

Allocation of taxing rights in international corporate income taxation

Comparing the current system, residual profit
allocation, and OECD Pillar One

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Tiivistelmä - Referat - Abstract <p>This thesis investigates the tax base and allocation choices in international corporate income tax architecture and provides an evaluation of the effects of the choices made in three different systems: the current system, residual profit allocation, and OECD Pillar One.</p> <p>International corporate income tax design has a significant effect on the functioning of the international economy and on the welfare of individuals. Thus, making the correct design choices is extremely important. This thesis argues that the international corporate income tax system should be designed following certain important principles of taxation: 1) fairness, 2) economic efficiency, 3) robustness to avoidance, 4) administrative ease, and 5) incentive compatibility. The different systems are then introduced in turn and evaluated against these criteria.</p> <p>The thesis finds that the current system suffers from certain conceptual weaknesses that leave significant room for improvement with regards to the set criteria. It is further argued that a reform is required for the continued functioning of the international system. Such a reform could be introduced in the form of residual profit allocation. OECD Pillar One proposal involves elements of residual profit allocation, but in comparing the different systems with each other, this thesis argues that the OECD proposal is too narrow in scope to gain the full benefits of a residual profit allocation system.</p>			
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Tiivistelmä - Referat - Abstract <p>Tutkielma käsittelee veropohjan ja kansainvälisen verotusoikeuden jakoon liittyviä kysymyksiä ja arvioi toisiaan vasten kolmea eri verojärjestelmää ja niiden vaikutuksia. Nämä kolme verojärjestelmää ovat: nykyjärjestelmä, jäännösvoiton jakoon perustuva järjestelmä (<i>residual profit allocation</i>), ja OECD:n Pilari I.</p> <p>Kansainvälisen yritysverotuksen toteutuksella on merkittävä vaikutus kansainvälisen talouden toimintaan ja tämän kautta yksilöiden hyvinvointiin. Järjestelmän toimivuuden varmistaminen on täten ensiarvoisen tärkeää. Tutkielmassa esitetään, että kansainvälinen yritysverojärjestelmä tulisi suunnitella perustuen tiettyihin hyvän verotuksen periaatteisiin, jotka ovat: 1) reiluus ja tasapuolisuus, 2) taloudellinen tehokkuus, 3) välttelyn vaikeus, 4) hallinnon helppous, ja 5) kannustimien yhteensopivuus. Mainittuja kolmea verojärjestelmää arvioidaan suhteessa näihin kriteereihin.</p> <p>Tutkielmassa havaitaan, että nykyjärjestelmä kärsii konseptuaalisista heikkouksista, jotka altistavat sen monille ongelmille suhteessa asetettuihin kriteereihin. Tämän perusteella argumentoidaan, että järjestelmän uudistaminen on välttämätöntä sen toiminnan varmistamiseksi myös tulevaisuudessa. Yksi mahdollinen uudistus on tutkielmassa esitettävä jäännösvoiton jakoon perustuva järjestelmä. OECD:n Pilari I -ehdotus sisältää elementtejä jäännösvoiton jaosta, mutta tutkielmassa osoitetaan, että OECD:n esitys ei ole tarpeeksi laaja saavuttaakseen samoja hyötyjä kuin laajempi jäännösvoiton jakoon perustuva järjestelmä.</p>			
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1 Introduction

There is something amiss with the international corporate tax system. Periodically, media brings up curious headlines and stories regarding taxation: leprechaun economics in 2015, Panama papers in 2016, and praise on Supercell for paying their fair share of taxes in Finland in 2017.¹ All of these tell a similar story: corporations are not paying their taxes, and when they do, it is surprising. Public discourse often frames this as lack of social responsibility of corporations, or even as a lapse of personal morality on the part of corporate administration. However, a robust judicial system should not rest on the goodwill of people. Following economic principles, we should assume that agents will maximize their utility within the boundaries of the system. If avoidance is allowed, it is indeed surprising that corporations are paying their taxes. This brings us to a central question in the minds of many economists today: why are we operating a system that allows avoidance, and what could be done to fix it?

