

CORPORATE TAX OUT OF CONTROL

EU Tax Protectionism and
the Digital Services Tax

Matthias Bauer
February 2019

Contents

About the author	4
About EPICE and EPICENTER	6
Abstract	7
Introduction	8
The Digital Services Tax: Just Another Complex Layer of Corporate Taxation in the EU	11
Tax Competition in the EU and Effective Corporate Tax Rates (ECTRs)	18
Effective Corporate Tax Rates of Large Traditional and Digital Companies	27
Fair Taxation, Tax Protectionism and the EU's Digital Services Tax	41
Conclusions	54
References	56
Annex	60

About the author

Matthias Bauer is Senior Economist at ECIPE.

His areas of research include international trade, the economics of digital markets and the digital economy, European Single Market integration, European fiscal affairs and capital market policy.

Matthias studied business administration at the University of Hull, UK, and economics at the Friedrich Schiller University Jena, Germany. He received his Ph.D. degree after joining the Bundesbank graduate programme on the 'Foundations of Global Financial Markets and Financial Stability'.

Before joining ECIPE, Matthias was the Coordinator of International Political Economy at the international cooperation division of Konrad Adenauer Foundation, Berlin. Previously, Matthias held positions at DekaBank, UBS, Mercedes-Benz China, and worked as a start-up and business development consultant.

About ECIPE and EPICENTER

The European Centre for International Political Economy (ECIPE) is an independent and non-profit policy research think tank dedicated to trade policy and other international economic policy issues of importance to Europe.

ECIPE is rooted in the classical tradition of free trade and an open world economic order. Progressive reduction of barriers to the movement of goods, services, capital and people across borders creates prosperity, and improves the conditions for peace, security and individual freedom. But discussion and advocacy of abstract ideas is far from enough. ECIPE's intention is to subject international economic policy, particularly in Europe, to rigorous scrutiny of costs and benefits, and to present conclusions in a concise, readily accessible form to the European public.

EPICENTER, the European Policy Information Center, is an independent initiative of nine leading think tanks from across the European Union. It seeks to inform the EU policy debate and promote the principles of a free society by bringing together the economic expertise of its members.

EPICENTER is formed by the Centre for Political Studies (Denmark), Civil Development Forum (Poland), Civismo (Spain), the Institut Economique Molinari (France), the Institute of Economic Affairs (UK), Instituto Bruno Leoni (Italy), KEFiM (Greece), the Lithuanian Free Market Institute and Timbro (Sweden). Like its members, EPICENTER is politically independent and does not accept taxpayer funding.

EPICENTER was launched in October of 2014. Since then, it has been active in the European policy debate, providing a free-market perspective on topics including the digital economy, trade policy, energy security and competition, financial regulation, free movement and welfare, and public health.

Abstract

Do European companies pay their fair share of tax? Many companies headquartered in France, Germany, Italy and Spain show very low effective corporate tax rates (ECTRs). Their effective tax rates are often much lower than those of digital corporations, including the largest tech companies headquartered in the United States. The high level of variation in ECTRs demonstrates that EU governments *de facto* endorse large European companies' "tax saving" behaviour. In other words, EU governments actively encourage EU-based companies to lawfully reduce their global tax bills. New special taxes on digital services companies fail to address the central problems of Member States' corporate tax codes. The political campaign for an EU-wide Digital Services Tax (DST), spearheaded by vocal parts of the European Commission (DG TAXUD) and the European Parliament (predominantly the Socialists and Democrats), distracts public attention away from tax exemption rules that have been implemented to benefit Europe's large traditional companies. A new complex layer of corporate tax code for digital companies would further undermine tax honesty and accountability on the side of EU governments. Special taxes on digital services would render the EU's tax system even more complex without tackling the real problems in national and international corporate taxation. Policymakers in the EU should be concerned about the significant long-term economic implications of any tax on individual and corporate business activity, including the commercial activities of micro businesses and small and medium-sized companies. Any politician concerned about fairness and accountability should be particularly wary of the path dependency in corporate taxation, i.e. the historical pattern that tax complexity breeds further tax complexity, effectively taking corporate tax rules out of the control of *elected* lawmakers.

Introduction

Many Europeans should have got the message by now: “Digital companies don’t pay their fair share of tax.” At least this is what the European Commission has been trying to tell the general public since the launch of its Digital Services Tax initiative (DST) in September 2017.

Back then, the European Commission began a vigorous political campaign to promote the idea of new special taxes for “digital companies” that do business in the EU. The Commission argues that “international tax rules [...] no longer fit the modern context where businesses rely heavily on hard-to-value intangible assets, data and automation, which facilitate online trading across borders with no physical presence.” Its proposals aim “to ensure that digital business activities are taxed in a fair and growth-friendly way in the EU”.¹ More precisely, the Commission intends to

- 1) reform corporate tax rules so that profits are registered and taxed where businesses have significant interaction with EU-based users through digital channels, i.e. to create a “digital presence” or a “virtual permanent establishment” in a Member State (long-term option), and to
- 2) consider a 3% interim tax on turnover, which covers the major activities of large digital companies that “currently escape tax altogether in the EU” (short-term, interim solution).

Applauded by the European Parliament and some Member State governments, EU-imposed taxes on digital services have become a critical

¹ European Commission (2018). Fair Taxation of the Digital Economy. Available at https://ec.europa.eu/taxation_customs/business/company-tax/fair-taxation-digital-economy_en, accessed on 20 January 2019.

talking point for many Europhiles in the run-up to the European elections in May 2019. However, many wrongs don't make a right. EU governments continue to defend complex national tax codes and maintain complicated tax treaties, which create strong legal incentives for any large EU-based corporation to reduce its tax bills by the use of lawful tax exemption policies.

The Commission's DST proposal has little to do with anti-abuse legislation. It explicitly intends to change the allocation of tax revenues between countries for a certain group of businesses. The Commission's ideas are, by definition, discriminatory. They constitute a fundamental change to the prevailing principles in international corporate taxation, which is likely to trigger multiple retaliatory measures, e.g. special taxes on European machinery exports. Changing the principles in an uncoordinated, unilateral way is therefore likely to impact on where EU exporters – traditional and digital – pay tax in the future.

There is nevertheless a good case to make for fair taxation. Uneven effective tax rates can significantly distort competition and lead to smaller tax revenues. However, those that are calling for higher taxes on one particular group of firms – digital businesses – have yet to present the evidence for why this relates to fair taxation. Calls for an entirely new type of taxes for digital companies distract public attention and political capital away from the need to fundamentally reform the corporate tax code in order to achieve a simpler, fairer and more efficient corporate tax system – in the EU and globally.

The aim of this paper is to demonstrate that the current system of international corporate taxation, as it is enforced in most countries inside and outside the EU, is fundamentally flawed and in need of substantial reform. There is no single set of rules to calculate companies' taxable profits in the EU. Due to the existence of nationally-fragmented tax laws and, literally, tens of thousands of national tax exemption policies, it is close to impossible for citizens, policymakers and even tax experts to draw informed conclusions about tax fairness and whether certain companies actually pay a fair share of tax.

The remainder of this paper is organised as follows. Section 2 discusses the European Commission's digital services tax campaign, which is guided by the assumption that a selective group of digital companies doesn't pay its fair share of tax in the EU. It will also discuss how, for example, the European Parliament's Socialists and Democrats (S&D) aimed to create

discontent about some large digital companies in the light of corporate taxation. Section 3 discusses intra-EU tax competition to “attract more tax base and to protect the existing tax base” (OECD 2019, p. 2). It outlines the problem of double taxation in the EU and describes the limitations of both statutory and effective corporate tax rates in the debate about tax fairness. Section 4 provides a unique comparative analysis of the profit margins and effective corporate tax rates of the world’s major digital (technology and software-driven) companies, and the constituent companies of major euro area stock market indices, i.e. France (CAC40), Germany (DAX30), Italy (MIB40), Spain (IBEX35). The United States’ DJIA is included as a benchmark index. Section 5 discusses the results in the light of tax competition and tax protectionism in the EU. It stresses the need to fundamentally reform corporate tax codes to achieve a simpler, fairer and more efficient corporate tax system. Section 6 concludes.

The Digital Services Tax: Just Another Complex Layer of Corporate Taxation in the EU

What is fair taxation? And what constitutes a fair system of corporate taxation? As concerns the first question, there seems to be a global consensus among policymakers that some form of progressivity, i.e. those with more income shall pay a larger share of it in taxes, constitutes a fundamental pillar of any tax system that is considered fair. Another characteristic, which is much less popular with policymakers, is simplicity, i.e. a broad, easy-to-comprehend tax base lacking exemptions policies, which are often (lawfully) considered invitations to cheat. Finally, efficiency, i.e. a low tax burden and low tax-induced distortions as well as low cost of administration, constitutes a critical element of a fair tax regime.

Unfortunately, politicians and government officials alike have in practice done little to promote a tax system that is fair. The evolution of tax rules worldwide reveals that governments don't like the idea of simple and efficient tax systems. This is true for many taxes including taxes on personal income, capital earnings and sales (e.g. VAT). For corporate taxes in particular, complexity, *de facto* opacity, and inefficiency have in the past appeared to be governments' principle guidelines for the design of corporate tax rules – including for policymakers and tax experts cooperating in The Organisation for Economic Co-operation and Development (OECD). Indeed, a survey on tax practitioners from 108 countries shows that tax complexity results from two main drivers: corporate tax code opaqueness and frequent changes of tax regulations (Hoppe et al. 2017). In addition, the authors argue that inconsistent decisions among tax officers (tax audits) or retroactively applied tax law amendments significantly increase

the level of complexity companies have to deal with (see also OECD 2008a and 2007 for earlier discussions at OECD level).

New special taxes on certain digital services demonstrate that there's a hard-to-break path dependency in how EU policymakers and national governments think about corporate taxation and the design of tax codes. The DST is a case in point. Those wishing to introduce new taxes on digital companies have one thing in common: their arguments are all centred around tax fairness. However, concepts of fairness, to borrow from Machiavelli, often "serve to veil the facts" and are often intended "in such a way that no one become[s] aware of it".

According to the Commission's Communication,

"[o]n average, domestic digitalised business models are subject to an effective tax rate in the EU of only 8.5%,"

which is said by to be less than half compared to traditional business models in the EU. However, as discussed further below, this is based on the rates that might be paid by *hypothetical* companies, rather than data from *real* ones.

Tax Code Opaqueness and the "Hypothetical Model"

Industry data show that the numbers promoted by the European Commission and some high-level government officials are highly misleading (see, e.g. Bauer 2018c for a discussion of the illustrative example of the European Commission's social media activities). Effective corporate tax rates, which are based on audited annual reports and therefore are widely-accepted indicators for what companies actually pay in taxes, tell a fairly different story. Even though effective corporate tax rates must be interpreted with caution (see discussion below), the numbers reported by corporations demonstrate that digital companies very often pay far more in taxes than large and well-known traditional companies that are based in the EU. The numbers stated by the European Commission do not at all reflect this pattern, let alone the overall tax burden of companies that operate in international markets including the EU. This is irrespective of whether their business models are digital, less digital or non-digital and irrespective of whether they are headquartered in the EU or not.

Importantly, the Commission's assertions are based on a merely theoretical model, which builds on critical hypothetical assumptions.² This is mainly because of the fact that there is very little data which is easily available to the public on what companies pay in taxes in the countries in which they operate (i.e. tax returns; which generally applies for parent or headquartered companies as well as their subsidiaries).

The European Commission never admits that it is in fact fishing in the dark. In a formal response to a question asked by a Member of the European Parliament, the Commission acknowledged in a side note that "country-specific tax return information are not publicly available", which constitutes a serious problem for any analysis of where corporate taxes are paid. It also recognises that the "greatest weakness" in the current system of corporate taxation is that taxable profits (the tax base) are determined differently country-by-country in EU Member States.³

The lack of availability of company-specific tax revenue data, which EU and non-EU governments alike refuse to publish, and the fact that it is very hard for outsiders to understand companies' internal tax planning policies, are at the heart of the problem with the Commission's numbers. Hypothetical models can help understand certain tax incentives but cannot by any means be taken at face value.⁴ Any international tax model can be configured in such ways to confirm pre-set hypotheses. Importantly, the numbers produced by the model can be interpreted in highly misleading, sometimes deliberately manipulative ways. Unfortunately, this is exactly what some high-level European Commission officials and a few national policymakers did in the first place and continue to do.

Several tax experts, including the modellers themselves, argue that the hypothetical model numbers cannot be used to compare the tax burdens

2 For example, assumptions regarding pre-tax rates of the return of a hypothetical investment, real interest rates, and different depreciation rates for a limited number of asset classes (see ZEW 2016).

3 Reply by Commissioner Pierre Moscovici on behalf of the European Commission, DE E-005510/2018, 17 January 2019.

4 On 12 April 2016, the European Commission presented a proposal for a public country-by-country reporting (CBCR) for businesses with multinational reach and with a total consolidated group revenue of at least 750 million EUR. However, the proposals have so far been blocked by the Council. The legislative schedule is available at <http://www.europarl.europa.eu/legislative-train/theme-deeper-and-fairer-internal-market-with-a-strengthened-industrial-base-taxation/file-public-country-by-country-reporting>, accessed on 29 January 2019.

of “digital” and “traditional” companies or determine whether these companies pay their fair share of tax or not.

The precise clarification goes as follows:

“The study does not calculate EATRs [Effective Average Corporate Tax Rates] using tax information for actual companies or sectors; more importantly, the study cannot be used to compare the tax burdens of ‘digital’ and ‘traditional’ companies. In interviews with Bloomberg, Law360, and Disco, Prof. Spengel of ZEW made clear that the study does not support conclusions that the digital sector is undertaxed. In summary, the ZEW-PwC study enables a comparison of the relative attractiveness of certain countries’ tax regimes for intangible assets developed through R&D, but does not analyze the effective tax rates of actual enterprises or allow conclusions to be drawn regarding corporate taxes paid by the ‘digital sector’.” (PWC 2018)

Even after this publicly-stated clarification by the authors this study, the European Commission’s communications department continued to crank up the debate on its Facebook and Twitter channels by using eye-catching infographics and bubble charts depicting the alleged tax gap between “digital companies” and “traditional companies”. On top of that, Pierre Moscovici, the European Commissioner for Economic and Financial Affairs, Taxation and Customs, spread video messages in straightforward language intended to manifest citizens’ perception that digital companies don’t pay enough tax.

The numbers disseminated by the Commission still carry enormous weight. The figures are still taken for granted by media representatives and large parts of the political class in Brussels – including the EU’s liberal (ALDE) and liberal-conservative (EPP) political parties – and some Member State governments. Similarly, journalists barely questioned the reasoning of the Commission, let alone the Commission’s idiosyncratic institutional interests, ahead of the European election in 2019.

Accordingly, many Brussels-based policymakers are still largely in favour of discriminating against digital companies by the means of tax policy. The misleading assumption in workshops and roundtables in Brussels has simply been that digital companies don’t pay tax. In December 2018, the European Parliament even adopted two formal opinions on the

proposals for special taxes on digital services by an “overwhelming majority.”⁵ Similarly, representatives of civil society organisations started to promote the idea of special taxes for digital companies. In November 2018, for example, Avaaz, a US-based online petition platform, launched a forceful online petition campaign, arguing that

“[t]ech giants hide their billions in #taxhavens but a new European #digitax could change this forever in just days. Let’s make them pay their fair share.” (AVAAZ 2018)

A Tax Fairness Narrative to Veil the Truth

What’s sold by the Commission and some Member State governments as a contribution to tax justice, is actually based on spurious numbers made up by the Commission’s tax department to shape public opinion in a very clear way. As argued by Becker and Englisch (2018), for example: “public opinion in Germany, as elsewhere, pushes for action against tax-saving arrangements and ‘aggressive’ tax planning by big tech companies and other multinationals.” Against the background of how the European Commission interfered in the public debate, such statements should be taken with great caution.

