to this general rule is when a company holding less than 10% of the distributing corporation receives dividends: in this situation, dividends are subject to corporate income tax.

e. **Losses carry-forward and -backward:** Loss carry-backward is applied, with time limit fixed at 1 year and limited size of EUR 1 million.

f. **Thin capitalization rule:** Thin capitalization rule in force since 1994, and introduced as part of CIT law. It depends on shareholding and the direct substantial shareholding threshold is 25%. Automatic remedy applied for all companies consists in the non-deductibility of interests.

g. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

h. **International aspects:** Treaty and non-treaty countries are approached differently concerning with corporate tax.
   - *Treaty countries:* If the exemption system is applicable on business income foreign losses cannot be set off. Outgoing royalty payments withholding tax: tax rate can be reduced due to differing provisions in

Double Taxation Agreements or due to Directive 2003/49/EC by a refund or by exemption prior to payment to the creditor.

– *Non-treaty countries:* Special foreign losses from third countries may be set-off against corresponding positive income from this country. Outgoing interest payments withholding tax: Tax is only payable on interest if the capital investment is secured by domestic real property.

12. Greece [66]

a. Entities liable for CIT:

– Legal persons
– Organizational units having no legal personality
– Associations
– Foundations
– Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
– Public corporations

b. Entities exempted from CIT:

– General government entities and companies in which the State or a legal person governed by public law holds 100%
– Bank of Greece
– Collective investment undertakings that are subject to a special system of operation and are established in Greece or in another EU/EEA member-state
– International organizations, provided that the tax exemption is provided under an international convention ratified by Greece or subject to reciprocity
– Asset Development Fund SA

c. Limits to interest deductions: Interest expenses are not deductible to the extent that the excess interest expenses exceed 30% of taxable EBITDA. This rate enters into force on 1st January 2017, while before the rate of 40% applied. Interest expenses are deductible up to a limit of net amount of expenses of EUR3 million per year.

d. Exemptions from taxable income:

[66] Greece data from Taxes in European Database – update 17th January 2017

- Interest on bonds issued by the European Financial Stability Fund (EFSF) under the implementation of the *program for restructuring the Greek debt*;
- Capital gains from the exchange of Greek government bonds or corporate bonds guaranteed by the Greek government for other securities pursuant to the *program for restructuring the Greek debt*;
- Capital gains from the transfer of Greek government bonds and treasury bills acquired by foreign legal persons or legal entities that do not have a permanent establishment in Greece.
- Intra-group dividends received by a legal person who is a tax resident in Greece, provided that (a) the recipient holds at least 10% of the value or number of shares, capital or voting rights of the entity that distributes the profits; (b) the minimum shareholding period is 24 months; and (c) the legal entity that makes the distribution of profits is subject to tax and is not established in a country that is included in the list of non-cooperative States according to the Article 65 of the ITC. [67]
- Profits of very small businesses [68], from the disposal of electrical power towards "D.E.I" or other supplier according to the "Special Program of photovoltaic Systems" up to 10kw.
- Profits from the operation of ships under the Greek flag by Greek companies, cooperatives or unions of cooperatives, where such profits are subject to the specific taxation on ship owners' profits (tonnage tax)
- Capital gains from property expropriation
- Capital gains from the transfer of domestic corporate bonds or corporate bonds issued by EU or EEA/EFTA companies
- Capital gains from the sale of Undertakings for collective investment in transferable securities (UCITS) established in Greece or in another EU or EEA member-state

e. Loss carry-forward: with time limit fixed at 5 years

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[67] The definition of the jurisdictions that are non-cooperative in tax matters and of countries with privileged tax regimes is provided in Art 65 of the Income Tax Code. To date, this definition has been relevant for the application of the controlled foreign corporation (CFC) rules and with certain exceptions for the expense deductibility restrictions. Such countries are defined in relevant lists published by the Ministry of Finance annually. With respect to the list of countries with privileged tax regimes, the one published last year also includes three EU countries, namely Bulgaria, Cyprus and Ireland, as countries with corporate tax rates lower than 50% of the Greek corporate tax rate. The new rules entered into force on 21 March 2015.

[68] As defined in the 2003/362/EC Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises

f. **Tax credits:** for investments that fall into the scope of Development Acts.

g. **Thin capitalization rule:** Thin capitalization rule in force since 2013, introduced as part of CIT law. Test for TC consists in the ratio $\frac{excess\ of\ interests}{EBITDA}$. Differently from the other countries, it does not depend on shareholding.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:**
   - The rates of outgoing dividends, royalty payments and interest payments withholding taxes depend on the provisions of the applicable DTC;
   - Foreign losses can be set-off or carried-forward provided that the income arises in other EU or EEA member-states, is taxed according to the Greek law and is not exempted from tax according to the provisions of a DTC.

13. Hungary [69]

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Associations
   - Foundations
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations
   - Trust fund managed under a fiduciary asset management contract (considered as resident taxpayer)

b. **Entities exempted from CIT:** The bodies listed in Schedule No. 5 in Act LXXXI of 1996 on Corporate Tax and Dividend Tax are not subject to corporate tax. For example:
   - the Hungarian National Bank
   - public media service provider as specified by law
   - political parties
   - the Hungarian News Agency

[69] Hungary data from Taxes in Europe Database – 18th November 2016

- institutions of higher operating in the form of budgetary agencies, and student hostels
- the National Asset Management Company

c. **Tax rate and tax base structure**: The tax liability of resident taxpayers shall apply to their income from Hungary and from abroad, both (total tax liability). The tax liability of nonresident entrepreneurs shall apply to their income from business operations performed in their Hungarian branches (limited tax liability).

d. **Exemption from taxable income:** corporate tax liabilities payable – under ACT LXXXI of 1996 on Corporate Tax and Dividend Tax – regarding the revenues obtained from economic activities performed for profit on a regular basis and other similar gainful activities must be complied. Normal business expenses are generally deductible in computing taxable income.

e. **Loss carry-forward and -backward:**
   - Loss carry-forward exists with time limit fixed at 5 years. If the tax base is negative in any tax year, the taxpayer may deduct such amount of loss from its pre-tax profit spread out at any rate in the following 5 tax years. This is possible if the negative tax base occurred under the principle of proper execution of the law within its meaning and intent and up to 50 per cent of the tax base for the tax year calculated.
   - Loss carry-backward exists and it is addressed to taxpayers operating in the agricultural sector. They can account for deferred losses from the tax year by self-auditing or by correcting the amount of tax paid in the previous 2 tax years by reducing the pre-tax profit of the preceding two tax years by the amount of the deferred loss, each tax year up to 30 per cent of the pre-tax profit for the tax year.

f. **Tax credits:** tax credit is given in case of:
   - sponsorship of cinematographic works;
   - sponsorship of associations for the protection of performers rights;
   - sponsorship of popular team sports.

g. **Tax rate structure:** The corporate tax rate in Hungary is 10% of the positive tax base up to HUF 500 million five, while above this amount the rate is 19%.

h. **Thin capitalization rule:** Thin capitalization rule in force since 2012, introduced as part of CIT law. It does not depend on shareholding.

i. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

14. Iceland [70]

a. **Entities liable to CIT:** Public and private limited companies, partnerships, limited partnerships, joint venture and branch of a foreign company.

b. **Exemptions from taxable income:** Taxable income includes all business income, included capital gains and interests. Deductions are permitted under certain circumstances: interests are subject to a 20% withholding tax, in case of a resident company, while it applies a 10% withholding tax to nonresident companies entering a tax treaty with Iceland.