The international corporate income tax (CIT) system's most important function is to allocate taxing rights among countries. In essence, the system should provide an answer as to *where* and *how much* taxes should be paid, without allowing the same income to be taxed twice. There are several ways to design such a system, and the choices have a great impact on the functioning of the economy as a whole. This thesis shows that certain choices are superior to others. More specifically, the goal of this thesis is threefold: 1) to provide a principled view on how international CIT architecture should be designed, 2) to present the central design choices characterizing the allocation scheme in three different systems: the current system, residual profit allocation, and OECD Pillar One, and 3) to compare the three systems in light of the principles of a good CIT system. The thesis will proceed as a high-level literature review. The presented interpretation of Pillar One in the

¹ Recently, international corporate taxation has again received remarkable attention due to G7 countries agreeing to implement a global minimum tax. The subject matter of this thesis was written before the agreement, so it will not be explicitly mentioned beyond this footnote; however, the content of the agreement ties relevantly to the topics of this thesis. In essence, the agreement is only a signal that G7 countries are willing to implement both pillars of the OECD Action 1 in some form. This thesis' discussion on these topics is thus directly applicable to the content of the G7 agreement.

residual profit allocation framework and its evaluation under the set criteria present my own contribution to the literature. The structure of the thesis is as follows.

The introduction establishes principles of taxation, which are then formulated to better suit evaluation of international CIT. Also, the OECD/G20 BEPS project² is superficially introduced for ease of reference in the upcoming section.

The second chapter introduces the basis and justification for corporate income taxation. This, together with the principles of taxation, forms the framework in which the rest of the thesis takes place. Next, the current system and its central mechanisms and principles are introduced. In addition, the second chapter provides an overview of the main channels of *base erosion and profit shifting* (BEPS) and attempts to locate the main conceptual factors responsible for facilitating the use of these channels in the current system. The findings are then used to give a critical evaluation of the current system based on the principles established earlier.

The third chapter builds upon the results of the second chapter and investigates alternatives for the problematic aspects of the current system. The third chapter argues that a switch from an origin-based system in favor of a destination-based system would solve many of the issues recognized in the second chapter. After this, focus is centered on introducing one reform option employing destination basis, namely *residual profit allocation* (RPA). RPA is then again subjected to a similar evaluation as in the second chapter, with an attempt to highlight the benefits of such a reform as opposed to the current system.

The fourth chapter introduces Pillar One, which is a concrete reform proposal utilizing elements of residual profit allocation. In addition to an introduction to the proposal, this chapter presents the main differences between a full RPA system and the Pillar One style implementation. Pillar One is then evaluated against the established principles, with a focus on how the specifics of Pillar One affect the results achieved in the third chapter. Accordingly, it will also be evaluated if and how Pillar One succeeds in solving the issues recognized in chapter two. Fifth chapter concludes.

² Noted as *BEPS project* from now on.

1.1 Principles of taxation

This is neither a work of political economy nor practical philosophy, so a few things we have to take as given: there has to be some amount of public spending, and there has to be some amount of redistribution of income. Even without further specifying this welfarist agenda, we can mostly agree that these are necessary for the functioning and welfare of any society. And where there is public spending, there must also be taxes.

From a welfare perspective, taxes are a necessary evil because they are not free. Raising and redistributing taxes has a major impact on incentives of economic agents, possibly causing inefficiencies and welfare loss. The grounding idea is that markets, free of taxation, are efficient. For a topical example, in an efficient market, multinational corporations³ will locate their manufacturing activities in places where products of highest possible quality are least costly to make. If we introduce taxes to this system, multinationals will also take the taxes into account, and possibly reorganize to minimize their tax burden. If a certain location would have been chosen in absence of taxes, any tax-induced deviation will reduce welfare either in the form of a more costly or a lesser-quality product. This welfare loss is known as the *excess burden* of the tax. All taxes are subject to these considerations, and in general, we want to make the tax system as efficient as possible – or, in other words, minimize the excess burden. Tax design is then always a balancing act. Each tax system is built to reach certain goals, having usually to do with collecting a certain amount of revenue from certain people. These goals have to then be balanced against the negative externalities to decide where to draw the line in the trade-off between redistribution and efficiency. (Mirrlees et al., 2011, p. 45.) The goals, and the subsequent drawing of the line, are entirely dependent on our economic, moral, or distributive valuations, which are only partially objective, at best. There is no single answer to the question of optimal tax policy.