Moreover, activities on the side of the European Parliament give cause for even more reconsideration. Paul Tang, a Dutch MEP and the European Parliament’s lead negotiator on the digital services tax, promoted the results of a survey conducted by a Dutch consultancy company arguing that “[m]ore than 75 per cent of all citizen[s] in Denmark, Sweden, France, The Netherlands, Germany and Austria (strongly) agree with introducing a fair tax on tech companies.” (Tang 2018) More precisely, according to the wording of the study, “[t]he most important finding is that over 80 per cent of all citizen in Denmark, Sweden, France, The Netherlands, Germany and Austria (strongly) agree with introducing a tax on tech companies, *particularly when confronted with the low level currently paid and the possibilities of tax evasion.*” (Kieskompas 2018, p. 3)

5 The report on the digital services tax directive was adopted with 451 votes in favour, 69 against and 64 abstentions. The report on the corporate taxation of a significant digital presence directive was adopted with 439 votes in favour, 58 against and 81 abstentions (see European Parliament 2018).

The quoted survey supports a number of statements that have been deployed in a very biased manner, such as: “European countries should wait for international solutions, even though such solutions may not be within reach,” Kieskompas 2018, p. 12) and: “The EU should impose a digital tax even if the USA are perceiving this measure as mainly targeting American companies.” (Kieskompas 2018, p. 19) It should be noted that the survey report doesn’t state by whom the survey has been commissioned.⁶ A request sent by the author to Kieskompas has been left unanswered. The way these survey results have been promoted by Paul Tang and the EU’s Socialists & Democrats party doesn’t need further explanation.

EU Member States in Disagreement about New Taxes on Digital Services

The European Commission deliberately avoided that traditional companies also reduce their tax bills based on national tax laws. In addition, the Commission didn’t provide an appropriate impact assessment and thus was formally admonished by the EU’s Regulatory Scrutiny Board (see, e.g. Bauer 2018 for a broader discussion of the tax incidence and the Commission’s failure to properly address the implication of a tax on digital services; RSB 2018).

The idea to tax certain digital services in the EU nevertheless received strong support from some EU governments, particularly that the “interim solution should establish the common system of a digital services tax (‘DST’) on revenues resulting from the supply of certain digital services by certain entities.” (Council of the European Union 2018a).

Following an analysis of the technical issues of the DST and a compromise text from 29 November 2018 put forward by the EU presidency, several Member State delegations rejected the text. Some rejected the initiative as a matter of principle, while a few others were not satisfied with some specific points in the text. As such, in the Council Meeting of the EU’s Economic and Finance Ministers, the Commission’s proposal didn’t gain the unanimous support needed (Council of the European Union 2018b).

Tax policy currently requires unanimity among Member State governments. It is noteworthy that the European Commission also published a roadmap

6 As of 25 January 2019.

for the reform of EU decision-making for areas of tax policy. The proposals, which aim at a progressive transition to qualified majority voting in certain areas of shared EU taxation policy were published on 15 January 2019 (European Commission 2019).

Even though the DST wasn't discussed in further detail by the Council in a joint declaration, the governments of France and Germany asked the European Commission to:

- amend and focus its draft directive for a digital services tax on a tax base referring to advertising revenues, on the basis of a 3% tax on turnover and
- to submit proposals in due course on taxing the digital economy and minimum taxation in line with the work of the OECD (Council of the European Union 2018c).

In addition, some Member States expressed their willingness to implement digital services taxes separately at the national level, most notably France, Italy, Spain and the United Kingdom.

It goes without saying that different national taxes levied by individual EU Member States would further increase the tax code fragmentation in the EU. As rightfully outlined by many EU policymakers, separate national initiatives would undermine the functioning of the Single Market. The issue of regulatory fragmentation also entered the narrative of the European Commission in defence of its original DST proposals. At the same time, there hasn't been much of a desire to work for simplicity and efficiency in Member State tax codes, i.e. a more fundamental reform at EU and OECD level.

Tax Competition in the EU and Effective Corporate Tax Rates (ECTRs)

International tax competition has increased over the past 40 years, including in the EU. Tax competition is a distinct feature of the EU. Even though the debate about corporate taxation is to the largest extent driven by matters of fairness and the allocation of tax rights, EU governments are competing for private investment and business activity respectively. They simply aim to keep domestic businesses and jobs and attract businesses from abroad. At the same time, national revenue authorities are frequently claiming the right to tax the same corporate profit, which is why many companies complain about double taxation within and beyond the EU.

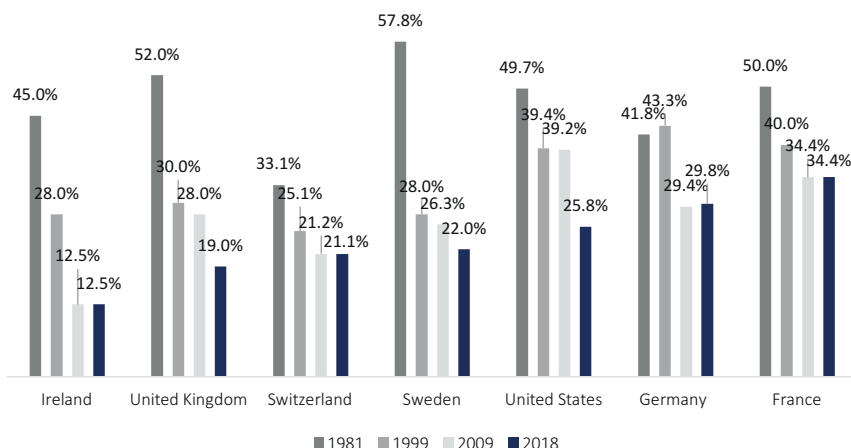
Tax competition and double taxation often go hand in hand, putting an unnecessary burden on companies operating in the EU. A survey conducted by Business Europe in 2013, for instance, has shown that double taxation is a considerable concern for companies operating in at least seven EU Member States. Companies name transfer pricing arrangements and various limitations for the deduction of business cost to be the major causes of double taxation within the EU. In this particular survey, Germany and Italy have been identified as the Member States in which most double taxation cases have occurred. The authors also report that the “cost of ‘getting it right’ is in many cases out of proportion to the disputed amount in each transaction,” which is why SMEs are likely to be far more affected by tax code complexity and double taxation than large companies. As concerns economic integration within the Single Market, “[t]he net outcome may therefore be abstention from cross-border activities as the tax systems act as a deterrent to investment and cross-border activities.” (Business Europe 2013, p.3)

The problem of tax competition and double taxation in the Single Market has also been outlined by an impact assessment commissioned by the European Commission in 2016. Against the background of a proposed Double Taxation Dispute Resolution Mechanism (DTDRM), the Commission finds that disputes regarding transfer pricing, appropriate profit attribution and withholding taxes are the major reasons for double taxation within the EU (European Commission 2016). In the same report, the authors warn, however, that an intra-EU dispute settlement mechanism comes with the risk that double taxation issues won't be resolved. The DTDRM, which has finally been adopted by the Council in October 2017, is a clear demonstration of national EU governments' strong defensive interests in area of corporate tax policy. Accordingly, companies operating in the EU are very likely to continue to bear the significant cost of double taxation⁷ as well as high legal and administrative costs for dispute settlement procedures.

Increasing tax competition is best reflected by the historical path of statutory corporate tax rates. While large developed countries still tend to have higher statutory corporate income tax rates than developing countries, European countries show the lowest regional average rate, at 18.4% (25.4% when weighted by GDP). The average top corporate rate among EU countries is 21.7%. By contrast, for OECD countries it is 23.7% (see Figure 1 for the evolution of statutory corporate tax rates in major OECD countries). The worldwide average statutory corporate income tax rate, measured across 208 jurisdictions, is 23%. And, when weighted by GDP, the worldwide average statutory rate is 26.5% (Tax Foundation 2018a).

7 The cost of double taxation in the EU tend to be significant. In the Commission's impact assessment, "9 responses were received on the question in the first column (amount of double taxation with a minimum amount of double taxation 3.400.000 Euro and a maximum of 260.000.000 Euro resulting in an average of around 45.000.000 per case." (European Commission 2016, p. 115).

Figure 1: Evolution of statutory corporate tax rates in major OECD countries since 1981.

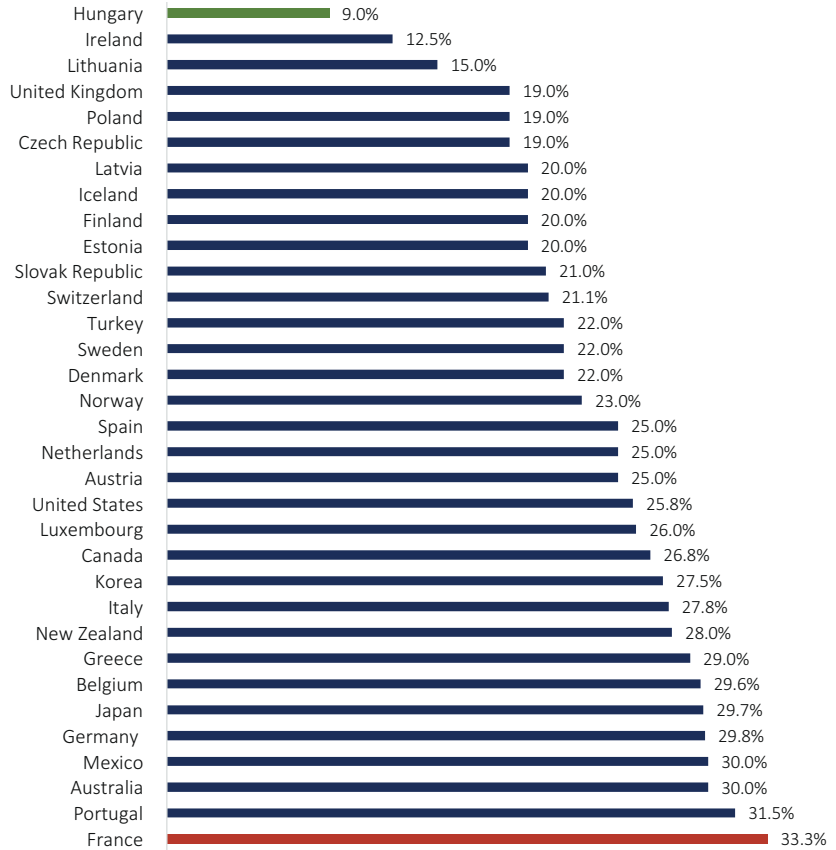


Source: OECD. Chart depicts the combined (central and sub-central) marginal statutory corporate income tax rate on corporate profits.

In the EU, taxation is a traditional competence of national Member States. All Member States are free to design tax codes and set their own statutory tax rates. In other words, tax competition is a distinct feature of the EU, and well-defended by sovereign governments. Several EU efforts, such as the Common Consolidated Corporate Tax Base (CCCTB) or the Consolidated Corporate Tax Base (CCTB), aimed to largely eliminate discretionary corporate tax policies within the Single Market, but didn't attract support from Member States.

Member States' tax sovereignty is well-reflected by statutory corporate tax rates in the EU, which show a high level of variation (see Figure 2). France, which is the major force behind new taxes on digital services, shows the highest statutory corporate tax rate in the EU. Hungary, Ireland and Lithuania are the EU's most tax-competitive countries in terms of their statutory rates.

Figure 2: Combined (central and sub-central) marginal statutory corporate income tax rate, 2018



Source: OECD. Chart depicts the combined (central and sub-central) marginal statutory corporate income tax rate on corporate profits in 2018.

Despite decreasing statutory corporate tax rates, corporate tax revenues have not declined in the EU. Contrary to the European Commission's considerations, there isn't any urgency for securing sufficient corporate tax revenues to achieve "social objectives" in the Member States, or to stop the "erosion of social budgets" in the EU. Considering the actual development of overall EU tax receipts, it becomes immediately obvious that calls for new taxes on certain corporations are not at all justified. In fact, the actual development of overall EU tax receipts suggests that there is not much of a "failure" in Europe in tapping profits:

- Over the past 20 years, the growth of overall government tax revenues in the EU (119%) was significantly higher than overall EU GDP growth (103%). Accordingly, tax revenue growth didn't just happen because Europe's economy had grown.
- Official tax revenue data demonstrate that a significantly higher amount of both household and corporate income has been collected by EU governments since 1995. Increasing by 147% from 1995 to 2016, the growth of overall EU government revenues from taxes on corporate profits exceeded the growth of general tax receipts by no less than 28 percentage points.
- Between 1995 and 2016 the share of overall tax revenues in the EU relative to EU GDP increased by two percentage points to 26.8%.

Many politicians, policymakers and media representatives turn a blind eye to these numbers. Instead, countries' statutory corporate tax rates are widely used by politicians and journalists in discussions about both tax fairness and tax competitiveness. However, statutory corporate tax rates alone are fairly inadequate for judgement of a corporation's real tax burden. Neither do they say much about how fair a country's tax code actually is. But it is the nitty-gritty of tax codes that really matters.

The statutory tax rate is merely the percentage imposed by tax law on taxable profits. To measure what companies really pay in taxes on their income, a more appropriate proxy is the effective corporate tax rate (ECTR). The actual level of taxable profits is very sensitive to the rules prescribed by a country's tax code. The tax code also matters for the ECTR, which is the percentage of income actually paid by a company after taking into account tax breaks prescribed by law (including loopholes, deductions, exemptions, credits, and preferential rates).

In its communication campaign to promote the idea of special taxes for digital companies, the European Commission refers to "effective tax rates", which are based on a theoretical model and various assumptions about hypothetical company's investment characteristics and national tax code. As is shown in Bauer (2018a), the numbers published by the Commission significantly understate real ECTRs of digital companies by about 20 percentage points. The Commission's numbers for hypothetical businesses are highly inadequate indicators for what real companies, digital or not,

really pay in taxes. The modelled numbers presented by the Commission have, at best, theoretical value. As they don't say anything about an individual company's tax rates, they can't be used by policymakers to derive general and reasonable conclusions about tax fairness, or where and how much individual companies pay in taxes on their profits.

It should be noted though that real-world ECTRs, which are based on audited reports, also suffer from some limitations, which can lead to a somewhat distorted picture about what companies actually pay in taxes on their profits over a certain period of time. Nevertheless, ECTRs are commonly used by professional investors as a tax burden and profitability indicator for individual companies. In other words, they are of great informational value for investors and financial market participants – instead of numbers based on a merely hypothetical model.

One limitation is that they don't allow for a judgement about where companies pay corporate income tax – and where not. ECTRs calculated on the basis of consolidated corporate financial data only give an indication about a company's overall annual tax burden. In addition, ECTRs can fluctuate, sometimes dramatically, from year to year. Because of the complexities of international corporate tax codes, it can be very difficult to immediately identify why an effective tax rate jumps or drops. For instance, it could be that a company is engaging in certain asset accounting practices to reduce its tax burden, rather than a change reflecting altering earnings and tax practices.

Importantly, there are many reasons why an ECTR might differ from the statutory corporate tax rate. Since all companies, irrespective of whether they are regarded as digital or traditional, operate highly different business models that are subject to tax policies and tax practices that differ from one country to another, it is close to impossible for outsiders to come to precise conclusions about whether an individual or a certain group of companies is sufficiently taxed or not when compared to another company or another group of companies. Differences in ECTRs can generally result from:

- Different statutory corporate tax rates: foreign profits of a German company, for example, may be taxed at a lower rate abroad than in Germany. So a Germany company that generates a big portion of its profits overseas may pay a lower average tax rate on its overall profits compared to Germany's statutory corporate tax rate.