c. **Tax rate and tax base structure:** Statutory corporate income tax rate is 20%, while partnerships registered as taxable entities are subject to a 36% tax rate.

d. **Loss carry-forward and –backward:** Losses of the year may be carried forward for 10 years, while loss carry-backward is no allowed.

e. **Tax credits:** A foreign tax credit is available on foreign-source income, up to the amount of Icelandic tax liability due on the income. Companies which invest in R&D projects and have obtained confirmation by the Iceland Centre for Research, are entitled to a deduction from income tax of 20% of expenses incurred for the projects. Deductions are allowed up to ISK 100 million for each operating year (in case of purchased R&D services, expenses for deduction purposes must not be higher than ISK 150 million).

f. **Thin capitalization rule:** Interests on related party debt can be deducted up to the 30% of EBITDA. Interests exceeding such threshold cannot be deducted, exception made in same particular circumstances: annual threshold to ISK 100 million; taxpayer equity ratio equal or higher that 2% of the group's equity ratio; or the taxpayer being a financial or insurance company.

g. **Transfer pricing rule:** Transactions between related companies must be carried out at arm's length otherwise the tax authority can adjust the income according to the OECD guidelines. Iceland follows the OECD BEPS[71] initiative and implements a country-by-country reporting requirement.

h. **International factors:** Iceland has entered in more than 40 tax treaties.

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[70] Iceland data from Deloitte Tax Database – last update fiscal year 2017.

[71] The *Base Erosion and Profit Shifting (BEPS) Project* provides governments with solutions for closing the gaps in existing international rules that currently allow corporate profits to "disappear" or be artificially shifted to low or no tax environments, preventing treaty shopping and double taxation,

15. Ireland [72]

a. **Entities liable for CIT:**
   - Legal persons
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations

b. **Entities exempted from CIT:**
   - Credit Unions and certain State-controlled non-commercial bodies are exempt on all of their profits.
   - Charitable companies promoting amateur or athletic games or sports, friendly societies, trade unions, approved superannuation funds and mutual trading companies are all exempt from corporation tax on income, which fulfils certain statutory requirements.

c. **Limits to interest deductions:** Interest must be wholly and exclusively for the purpose of the trade in order to be deducted.

d. **Exemptions from taxable income:**
   - Profits from stallion and stud greyhound fees [73] to 31 July 2008, and certain woodlands [74] are exempt.
   - Certain grants to industrial undertakings and certain employment grants are also exempt.

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[72] Ireland data from Taxes in Europe Database – last update 10th October 2016

[73] According to Section 231 Tax Consolidation Act 1997 of Ireland (available for online consultation at ISB www.irishstatutebook.ie), the following shall not be taken into account for any purpose of the Tax Acts:

(a) (i) to the owner of a stallion, which is ordinarily kept on land in the State, from the sale of services of mares within the State by the stallion, or (ii) to the part-owner of such a stallion from the sale of such services or of rights to such services, or

(b) to the part-owner of a stallion, which is ordinarily kept on land outside the State, from the sale of services of mares by the stallion or of rights to such services, where the part-owner carries on in the State a trade which consists of or includes bloodstock breeding and it is shown to the satisfaction of the inspector, or on appeal to the satisfaction of the Appeal Commissioners, that the part-ownership of the stallion was acquired and is held primarily for the purposes of the service by the stallion of mares owned or partly-owned by the part-owner of the stallion in the course of that trade.

This exemption ceased in relation to profits or gains arising after 31 July 2008.

[74] Profits or gains from the commercial occupation of woodlands in the State are exempt from income tax under Section 232 TCA 1997.

– A start-up company that commences a new trade may be exempted from corporation tax for the first three years of trading in respect of the profits and chargeable gains related to that new trade, subject to certain conditions.

e. **Loss carry-forward and -backward:** Loss carry-forward exists with no time limit. Loss carry-backward exists too, with time limit set at 1 year. Subject to certain restrictions, losses may be used by a company against other sources of income, either in its current accounting period, its previous accounting period or future accounting periods. Certain losses may also be surrendered to group members.

f. **Tax credits:** Tax credit is available for research and development investment.

g. **Transfer pricing:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

h. **International aspects:**

– Loss carry-forward exists, with indefinite time limit and size limit not applicable. Loss carry-backward exists, with time limit 1 year and size limit not applicable.

– Where a foreign branch of an Irish registered company pays tax on its (foreign – outside Ireland) profits, the tax paid is allowed firstly as a credit against the Irish tax due on the Irish measure of this profit (i.e. at corporate tax rate 12.5%). Any surplus tax not allowed as a credit is allowed as a deduction (i.e. treated as a cost).

16. Israel [75]

a. **Entities liable to CIT:** Public and private limited liability company, registered and nonregistered partnerships and branch of a foreign corporations.

b. **Exemptions from taxable income:** Tax rate on dividends paid out by Israeli companies is set at 0%, provided that those dividends arise from income produced or accrued in Israel. However, for dividends received from abroad, the tax rate on such dividends is 24% and a withholding tax is granted. From 2017, dividends will be taxed at 24%.

[75] Israel data from Deloitte International Tax Guides – last update 2017.

c. **Tax rate and tax base structure:** Resident companies are subject to tax on their worldwide profit (source-based taxation). Nonresident companies are subject to taxation only on Israeli-source profits. An Israeli company classified as preferred technological enterprise is entitled to a reduced tax rate of 12% on technological earnings, or 6% in case of special preferred technological enterprises.

d. **Loss carry-forward and –backward:** Trading or business losses may be offset against income from any source in the current tax year. Trading or business losses can be carried forward with no time limit and no size limit. Loss carry-backward is not allowed.

e. **Tax credits:** Israeli grants a direct tax credit on foreign taxes paid on non-Israeli-source income. Moreover, there exists some taxation programs providing incentives for foreign investments, holding company regime and R&D incentives.

f. **Thin capitalization rule:** TC rule is not in force in Israel.

g. **Transfer pricing rule:** The transfer pricing rules, which are based on the OECD guidelines, apply to transactions between Israeli resident and its related nonresident party. Different transfer pricing methodologies applies, with preference given to transaction-based method with respect to the profit-based method.

h. **International factors:** Israel has more than 60 tax treaties actually in force.

17. Italy [76]

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Tax capital groups
   - Associations
   - Foundations
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations

b. **Entities exempted from CIT:**

[76] Italy data from Taxes in Europe Database – last update 6th July 2016

– Agricultural cooperatives
– Small fisheries cooperatives
– Labor/Production cooperative under specific conditions

c. **Limits to interest deductions:** Interest paid are deductible up to the value of interests received; the exceeding interests are deductible up to the 30% of EBIT (ROL – Reddito Operativo Lordo) and dividends received from non-resident controlled companies. ROL can be defined as earning before interests, taxes and amortizations.
d. **Exemptions from taxable income:** income of agricultural cooperatives, small scale fisheries cooperatives, or labor and production cooperatives under certain conditions.
e. **Loss carry-forward:** In general, losses may be carried forward up to 80% of taxable revenue without any time limits. Stricter rules apply to loss carry-forward if ownership of the company is transferred and if the company changes its activities. Although, it is allowed to carry losses forward if the company respect same "live" rates (such as amount of proceeds or amount of salary cost or number of employees).
f. **Transfer pricing rules:** In force. Arm's length principle is applied and the remedy is fee-based rather than the enlargement of the tax base, as it is applied in most of the other EU countries. The company is free to practice in intercompany transactions prices diverging from the normal value. However, if conduct results in a reduction of the national tax base or of the tax return, the enterprise will increases the total income of an amount equal to the greatest profit you would have made if the transactions were run at normal speed.