Despite certain inherent subjectivity, systems of taxation can be evaluated based on how well they succeed in maximizing positives and minimizing negatives. Perhaps the most well-known criteria for a good tax system are presented by Adam Smith in *The Wealth of*

³ Noted as *multinationals* from now on.

*Nations*⁴, and they still form the basis for the more modern interpretations, such as the one utilized by OECD (see OECD, 2015, pp. 20–21). It is good to keep in mind that overarching principles are concerned with the tax system as a whole – for example, single taxes can go against progressivity⁵, if the larger tax system is still sufficiently progressive. With this in mind, this thesis will utilize five criteria as formulated by Devereux et al. (2021, pp. 33–56) to reflect relevant aspects of international CIT and to evaluate its success. These criteria are: 1) fairness, 2) efficiency, 3) robustness to avoidance, 4) administrative ease, and 5) incentive compatibility. I will next briefly present why these criteria are held as particularly important.

Fairness is a surprisingly difficult criterion despite being intuitively straightforward. It is not controversial to believe that a good tax system is also fair, yet in the context of CIT, it is hard to evaluate whether a system *is* fair. This is due to three conflicting notions on whose fair treatment we are interested in: the system should be fair between countries, between corporations, and between people. Moreover, fairness usually implies some sort of progressivity. As we will see, CIT is very hard to design in a way that accomplishes all of these goals, not least because we are still unsure as to who in reality bears the burden of corporate taxes – does the incidence fall on the owners, or is it passed onto employees or customers through lower wages and higher prices? This has proven to be an elusive question (see Auerbach, 2006), possibly also subject to heterogeneity with regards to firm composition and regional labor market specifications (see Fuest et al., 2018). Thus, CIT is not the best tool to ensure a fair tax system, in the sense that it cannot be accurately targeted. Still, fairness remains an important criterion to measure whether the system in

⁴ Adam Smith's (1776/2007, pp. 639–641) four maxims of taxation are (as presented in Mirrlees et al., 2011, p. 36):

- (i) The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities ...
- (ii) The tax which the individual is bound to pay ought to be certain and not arbitrary ...
- (iii) Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it.
- (iv) Every tax ought to be so contrived as to take out of the pockets as little as possible, over and above that which it brings into the public treasury of the state.

⁵ A tax is progressive if the average tax rate rises as the tax base increases (Mirrlees et al., 2011, p. 24).

question invites unnecessary unfairness – albeit the judgement is always somewhat subjective, a less unfair system is, *ceteris paribus*, always the better choice.

The other criteria are more economically understandable. Efficiency is used to evaluate the magnitude of the excess burden of the tax. CIT distorts firm choices on multiple dimensions, which we will discuss in more detail later. We want to effectively minimize these distortions in an effort to make our system as efficient as possible. Moving on, robustness to avoidance and ease of administration are somewhat self-explanatory: we want our system to not allow artificial reductions to tax liabilities, and we want the system to be as cheap, easy to follow, and simple to maintain as possible. Unlike the others, incentive compatibility is not a traditional criterion, but it captures something central about international CIT: we want the international system to also encourage cooperation and stability. If the system is incentive incompatible, countries can benefit from unilateral actions, for example, by lowering their CIT rate to attract economic activity and more tax revenues. Incompatible incentives cause a downward spiral – in this context known as the *race to the bottom* – where countries will theoretically compete over tax rates until they reach zero. Such a system is not stable, and we would instead prefer one which removes incentives for aggressive competition.

It bears to point out that these criteria are not self-contained: for example, if a system is not robust to avoidance, it will cause efficiency and fairness issues. Instead, the criteria should be understood only as highlighting different interrelated aspects of a tax system. With these principles in place, let us move on to discuss the BEPS project.