- Tax breaks: Many companies benefit from tax breaks, which reduce the amount of tax they have to pay. Tax breaks (also known as tax exemptions) encourage investment in research and development activities, oil and gas exploration and production, accelerated depreciation on machinery and equipment, domestic manufacturing, and interest on state and local bonds. The government of France, for example, applies a reduced income tax rate on income derived from the licensing of patents and patentable rights. Contrary to most ‘other’ income, which is taxed at 33.3%, the reduced tax rate applies for capital gains realised on patents and patentable rights held for at least two years, unless the disposal takes place between related companies (see, e.g. EY 2018).
- Loss carryforwards: Losses carried forward can distort ECTRs. Companies that have reported losses in the past can use those losses to offset a portion of their current and future profits, which results in lower ECTRs.
- Transfer pricing: Transfer pricing techniques also impact ECTRs. A common practice of many companies, e.g. technology, pharmaceutical, manufacturing, and financial services companies involves transferring profits to shell subsidiaries in low-tax jurisdictions such as Ireland, the Netherlands, Luxembourg, Belgium, Bermuda, and the Cayman Islands. Companies that generate a big portion of their profits in these jurisdictions tend to show lower ECTRs.
- Deferred taxes: Deferred taxes can distort the picture of ECTRs. Deferred tax liability is a tax that is assessed or is due for the current period but has not yet been paid. It results from the difference in timing between when the tax is accrued and when the tax is paid. In other words, deferred tax liability is the amount of taxes a company has “underpaid”, but which will eventually be paid in the future.

Take Renault and Alphabet (Google) as examples. Based on total tax expenses, Alphabet’s ECTR was 18.1% in 2015, 19.3% in 2016 and 53.4% in 2017. Similarly, based on total tax expenses Renault’s ECTR was 18.7% in 2015, 35.8% in 2016 and 27.0% in 2017. Effective corporate tax rates adjusted for deferred domestic and foreign income tax are different from

total ECTRs for both companies, i.e. 26.9%, 24.6% and 19.2% for Renault and 18.1%, 19.9% and 52.8% for Alphabet (see Table 1). On average, these numbers result in an adjusted ECTRs, i.e. ECTRs based on current income tax expense, of 23.0% for Renault and 32.0% for Alphabet for the three year-period 2015-2017.⁸ It should be noted that the US tax reform of 2017 impacted on both companies' ECTRs.

8 Renault, for example, reports that “[t]he contribution of associated companies, primarily Nissan, came to €2,799 million, compared to €1,638 million in 2016. Nissan’s contribution included a non-recurring income of €1,021 million linked to the tax reform voted at the end of 2017 in the USA and to the sale of its interest in the equipment manufacturer Calsonic Kansei.” (Renault 2017, p. 74) Alphabet reports that “[t]he U.S. Tax Cuts and Jobs Act (Tax Act) was enacted on December 22, 2017 and introduces significant changes to U.S. income tax law. Effective in 2018, the Tax Act reduces the U.S. statutory tax rate from 35% to 21% and creates new taxes on certain foreign-sourced earnings and certain related-party payments, which are referred to as the global intangible low-taxed income tax [GILTI] and the base erosion tax, respectively. In addition, in 2017 we were subject to a one-time transition tax on accumulated foreign subsidiary earnings not previously subject to U.S. income tax [...]” (Alphabet 2017, p. 80) With respect to the “one-time transition tax” imposed by the US government, the company states: “The Tax Act requires us to pay U.S. income taxes on accumulated foreign subsidiary earnings not previously subject to U.S. income tax at a rate of 15.5% to the extent of foreign cash and certain other net current assets and 8% on the remaining earnings. We recorded a provisional amount for our one-time transitional tax liability and income tax expense of \$10.2 billion. We have recorded provisional amounts based on estimates of the effects of the Tax Act as the analysis requires significant data from our foreign subsidiaries that is not regularly collected or analyzed. (p. 81) With respect to “deferred tax effects”, the company makes the following statement: “The Tax Act reduces the U.S. statutory tax rate from 35% to 21% for years after 2017. Accordingly, we have remeasured our deferred taxes as of December 31, 2017 to reflect the reduced rate that will apply in future periods when these deferred taxes are settled or realized. We recognized a deferred tax benefit of \$376 million to reflect the reduced U.S. tax rate and other effects of the Tax Act.” (p. 81)

Table 1: Differences in ECTRs, Renault vs. Alphabet (Google), 2015 – 2017

		2015	2016	2017
Renault	Pre-tax income	1.96	2.96	3.3
<i>Fiscal year is January-December. All values in billion EUR.</i>	Total income tax	0.366	1.06	0.891
	Income Tax - Current Domestic	0.527	0.728	0.634
	Income Tax - Current Foreign			
	Income Tax - Deferred Domestic	-0.161	0.327	0.257
	Income Tax - Deferred Foreign			
	Income Tax Credits			
	ECTR total	18.7%	35.8%	27.0%
	ECTR current	26.9%	24.6%	19.2%
	3Y average 2015 - 2017, ECTR total	28.2%		
	3Y average 2015 - 2017, ECTR current	23.0%		
Alphabet (Google)	Pre-tax income	19.65	24.15	27.19
<i>Fiscal year is January-December. All values USD billions.</i>	Total income tax	3.3	4.67	14.53
	Income Tax - Current Domestic	2.84	3.83	12.61
	Income Tax - Current Foreign	0.723	0.966	1.75
	Income Tax - Deferred Domestic	-0.241	-0.07	0.22
	Income Tax - Deferred Foreign	0.017	-0.05	-0.043
	Income Tax Credits			
	ECTR total	16.8%	19.3%	53.4%
	ECTR current	18.1%	19.9%	52.8%
	3Y average 2015 - 2017, ECTR total	31.7%		
	3Y average 2015 - 2017, ECTR current	32.0%		

Source: annual reports. MarketWatch.

Effective Corporate Tax Rates of Large Traditional and Digital Companies

This section provides an analysis of the effective corporate tax rates of the world's major digital (technology- and software-driven) companies as well as the constituent companies of major euro area stock market indices, i.e. France, Germany, Italy and Spain, and the United States.

Calculation of Effective Tax Rates (average ECTRs)

To reiterate, the effective corporate tax rate (ECTR) is the average rate at which a corporation is taxed. More precisely, it is the average rate at which its pre-tax profits are taxed. ECTRs are determined by the ratio of taxes expenses *divided* by pre-tax profits. ECTRs therefore implicitly capture the tax benefits that reduce the taxable income base relative to financial profits. For this analysis, ECTRs are computed by dividing total "Provisions for Income Taxes" (sometimes reported as "Tax Expense") by the firm's "Pre-tax Income" (sometimes reported as Earnings Before Tax, EBT). The taxes paid include provisions for income taxes, but do not include other taxes such as sales taxes or taxes on payroll.

ECTRs are calculated for the period 2012 to 2017 by summing up the total pre-tax income for this six-year period and the total tax expenses recorded for the same period. A period of six years is preferred to yearly observations as taxes paid and estimated tax expenses tend to be quite volatile over time (see discussion above). ECTRs can fluctuate, sometimes significantly, from year to year. Since large parts of this analysis are based

on six-year averages (three-year averages are also reported where appropriate) for the period 2012 to 2017, it controls for seasonal or yearly fluctuations. For example, a company might decide to defer taxes or is eligible to benefit from different tax incentives in different years. A 6-year average tends to be a more accurate measure. We also compute three-year averages to detect trends and large deviations respectively. When a company didn't pay any taxes or received tax refunds despite a positive pre-tax income, the calculated ECTR is negative and included in the calculations. Company-specific ECTRs and underlying raw data, which are based on the audited annual reports for the period 2012-2017, are given by Table 2 in the Appendix.

Description of Data

The analysis is based on 232 publicly-listed corporations for which financial data is available for the overall period 2012-2017. Companies for which financial data is not publicly available for the overall period have been excluded. Loss-making companies for which corporate losses resulted in negative ECTRs for either 3Y, 4Y, 5Y or 6Y averages have also been excluded from the sample.

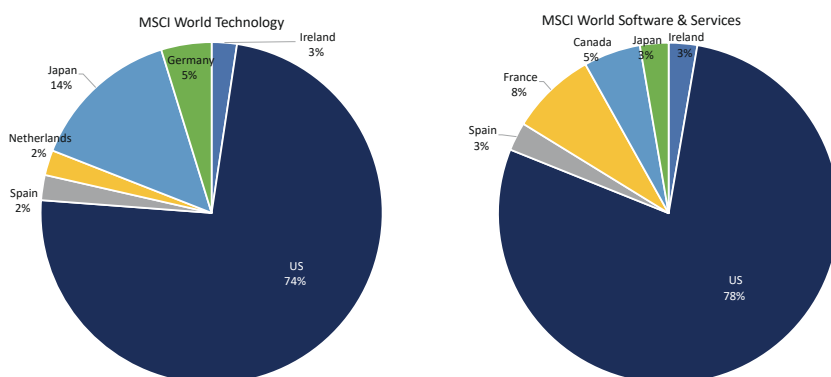
Data include corporations constituting the following stock market indices:

- **Dax30** (Germany, excl. Eon, Deutsche Bank, RWE, ThyssenKrupp),
- **CAC40** (France, Engie, ArcelorMittal, Peugeot, STMicroelectronics),
- **IBEX35** (Spain, excl. Iberdrola, CaixaBank, ArcelorMittal, Cellnex, Acciona, Indra, Mediaset Espana, Merlin Properties, Inmobiliaria Colonial),
- **MIB40** (Italy, excl. ENI, Saipa, Ubi Banca, UniCredit, STMicroelectronics, Banco Bpm, Fineco Bank, Italgas, Mediaset, Pirelli, Saipem),
- **Dow Jones Industrial Average** (US, excl. Pfizer, Chevron, Boing),
- **MSCI World Technology Index** (*top 50* by relative index weight as of 1 December 2018; excl. Salesforce, NXP Semiconductors, TE Connectivity, Nokia, ServiceNow, Autodesk, HP, Ebay), and the

- **MSCI World Software and Services Index** (*top 50* by relative index weight as of 1 December 2018; excl. Salesforce, ServiceNow, Autodesk, Twitter, DXC Technology, Wirecard, Workday, Square, Splunk, Take-Two Interactive Systems, Shopify, Symantec).

About three-quarters of the top 50 constituent companies of each of the MSCI World Technology (74%) and the MSCI World Software and Services (78%) indices are headquartered in the US. Only a very small number of those companies that mainly operate on the basis of technology- and software-driven business models have their corporate headquarters in the EU (see Figure 3). In other words, the vast majority of the world's digital forerunners, which show a high variety of technology-driven business models, are currently headquartered outside of EU Member States.

Figure 3: Place of headquarter of constituent companies of MSCI World Technology and MSCI World Software and Services indices



Source: MSCI. Numbers reflect top 50 companies by index weight as of 1 December 2018. The following companies, which show negative effective corporate tax rates, have been excluded: Autodesk, HP, Nokia, NXPSemiconductors, Salesforce, ServiceNow, TEConnectivity (MSCI World Technology), Autodesk, Dell, Salesforce, Take Two Interactive Software, Square, Splunk, ServiceNow, Twitter, Wirecard, Workday (MSCI World Software & Services).

Profit Margins

While there are slight variations on the definition of “profit margin”, a profit margin typically represents the percentage of revenue earned after the deduction of all costs, taxes, depreciation, interests, and other expenses. In this analysis profit margins are calculated as “Net Income” (after taxes) divided by “Total Revenue”.

Industry data for the 3Y period 2015 to 2017 show that profit margins of large corporations do not significantly differ among Europe’s rather traditional, less digital companies when analysed on a country-by-country basis (see Figure 4). In our sample, the average 3Y profit margin is 12.1% for Italian, 12.4% for German, 10.1% for French and 11.9% for Spanish corporations. For the 6Y period 2012 to 2017, the profit margins are, however, significantly lower for French and Spanish corporations, standing at 9.1% and 6.9% respectively. By comparison, traditional, less digital companies headquartered in the US show considerably higher profit margins, amounting to 13.9% for the 3Y average and 14.3% for the 6Y average.

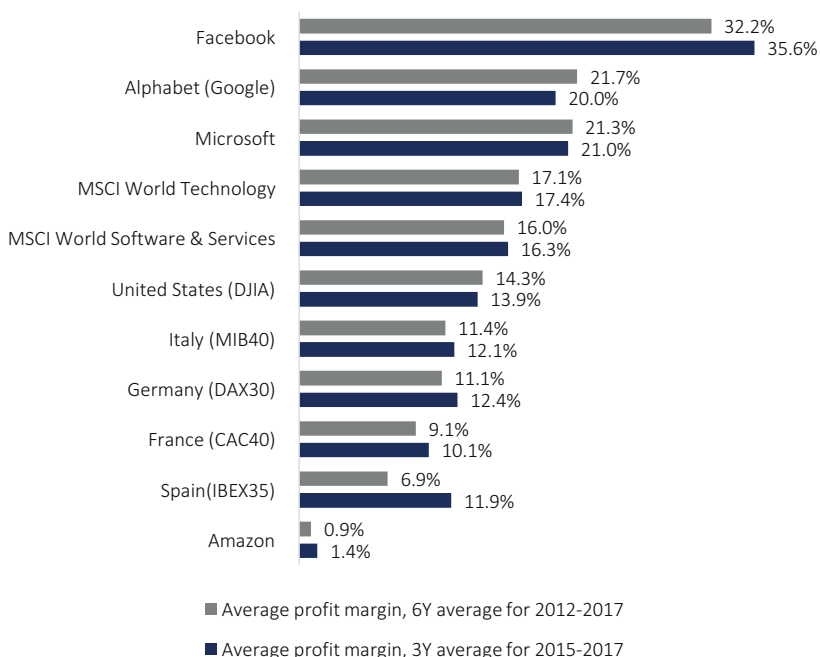
According to the data, large digital corporations show on average much higher profit margins than traditional, less digital corporations, irrespective of whether they are headquartered in the EU or the US. The large and well-known digital companies Facebook, Alphabet (Google) and Microsoft show comparatively high profit margins, while Amazon shows a very low profit margin. Similarly, companies listed in both MSCI indices, i.e. large internationally-operating technology and software-driven companies, show on average much higher profit margins than traditional, less digital companies. For 3Y averages, the profit margin of digital companies is on average 5 to 6 percentage points higher than the average profit margin of Europe’s largely traditional, less digital companies, but at the same time only 1 to 2 percentage points higher than the average profit margin of traditional, less digital US corporations listed in the DJIA.

It should be noted that high profit margins are a typical feature of innovative companies that enter into existing markets or even create completely new markets and thereby successfully contest “less competitive” incumbent companies. This is also true for technology- and software-driven companies. Yet, superior competitiveness doesn’t imply that these companies pay less in taxes on their profits.

Profits margins are highly different between and within different industries. Profit margins shouldn't be considered by policymakers to draw conclusions about matters of tax justice or tax fairness. Many traditional, less digital companies in France (CAC40), Germany (DAX30), Italy (MIB40), Spain (IBEX35) and the US (DJIA) show very high profit margins, while others show comparatively low levels of pre-tax profitability. Similarly, both low and high profitability companies exist in almost all sectors of the economy. In the sample underlying this analysis, profit margins exceeding, for example, 20% are found in Air Transport Services (airline companies), Banking and Financial Services, Energy Production, and the Real Estate Sector (real estate development and management). Profit margins exceeding 15% are found in Accommodation and Food Services, the Chemicals Industry, the Food and Beverages, Media Services, the Medical Equipment Industry, the Personal and Household Goods sectors, and the Textiles Industry.

Those in favour of new special taxes on certain digital services companies disregard the fact that there are numerous high profitability companies in industries that are (still) characterised by a high share of traditional, less digital companies. In addition, new special taxes would hit many digital companies whose profitability is comparable or even lower than those of traditional, less digital companies.

Similarly, those in favour of new special taxes on certain digital companies also disregard the fact that companies with more digital business models also show a high variation of profit margins, which, in addition, can fluctuate significantly over time. In the sample underlying this analysis, 38 of the 80 constituent companies of the MSCI World Technology and the MSCI World Software and Services indices show 3Y average profit margins of less than 15%. In other words, almost half of the companies that operate on technology- or software driven business models show relatively low profit margins, i.e. profit margins comparable to those of traditional, less digital companies. Only 14 companies (17.5% of the overall sample of digital companies) show profit margins exceeding 30%, whereby these companies don't pay less in taxes compared to lower-profitability companies (see below).