18. Japan [77]

a. **Entities liable to CIT:** Joint stock companies, limited liability companies, partnerships and branch of foreign corporations.
b. **Loss carry-forward and –backward:** Only 60% of a company's taxable income may be offset by net operating losses (NOLs). A small or medium-sized enterprise (SME) with share capital of no more than JPY 100 million is exempt from the NOL restriction, unless the SME is owned by a large corporation. NOL carry-forward may be further restricted in certain

[77] Japan data from Deloitte International Tax Guides – last update 2017

situations, including a change of ownership of more than 50% in connection with a discontinuance of an old business and commencement of a new business. The NOL carry-forward period is 9 years for ordinary corporations while loss carry-back is suspended for ordinary corporations. For SMEs, loss carry-back is allowed for one year.

c. **Tax rate and tax base structure:** Resident companies are taxed on worldwide income while nonresident companies are generally taxed on certain Japan-source income. The applied national standard CIT rate is 23,4% and applies to corporations with share capital exceeding JPY 100 million. In addition to such 23,4%, ordinary corporations must pay inhabitant tax which varies according to the location and the size of the firm. Moreover, companies must pay the local enterprise tax, categorized as income-based tax and factor-based tax, setting an additional rate which must be added to the ordinary 23,4%, ending up to an effective tax rate for ordinary corporations of 30%. A special tax rate of 19% is available to SMEs (e.g. corporations with share capital of JPY 100 million or less, and that are not 100%-owned directly or indirectly by a company with share capital of JPY 500 million or more). The reduced CIT rate for SMEs will be decreased to 15% for the following fiscal year beginning the 31st March 2017, while the ordinary corporations' CIT rate will be also reduced to 23,2% from 2018 fiscal year.

d. **Exemptions from taxable income:** Taxable income of a corporation in each accounting period is gross taxable revenues less deductible business expenses.

e. **Tax credits:** Incentives are provided in the form of R&D tax credit. Moreover, there is a tax incentive for investments in productivity improving assets (PIAs[78]) where taxpayers enjoy special depreciation or a tax credit for such investments if certain requirements are met.

f. **Limits to interest deductibility:** Where net interest payments to related persons exceed 50% of adjusted taxable income in a fiscal year, the excess portion is nondeductible. For these purposes, "related persons" is defined broadly, and includes similar controlling and affiliate relationships to those discussed under "Thin capitalization." The rules also can apply to interest

[78] Depreciable assets that are directly used for production, sales or service provision activities or other revenue-producing activities conducted by companies.

payments to certain third parties (e.g. where a third party provides a loan that is guaranteed by a related person). To summarize, "adjusted taxable income" is taxable income without applying certain provisions (including offsetting brought-forward tax losses, the dividends received deduction, the foreign dividend exemption, etc.), and adding back net interest payments to related persons and certain other expenses. Where both the *earning stripping* and the *thin capitalization* rules are applicable, the larger of the two potential disallowances will apply. To the extent the application of the above rules gives rise to nondeductible related party interest, such interest expense may be carried forward and deducted (within the limitation) against taxable income arising during the following seven fiscal years.

g. **Thin capitalization rule:** Japan's thin capitalization rule primarily restricts the deductibility of interest payable (including certain guarantee fees) by a Japanese corporation, or a foreign corporation liable to pay corporation tax in Japan, to its foreign controlling shareholder (or certain third parties) if the interest is not subject to Japanese tax in the hands of the recipient[79]. There is a *debt-to-equity* safe harbor ratio of 3:1 (2:1 for certain repo transactions). This effectively means that there will be a restriction only if the debt from the foreign controlling shareholder (or specified third party) exceeds three times the amount of net equity the shareholder/third party owns, and the total debt exceeds three times the equity. In such a situation, interest expenses calculated on the excess debt are treated as nondeductible expenses for Japanese corporate income tax purposes. If the taxpayer can demonstrate the existence of comparable Japanese corporations that have a higher debt-to-equity ratio, that higher ratio may be used.

h. **Transfer pricing rule:** The prices of goods and services exchanged between internationally affiliated entities must be consistent with the arm's length principle. Advance pricing agreements on the reasonableness of the taxpayer's methodology and results may be obtained from the tax authorities.

i. **International factors:** Japan has concluded 65 income tax treaties.

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[79] A foreign controlling shareholder is defined as a foreign corporation or nonresident individual that (1) directly or indirectly owns 50% or more of the total outstanding shares of the Japanese corporation (i.e. a parent-subsidiary relationship); (2) is a foreign corporation in which 50% or more of the total outstanding shares are directly or indirectly owned by the same shareholder that directly or indirectly owns 50% or more of the shares of the relevant Japanese entity (i.e. a brother-sister relationship); or (3) otherwise exercises control over the Japanese entity.

19. Korea [80]

a. **Entities liable to CIT:** Stock corporations, limited liability companies and branch of foreign corporations.

b. **Tax rate and tax base structure:** Residents are taxed on worldwide income; nonresidents are taxed only on Korean-source income. The corporation tax is 10% on the first KRW 200 million of taxable income; 20% for taxable income above KRW 200 million and up to KRW 20 billion; and 22% on the excess. A corporate tax rate of 7% applies for SMEs. In addition, corporations (both domestic and foreign) are subject to a local income surtax of 10% of the computed corporate income tax before the application of tax credits and exemptions.

c. **Exemptions from taxable income:** Corporate income tax is imposed on the company's taxable income. Normal business expenses are deductible expenses for tax purposes.

d. **Loss carry-forward and –backward:** Losses may be carried forward for up to 10 years. Regarding loss carry-backward, only for SMEs apply the loss carry backward for 80% of the taxable income for a fiscal year.

e. **Tax credits:** A Korean resident is entitled to a foreign tax credit for foreign overseas paid taxes. Various type of tax credits and exemptions are available, such as an investment tax credit, R&D tax credit, tax exemption for high-tech foreign-invested companies. The foreign investment company will be entitled to a full CIT exemption for the first 3 or 5 years from the fiscal year in which taxable income is generated, and an additional 50% exemption for the following 2 years.

f. **Thin capitalization rule:** If a foreign-invested company borrows from a foreign controlling shareholders (FCS) and the borrowing exceeds 200% (or 600% for financial companies) of equity (or contributed capital if greater than equity), the interest expenses on the debt exceeding the threshold of the FCS's share of the borrower's equity is not deductible.

g. **Transfer pricing rule:** Transactions with overseas-related parties must be made on arm's length principle. From 2016, domestic companies and permanent establishments of a foreign company that have annual sales of more than KRW 100 billion and a transaction volume with foreign related

[80] Korea data from Deloitte International Tax Guides – last update 2017

parties of more than KRW 50 billion per year are required to submit additional transfer pricing documentation that provides management information, cross-border transactions information and various business/intangible assets/financial/tax information. Both unilateral and bilateral advance pricing agreements are available.

h. **International factors:** Korea has actually in force more than 80 tax treaties.

20. Luxembourg [81]

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Tax capital groups
   - Associations
   - Foundations
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations

b. **Entities exempted from CIT:** Undertakings for Collective Investment (UCI) which collect savings from the public in order to make investments according to the principle of risk diversification (equities, bonds, etc.) are excluded from tax.

c. **Limits to interest deductions:** No deduction up to exempted income.

d. **Exemptions from taxable income:**
   - Personal exemption:
     - Certain corporate bodies whose direct or exclusive objectives are religious, charitable or of general interest.
     - Establishments supplying water, gas and electricity and belonging to the State, municipalities or groups of municipalities.
     - National lottery, national low-cost housing corporation, independent employers' pension and provident funds.
     - Holding companies.