1.2 OECD/G20 BEPS Project

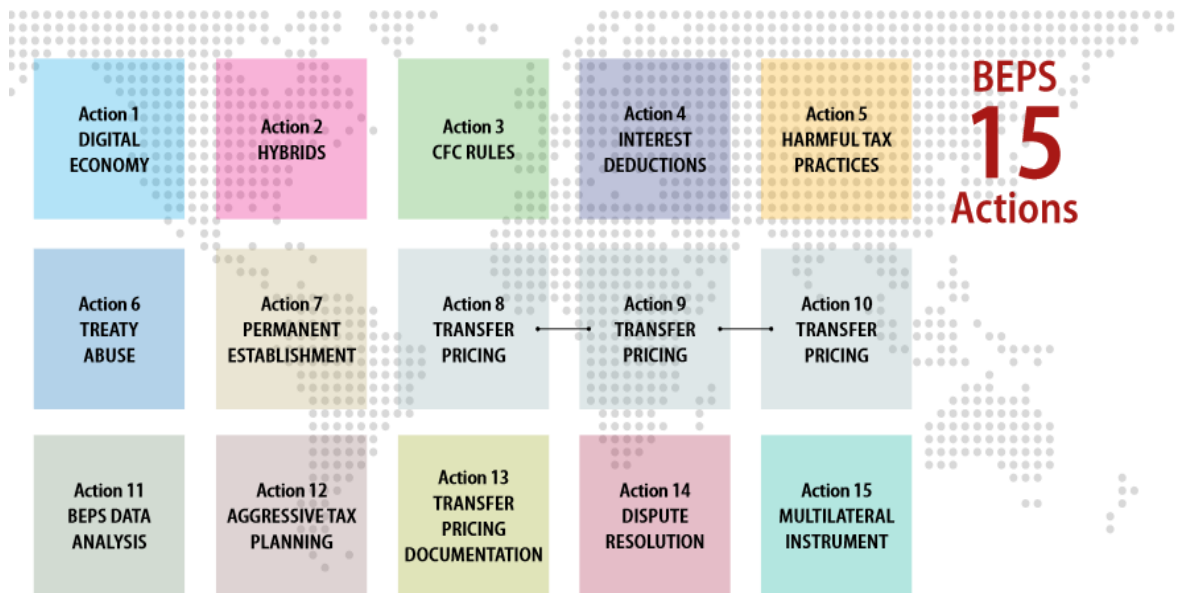
The international CIT system is a complex combination of transfer price rules, anti-avoidance regulation, and bilateral tax treaties. This system with all its complexity is both theoretically susceptible and empirically proven to lead to tax avoidance activities collectively known as *base erosion and profit shifting* (BEPS). BEPS is a blanket term to describe legal activities that move a multinationals profits from one jurisdiction to other for tax purposes. The central feature of BEPS is that the movement of profit is generally not associated with simultaneous movement of real economic activity. Accordingly, the OECD (2013, p. 10) determines BEPS as practices that “artificially segregate taxable

income from the activities that generate it.” OECD has further estimated that BEPS is responsible for tax revenue losses of between \$100-\$240 billion annually, corresponding to 4%-10% of global CIT revenues. Additionally, BEPS destabilizes the international tax system and causes significant tax uncertainty for governments.

With the outlined principles of taxation, we can already build a preliminary picture on why BEPS is harmful. Intuitively, it is unfair that multinationals are able to locate profits in a way provides them with tax benefits, both because they are “not paying their fair share” and because domestic companies do not have the same option. From an efficiency perspective, BEPS is more of a symptom: there are costs to shifting profits, and it would be better if our system did not incentivize BEPS or relocation of real activity to low-tax locations. This ties together with the insufficient robustness to avoidance, which allows the use of BEPS measures for multinationals. In order to combat profit shifting, countries utilize a massive regulatory structure, which has become increasingly complex and expensive to maintain. This injures tax certainty for both countries and multinationals because evaluating any exact tax burden is extremely difficult – tax revenues and liabilities can appear and disappear in arbitrary looking ways. In addition, because profits and activity tend to shift to low-tax locations, countries are incentivized to lower their tax rates to capture a larger portion of the international tax revenues.