Figure 4: Profit margins of internationally operating companies

Source: own analysis based on YCHARTS data and companies' annual reports. Time period: 2012-2017.

Effective Corporate Tax Rates (ECTRs)

Real-world ECTRs for digital companies are not systematically different from those of traditional companies. The data even reveal that many digital corporations actually show much higher effective tax rates compared to many traditional, less digital companies (see Figure 5):

- In the sample underlying this analysis, large digital companies, i.e. Alphabet (Google), Facebook, Microsoft and Amazon, show relatively high ECTRs, exceeding 26.8% for 6Y averages and 24.1% for 3Y averages. Similarly, 6Y average ECTRs of digital companies constituting the MSCI World Technology and the MSCI World Software and Services indices are 24.8% and 27.8%.
- By comparison, considerably lower average ECTRs are found for traditional, less digital companies headquartered in Spain

(IBEX35 companies) and Germany (DAX30 companies, where 6Y average ECTRs amount to “only” 23.4% and 24.1% respectively.

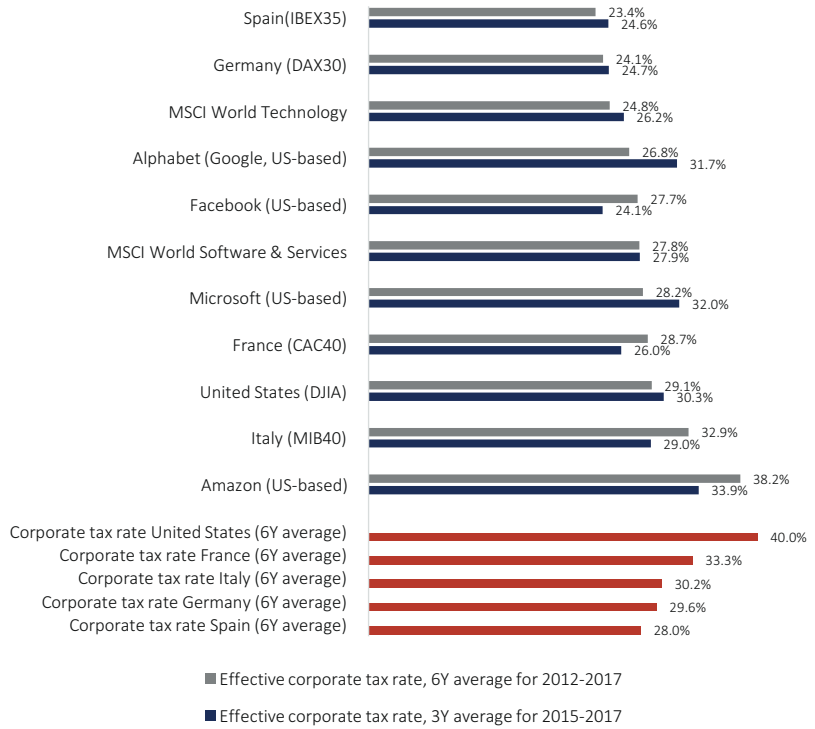
- Higher ECTRs are found for France (CAC40; 28.7%), the US (DJIA; 29.1%) and Italy (MIB40; 32.9%).

The numbers show that the average ECTRs of technology and software-driven companies exceed the average of traditional companies that are headquartered in Germany and Spain. At the same time, the average ECTRs of technology- and software-driven companies are comparable to the average ECTRs of traditional companies headquartered in France and only slightly lower than the average ECTRs of traditional companies headquartered in the US and Italy.

As a result, the numbers demonstrate that the underlying proposition of many EU policymakers in the discussion about taxing digital firms is misguided. Digital corporations’ effective tax rates are:

- 1) not systematically – or by default – different from those of traditional brick-and-mortar firms,
- 2) higher for many digital companies compared to traditional brick-and-mortar companies, and
- 3) contrary to many policymakers’ allegations, relatively low for many traditional brick-and-mortar companies – which so far have largely been ignored in the public debate in Brussels and the Member States.

Figure 5: Effective corporate tax rates of US-based digital corporations and average Effective corporate tax rates large EU-based companies



Source: own analysis based on YCHARTS data and companies' annual reports. Time period: 2012-2017. KPMG for 2017 corporate tax rates.⁹

⁹ Corporate tax rates are available at <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>, accessed on 15 December 2018.

Distribution of ECTRs by Country

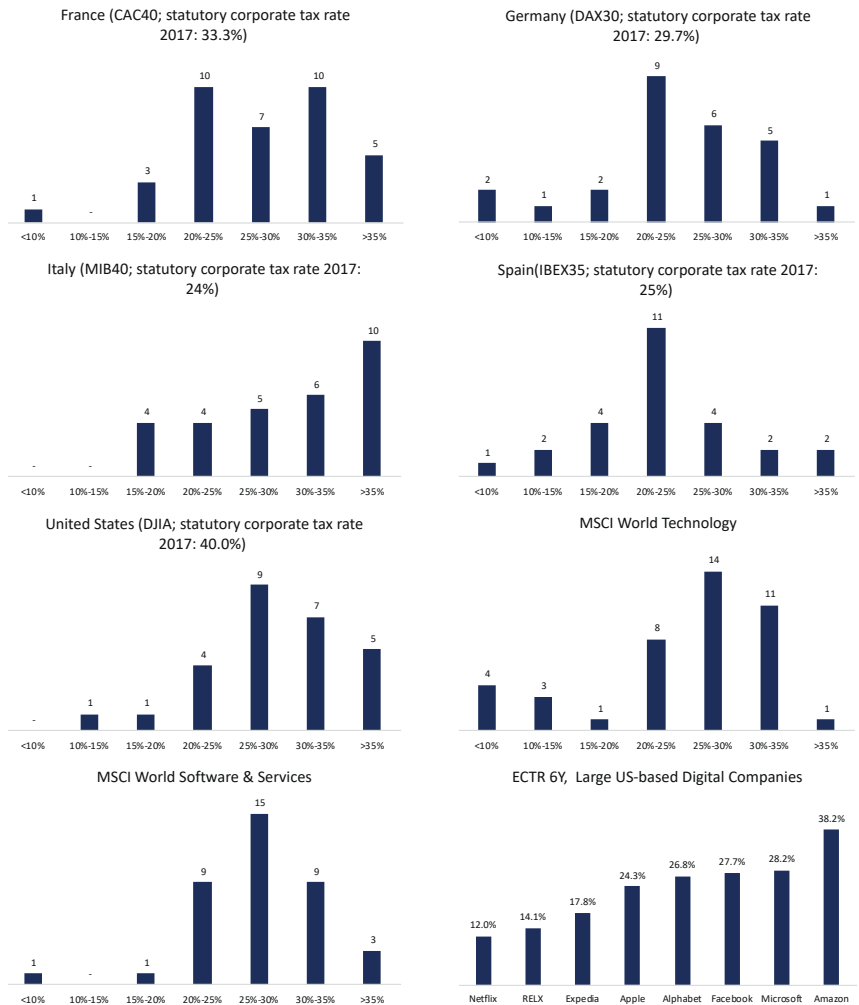
Average ECTRs broken down by country-specific indices already indicate that there is a high variation between countries that enforce *different* corporate tax rules. At the same time, the numbers demonstrate that ECTRs vary considerably within countries and industries (see Figure 6):

- 11% of all French companies analysed show 6Y ECTRs that are lower than 20% (a well-known example is the French car-maker Renault).
- 19% of all German companies analysed show 6Y ECTRs that are lower than 20% (a well-known example is Deutsche Telekom, Germany's leading telecommunications company).
- 14% of all Italian companies analysed show 6Y ECTRs that are lower than 20%.
- 27% of all Spanish companies analysed show 6Y ECTRs that are lower than 20%.
- 7% of all US companies analysed show 6Y ECTRs that are lower than 20%.

At the same time, there's a high number of companies showing relatively high ECTRs:

- 42% of all French companies analysed show 6Y ECTRs that are higher than 30%.
- 23% of all Germany companies analysed show 6Y ECTRs that are higher than 30%.
- 55% of all Italian companies analysed show 6Y ECTRs that are higher 30%.
- 15% of all Spanish companies analysed show 6Y ECTRs that are higher than 30%.
- 44% of all US companies analysed show 6Y ECTRs that are higher 30%.

Figure 6: Distribution of effective corporate tax rates, by index/country, 6Y averages for period 2012 – 2017

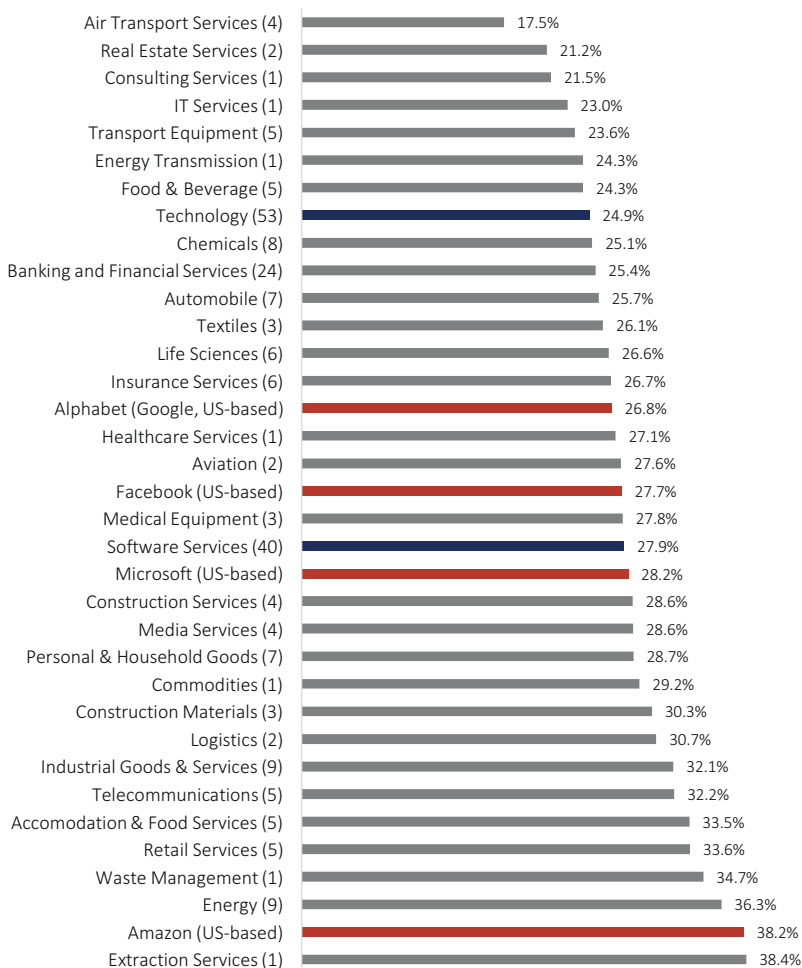


Source: own analysis based on YCHARTS data and companies' annual reports. Analysis is based on 232 publicly-listed corporations for which financial data is available for the overall period 2012-2017. Companies for which financial data is not publicly available for the overall period have been excluded. Loss-making companies for which corporate losses resulted in negative effective corporate tax rates for either 3Y, 4Y, 5Y or 6Y averages have also been excluded from the sample.

Distribution of ECTRs by Industry (between and within variation)

Average ECTRs show a high level of variation between industries. As shown by Figure 7, 6Y average ECTRs vary greatly from sector to sector. The same pattern emerges for 3Y averages. The numbers indicate that many companies with low ECTRs are found in traditional rather than digital sectors. Relatively low ECTRs are, for example, found for Air Transport Services, Real Estate Services, Consulting Services, the Food and Beverages Sector, the Transport Equipment Industry, Banking and Financial Services and the Automobile Industry. Accordingly, the reasoning applied by the European Commission and some EU policymakers, suggesting that a distinct group of companies does not pay its fair share of tax, could be applied to many other sectors inside the European economy.

Figure 7: Effective corporate tax rates of digital corporations vs. average ECTRs by sector, 6Y period 2012 -2017

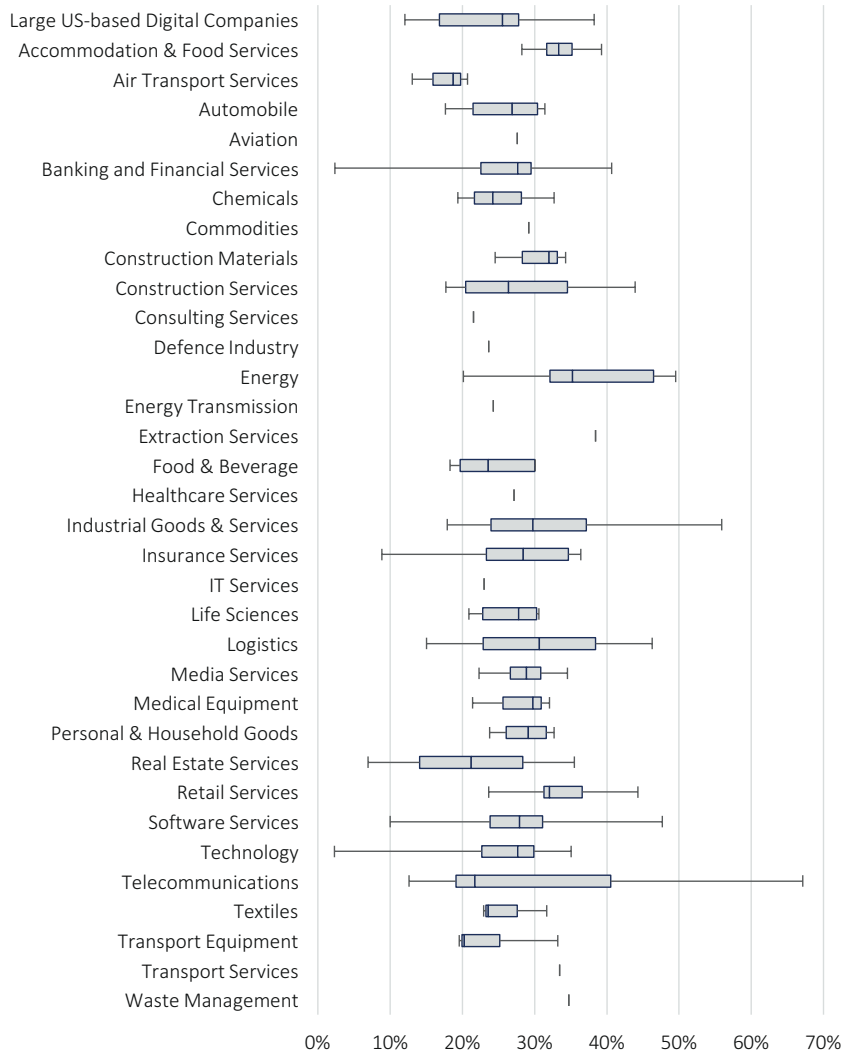


Source: own analysis based on YCHART data and companies' annual reports. Time period: 2012-2017. Numbers in brackets indicate number of companies in sector.

Despite these observations, the use of sector-based average numbers as a guide for policymaking, as initially done by the European Commission, would be highly misleading. Companies with both low and high ECTRs are found in almost every industry, indicating that a sector-specific one-size fits all approach would be highly inappropriate. As outlined by

Figure 8, intra-sector variation of company-specific ECTRs is substantial for many sectors that host traditional brick-and-mortar companies, including large or growing US-based technology companies. In the underlying sample of this study, intra-sector variation is particularly high in Banking and Financial Services, Construction Services, the Energy Production Sector, the Industrial Goods and Services Sector (i.e. Manufacturing), the Logistics Sector, Real Estate Services, and the Communications Sector.

Figure 8: Distribution of effective corporate tax rates, by sector, 6Y averages



Source: own analysis based on YCHART data and companies' annual reports. Time period: 2012-2017. Large US-based Digital Companies include Amazon, Expedia, Alphabet, Facebook, Netflix, Microsoft, RELX, Apple.