[81] Luxembourg data from Taxes in Europe database – last update 9th June 2016

- Exclusively occupational associations and agricultural cooperatives in which machines are used in common and by which the agricultural produce of the members is processed or sold.

– Income from participations (dividends):
  - Where resident joint stock companies sell shares in a collective entity, the capital gains realised are tax exempt provided a holding period of at least 12 months and a share holding of at least 10 % or that was purchased for at least EUR 6 millions;
  - The income of a resident joint-stock company which is fully liable to tax and which has a direct continuous holding of at least 10 % or at least EUR 1,200,000 in the capital of another joint-stock company is exempted wholly if the other company is fully liable to tax.

– Patents income: The Intellectual Property (IP) regime provides for an 80% tax exemption of the net income deriving from the use and the right to use the IP rights. Qualifying IPs are patents, trademarks, design, domain names, models and software copyright. An 80% deduction of the net deemed income is also available under certain conditions for self-developed patents, which are used internally in the business by the taxpayer. The net capital gain realised upon disposal of the qualifying IP rights also benefit from the 80% exemption. This regime will phase out by 2021.

e. Loss carry-forward: Loss carry-forward exists with indefinite time limit and size limit is not applicable.

f. Tax credits: Tax credit is given in case of:

– Global Investment: An investment tax credit is granted and calculated on the purchase price. The tax credit is 7% for the portion of the investment up to 150.000 EUR, and 2% for the portion of the investment exceeding 150.000 EUR. The above mentioned rates are increased to 8% and 4% for investments eligible for special depreciation (i.e. investments favouring the protection of the environment, the realisation of energy savings, the creation of employment for handicapped workers).

– Complementary Investment: Limited to 12% and is only eligible if the additional investment exceeds the average value that the underlying had in the closing balance sheet during the last 5 years.

g. **Thin Capitalization Rule:** Thin capitalization is not applicable. However, it depends on the shareholding. The remedy applied is the reclassification as dividend.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

21. Mexico [82]

a. **Entities liable to CIT:** Corporations (SA), limited liability companies (SRL) and branches of foreign companies.

a. **Exemptions from taxable income:** Business expenses are deductible, and interest deductibility is subject to TC rule. Taxable income includes all profits from operations; passive income, such as interest, royalties and rents; and capital gains. The taxable income of a company is its gross income in a tax year less allowable expenses and losses. Corporate capital gains or losses arising from the sale of fixed assets are treated as ordinary income or losses, taxable at the normal corporate rate.

b. **Loss carry-forward and –backward:** Losses can be carried forward for 10 years, while carryback of losses is not allowed.

c. **Tax credits:** Special rules apply to maquiladoras. Incentives are granted for national cinematographic and theatrical productions, as well as investments in high performance sports, electric vehicle power feeders, technology and R&D projects.

d. **Rate structure:** Residents are taxed on their worldwide income. Nonresident companies are taxed only on their Mexican-source income. Income is deemed to derive from Mexican sources when the assets or activities are in Mexico or when the sales or contracts are carried out in the country, regardless of where title passes. The corporate tax rate is 30%. The same rate applies to Mexican branches of foreign companies

a. **Thin capitalization rule:** Interest payments made by a Mexican resident company on a loan from a nonresident related party are nondeductible for income tax purposes to the extent that the debt-to-equity ratio of the payer company exceeds 3:1. Debts incurred for the construction, operation or maintenance of productive infrastructure linked to strategic areas or for the generation of electricity, are excluded from thin capitalization rules.

[82] Mexico data from Deloitte International Tax Guides – last update 2017.

a. **Transfer pricing rule:** Rules following the OECD guidelines apply to cross-border and domestic transactions. Acceptable transfer pricing methods are as follows: the comparable uncontrolled price (CUP) method is considered the preferred method, followed by the cost plus and resale price methods. Profit-based methods are to be applied if the CUP, cost plus and resale price methods are not applicable.
b. **International factors:** Mexico has 55 tax treaties actually in force.

22. Netherlands [83]

a. **Entities liable for CIT:**
   - Legal persons
   - Tax capital groups
   - Organizational units having no legal personality are not taxed in the DCIT, expect for one specific kind of limited partnership.
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations are generally taxed, however some exceptions apply for certain public goods and services.
   - Associations and foundations are taxed if they have an enterprise or if they compete with private companies.
   - Other types of taxed entities are cooperatives, mutual insurance associations and mutual funds.
   - Branches are only taxed to their source-income.
b. **Entities exempted from CIT:**
   - Certain public corporations providing typical public goods/services (i.e. hospitals, educational institutions).
   - Non-profit welfare organizations
   - Pension funds
   - Public libraries
   - Non-profit organizations
   - Some specific investment institutions are exempt if they fulfill certain conditions.

[83] Netherlands data from Taxes in Europe database – last update 22nd December 2016

c. **Tax rate and tax base structure:** Non-resident non-Dutch entities are only taxed for their Dutch source income. Dutch entities are deemed to always have their legal seat in the Netherlands and are therefore always taxed on their worldwide income. For the first EUR 200,000 of taxable income a rate of 20% applies for every tax payer. All the taxable income above EUR200.000 is taxed at a rate of 25%.

d. **Limits to interest deduction:** Transfer pricing rule is not applicable but various other rules can partially deny the deduction of interest costs:
   - anti-base erosion legislation that covers the conversion of equity into intragroup debt
   - rules that cover the acquisition of shares against debt from a related party;
   - rules that disallow the deduction of interest expense relating to excess debts associated with the acquisition price of participations.
   - rules that cover debt-funded acquisition of Dutch companies for acquisition holdings.

   Special anti-abuse rules apply to interest on non-functional loans paid to a related company. Interests paid on these loans are not deductible. Deduction of interest is limited in case an acquiring company forms after takeover a fiscal unity with the target company. This is to prevent that interest costs of the take-over are set off with the profits of the target company. Excessive participation debt is also non-deductible.

e. **Tax credits:** Various types of aid are available, including direct subsidies, loans and grants for environmental and R&D projects, employment premiums for investments that create jobs. Moreover, the "innovation box" regime will provide companies a reduction of CIT rate on profits derived from intellectual property, including royalty income. Under the innovation box, profits which are derived from intellectual property developed by a company are subject to taxation ad an effective rate of 5%, up to the threshold equal to the sum of the costs incurred to develop the intellectual property. Additionally, a R&D allowance applies for costs and expenditure directly related to a taxpayer's R&D activities.

f. **Exemptions from taxable income:**
   - The capital gains derived from agricultural land is exempt
   - Income from forestry is exempt

- Results from the remission of a debt are, under conditions, exempted
- Dividend income is taxed, however dividend income – and other capital gains – derived from a subsidiary in which the tax payer holds >5% of the stock capital is exempt (this only applies under certain conditions).
- Income derived from a foreign permanent establishment is also exempt (under certain conditions).
- Income derived from a permanent establishment is exempted. The participation exemption is applicable for both domestic and foreign shareholdings. A participation is regarded to exist if the taxpayer holds at least 5% of the nominal paid-up capital of a company of which the capital is partially or wholly divided into shares.
- If, among other conditions, a tax payer has developed an intangible asset, the tax payer can apply for the 'innovation box' so the income derived from that self-developed intangible asset is taxed at 5%.

g. **Loss carry-forward and -backward:** Loss carry-forward exists with time limit of 9 years and size limit is not applicable. Loss carry-backward exists, with time limit of 1 year.

h. **Transfer pricing rules:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:** In force. Arm's length principle is applied and the remedy consists in the tax base increase. The rate of DDT of outbound dividends for treaty countries differ from 0% to 15%, dependent on the requirements of the specific treaty. For non-treaty countries, the rate of outbound dividends is the standard rate of the DDT (15%). Import of losses is only possible when a subsidiary of the tax payer is liquidated and losses of that subsidiary cannot be offset anywhere else. This only applies under strict conditions.