Strong emotions are at play with issues of taxation, and unfairness especially strikes a particular chord with the general population. This became increasingly relevant after the 2008 financial crisis, which brought to limelight the questionable practices of financial institutions and also paved the way for discussion on the tax treatment of multinationals. Prompted by this shift in general focus, the BEPS project began in earnest in 2013 and produced a final report in 2015, which proposed 15 actions to combat harmful tax practices. By 2021, over 135 jurisdictions have committed to the BEPS project, including all the OECD member states. This group of countries forms the Inclusive Framework, which works to achieve extensive implementation of the BEPS project measures while giving all the members an opportunity to influence the design. Many of the BEPS issues are not solvable through unilateral action, which is why international coordination is at the heart of the BEPS project. Next, a brief summary of the different actions will be

provided for future reference and as an introduction to the breadth of the issue – and also as an early example of the ingenuity of multinationals in avoiding taxation.



Source: OECD, n.d.

The 15 BEPS Actions

Action 1 is divided into two pillars, reflecting two major issues caused by digitalization: first, companies are able to generate massive profits in certain jurisdictions without having any physical presence there, and second, digitalization has made tax bases more mobile than ever. Under the current system, market jurisdictions are not entitled to tax revenues if the multinational has no concrete physical presence in said jurisdiction. Pillar One will be covered extensively in the fourth chapter, but its main idea is that market countries should have some taxing rights to corporate profits, and it aims to provide the framework to achieve this allocation. Pillar Two on the other hand aims to solve the problem of mobile tax bases by enforcing a minimum international level of taxation on multinationals. This is meant to counteract multinationals shifting their profits to locations with no effective taxation, as they will still be liable for the set minimum rate of taxes for their worldwide profits in the residence country. Pillar Two will be briefly covered in 3.1.2.

Action 2 concerns hybrid mismatch agreements. A hybrid mismatch happens when an entity or instrument is treated differently in two jurisdictions, leading to double non-

taxation. This is possible, for example, through complex financial instruments whose payments are legally understood as deductible interest in one country and exemptible dividends in other. Action 3 establishes coordinated rules to regulate shifting profits to a controlled foreign company (CFC), such as a full subsidiary of a multinational. Action 4 is aimed at updating interest deduction rules to disincentivize strategic use of debt finance. Action 5 constitutes a peer review of national tax regimes to determine if they could be harmful to the tax base of other jurisdictions – harmful practices include, for example, patent box regimes, which are discussed in 2.7.5.

Action 6 addresses treaty shopping, by which a multinational tries to benefit from a tax treaty between two nations, even if it does not actually reside in either one. This is accomplished, for example, by channeling revenues through shell companies in desirable locations. Action 7 deals with issues of the *permanent establishment* (PE) principle. For a multinational to be liable for taxes in some jurisdiction, the current CIT system requires it to have a PE in said jurisdiction. Traditionally, a PE is formed based on physical presence: a production facility, sales office, or any other significant base of business forms a PE. Importantly, simply selling goods or services in a country currently does *not* create a PE – something Action 1 aims to change. In a digital economy, there are evidently a lot of workarounds to avoid a formation of a PE, and consequently, to avoid taxation. Actions 8-10 address the existing transfer pricing rules, i.e. rules that govern the prices multinationals have to use when trading within the group. For reasons to be discussed below, the current CIT requires intracompany transfers to be priced as if the two companies were independent. This is known as the *arm's length principle* (ALP), as it requires the companies to be at an “arm’s length from each other”. Actions 8-10 offer guidance on how to apply ALP in several hard-to-value transactions: Action 8 concerns intangible assets, Action 9 risks and capital, and Action 10 high-risk transactions.

Actions 11-15 provide institutional and informational tools for governments to combat BEPS. They have less to do with economic principles, and more with legal and

bureaucratic application of the earlier actions, as well as establishing a system of international coordination. They will not be covered in this thesis.