Fair Taxation, Tax Protectionism and the EU's Digital Services Tax

What do effective corporate tax rates in the EU tell us about fair taxation in the EU's Member States? Does the wide dispersion of effective corporate tax rates of large EU-headquartered companies justify a new layer of special taxes for companies with digital business models? And, finally, why are EU policymakers and some national governments insisting on taxes on digital turnover, despite the fact that the incidence of any corporate tax is ultimately borne by individuals, i.e. individual workers, consumers and shareholders, and not the "corporation"?

In answering this question, it is important to look at the numerical levels and the great disparities of company-specific effective tax rates in the EU. But it is also important to take into account the political economy of tax reform in the EU, i.e. the interests of and information available to national governments, national tax authorities and EU policymakers.

Variation in EU Companies Effective Tax Rates and Tax Fairness in the EU

The high level of variation in ECTRs demonstrates that Western European governments *de facto* endorse companies' "tax avoidance" behaviour. After all, the differences in ECTRs result from corporate practices intended to lawfully avoid high tax bills. The governments of France, Germany, Italy and Spain continue to operate old-fashioned tax systems that incentivise companies to reduce their tax bills in various ways, irrespective of whether they operate domestically and internationally. Accordingly, corporations' tax saving practices should, however, not be called tax evasion.

What's often coined tax avoidance isn't tax evasion. The high level of variation in effective corporate tax rates of companies headquartered in the EU results from well-defended differences in national laws prescribing 1) rules for the calculation of taxable profits (i.e. differences in the number and nature of tax exemptions, tax deductions etc.) and 2) countries' statutory corporate tax rates. It should be noted, however, that it is not a particular feature of (Western) European governments.

Importantly, companies that operate in more than one country actively use these legal incentives and structure their commercial activities (e.g. transfer pricing arrangements, use of patent boxes etc.) in a way to legally reduce their overall tax bill. Such practices aren't restricted to business activities in the EU's Member States. In fact, most companies analysed in the analytical part of this paper operate to a significant extent in non-EU countries, whose tax code also impacts on the overall level of these companies' ECTRs. However, lawful practices intended to avoid burdensome tax expenditures don't represent "tax evasion" as they aren't illegal by law. Corporate tax planning that is in compliance with country-specific tax laws doesn't involve any managerial practices for which corporations can be fined or for which managers can be jailed.

Those in favour of fair corporate taxation need to understand that corporate tax planning isn't illegal, which is often disguised by those using the term tax avoidance in debates about tax fairness. Tax avoidance, which according to the Tax Justice Network is the "most misunderstood and misused word in the field of tax", should be considered as behaviour "[complying] with [tax] law, but [going] against the spirit of what our legislators intended."¹⁰ Accordingly, the Tax Justice Network advises journalists, for example, to use the term tax avoidance only "when they can show that the company hasn't broken the tax laws, but has still got around the rules." Based on this interpretation, tax avoidance occurs when companies use the law as it is written but in a manner not intended or desired by the tax officials or tax experts who wrote the law.

In recent decades, corporate tax code complexity increased tremendously across the globe. Tax breaks, tax credits and other policies have proliferated worldwide, including in the EU's Member States. The ECTRs presented in the analytical part of this paper demonstrate that corporations actively take advantage of the policies inscribed in the laws of the countries in

10 Tax Justice Network (2019), Tax Avoidance. Available at <https://www.taxjustice.net/faq/tax-avoidance/>, accessed on 29 January 2019.

which they operate (often via a physical, taxable presence). In other words, the high level of heterogeneity, often accompanied by vast differences in EU companies' effective corporate tax rates, is the logical consequence of tax code heterogeneity within the EU and between the EU's Member States and non-EU countries. Accordingly, any judgement about the fair share of taxes that certain companies contribute to national budgets needs to account for the particularities of national tax law.

The fact that many companies headquartered in France, Germany, Italy and Spain, e.g. Renault (France) or Deutsche Telekom (Germany), show very low ECTRs over a very long period of time, demonstrates that, overall, the current design of the corporate tax code represents a consensus of what tax officials and politicians (and political parties) in these countries actually consider as relatively fair, compared to alternative rules for corporate taxation. Otherwise, these countries' governments would have set in motion reforms to reduce the variation in ECTRs. In fact, however, EU (and non-EU) governments have failed to reform their tax systems in such way

- 1) to reduce tax code heterogeneity (e.g. through harmonising rules for the calculation of taxable profits),
- 2) to re-allocate tax rights (e.g. by moving towards destination-based taxation), or
- 3) to take into consideration more fundamental reforms for taxing capital (e.g. the abolition of the traditional corporate income tax and the introduction of a tax on distributed earnings).

Companies' lawful tax avoidance practices therefore merely reflect EU governments' current perceptions of fairness in the tax system, including EU governments' differential treatment of domestic and multinational firms.

Tax Protectionism in the EU

EU policymakers' unwillingness to reform corporate tax codes is largely confirmed by a recent study commissioned by the Greens/EFA Group in the European Parliament, which finds that "effective tax rates in the European Union are much lower than nominal [statutory corporate] tax rates." (Jansky 2019, p. 3) The study, which is largely based on unconsolidated corporate financial data for a large set of companies, finds that "many MNEs [multinational enterprises] do not pay much tax in many countries." (p. 19)

According to the findings of this study, "Luxembourg has the lowest ETR (2.2%) [and] in addition to Luxembourg, the lowest ETRs are in Hungary (7.5%), Bulgaria (9.5%), Cyprus (9.6%) as well as in the Netherlands (10.4%) and Latvia (10.6%). Within the EU, Italy and Greece have the highest ETR (30.4% and 28.4% respectively), with the third and fourth highest being Spain and Slovakia (21.8% and 20.2% respectively). The remaining 18 EU countries (out of the current 28 EU member states) have ETRs between 12% and 20%. Some of the biggest EU economies are within this range, including the United Kingdom (14.9%), France (16.7%) and Germany (19.6%)." (p. 15)

Jansky (2019) highlights that ECTR data only reflect tax expenses according to financial accounting data rather than what companies really paid in taxes according to country-specific tax filing data. As tax filing data are not publicly available, the author calls for "public country-by-country" tax reporting by multinational enterprises. Another, rather politically-motivated recommendation derived in the commissioned report is to "introduce minimum effective corporate tax rates in the EU to stop the current race to the bottom and end the unhealthy tax competition in the European Union." (p. 20) This corresponds to the opinion of the Green party in the European Parliament.

A minimum tax sounds appealing for those generally in favour of tax fairness (for a discussion of a German-led initiative at OECD level, see, e.g., Becker and Englisch (2018)). However, Andersson (2018) argues that digital companies are already paying higher taxes than a likely minimum tax rate and would therefore not be affected. Moreover, a minimum tax wouldn't correct the fundamental flaws of the current corporate income tax regime unless such a reform would be accompanied by the abolition of tax credits and various loopholes inscribed in national EU law. A minimum ECTR could, in theory, be achieved through the harmonisation of rules

for the calculation of taxable profits. Even then, countries would still largely be free to set their own statutory corporate tax rate, which would to some extent safeguard tax competition in the EU. However, it would require high levels of transparency, the exchange of information and consistently applied rules at Member State level. Yet, as outlined by EPRS (2016a and 2015b), the lack of transparency and uneven implementation of tax rules are among the most serious challenges faced by the EU in the field of business taxes.

As demonstrated by the political haggling (since 2011) over the introduction of a Common Consolidated Corporate Tax Base (CCCTB) in the EU, critical matters of tax competition as well as the institutional interests of national tax administrations, stand in the way of a meaningful reform towards a simpler, fairer and less discriminatory corporate tax system. Importantly, it is mainly these two matters that pushed some European policymakers to consider new special taxes on digital services providers.

Corporate tax law is merely one of many tools frequently used by governments to achieve discriminatory treatment of certain companies or certain business activities. In the case of taxes on imports (tariffs), the tax law is used to protect domestic companies and to reduce the benefits of international trade. When it comes to corporate tax law, governments generally seek to keep business activities in their countries, but also to maintain domestic investment and to keep domestic jobs. At the same time, they aim to safeguard domestic tax revenues. As outlined by the EPRS (2015a, p. 17), “[t]he local reduction in effective tax rates in individual Member States has a positive correlation with attracting foreign direct investment.” However, it is also emphasised that the “[c]urrent opacity in the tax systems and arrangements across the EU is fuelling strategic competition amongst Member States, and is deteriorating the effective corporate tax rates.”

The patchy legal framework for corporate taxation in the EU, its complexity and sheer immutability is a reflection of national policymakers' unwillingness to exit the status quo. This has been confirmed by policymakers and academia alike. As unequivocally outlined by the European Parliamentary Research Service on the “Bringing transparency, coordination and convergence to corporate tax policies in the European Union:”

“[...] there is considerable empirical evidence for a *strategic competition between member states* – with negative consequences for Member States and the operation and development of the single market - in tax setting (essentially the effective rate), and also in recovery practices (the latitude afforded to businesses in complying with the tax code) [...] We note, however, that the historical pattern in corporate tax policy has been to *find new avenues for competitive behaviour* [...]” (EPRS 2015, p. 7)

National EU governments in fact defend multiple country-specific tax-codes. They essentially accept the disparities between systems and that these disparities can significantly distort competition. Moreover, Member State’s tax authorities frequently enter into “individualised” tax agreements with certain companies. As outlined by the researchers of the EPRS (EPRS 2015a; 2015b), individualised tax arrangements between “major multinational enterprises” and Member States’ tax authorities are frequently applied.

The European Commission’s Directorate-General for Competition (the Directorate-General for Taxation isn’t in charge) is well aware of that problem. In 2013, it set up a dedicated Task Force on Tax Planning Practices to investigate the discriminatory tax ruling practices of EU Member States, following up on public allegations of the favourable tax treatment of certain companies voiced in the media and in national Parliaments.¹¹ Formal investigations have been launched against the governments of Belgium (excess profit exemption), Ireland (state aid, Apple), Luxembourg (state aid, McDonalds, ENGIE), The Netherlands (state aid, Starbucks, IKEA, Nike), and the United Kingdom (UK tax scheme for multinationals). It is noteworthy that none of these cases explicitly takes aim on companies with digital business models.

Take, for instance, Ikea and the Dutch government. The European Commission’s interpretation of Ikea’s tax affairs is a telling example of how complex taxing global companies has become: Ikea, simply put, uses a common franchise model. Its stores are owned by operating companies that pay franchise fees (as a percentage share of sales) to a separate company in the Netherlands. The payments include rights to Ikea’s brand and patents etc. In 2006, the Dutch company — with the official fiat of the Dutch tax authorities — began to pay an annual licence fee to a related company based in Luxembourg, which held intellectual property. The

11 European Commission (2019), Tax Rulings. Available at http://ec.europa.eu/competition/state_aid/tax_rulings/index_en.html, accessed on 29 January 2019.

money, which according to the European Commission accounted for a “significant” proportion of store franchise fees, went untaxed in Luxembourg. When this arrangement was found to be illegal under EU rules, Ikea restructured its operations again. The Netherlands company – again after receiving official assent by the Dutch tax authorities – bought the intellectual property from the Luxembourg company, funded by a loan from a Liechtenstein-based group company. Interest payments on the loan were deducted from Ikea’s taxable profits in the Netherlands. But should Ikea be blamed?

The Commission argues that two Dutch tax rulings may have allowed IKEA to pay less tax and given them an unfair advantage over other companies, in breach of EU State aid rules. In 2017, the Commission’s Margrethe Vestager, the Commissioner in charge of Competition Policy, argued that “[a]ll companies, big or small, multinational or not, should pay their fair share of tax. Member States cannot let selected companies pay less tax by allowing them to artificially shift their profits elsewhere. We will now carefully investigate the Netherlands’ tax treatment of Inter IKEA.” (European Commission 2017)

To date, tax reforms across the world failed to reverse the complexity trend. While simplicity is indeed an often-stated policy objective, complexity wins the day. Many EU policymakers actually share the understanding that tax code complexity and fragmented tax laws distort corporate behaviour, competition and commercial efficiency. Yet, there haven’t been serious attempts in the EU’s Member States to collectively reform corporate tax regimes for the better.

A Misleading Debate About Digital Companies and Their Fair Share of Tax

Calls for more fairness in corporate taxation disguise the fact that fairness can only be achieved through much simpler and internationally more harmonised rules that apply for all companies irrespective of their business model. Given the current state of corporate taxation across the world, including the EU's 27 Member States and the UK, it is close to impossible to objectively assess whether certain companies pay their fair share of tax or not, let alone where they pay taxes on their corporate income. When addressing the question of whether large US firms paid less tax than their European peers in the past, Overesch et al. 2018, find that large US corporations operated at a distinct tax disadvantage due to the high tax level in the US until 2017. The authors also point to the fact that tax code heterogeneity is a serious international problem. More precisely, based on their analysis, they argue that "international taxation is inefficient and that even a territorial system will not guarantee that [internationally-operating] firms compete on equal terms with each other." (p. 35)

Corporate tax law complexity represents an open invitation for populist political abuse. The fact that the European Commission (and some political parties in the European Parliament, see above) aimed to evoke citizens' emotions to build political capital behind the DST initiative reveals that the current regime, with all its weaknesses, can be easily abused by policymakers and vested interests. The European Commission, some of its high-level representatives and some national governments indeed managed to evoke widespread public outrage in the EU about individual companies and modern technology-driven industries, with adverse feedback effects on economic diplomacy and international trade policy.¹²

At the same time, trends in international corporate taxation reveal that the vast majority of politicians at the EU and national level have lost control over the corporate tax system. National tax authorities, tax advisory firms and the companies themselves are currently in the best position to assess

¹² In April 2018, the US government signalled to challenge the European Commission's proposals for a new EU-wide digital tax, warning to take the Commission's plans to a tribunal of the WTO (Handelsblatt Global 2018). In January 2019, the US Senate Finance Committee leaders, for example, expressed serious concerns regarding unilateral action by foreign countries to establish digital services taxes. In October 2018, the Senate called on the European Commission and the Council to abandon EU proposal for digital services taxes (US Senate 2019).

where and how much companies really pay in tax. However, it is questionable whether these organisations, private or public, are truly interested in a change of the status quo towards a regime that leads to better and more widely accepted tax outcomes. Given the asymmetry of information in addition to vested interests in business and politics, it isn't surprising that EU Member States' legislative efforts to reform the corporate tax system only created additional layers of complexity to an already opaque system.

The political debates on corporate taxation, including the European Council and the European Parliament, are to a large extent beset by mere statements about corporate tax rates. High-level political debates indicate that most elected politicians don't understand the "science of corporate taxation." Corporate tax regimes are, to the largest extent, managed by (unelected) tax officials from national finance ministries as well as the European Commission and the OECD. Tax officials, who are familiar with the legal particularities of international corporate taxation, have in the past managed to successfully maintain a corporate tax regime characterised by 1) opaque (national) rules for the determination of taxable profit, 2) numerous distortive tax exemptions, and 3) secretiveness about the taxes paid by individual companies to contribute to national, sub-federal and municipal budgets (for a discussion of transparency requirements see, e.g., EPRS 2015a; 2015b).

As a consequence, political declarations rarely go beyond vague statements about tax fairness. While tax officials actively shape international expert dialogue and set agendas for international tax reform, corporate tax law is a sealed book for most elected lawmakers. Politicians generally avoid getting into the nitty-gritty of international corporate tax law. And the current state of corporate taxation in the EU clearly demonstrates that Europe's political leaders never shared a strong desire to take (back) control over the design of corporate tax law, let alone a fundamental reform of the current principles in international corporate taxation, both at the Member State and EU level.

This all needs to be taken into consideration in order to make sense of the current debate about special taxes for digital companies on top of a patchy and opaque international corporate tax regime. However, in addition to these rather systemic challenges, many EU policymakers also seem to be driven by other political motives.

For many EU policymakers, the DST still seems to kill two birds with one stone, which is why the Commission's initiative is still embraced by the majority of the European Parliament and some Member State governments. The DST is considered a source of funding for the EU budget. For example, the DST serves as a partial compensation for the EU's revenue shortfalls because of the UK's exit from the EU, even though the revenue potential hasn't been properly assessed by the Commission (see, e.g., Copenhagen Economics 2018).