23. New Zealand [84]

a. **Entities liable to CIT:** These are the public and private limited liability company, partnership, limited partnership, trust, sole proprietorship and branch of a foreign corporation.

b. **Exemptions from taxable income:** Taxable income is calculated by subtracting allowable deductions from assessable income, which includes

[84] New Zealand data from Deloitte International Tax Guides – last update 2017.

gross income from the sale of goods, the provision of services, most dividends, interest and royalties. Deductions are allowed for expenses incurred in gaining assessable income or conducting business for the purpose of gaining or producing assessable income for any income year. New Zealand operates a full imputation system, under which the payment of company tax is imputed to shareholders and the shareholders are relieved of their tax liability to the extent profits have been taxed at the corporate level. Dividends received by a company from a wholly owned group member generally are exempt.

c. **Tax rate and tax base structure:** Resident companies are taxed on worldwide income; nonresident companies are taxed only on New Zealand-source income. As a general rule, tax rates and tax treatment are the same for all companies, including branches of foreign companies.

d. **Loss carry-forward and –backward:** Losses may be carried forward indefinitely, subject to a 49% continuity of ultimate share ownership requirement. Losses also may be offset against the profits of other group companies, where the companies are at least 66% commonly owned at all relevant times. Losses may not be carried back.

e. **Tax credits:** There are no specific incentive schemes, but tax legislation provides some industry-specific concessions and rules for farming, forestry, research and development, environmental protection, venture capital, film production and research and development intensive start-up companies. Start-up companies with losses arising from research and development expenditure may be eligible for a tax credit upon meeting certain eligibility criteria.

f. **Thin capitalization rule:** Interest deductions claimed against New Zealand assessable income for inbound and outbound companies are limited where any entity's debt exceeds a safe harbor debt-to-assets ratio (debt percentage). For inbound companies, interest will be apportioned (and the deductible portion will be limited) if the debt percentage of the New Zealand group is more than 60% and exceeds 110% of the debt percentage of the worldwide group. For outbound companies, interest will be apportioned if the debt percentage of the New Zealand group is more than 75% and exceeds 110% of the debt percentage of the worldwide group.

g. **Transfer pricing rule:** New Zealand's transfer pricing rules apply to cross-border transactions between associated persons. The rules aim to prevent

companies from avoiding taxes by fixing artificial prices in transactions with related companies in different tax jurisdictions. Covered international transactions are broadly defined, but include transactions involving tangible or intangible property, the provision of services and financing. The transfer pricing rules and administration are broadly based on the OECD's transfer pricing guidelines, although the rules provide no specific guidance on the attribution of income to branches or permanent establishments in New Zealand. New Zealand's tax authorities have the power to adjust the pricing of transactions that are considered not to be at arm's length. Advance pricing agreements are possible.

h. **International factors:** New Zealand has entered 40 tax treaties and 18 tax information exchange agreements.

24. Norway [85]

a. **Entities liable to CIT:** Public and private limited company (ASA/AS), limited partnership (KS), general partnership (ANS), branch of foreign company (NUF) and individual enterprises.

b. **Exemptions from taxable income:** Intracompany dividends from Norwegian companies are 100% exempt from taxations, while dividends received from other companies resident in the EU are 97% exempt from tax, with the remaining 3% taxed at the ordinary tax rate of 25%. Capital gains are generally taxable but they are subject to an exemption for capital gains on shares. Ordinary business expenses, depreciation, social security payments, R&D, interests and royalty payments.

c. **Loss carry-forward and –backward:** Losses can be carried forward without limit while liquidation losses can be carried backward for two years.

d. **Tax credits:** Limited tax credits for R&D are available. Tax credit for foreign tax paid are available: the maximum credit provided is the minimum between the foreign tax rate and the ordinary Norwegian tax rate (24%).

e. **Rate structure:** Standard corporate tax rate is 25% (24% from 2017). No reduced tax rate applies for small medium enterprises (SMEs).

f. **Thin capitalization rule:** Thin capitalization rule applies through an interest deduction limitation, where interests on related party debt are

[85] Norway data from Deloitte International Tax Guides – last update year 2017.

generally deductible up to 25% of adjusted EBITDA. Moreover, for certain oil companies, special thin capitalization rule applies.

g. **Transfer pricing rule:** Intercompany transactions are acceptable if they are based on the arm's length principle. The Norwegian tax authorities may intervene whether they deem payments of interests and management fees to be at unreasonable rates.

h. **International factors:** Norway is engaged in more than 85 bilateral tax treaties.

25. Poland [86]

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Tax capital groups
   - Associations
   - Foundations
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income

b. **Entities exempted from CIT:**
   - State Treasury;
   - National Bank of Poland;
   - State budget entities;
   - national special-purpose funds referred to in the Act of 27 August 2009 on public finance;
   - National Fund for Environmental Protection and Water Management;
   - territorial self-government units with respect to incomes referred to in the Act on Incomes of Territorial Self-government Units;
   - Agency for Restructuring and Modernizing the Agriculture;
   - Agency of Agricultural Market.

c. **Tax object excluded:** Income from agriculture. Taxable income is computed based on the accounting profits adjusted for tax purposes.

d. **Exemptions from taxable income:** Income from participations (dividends) is exempted from tax purposes. Moreover, certain types of income of

[86] Poland data from Taxes in Europe database – last update 8th December 2016

resident companies are exempt from income tax, such as qualified dividends, subventions from national or local authorities, and certain grants from foreign governments and international organizations (e.g. NATO and European Union).

e. **Tax credits:** Deduction for qualifying expenses (limited to 10-30% of qualifying expenses) incurred for R&D activity, with additional incentives available to entities that have R&D center status. Entities with R&D center status may establish an innovative fund: monthly contributions to the fund amounting to 20% of revenue may be treated as tax-deductible costs. A one-time depreciation write-off up to EUR 50 thousands may be available for small and start-up taxpayers.

f. **Loss carry-forward:** Loss carry-forward exists with time limit of 5 years in order to offset profits from all sources in those years.

g. **Thin capitalization rule:** Thin capitalization rule in force since 1998, introduced as part of CIT law. Test for TC consists in the ratio 1:1 with $borrower's\ equity$ as denominator. TC test is depends on 25% of direct shareholding. Automatic remedy applied in such circumstances for all companies is the non-deductibility of interests.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:** The withholding tax rate for outgoing dividends is from 0% to 15% and for outgoing interest payment from 0% to 20%. A foreign EU company is not covered by the CFC rules if its entire income is subject to taxation in a member state of the EU, provided that it actually conducts a business activity. Companies from beyond the EU are not covered by the CFC rules if the annual revenue of the CFC does not exceed EUR250.000.