In addition, given the latent aversion of many Europeans towards large US-based technology companies, the DST is considered a "nice-to-have" deliverable ahead of the European elections in May 2019. In other words, it is considered by EU policymakers a critical element of the pro-EU political narrative – in particular against the background of rising anti-EU political movements across the continent. In fact, many EU policymakers share the hope that an EU-imposed tax on digital services would impact on Europeans in the same way as the often-cited abolishment of roaming charges in the Single Market in 2017.

The European Commission's call for an entirely new type of taxes for a selective list of large digital companies essentially distracts public attention and political capital away from the need to fundamentally reform corporate tax codes to achieve a simpler, fairer and more efficient corporate tax system – not only in the EU.

The allegations of the European Commission as well as the European Parliament and some national EU governments (particularly France, Italy and Spain) regarding the effective tax burden of digital corporations are highly misleading and get important issues wrong:

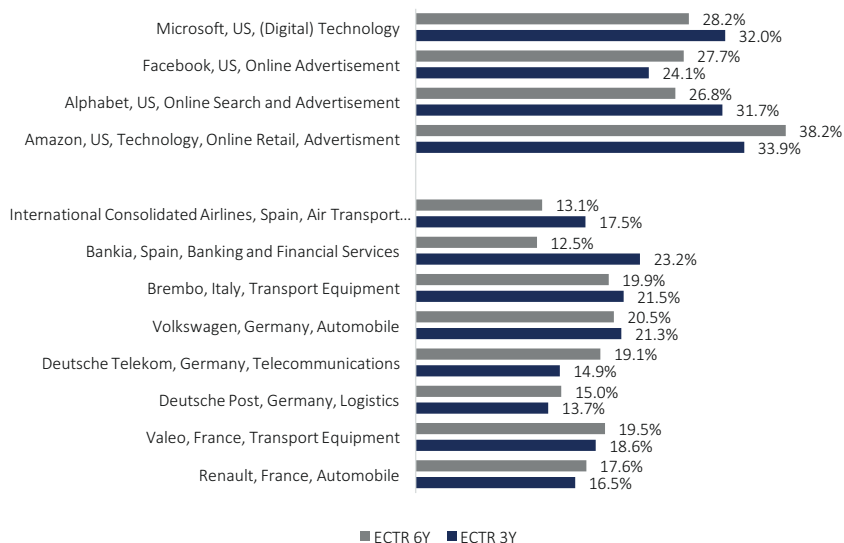
- 1) A great number of digital companies, including large US-based Internet companies (e.g. Amazon, Facebook, Google), actually show much higher effective corporate tax rates than a myriad of traditional, less or non-digital companies headquartered in the EU (see the analytical part above).
- 2) Tax avoidance isn't tax evasion, which is why all companies try to reduce their tax bills. Tax saving behaviour is a common, long-standing feature of traditional companies that operate in different tax jurisdictions, including the tax-sovereign EU Member States. The effective corporate tax rates of both traditional and digital

companies vary substantially because of the legal incentives provided by national tax law and international tax treaties.

- 3) Reducing tax bills by the use of tax exemptions is lawful. Tax exemptions were designed and implemented by national governments to incentivise companies to act in certain ways. In addition, national governments invented ever more layers of tax code over time, rather than pushing for meaningful reforms.
- 4) “Tax avoidance” strategies aren’t a unique feature of modern digital companies. Many large traditional companies that are headquartered in France, Germany, Italy and Spain show significantly lower effective tax rates than large US-based Internet companies. Renault, the French car-maker, for example, shows an average ECTR of only 17.6% for the period 2012 to 2017. Valeo, a French automotive supplier shows a 6Y ECTR of only 19.5%. In Germany, despite a 29.5% statutory tax rate on corporate income applied over the entire period 2012 to 2017, Germany’s three largest partly state-owned companies show relatively low ECTRs: Volkswagen, the German car-maker, shows a comparatively low 6Y average ECTR of 20.5%, while Deutsche Post, Germany’s major logistics services supplier, shows a 6Y average ECTR of only 15.0%, and Deutsche Telekom, Germany’s major telecommunications operator, shows a 6Y average ECTR of only 19.1% (see Figure 9).¹³

13 See Finanzministerium, *Bedeutendste Beteiligungen des Bundes*. Available at https://www.bundesfinanzministerium.de/Web/DE/Themen/Bundesvermoegen/Privatisierungs_und_Beteiligungspolitik/Beteiligungspolitik/Bedeutendste-Bundesbeteiligungen/bedeutendste-bundesbeteiligungen.html;jsessionid=1DD9E3EA2671A94128B6A4309382C39D, accessed on 22 January 2019.

Figure 9: Average ECTRs of selected companies headquartered in Western EU Member States vs. large US-based “digital companies”



Source: own analysis based on YCHARTS data and companies' annual reports. Period: 2012-2017.

- 5) Corporate taxes are in general found to be most harmful to business activity, investment, capital accumulation and economic growth (OECD 2008b).
- 6) The general argument that some companies need to pay more in taxes, or show higher effective corporate tax rates, fails to recognise the fact that all taxes are ultimately borne by individuals – by shareholders through a reduction in the after-tax return on capital, by the labour force through lower wages and/or by consumers through higher prices for the corporation's products and services. Fuest et al. (2017), for example, find that that low-skilled, young and female employees bear a larger share of the corporate income tax burden (see also OECD 2008b, 2010).
- 7) The European Commission didn't provide an appropriate impact assessment and, accordingly, was sharply criticised by the EU's Regulatory Scrutiny Board (RSB 2018). The Commission's nebulous assessment fails to take account of the most common

consequences of business taxes. It doesn't provide essential information that is needed to assess how new taxes on digital services would be passed on to consumers, workers and shareholders, and businesses indirectly affected, including the large number of SMEs using modern digital services, such as online advertisement and online intermediation services (e.g. restaurants, online traders, micro businesses from various industries etc.). The Commission also failed to provide information about dynamic, second-round effects, i.e. affected companies' incentives to produce, invest and consume in the future (Bauer 2018b; Copenhagen Economic 2018).

- 8) Finally, both proposals would have a broad impact despite being intended to target just a "small" portion of the economy (Tax Foundation 2018b). However, the systemic implications for future economic development (dynamic, i.e. medium to long-term, effects) and the prospects for innovation, economic renewal and convergence in the EU have been entirely neglected in the European Commission's reasoning – despite the fact that the tax aims to target companies that account for a substantial part of innovation in Europe's economy, both in terms of new technologies and new business models.

To summarise, the EU's Digital Services Tax initiative is a perfect example of a piecemeal reform that lacks the strategic vision for a simpler, fairer and more efficient system of corporate taxation in the EU and elsewhere.

Both the DST proposal (a 3% revenue tax) and the idea to establish a taxable digital presence fail to address the underlying problems in international corporate taxation, particularly the competing political interests to safeguard jobs, investment and tax revenues domestically. They also disregard that the vast majority of elected lawmakers have effectively lost control over the complexities of corporate taxation. On the contrary, the proposals would create additional layers of complexity and render the overall system even more unfair through effective discrimination, double taxation and higher tax expenses for digital companies, particularly those that already pay more in taxes than many traditional EU-based companies (in, for example, France, Germany, Italy and Spain).

Conclusions

The Digital Services Tax would render the EU's tax system even more complex without tackling the underlying tax issues. From a political economy perspective, it is understandable that EU policymakers "face incentives to reform the tax system in order to signal to particular groups of voters that they care about taxpayers' [European citizens'] welfare." (OECD 2010, p. 58) Given that the Commission and national governments have so far failed to provide comprehensive impact assessments, any lawmaker should be wary about the long-term implications of the proposed measures and the path dependency in corporate taxation, i.e. that tax complexity usually created further tax complexity.

The question of whether digital companies are paying their fair share of taxes has become a central political concern in Brussels and some EU Member States. However, real-world data for effective corporate tax rates demonstrate that there is no systematic difference in income taxes paid by digital corporations compared to their traditional, less digital peers. The effective corporate tax rates of traditional companies indicate that EU-headquartered firms utilise differences in national tax laws to the same extent as companies based in non-EU countries like the US – irrespective of whether these companies are based on traditional brick-and-mortar or more digital business models.

Company data demonstrate that many large US-based digital companies show substantially higher effective tax rates than many traditional companies headquartered in France, Germany, Italy and Spain. At the same time, several large and well-known European companies, e.g. Renault, Volkswagen and Deutsche Telekom, show very effective tax rates compared to the statutory tax rates applied in the countries in which they are headquartered.

Since most companies have very complex business models, which are subject to various tax policies and enforcement practices that differ from one country to another, it is close to impossible for outsiders to come to objective conclusions about whether an individual corporation or a group of companies is sufficiently taxed or not. In addition to the profound differences between national tax codes, multiple incentives set-out by the tax treaties between EU Member States and non-EU countries add additional complexity to an opaque system of international corporate taxation.

Policymakers should recognise that reducing tax bills by the use of tax exemptions is lawful. Tax exemptions were designed and implemented by national governments to incentivise companies to act in certain ways. The high level of variation in ECTRs demonstrates that EU governments *de facto* endorse large European companies' "tax saving" behaviour. In other words, EU governments implemented laws that actively encourage EU-based companies to lawfully reduce their global tax bills.

EU policymakers should understand that any corporate tax is ultimately borne by individuals, i.e. individual workers, consumers and shareholders, and not the "corporation." Accordingly, special taxes on digital companies would, as outlined by the OECD, be harmful to commercial activities in the EU – well beyond the businesses that would have to formally pay the tax in the EU.

The European Commission's DST proposals fail to address the underlying problems in international corporate taxation, particularly the competing protectionist political interests in the Member States aiming to safeguard domestic jobs, domestic investment and domestic tax revenues. New special taxes on digital services would create additional layers of complexity and render the corporate taxation in the EU even more unfair and more out of the control of elected lawmakers.

Proposals for special taxes on digital companies disguise the fact that fairness in corporate taxation can only be achieved through much simpler and internationally more harmonised rules that apply for all companies irrespective of their business model.

References

Andersson, K. (2018). Should we use Value Creation or Destination as a Basis for Taxing Digital Businesses? Klaus Vogel Lecture, European Economic and Social Committee (EESC). 14 September 2018.

Alphabet (2017). Alphabet Inc., Annual Report for the fiscal year ended December 31, 2017

AVAAZ (2018). Make the Tech Giants Pay Their Taxes!, Call for petition posted on 23 November 2018. Available at https://secure.avaaz.org/campaign/en/tax_the_tech_giants/?wHfowbb, accessed on 10. January 2019.

Bauer (2018a). Digital Companies and Their Fair Share of Taxes: Myths and Misconceptions. ECIPE Occasional Paper 03/2018.

Bauer (2018b). Five Questions about the Digital Services Tax to Pierre Moscovici. ECIPE Occasional Paper 04/2018.

Bauer (2018c). Fake News and How to Use Twitter in a Meaningful Way for Policy Debates: Lessons from the European Commission's "Digital Tax" Campaign. ECIPE Blog, April 2018, available at: <https://ecipe.org/blog/using-twitter-in-a-meaningful-way-for-policy-debates/>, accessed on 15 January 2019.

Becker, J. and Englisch, J. (2018). The German proposal for an effective minimum tax on multinational's profits. Tax Justice Network, 15 January 2019. Available at <https://www.taxjustice.net/2019/01/15/the-german-proposal-for-an-effective-minimum-tax-on-multinationals-profits/>, accessed on 18 January 2019.

Business Europe (2013). Double Taxation Cases Outside the Transfer Pricing Area. December 2013.

Council of the European Union (2018a). Proposal for a Council Directive on the common system of a digital services tax on revenues resulting from the provision of certain digital services. 29 November 2018.

Council of the European Union (2018b). Outcome of the Council Meeting. Council Meeting 3658. 4 December 2018.

Council of the European Union (2018c). Franco-German joint declaration on the taxation of digital companies and minimum taxation. Available at <https://www.consilium.europa.eu/media/37276/fr-de-joint-declaration-on-the-taxation-of-digital-companies-final.pdf>, accessed on 15 January 2019.

Copenhagen Economics (2018). The Proposed EU Digital Services Tax: Effects on welfare, growth and revenues. September 2018.

EPRS (2015a). Bringing transparency, coordination and convergence to corporate tax policies in the European Union, Part I: Assessment of the magnitude of aggressive corporate tax planning.

EPRS (2015b). Bringing transparency, coordination and convergence to corporate tax policies in the European Union, Part II: Evaluation of the European Added Value of the recommendations in the ECON legislative own-initiative draft report on bringing transparency, coordination and convergence to corporate tax policies in the European Union.

European Commission (2019). Commission launches debate on a gradual transition to more efficient and democratic decision-making in EU tax policy, press release. 15 January 2019.

European Commission (2017). State aid: Commission opens in-depth investigation into the Netherlands' tax treatment of Inter IKEA, press release, 18 December 2017.

European Commission (2016). Commission Staff Working Document. Impact Assessment Accompanying the Document "Proposal for a Council Directive on Double Taxation Dispute Resolution Mechanisms in the European Union. 25 October 2016.

European Parliament (2018). MEPs agree on new rules to tax digital companies' revenues. 13 December 2018. Available at: <http://www.europarl.europa.eu/news/en/press-room/20181205IPR20944/meps-agree-on-new-rules-to-tax-digital-companies-revenues>, accessed on 15 January 2019.

EY (2018). French Government releases draft Finance Bill for 2019. Available at <https://taxinsights.ey.com/archive/archive-news/french-government-releases-draft-finance-bill-for-2019.aspx>, accessed on 14 January 2019.

Fuest, C., Peichl, A. and Siegloch, S. (2017). Do Higher Corporate Taxes Reduce Wages? - Micro Evidence from Germany. ifo Working Papers No. 241, 2017.

Handelsblatt Global (2018). Trump set to tussle over EU digital tax plans. 16 April 2018, available at <https://global.handelsblatt.com/politics/trump-america-eu-digital-tax-google-911691>, accessed on 19 January 2018.

Hoppe, T., Schanz, D., Sturm, S. and Sureth-Sloane, C. (2017). What are the Drivers of Tax Complexity for Multinational Corporations? Evidence from 108 Countries. WU International Taxation Research Paper Series No. 2017 – 12.

Jansky, P. (2019). Effective Tax Rates of Multinational Enterprises in the EU. Report Commissioned by the Greens/EFA Group in the European Parliament. 22 January 2019.

Kieskompas (2018). Public perceptions towards taxing digital companies in six countries. Available at <https://paultang.nl/wp-content/uploads/2018/12/PvdA-Digital-tax-report.pdf>, accessed on 18 January 2019.

OECD (2019). Addressing the Tax Challenges of the Digitalisation of the Economy – Policy Note OECD/G20 Base Erosion and Profit Shifting Project. 23 January 2019.

OECD (2010). Tax Policy Reform and Economic Growth, OECD Tax Policy Studies No. 20.

OECD (2008a). Reforming Corporate Income Tax. OECD Policy Brief. July 2018.

OECD (2008b). Tax and Economic Growth. ECO/WKP(2008)28, 11 July 2008.

OECD (2007). Fundamental Reform of Corporate Income Tax. No 16. OECD 2007.

Overesch, M., Schenkelberg, S. and Wamser, G. (2018). Do US Firms Pay Less Tax than their European Peers? On Firm Characteristics, Profit Shifting Opportunities, and Tax Legislation as Determinants of Tax Differentials, cesifo Working Papers, 6960 2018, March 2018.

PWC (2018). Understanding the ZEW-PwC Report, “Digital Tax Index, 2017”. Available at <https://www.pwc.com/us/en/press-releases/2018/understanding-the-zew-pwc-report.html>, accessed on 15 December 2018.

Renault (2017). Registration Document Groupe Renault., for the fiscal year ended December 31, 2017.

RSB (2018). Regulatory scrutiny Board Opinion on the “Proposal for a Council Directive laying down rules relating to the corporate taxation of a significant digital presence” and the “Proposal for a Council Directive on the common system of a digital services tax on revenues resulting from the provision of certain digital services”. 23 March 2018.

Tang, P. (2018). Widespread public support for tax on tech giants. Available at: <https://paultang.nl/widespread-public-support-for-tax-on-tech-giants/>, accessed on 18 January 2019.

Tax Foundation (2018a). Corporate Income Tax Rates around the World, 2018. Available at: <https://files.taxfoundation.org/20181127165741/Corporate-Tax-Rates-Around-the-World-2018.pdf>, accessed on 18 January 2019.

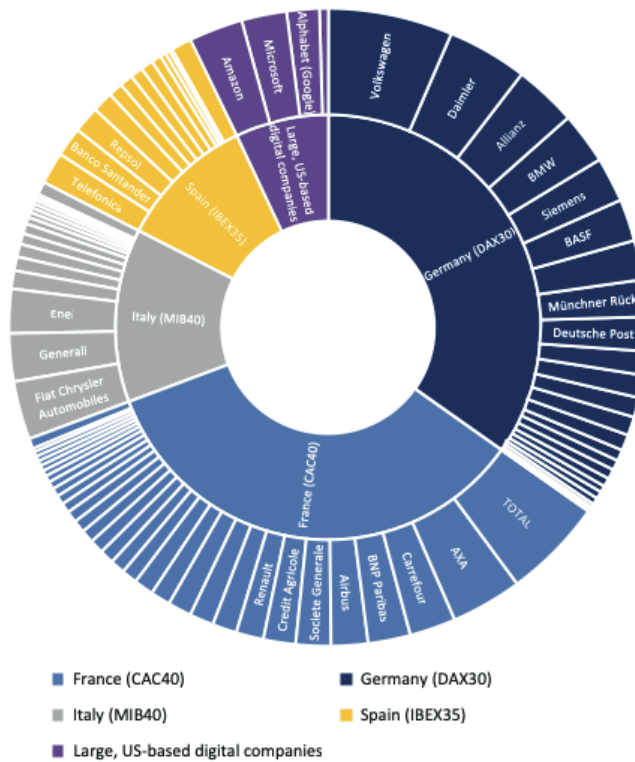
Tax Foundation (2018b). A Summary of Criticisms of the EU Digital Tax. 22 October 2018.

US Senate (2019). United States Senate, Committee on Finance, Letter to Steven T. Mnuchin, 29 January 2019.

ZEW (2016). The Impact of Tax Planning on Forward-Looking Effective Tax Rates, Working Paper No. 64 – 2016. Centre for European Economic Research.

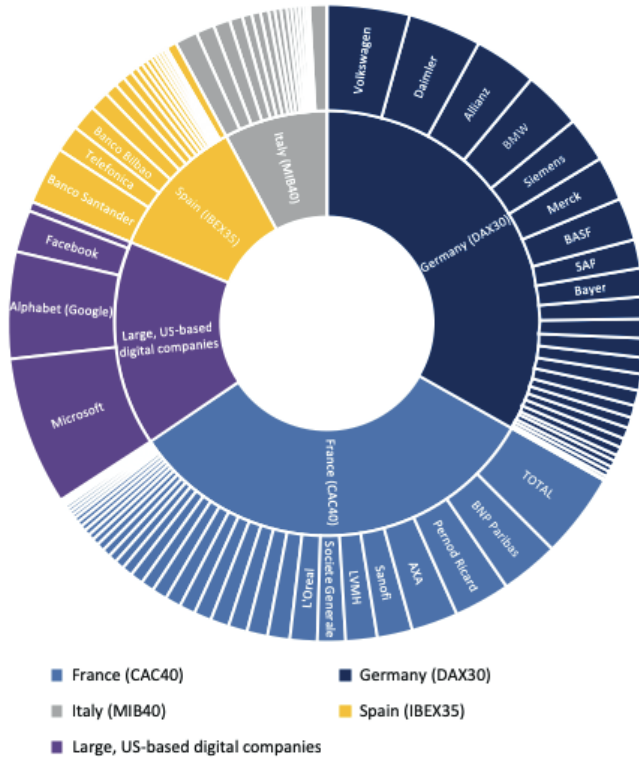
Annex

Figure 10: Distribution of total revenues, 6Y-average over the period 2012 – 2017



Source: own analysis based on YCHARTS data and companies' annual reports. Time period: 2012 – 2017.

Figure 11: Distribution of total pre-tax income, 6Y-average over the period 2012 – 2017



Source: own analysis based on YCHARTS data and companies' annual reports.
Time period: 2012 – 2017.

Figure 12: Distribution of pre-tax profit margins, by sector, 6Y averages

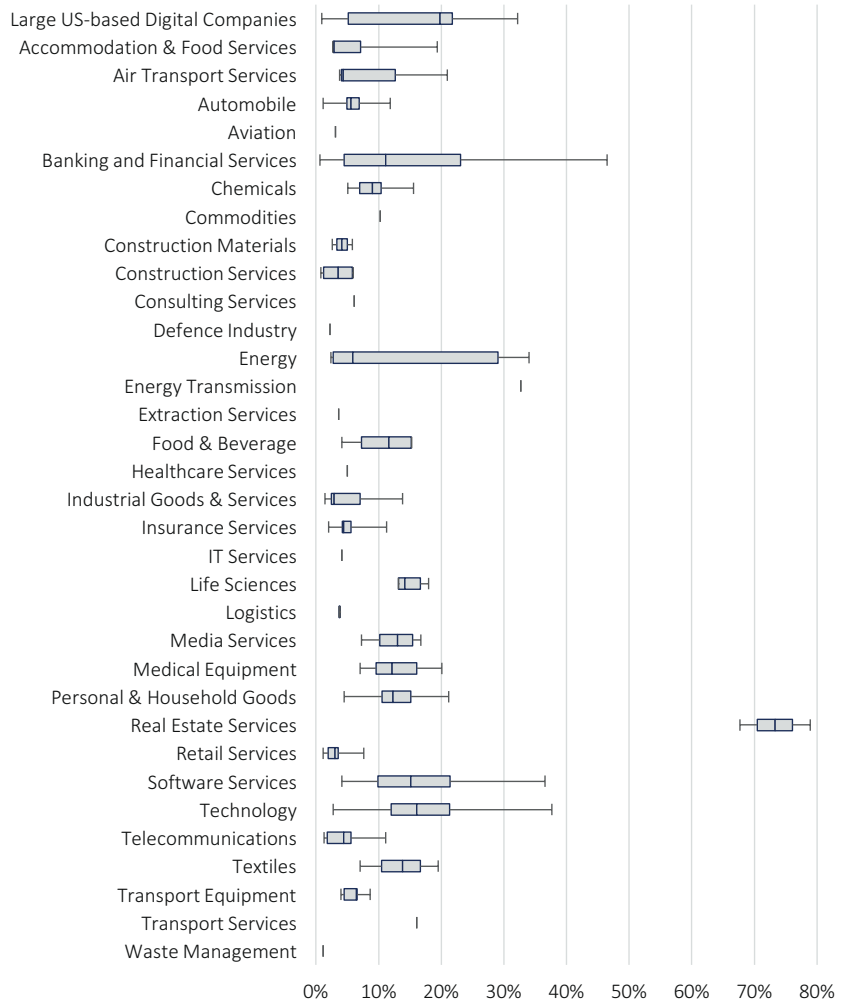


Table 2: List of companies, effective corporate tax rates and profit margins, 3Y and 6Y averages