26. Portugal [87]

a. **Entities liable for CIT:**

- Legal persons
- Organizational units having no legal personality
- Tax capital groups
- Associations

[87] Portugal data from Taxes in Europe Database – last update 11th October 2016

- Foundations
- Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
- Public corporations

b. **Entities exempted from CIT:**
   - The central government, autonomous regions and local authorities, municipal associations and federations, social security institutions, except for investment income.
   - Charities (IPSS) and entities of public interest, under certain conditions.
   - Agricultural, housing and building co-operatives, educational and handicraft production co-operatives subject to the conditions laid down by the law.
   - Political parties (non liable).

c. **Limits to interest deductions:** Interests are deductible up to maximum of 30% of EBIT or EUR 1 million.

d. **ACE rate:** Only individual-owned micro, small and medium-sized enterprises may benefit from a 5% notional interest deduction calculated based on the company´s share capital, for three years and limited to EUR 200.000.

e. **Exemptions from taxable income:** Income derived from cultural, entertainment or sport activities subject to the conditions laid down by the law.

f. **Loss carry-forward:** Loss carry-forward exists with time limit of 5 years and size limit not applicable. SMEs are provided with time limit of 12 years and size limit of 70% of the profits.

g. **Tax credits:**
   - For research and development investment;
   - Double taxation, patronage, net creation of jobs
   - Relevant investments in Agriculture, Tourism, Forestry and Mining (RFAI);
   - Acquisition of companies with a difficult financial situation (SIRME);
   - Deduction of reinvested profits (DLRR)

h. **Rate structure:** The 17% rate applies to taxable profit up to EUR15,000. Above that value the general rate applies. The 29.5% marginal rate applies to companies whose taxable profit reaches 35 million euros.

i. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

27. Slovak Republic [88]

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Tax capital groups
   - Associations
   - Foundations
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations

b. **Tax object excluded:** Dividends

c. **Limits to interest deductions:** Interests are deductible up to the 25% of the EBITDA.

d. **Exemptions from taxable income:**
   - Income from participations (dividends)
   - Gifts
   - Income from NGOs
   - R&D tax relief scheme developed in 2015 [89], with the possibility of a carry forward of up to four years. The deduction is calculated as: 25% of eligible R&D expenditures, 25% of increase in the R&D expenditures compared to the previous year (% YoY) and 25% of labour costs of newly hired

[88] Slovak Republic data from Taxes in Europe Database – last update 4th January 2017.

[89] The National Reform Programme of Slovak Republic has been developed in 2015 and includes structural measures planned for the implementation in the next two years. The priorities identified by the government take into account: the reduction in deficit percentage as total GDP below 3%; the enhancement and improvement of tax collection (in particular improving the VAT gap); the consolidation of the new pension system reform; structural changes regarding the labor market, the health care system and primary education. Further importance has been given to the quality of education and the promotion of science and research: the *Slovak Centre of Scientific and Technical Information* created a national support for technology transfer. Services are based on intellectual property protection and commercialization as well as a scheme of innovation vouchers enhancing the cooperation of the business sector and R&D facilities and investment. Since 2015, the government provides a tax relief for research and development expenditures that has further contributed to a more intensive technology transfer.

graduates involved in R&D. These R&D tax allowances come on top of the standard deduction of the R&D costs and wages from the CIT base.

e. **Loss carry-forward:** Loss carry-forward exists with time limit of 4 years and size limit not applicable.

f. **Tax credits:** Investment incentives may be available to start new production or the provision of services, to expand or modernize production or the provision of services or for R&D. A company may deduct 125% of the actual research and development expenses incurred in the relevant tax period, plus relief for 25% of the actual employee labor costs and 25% of the actual R&D costs that exceed the incurred R&D costs in the previous tax period.

g. **Thin capitalization rule:** Thin capitalization rule in force since 2015, introduced as part of CIT law. Test for TC consists in the ratio $\frac{interests}{EBITDA}$ of 1:4. TC test depends on 25% of direct shareholding. Automatic remedy applied in such circumstances for all companies is the non-deductibility of interests.

h. **International aspects:** Outgoing dividends withholding tax are exempt for both treaty and non-treaty countries. Outgoing interest payments withholding tax rate is set at a range 0–15% for treaty countries, where set tax rate depends on individual bilateral Double Tax Treaties; a range 19-35% instead applies whereas no treaty about bilateral exchange of information exists.

28. Slovenia [90]

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Associations
   - Public corporations

b. **Entities exempted from CIT:** The Republic of Slovenia and local authorities are not taxpayers, they are fully exempted from paying taxes. The Bank of Slovenia does not asses and pay tax.

c. **Exemptions from taxable income:** Exemptions include income from participations and, for some legal persons, income derived from non-profit activities. For example: institutes, societies, foundations, religious communities, political parties, chambers or representative trade unions.

[90] Slovenia data from EU Tax Database – last update 17th November 2016.

d. **Loss carry-forward and -backward:** Loss carry-forward exists with no time limit. The reduction of the tax base due to tax losses from preceding periods is only allowed up to a maximum of 50% of the tax base for the tax period.

e. **Tax credits:** Tax credit is available for R&D activities, training, employment, voluntary supplementary, donations. Incentives includes a deduction of 100% of the amount invested in domestic R&D activities and purchase of R&D services.

f. **Rate structure:** under certain conditions, tax payers whose annual income does not exceed EUR 100.000 can opt to calculate their tax base by applying a lump-sum expense deduction. This tax base assessment has to include revenues recognized for tax purposes and lump-sum expenses amounting to 80% of these revenues. If a taxpayer decided to comply under this scheme, no tax relief can be claimed or tax loss declared.

g. **Thin capitalization rule:** Thin capitalization rule in force since 2015, introduced as part of CIT law. Test for TC consists in the ratio $\frac{Amount\ of\ shareholder\ in\ the\ capital\ of\ the\ taxpayer}{Capital\ of\ the\ tax\ payer}$ of 1:4. TC test depends on 25% of indirect shareholding. Automatic remedy is not applicable.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:** Outgoing dividend and interest withholding tax depends on the relevant treaty in force respectively with each country.

29. Spain [91]

a. **Entities liable for CIT:**

- Legal persons
- Organizational units having no legal personality
- Tax capital groups
- Associations
- Foundations
- Public corporations

b. **Entities exempted from CIT:**

[91] Spain data from EU Tax Database – last update 21st September 2016.

- Full exemption for the Central Government, the Autonomous Communities, certain public bodies, the Bank of Spain, etc.
- Partial exemption applies in respect of certain types of income accruing to political parties, trade unions, associations, etc.

c. **Limits to interest deductions:** Net financial expenses are deductible up to 30% of operating profit, subject to a maximum of EUR 1 million.

d. **Exemption from taxable income:** Exemptions include income from participations, patents income and income earned through permanent establishments based abroad.

e. **Loss carry-forward and –backward:** Loss carry-forward exists with no time limit while size limit, for tax year 2016, is set to 60% (70% since tax year 2017).

f. **Tax credit:**
   - For R&D investments
   - Deduction to avoid double taxation
   - Deduction for investments in film productions, audiovisual series and live entertainment
   - Deduction for job creation
   - Deduction for job creation for disabled workers

g. **Thin capitalization rule:** Measure against profit shifting consists in an automatic remedy implying the non-deductibility of financial expenses from intra-group debts incurred in acquiring a stake in the capital or own funds of any type of company. Moreover, it includes those expenses incurred in contributing to the capital or own funds of other entities within the group, unless the taxpayer can prove sound business reasons underlying the transaction.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:** A difference treatment is applied to treaty and non-treaty countries concerning outgoing dividends, royalty payments and interest payments withholding tax: the former are taxed at 15% while the latter are taxed at 19%.