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Accor	France	CAC40	Accommodation & Food Services	19.2%	2.8%	0.6%	28.2%
Air Liquide	France	CAC40	Industrial Goods & Services	10.7%	10.7%	21.0%	24.0%
Airbus	France	CAC40	Aviation	3.3%	3.1%	28.9%	27.6%
Atos	France	CAC40	IT Services	4.9%	4.1%	18.8%	23.0%
AXA	France	CAC40	Insurance Services	4.9%	4.3%	21.7%	22.5%
BNP Paribas	France	CAC40	Banking and Financial Services	9.7%	7.7%	29.0%	33.3%
Bouygues	France	CAC40	Construction Services	2.3%	1.4%	26.6%	43.9%
Capgemini	France	CAC40	Consulting Services	7.6%	6.1%	5.8%	21.5%
Carrefour	France	CAC40	Retail Services	0.5%	1.1%	50.6%	44.3%
Credit Agricole	France	CAC40	Banking and Financial Services	6.4%	2.6%	25.4%	24.2%
Danone	France	CAC40	Food & Beverage	7.9%	7.3%	28.9%	30.0%
Dassault Systemes	France	CAC40	Software Services	15.0%	15.1%	32.6%	33.1%
Essilor Luxottica	France	CAC40	Medical Equipment	11.1%	12.2%	21.9%	21.4%
Hermes	France	CAC40	Personal & Household Goods	21.2%	21.2%	35.0%	32.0%
Kering	France	CAC40	Textiles	8.4%	7.0%	26.0%	23.5%
L'Oreal	France	CAC40	Personal & Household Goods	13.3%	14.8%	24.7%	25.9%
Legrand	France	CAC40	Technology	12.3%	12.0%	26.9%	29.2%
LVMH	France	CAC40	Personal & Household Goods	10.9%	12.3%	29.9%	31.3%
Michelin	France	CAC40	Transport Equipment	7.1%	6.5%	32.3%	33.2%
Orange	France	CAC40	Tele communications	6.1%	4.4%	32.5%	40.5%
Pernod Ricard	France	CAC40	Food & Beverage	4.6%	4.1%	20.7%	18.3%
Publicis Groupe	France	CAC40	Media Services	4.3%	7.3%	44.9%	34.6%
Renault	France	CAC40	Automobile	7.3%	5.4%	16.5%	17.6%
Safran	France	CAC40	Technology	12.8%	9.3%	24.1%	24.1%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Saint-Gobain	France	CAC40	Construction Materials	3.5%	2.6%	24.5%	32.0%
Sanofi	France	CAC40	Life Sciences	17.0%	15.1%	22.9%	20.9%
Scheider Electric	France	CAC40	Technology	7.0%	7.4%	23.9%	23.8%
Societe Generale	France	CAC40	Banking and Financial Services	8.0%	4.5%	30.7%	28.7%
Sodexo	France	CAC40	Accommodation & Food Services	3.4%	3.0%	31.8%	32.8%
TechnipFMC	France	CAC40	Extraction Services	1.5%	3.6%	62.4%	38.4%
TOTAL	France	CAC40	Energy	4.1%	4.0%	22.7%	48.4%
Unibail-Rodamco-Westfield	France	CAC40	Real Estate Services	82.8%	78.9%	7.3%	6.9%
Valeo	France	CAC40	Transport Equipment	5.1%	4.5%	18.6%	19.5%
Veolia Environnement	France	CAC40	Waste Management	1.6%	1.1%	29.4%	34.7%
Vinci	France	CAC40	Construction Services	6.1%	5.7%	30.9%	31.4%
Vivendi	France	CAC40	Media Services	13.0%	15.0%	4.7%	28.1%
Adidas	Germany	DAX30	Personal & Household Goods	4.9%	4.5%	32.1%	32.7%
Allianz	Germany	DAX30	Insurance Services	6.3%	6.0%	30.0%	31.0%
BASF	Germany	DAX30	Chemicals	7.4%	7.0%	20.4%	20.7%
Bayer	Germany	DAX30	Chemicals	13.8%	10.3%	24.5%	24.2%
Beiersdorf	Germany	DAX30	Chemicals	10.0%	9.0%	31.1%	32.7%
BMW	Germany	DAX30	Automobile	7.7%	7.3%	25.4%	29.3%
Continental	Germany	DAX30	Transport Equipment	6.9%	6.5%	28.2%	25.2%
Covestro	Germany	DAX30	Chemicals	8.3%	5.1%	26.1%	26.4%
Daimler	Germany	DAX30	Automobile	5.9%	5.7%	28.4%	24.4%
Deutsche Börse	Germany	DAX30	Banking and Financial Services	35.6%	31.7%	28.4%	24.8%
Deutsche Post	Germany	DAX30	Logistics	3.9%	3.7%	13.7%	15.0%
Deutsche Telekom	Germany	DAX30	Telecommunications	4.3%	1.8%	14.9%	19.1%
Fresenius	Germany	DAX30	Healthcare Services	5.2%	5.0%	26.7%	27.1%
Fresenius Medical	Germany	DAX30	Medical Equipment	6.8%	7.0%	28.1%	29.8%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Heidelberg Cement	Germany	DAX30	Construction Materials	6.3%	5.8%	29.1%	24.5%
Henkel	Germany	DAX30	Chemicals	11.4%	10.5%	20.9%	22.7%
Infineon	Germany	DAX30	Technology	11.2%	10.8%	13.0%	6.6%
Linde	Germany	DAX30	Industrial Goods & Services	13.1%	13.8%	33.7%	30.2%
Lufthansa	Germany	DAX30	Air Transport Services	5.9%	3.7%	20.7%	20.7%
Merck	Germany	DAX30	Life Sciences	9.0%	13.1%	34.8%	30.3%
Münchener Rück	Germany	DAX30	Insurance Services	3.2%	4.2%	13.2%	8.8%
SAP	Germany	DAX30	Software Services	16.2%	17.3%	22.6%	23.8%
Siemens	Germany	DAX30	Industrial Goods & Services	7.9%	7.0%	26.4%	27.5%
Volkswagen	Germany	DAX30	Automobile	2.4%	4.8%	21.3%	20.5%
Vonovia	Germany	DAX30	Real Estate Services	88.0%	67.7%	36.7%	35.5%
Wirecard	Germany	DAX30	Banking and Financial Services	20.3%	19.5%	12.5%	13.4%
A2A	Italy	MIB40	Energy	4.0%	2.7%	45.2%	49.6%
Atlantia	Italy	MIB40	Transport Services	17.4%	16.1%	31.0%	33.5%
Azimut	Italy	MIB40	Banking and Financial Services	28.8%	28.3%	8.0%	16.4%
Banca Generali	Italy	MIB40	Banking and Financial Services	41.8%	46.5%	14.8%	19.0%
Banca Mediolanum	Italy	MIB40	Banking and Financial Services	1.6%	2.3%	17.9%	19.4%
Bper Banca	Italy	MIB40	Banking and Financial Services	6.1%	2.8%	2.2%	23.8%
Brembo	Italy	MIB40	Transport Equipment	10.0%	8.6%	21.5%	19.9%
Buzzi Unicem	Italy	MIB40	Construction Materials	8.2%	4.1%	20.9%	34.3%
Daive Campari	Italy	MIB40	Food & Beverage	13.5%	11.6%	13.8%	23.6%
Cnh Industrial	Italy	MIB40	Industrial Goods & Services	0.4%	1.4%	89.9%	55.9%
Diasorin	Italy	MIB40	Medical Equipment	20.7%	20.1%	28.9%	32.1%
Enel	Italy	MIB40	Energy	4.0%	2.7%	31.6%	46.5%
Ferrari	Italy	MIB40	Automobile	13.5%	11.9%	29.7%	30.8%
Fiat Chrysler Automobiles	Italy	MIB40	Automobile	1.7%	1.2%	43.1%	31.4%
Generali	Italy	MIB40	Insurance Services	2.5%	2.0%	31.4%	36.4%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Intesa Sanpaolo	Italy	MIB40	Banking and Financial Services	14.6%	5.6%	18.4%	36.3%
Leonardo/ Finmeccanica	Italy	MIB40	Defence Industry	2.9%	2.2%	20.8%	23.7%
Mediobanca	Italy	MIB40	Banking and Financial Services	33.8%	30.3%	19.3%	22.5%
Moncler	Italy	MIB40	Textiles	19.7%	19.5%	30%	31.7%
Poste Italiane	Italy	MIB40	Logistics	3.6%	3.8%	39.0%	46.3%
Prysmian	Italy	MIB40	Industrial Goods & Services	3.0%	2.5%	28.9%	29.7%
Recordati	Italy	MIB40	Life Sciences	20.7%	18.0%	25.3%	25.3%
Salvatore Ferragamo	Italy	MIB40	Personal & Household Goods	11.6%	11.3%	27.4%	29.1%
Snam	Italy	MIB40	Energy	39.7%	30.5%	30.3%	35.3%
Telecom Italia	Italy	MIB40	Telecommunications	4.9%	1.3%	35.2%	67.1%
Terna	Italy	MIB40	Energy	30.6%	29.1%	31.8%	38.1%
Tenaris	Italy	MIB40	Commodities	3.2%	10.3%	38.9%	29.2%
Unipol	Italy	MIB40	Banking and Financial Services	0.5%	0.6%	36.5%	40.7%
Unipolsai	Italy	MIB40	Banking and Financial Services	4.3%	4.5%	30.0%	28.1%
Acerinox	Spain	IBEX35	Industrial Goods & Services	2.8%	1.9%	37.3%	46.3%
ACS Actividades de Construccion y Servicios	Spain	IBEX35	Construction Services	2.3%	0.8%	27.7%	21.4%
Aena	Spain	IBEX35	Air Transport Services	29.0%	20.9%	22.5%	18.7%
Amadeus IT Group	Spain	IBEX35	Technology	19.0%	18.5%	26.5%	28.7%
Banco Bilbao	Spain	IBEX35	Banking and Financial Services	13.0%	11.9%	28.7%	22.6%
Banco de Sabadell	Spain	IBEX35	Banking and Financial Services	12.7%	8.8%	14.4%	2.3%
Banco Santander	Spain	IBEX35	Banking and Financial Services	12.7%	10.4%	29.0%	29.1%
Bankia	Spain	IBEX35	Banking and Financial Services	21.8%	-71.8%	23.2%	12.5%
Bankinter	Spain	IBEX35	Banking and Financial Services	20.8%	16.0%	27.4%	27.2%
CIE Automotive	Spain	IBEX35	Transport Equipment	3.8%	4.0%	21.3%	20.2%
Dia Distribuidora	Spain	IBEX35	Retail Services	2.1%	2.0%	31.1%	32.0%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Enagas	Spain	IBEX35	Energy	35.3%	34.0%	22.6%	24.1%
Ferrovial	Spain	IBEX35	Construction Services	4.7%	6.0%	14.1%	17.7%
Grifols	Spain	IBEX35	Life Sciences	14.2%	13.3%	17.1%	22.0%
Industria De Diseno Textil	Spain	IBEX35	Textiles	13.5%	13.9%	22.7%	22.9%
International Consolidated Airlines	Spain	IBEX35	Air Transport Services	7.9%	4.4%	17.5%	13.1%
Mapfre	Spain	IBEX35	Banking and Financial Services	3.3%	3.5%	29.9%	28.2%
Mediaset Espana Comunicacion	Spain	IBEX35	Media Services	18.3%	11.1%	22.8%	22.3%
Melia Hotels	Spain	IBEX35	Accommodation & Food Services	5.4%	2.7%	34.8%	39.2%
Naturgy Energy Group	Spain	IBEX35	Energy	5.9%	5.9%	19.4%	20.1%
Red Electrica Corporacion	Spain	IBEX35	Energy Transmission	32.9%	32.7%	25.5%	24.3%
Repsol	Spain	IBEX35	Energy	2.1%	2.4%	21.6%	32.1%
Siemens Gamesa	Spain	IBEX35	Industrial Goods & Services	3.2%	2.8%	31.6%	17.9%
Tecnicas Reunidas	Spain	IBEX35	Industrial Goods & Services	1.6%	2.9%	27.9%	20.6%
Telefonica	Spain	IBEX35	Telecommunications	3.9%	5.6%	25.4%	21.7%
VISCOFAN	Spain	IBEX35	Food & Beverage	16.3%	15.3%	18.6%	19.7%
3M	US	DJIA	Chemicals	16.0%	15.6%	31.1%	29.9%
American Express	US	DJIA	Banking and Financial Services	17.8%	18.3%	43.2%	37.9%
Apple	US	DJIA	Technology	21.6%	21.8%	22.6%	24.3%
Caterpillar	US	DJIA	Industrial Goods & Services	2.4%	4.9%	58.1%	37.2%
Cisco	US	DJIA	Technology	14.0%	16.2%	46.5%	32.8%
Coca-Cola	US	DJIA	Food & Beverage	12.4%	15.2%	38.3%	30.1%
DowDuPont Inc	US	DJIA	Chemicals	8.4%	7.0%	10.8%	19.3%
ExxonMobil	US	DJIA	Energy	6.4%	7.9%	7.9%	32.6%
Goldman Sachs Group	US	DJIA	Banking and Financial Services	20.0%	22.6%	41.2%	36.3%
IBM	US	DJIA	Technology	12.8%	14.2%	21.9%	21.3%
Intel	US	DJIA	Technology	17.7%	18.8%	34.0%	29.9%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Johnson & Johnson	US	DJIA	life Sciences	15.2%	17.2%	41.3%	30.6%
JPMorgan Chase & Co	US	DJIA	Banking and Financial Services	25.5%	23.3%	27.2%	28.2%
McDonalds	US	DJIA	Accommodation & Food Services	19.8%	19.4%	34.5%	33.8%
Merck	US	DJIA	Life Sciences	9.0%	13.1%	34.8%	30.3%
Microsoft	US	DJIA	Technology	21.0%	21.3%	32.0%	28.2%
Nike	US	DJIA	Personal & Household Goods	9.6%	9.8%	28.2%	26.1%
Procter & Gamble	US	DJIA	Personal & Household Goods	18.0%	15.5%	24.7%	23.7%
The Home Depot	US	DJIA	Retail Services	8.3%	7.7%	36.6%	36.6%
The Travelers Companies	US	DJIA	Insurance Services	10.2%	11.3%	26.2%	25.8%
United Technologies	US	DJIA	Technology	9.9%	9.9%	31.1%	28.2%
UnitedHealth	US	DJIA	Insurance Services	4.3%	4.5%	34.2%	35.9%
Verizon	US	DJIA	Telecommunications	15.9%	11.1%	10.4%	12.6%
Visa	US	DJIA	Banking and Financial Services	35.4%	36.5%	29.3%	29.7%
Walgreens Boots Alliance	US	DJIA	Retail Services	3.6%	3.5%	17.2%	23.7%
Walmart	US	DJIA	Retail Services	2.6%	3.0%	30.3%	31.3%
Walt Disney	US	DJIA	Media Services	18.2%	16.7%	25.7%	29.6%
Accenture	Ireland	MSCI World Technology	Technology	10.8%	10.6%	23.9%	23.6%
Activision Blizzard	US	MSCI World Technology	Technology	11.7%	15.9%	36.9%	28.2%
Adobe	US	MSCI World Technology	Technology	19.5%	16.0%	21.5%	22.3%
Alphabet (Google)	US	MSCI World Technology	Technology	20.0%	21.7%	31.7%	26.8%
Amadeus IT Group	Spain	MSCI World Technology	Technology	19.0%	18.5%	26.5%	28.7%
Amphenol	US	MSCI World Technology	Technology	11.9%	12.5%	36.1%	32.0%
Analog Devices	US	MSCI World Technology	Technology	19.1%	21.0%	11.9%	14.4%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Apple	US	MSCI World Technology	Technology	21.6%	21.8%	22.6%	24.3%
Applied Materials	US	MSCI World Technology	Technology	19.9%	16.2%	18.9%	19.2%
ASML HLDC	Netherlands	MSCI World Technology	Technology	22.6%	21.9%	12.2%	8.2%
Automatic Data	US	MSCI World Technology	Technology	13.0%	13.6%	30.1%	31.8%
Broadcom	US	MSCI World Technology	Technology	3.5%	5.8%	34.5%	22.4%
Canon	Japan	MSCI World Technology	Technology	5.4%	6.0%	31.3%	31.4%
Cisco Systems	US	MSCI World Technology	Technology	14.0%	16.2%	46.5%	32.8%
Cognizant Technology Solutions	US	MSCI World Technology	Technology	11.5%	13.1%	34.8%	31.0%
Ebay	US	MSCI World Technology	Technology	29.4%	23.1%	1.4%	27.1%
Electronic Arts	US	MSCI World Technology	Technology	22.0%	15.8%	10.5%	10.0%
Facebook	US	MSCI World Technology	Technology	35.6%	32.2%	24.1%	27.7%
Fidelity National Information Services	US	MSCI World Technology	Technology	10.1%	9.6%	12.7%	22.7%
Fiserf	US	MSCI World Technology	Technology	17.6%	15.9%	27.8%	31.3%
Hitachi	Japan	MSCI World Technology	Technology	2.7%	2.8%	25.8%	25.2%
IBM	US	MSCI World Technology	Technology	12.8%	14.2%	21.9%	21.3%
Infineon	Germany	MSCI World Technology	Technology	8.2%	13.0%	10.0%	6.7%
Intel	US	MSCI World Technology	Technology	17.7%	18.8%	34.0%	29.9%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Intuit	US	MSCI World Technology	Technology	20.0%	18.8%	26.6%	30.4%
Keyence Corp	Japan	MSCI World Technology	Technology	38.7%	37.7%	30.1%	31.8%
Lam Research Corp	US	MSCI World Technology	Technology	20.0%	16.6%	15.7%	14.2%
Mastercard	US	MSCI World Technology	Technology	29.3%	31.8%	31.2%	30.6%
Micron Technology	US	MSCI World Technology	Technology	30.0%	24.9%	1.6%	2.3%
Microsoft	US	MSCI World Technology	Technology	21.0%	21.3%	32.0%	28.2%
Murata	Japan	MSCI World Technology	Technology	13.5%	12.6%	21.6%	25.0%
Nintendo	Japan	MSCI World Technology	Technology	12.9%	7.0%	24.1%	35.1%
Nvidia	US	MSCI World Technology	Technology	24.6%	20.0%	8.8%	10.4%
Oracle	US	MSCI World Technology	Technology	19.2%	23.6%	38.5%	29.4%
Paypal	US	MSCI World Technology	Technology	13.3%	12.3%	16.8%	23.1%
Qualcom	US	MSCI World Technology	Technology	4.8%	16.1%	68.1%	32.2%
Red Hat	US	MSCI World Technology	Technology	9.6%	10.1%	33.5%	31.2%
SAP	Germany	MSCI World Technology	Technology	16.2%	17.3%	22.6%	23.8%
Texas Instruments	US	MSCI World Technology	Technology	24.8%	21.4%	32.6%	28.5%
Tokyo Electron	Japan	MSCI World Technology	Technology	15.4%	10.0%	25.1%	27.3%
Visa	US	MSCI World Technology	Technology	35.4%	36.5%	29.3%	29.7%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Western Digital	US	MSCI World Technology	Technology	2.5%	5.5%	56.3%	28.9%
Accenture	Ireland	MSCI World Software & Services	Software Services	10.8%	10.6%	23.9%	23.6%
Activision Blizzard	US	MSCI World Software & Services	Software Services	11.7%	15.9%	36.9%	28.2%
Adobe	US	MSCI World Software & Services	Software Services	19.5%	16.0%	21.5%	22.3%
Alphabet (Google)	US	MSCI World Software & Services	Software Services	20.0%	21.7%	31.7%	26.8%
Amadeus IT Group	Spain	MSCI World Software & Services	Software Services	19.0%	18.5%	26.5%	28.7%
Ansys	US	MSCI World Software & Services	Software Services	25.7%	26.3%	31.4%	29.4%
Atos	France	MSCI World Software & Services	Software Services	4.9%	4.1%	18.8%	23.0%
Automatic Data Processing	US	MSCI World Software & Services	Software Services	13.0%	13.6%	30.1%	31.8%
Broadridge Financial	US	MSCI World Software & Services	Software Services	9.3%	9.6%	30.0%	31.8%
Capgemini	France	MSCI World Software & Services	Software Services	7.6%	6.1%	5.8%	21.5%
CGI Group	Canada	MSCI World Software & Services	Software Services	9.8%	8.7%	25.6%	25.6%
Citrix Systems	US	MSCI World Software & Services	Software Services	10.2%	10.6%	43.1%	28.7%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Cognizant Technology Solutions	US	MSCI World Software & Services	Software Services	11.5%	13.1%	34.8%	31.0%
Constellation Software	Canada	MSCI World Software & Services	Software Services	9.4%	8.8%	28.8%	27.6%
Dassault Systems	France	MSCI World Software & Services	Software Services	15.0%	15.1%	32.6%	33.1%
Dell Technologies	US	MSCI World Software & Services	Software Services	2.9%	7.5%	23.5%	25.0%
Ebay	US	MSCI World Software & Services	Software Services	29.4%	23.1%	1.4%	27.1%
Electronic Arts	US	MSCI World Software & Services	Software Services	22.0%	15.8%	10.5%	10.0%
Facebook	US	MSCI World Software & Services	Software Services	35.6%	32.2%	24.1%	27.7%
Fidelity National Information Services	US	MSCI World Software & Services	Software Services	10.1%	9.6%	12.7%	22.7%
Fiserv	US	MSCI World Software & Services	Software Services	17.6%	15.9%	27.8%	31.3%
Fleetcor Technologies	US	MSCI World Software & Services	Software Services	26.9%	28.2%	25.0%	26.5%
Global Payments	US	MSCI World Software & Services	Software Services	9.5%	9.6%	0.5%	15.4%
IBM	US	MSCI World Software & Services	Software Services	12.8%	14.2%	21.9%	21.3%
Intuit	US	MSCI World Software & Services	Software Services	20.0%	18.8%	26.6%	30.4%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Mastercard	US	MSCI World Software & Services	Software Services	29.3%	31.8%	31.2%	30.6%
Microsoft	US	MSCI World Software & Services	Software Services	21.0%	21.3%	32.0%	28.2%
Nintendo	Japan	MSCI World Software & Services	Software Services	12.9%	7.0%	24.1%	35.1%
Oracle	US	MSCI World Software & Services	Software Services	19.2%	23.6%	38.5%	29.4%
Paychex	US	MSCI World Software & Services	Software Services	26.4%	25.7%	32.1%	34.2%
Paypal	US	MSCI World Software & Services	Software Services	13.3%	12.3%	16.8%	23.1%
Red Hat	US	MSCI World Software & Services	Software Services	9.6%	10.1%	33.5%	31.2%
SAP	Germany	MSCI World Software & Services	Software Services	16.2%	17.3%	22.6%	23.8%
Symantec	US	MSCI World Software & Services	Software Services	28.3%	22.0%	87.7%	42.4%
Synopsys	US	MSCI World Software & Services	Software Services	8.5%	10.0%	36.7%	24.4%
Total System Services	US	MSCI World Software & Services	Software Services	10.7%	11.4%	24.1%	27.5%
Visa	US	MSCI World Software & Services	Software Services	35.4%	36.5%	29.3%	29.7%
Worldpay	US	MSCI World Software & Services	Software Services	4.6%	4.7%	56.1%	47.7%

Company	Head-quarter	Index	Sector	PM 3Y	PM 6Y	ECTR 3Y	ECTR 6Y
Amazon	US	Large US-based Digital Companies		1.4%	0.9%	33.9%	38.2%
Expedia	US	Large US-based Digital Companies		5.6%	5.8%	16.3%	17.8%
Alphabet	US	Large US-based Digital Companies		20.0%	21.7%	31.7%	26.8%
Facebook	US	Large US-based Digital Companies		35.6%	32.2%	24.1%	27.7%
Netflix	US	Large US-based Digital Companies		3.2%	3.1%	2.1%	12.0%
Microsoft	US	Large US-based Digital Companies		21.0%	21.3%	32.0%	28.2%
RELX	US	Large US-based Digital Companies		19.1%	18.2%	15.2%	14.1%
Apple	US	Large US-based Digital Companies		21.6%	21.8%	22.6%	24.3%



ECIPE

EUROPEAN CENTRE
FOR INTERNATIONAL
POLITICAL ECONOMY