30. Sweden [92]

[92] Sweden data from EU Tax Database – last update 29th November 2016

a. **Entities liable for CIT:**
   - Legal persons
   - Organizational units having no legal personality
   - Tax capital groups
   - Associations
   - Foundations
   - Companies having their seat or management office in other countries, provided that in their country they are treated as legal persons and are subject to tax on income
   - Public corporations

b. **Limits to interest deductions:** The limits to interest deductions are complex. The main rule limits the deductibility of interest expense relating to all loans between related parties. There are exceptions to the main rule. The interest expenses are deductible if the interest income related to the expenses is taxable at a rate of 10% in the hands of the beneficial owner of the interest income. In addition, the taxpayer must show that the main reason for establishing the debt relationship is not to provide a tax advantage.

c. **Tax credits:** Companies can benefit from reduced employer social fees for employees engaged in R&D work within Sweden. The reduction amounts to 10% of the employees' salary within certain brackets. The social fee reduction is maximized at SEK 230 thousands per month.

d. **Loss carry-forward:** Loss carry-forward exists with no time and no size limit.

e. **Thin capitalization rule:** No TC rules is in force in Sweden. However, the Companies Act requires the compulsory liquidation of a company if more than 50% of the share capital is lost without replacement of new capital.

f. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

g. **International aspects:** Profits from a subsidiary are tax exempt regardless of whether the subsidiary is domestic or located abroad, provided the subsidiary falls under the rules of participation exemption. For this exemption to apply, the subsidiary must by either an unquoted firm, or a quoted firm in which the parent owns at least a 10% stake, or the ownership in the subsidiary must be a trade related investment.

31. Switzerland [93]

a. **Entities liable to CIT:** Corporations (AG), limited liability companies (GmbH), partnerships limited by shares, cooperatives societies established under Swiss law and comparable foreign entities as well as and branches of foreign company.

b. **Tax objects excluded:** Foreign-source income is included in taxable income but tax reliefs are granted for dividend income from qualifying participations. Foreign-source income is taxed net of foreign taxes and no credit is given for foreign tax paid, except for withholding tax on dividends, interests and royalties – applicable under in force tax treaties.

c. **Limits to interest deductions:** No withholding tax is levied on interests. Exceptions apply to interests derived from deposits and bond with Swiss banks, which are subject to a 35% withholding tax.

d. **Exemptions from taxable income:** Switzerland provides two special regimes for corporations, under which a particular set of privileges is given for qualifying companies:

   – *Holding company regime:* the holding company regime tax privilege is provided for companies whose primary purpose is the holding of participations. The requirements for the potential qualifying companies are 2/3 of total assets consisting of financial investments in subsidiaries or, alternatively, 2/3 of income consisting of dividends. When such circumstances applies, the company is full exempt from cantonal and communal income taxes, hence it is taxed only at the effective federal income tax rate on nondividend income, which is 7,8%.

   – *Mixed company regime:* the mixed company tax privilege is granted to companies with predominantly (at least 80%) foreign business activities. Requirements must satisfy at least 80% of gross income derived from foreign sources or 80% of expenses incurred abroad. This regime provides foreign-source income of the qualifying company to be taxed at a combined rate from 9% to 11%. Swiss-source income, instead, is taxed at the ordinary tax rate.

e. **Loss carry-forward and –backward:** Losses may be carried forward for 7 years and can be offset against income or capital gains. Loss carry-backward is not allowed.

[93] Switzerland data from Deloitte tax database – last update fiscal year 2017.

f. **Tax credits:** Incentives are available for domiciliary companies, principal companies and finance branches. Tax holidays may apply.

g. **Rate structure:** Taxation on corporate income applies both at federal and cantonal/communal levels. The federal tax rate is 8,50% and is levied on the net income (effective tax rate after deductions is 7,80%). The effective combined tax rate, considering both the federal and the communal income tax, is among 12% and 24% for companies subject to ordinary taxation. No alternative minimum taxation applies and no distinction is provided for SMEs.

h. **Thin capitalization rule:** Switzerland is a safe heaven and thin capitalization rule require a minimum equity ratio, i.e. receivables debt financed by 85%, investments by 70% and intellectual property by 75%.

i. **Transfer pricing rule:** There exists no formal transfer pricing legislation, even though all related party transactions with Swiss entities must be carried out following the arm's length principle.[94] Generally, Switzerland follows the OECD transfer pricing guidelines.

j. **International factors:** Switzerland has concluded more than 80 treaties which regulate many international transactions as well as providing reduced rates for qualifying investments.

32. Turkey [95]

a. **Entities liable to CIT:** Corporations ("Anonym Sirket" or AS), limited liability companies ("Limited Sirket" or Ltd. Sti.), ordinary partnerships, limited partnerships, sole proprietorships, branches of foreign companies.

b. **Exemptions from taxable income:** All profits derived from the earning of income are included in taxable income, with the exception of dividends qualifying under the domestic participation exemption. Expenses incurred in the course of the business generally are deductible.

c. **Tax rate and tax base structure:** Resident companies with unlimited liability are taxed on worldwide income while nonresident companies are subject to tax only on Turkish-source income.

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[94] The arm's length principle assesses that goods and services traded between group affiliates and related parties at the price observed in the market when the same goods and services are traded between unrelated parties in a standard transaction

[95] Turkey data from Deloitte International Tax Guides – last update 2017

d. **Loss carry-forward and –backward:** Tax losses may be carried forward for 5 years. Losses can note be carried back, except where the company is liquidated.

e. **Tax credits:**
   - A tax credit is granted for foreign tax paid, up to the amount of Turkish corporate tax attributable to the foreign income.
   - An allowance is available to companies that carry out qualifying R&D and design activities: such allowance is equal to 100% of R%D and design expenditure and is available in addition to a deduction for such expenditure.

f. **Thin capitalization rule:** Thin capitalization rules apply when loans from shareholders or related parties[96] exceed a 3:1 debt-to-equity ratio at any time in an accounting period (six times shareholder equity for loans from related party banks or financial institutions). If the debt-to-equity ratio is exceeded, interest payments in excess of the safe harbor ratio will be deemed to constitute a hidden profit distribution or a remittance of profits on the last day of the accounting period in which the conditions for application of the thin capitalization rules are satisfied and, therefore, subject to the 15% dividend withholding tax. Related expenses, foreign exchange losses and interest payments are nondeductible.

g. **Transfer pricing rule:** When a transaction between related parties (domestic or foreign) is not carried out on arm's length terms, profits arising from the transaction will be deemed to be "constructive dividends" subject to both corporate income tax and dividend withholding tax. The transfer pricing rules provide for the comparable uncontrolled price, cost-plus and resale price methods, as well as profit-based methods (e.g. profit-split and transactional net margin methods). However, a taxpayer may adopt another method based on its particular circumstances.

h. **International factors:** Turkey has actually signed 83 tax treaties.

33. United Kingdom [97]

[96] Related parties for these purposes are defined as shareholders and persons related to shareholders that own, directly or indirectly, 10% or more of the shares, voting rights or rights to receive dividends of the company.

[97] United Kingdom data from EU Tax Database – last update 9th February 2017

a. **Entities liable to CIT:** Any corporate or unincorporated association such as industrial and provident societies, clubs and trade associations.
b. **Entities exempted from CIT:** The list of exempted entities includes partnerships, co-ownership schemes [98], local authorities or local associations.
c. **Tax object excluded:** Dividends are generally exempt from corporation tax, but this is subject to certain anti-avoidance rules and conditions.
d. **Exemptions from taxable income:** Charitable organizations are exempt from corporation tax on their income.
e. **Loss carry-forward and –backward:** Loss carry-forward exists with no time and no size limit: trading losses may be offset against future profits from the same trade or against other profits of the same accounting period or previous year. Capital losses, instead, may be offset only against capital gains and may only be carried forward. From April 2017, new rules are expected to apply: these will increase the range of income against which the various types of income loss can be set, however it will also restrict the amount of profits that can be sheltered by carried forward losses to 50% of a group's profits (over a GBP 5mln allowance).
f. **Tax credit:** tax credit applies for R&D investments.
g. **Thin capitalization rule:** Thin capitalization rule has been introduced as part of CIT law. Test for TC consists in arm's length and does not depend on shareholding. Automatic remedy applied in such circumstances for all companies is the non-deductibility of interests. TC rules applies for all profits

[98] CoACS – Co-ownership Authorised Contractual Schemes – are collective investment schemes authorized by the Financial Conduct Authority, analogous to the popular forms of contractual funds in other EU countries, i.e. the German *Spezialfonds* as well as the *Luxembourg Fonds Commun de Placement (FCP).* In 2011, the UK government introduced a new regulated tax transparent fund vehicle to facilitate collective investment in transferable securities and in June 2013, a new regulation came into force, providing the regulation and tax treatment of an ACS. The ACS regulation provide for two types of ACS: a Co-ownership ACS and a Partnership ACS.

Regarding tax treatments at the level of ACS, either in case of a Partnership or Co-ownership, an ACS itself is not subject to corporation tax, income tax or capital gains tax at the Fund level. This tax treatment is a direct consequence of being fiscally transparent and not having separate legal identity, which make ACS not able to assert any right on behalf of its investors under the UK tax treaty. Moreover, management services supplied by the Fund Operators are VAT exempt under the management of "special investment funds" exemption.

For what is concerned with investors' taxes, investors will be treated for tax purposes as receiving **income** from the underlying assets of the fund, as if they had invested into the market directly. For c**apital gains** tax purposes, an investor's interest in the Fund is treated as a chargeable asset and any gain or loss may be realized only on disposal by an investor of its unit in the fund. This means that the investor does not incur in a capital gain or loss when the disposal of the asset is made by the fund.

– including income and capital gains – with exception for dividends and other distributions received from UK resident companies.

h. **Transfer pricing rule:** In force. Arm's length principle is applied and the remedy consists in the tax base increase.

i. **International aspects:** Although the UK is generally an exemption system, companies can elect to be taxed on the distributions, which could then lead to them claiming a tax credit or deduction for foreign tax. Whilst the UK aims to obtain a 0% rate in respect of interest and royalties, the actual rate depends on negotiations with the other state and can be set between 0% and 25%.

34. United States [99]

a. **Entities liable to CIT:** Corporations, limited liability companies, partnerships, limited partnerships, branches of foreign corporations, joint ventures and sole proprietorships.

b. **Entities exempted from CIT:** Corporations with 100 or fewer shareholders, none of whom may be corporations, that meet certain other requirements may elect to be taxed under Subchapter S of the Internal Revenue Code (IRC or 'the Code') and are thus known as S corporations. S corporations are taxed in a manner similar, but not identical, to partnerships (i.e. all tax items [e.g. income, deductions] flow through to the owners of the entity). Thus, S corporations generally are not subject to US federal income tax.

c. **Exemptions from taxable income:** Deductions are permitted for all ordinary and necessary expenses paid during the taxable year. Items that are not tax deductible are: dividends, going concern values, political contributions, costs for certain types of life insurance, legal penalties and costs related to corporate restructuring.

d. **Tax rate and tax base structure:** The US corporate income tax rate is based on a progressive rate schedule. A corporation's taxable income not exceeding USD 335 thousands is taxed at marginal rates ranging from 15% to 39%. Corporations with taxable income between USD 335 thousand and USD 10 million are effectively taxed at 34% on all taxable income. Corporations with taxable income exceeding USD 10 million are taxed at 35%, with amounts

[99] United States data from PwC Worldwide Tax Summary & Deloitte International Tax Source – last update in 2016.

exceeding USD 15 million but not exceeding USD 18,3 million subject to an additional tax of 3%. As a result, corporations with taxable income in excess of USD 18,3 million are effectively subject to tax at a rate of 35% on all taxable income. Special rules apply to personal service corporations and personal holding companies.

e. **Loss carry-forward and –backward:** If allowable deductions of a US corporation or branch of a foreign corporation exceed its gross income, the excess is called a net operating loss (NOL). In general, NOLs may be carried back 2 years and forward 20 years to offset taxable income in those years. A specified liability loss (including a product liability loss) may be carried back 10 years. A real estate investment trust (REIT) may not carry back an NOL arising in a tax year in which the entity did not operate as a REIT. Farming business losses may be carried back five years. Limitations apply in utilizing NOLs of acquired operations.

f. **Tax credits:**
   - A tax credit is allowed for foreign income taxes paid, or deemed paid, by US corporations, but the credit is generally limited to the amount of US tax incurred on the foreign source portion of a company's worldwide taxable income.
   - In the US, a nonrefundable tax credit is available for certain qualified research expenses (QREs) incurred in the US that exceed one of two computed base amounts. This tax credit may be used by a business to reduce its federal tax liability. The QREs eligible for the research credit are a subset of the expenses eligible for the deduction, as QREs are generally measured as direct expenses of R&D without including overhead expenses or indirect expenses. QREs generally include wage, supply, and a portion of contract or third-party expenses.
   - The research credit can be provided to companies in the form of (1) regular credit, as a maximum cash benefit or in (2) Alternative Simplified Credit (ASC) which is provided as a determined percentage on the QREs. Moreover, tax deductions are permitted for 100% of eligible R&D expenses for federal and state tax purposes.x

g. **Thin capitalization rule:** The United States has thin-capitalization principles under which the Internal Revenue Service (IRS) may attempt to limit the deduction for interest expense if a US corporation is thinly capitalized. A deduction is disallowed for certain "disqualified" interest paid

on loans made or guaranteed by related foreign parties that are not subject to US tax on the interest received. This dis-allowed interest may be carried forward to future years and allowed as a deduction. No interest deduction is dis-allowed under this provision if the payer corporation's debt-to-equity ratio does not exceed 1,5:1. If the debt-to-equity ratio exceeds this amount, the deduction of disqualified interest is deferred to the extent of any "excess interest expense[100]."

h. **Transfer pricing rule:** In general, the IRS may redetermine the tax liability of related parties if, in its discretion, this is necessary to prevent the evasion of taxes or to clearly reflect income. Specific regulations require that related taxpayers deal on an arm's length basis. Under the best-method rule included in the transfer pricing regulations, the best transfer-pricing method is determined based on the facts and circumstances. Transfer-pricing methods that may be acceptable, depending on the circumstances, include uncontrolled price, resale price and profit-split. It is possible to reach transfer-pricing agreements in advance with the IRS. If the IRS adjusts a taxpayer's tax liability, tax treaties between the United States and other countries usually provide procedures for allocation of adjustments between related parties in the two countries to avoid double tax.

i. **International factors:** United States has actually in force more than 60 tax treaties.

[100] "Excess interest expense" is defined as the excess of interest expense over interest income, minus 50% of the adjusted taxable income of the corporation plus any "excess limitation carryforward.

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