The different actions presented here will be referred to as they become topical at different points in this thesis. Let us next turn our attention to the current CIT system.

2 Current corporate income tax system

There are two main questions an international CIT system has to answer: how to define the base of the tax, and how to decide the location of the tax. Before we move to study the solutions the current system offers, it is in order to clarify what the *current system* means. The BEPS project has been active for over seven years as of the writing of this thesis, and during this time, over 135 jurisdictions have signed the Inclusive Framework and pledged to impose the four minimum standards of the BEPS project: Actions 5, 6, 13 and 14 (OECD, 2020a). Implementation of the other actions are also under way. Furthermore, we have also seen the launch of the European Commission's 2016 project on Common Consolidated Corporate Tax Base (CCCTB)⁶, and the 2017 Tax Cuts and Jobs Act (TCJA) and the included global intangible low-taxed income (GILTI) rules in USA. There are several global developments around CIT, and many countries are expectedly at different stages of implementation.

Recognizing this heterogeneity of corporate tax systems, *current system* will be used as a shorthand for a system that employs a few key elements to be studied in this chapter, namely: 1) allocation of taxing rights using a source-residency division, 2) categorization of income to either active or passive, and 3) separate accounting, or determining the taxable profits individually for a multinational's subsidiaries. These form the conceptual basis of the pre-reform international CIT system – i.e. *the current system* – and most of the reform proposals are an attempt to patch the weaknesses that follow from these key elements.

⁶ In addition to the G7 agreement, another recent turn of events at the end of May 2021 saw the European Commission withdraw the CCCTB proposal in favor of a new BEFIT proposal. This is due to CCCTB being seen as outdated in light of the new international framework being created by OECD. BEFIT is intended to be better aligned with the OECD proposals. Despite its withdrawal, CCCTB will be briefly referred to at certain points of this thesis – I have decided to leave the discussion as is, because the points are relatively minor and only reflect policy challenges and intuitions behind the project.

Before we move to discuss how corporations are taxed, it is in order to briefly discuss why they are taxed.

2.1 Why do we tax corporations?

The question “why do we tax *corporations*” has a surprisingly non-trivial answer. After all, corporations are simply a convenient way for groups of individuals to own assets with limited liability through a separate legal entity (Mirrlees et al., 2011, p. 408). In this sense, corporate taxes are interesting, as they do not relate to the type of good produced, but rather to the legal form of organization (Slemrod, 2004, p. 1170). From the prevalence of BEPS we know that corporate taxes introduce undesirable externalities to the international corporate and financial structure, and we also know that CIT produces a fairly small portion of total tax revenues.⁷ Assuming that policymakers have access to a catalogue of different enforceable taxes⁸, would it not be easier to do away with CIT and collect the revenue through less difficult means?

There are a few rationales usually presented for taxing the corporation. An informal, yet very common “folk theorem” claims that the marginal cost associated with any tax rises as the importance of said tax increases in the total tax system (Slemrod, 2004, pp. 1170–1171). The associated imperative is to “tax as many things as possible, to tax as little as possible.” Accordingly, it can be argued that corporations should be taxed only to broaden the tax base, so that the revenues do not need to be collected elsewhere. However, this view might downplay the possible negative implications of CIT – there are well known theoretical results showing that small open economies should not impose corporate income taxes (see Gordon & MacKie-Mason, 1995). Still, there are counterarguments to both the folk theorem and the small open economy result. First, many small open economies do in fact maintain corporate taxes, and firms do not react to this as radically as theory suggests. Second, countries’ CIT rates seem to be fairly insulated from their

⁷ CIT forms, on average, 10% of tax revenues in OECD countries (OECD, 2020b).

⁸ Here we will not consider the situation where different sources of tax revenues do not exist. For example, lower income countries might face difficulties in collecting enough tax revenue due to lack of information or resources in the tax authority. For these countries, a well-documented and established corporation might prove an irreplaceable source of tax revenue. (Devereux et al., 2021, pp. 76–77.) This emphasis on CIT in countries with lower overall tax revenues is empirically observable: countries collecting a smaller portion of GDP in taxes tend to report larger portions of tax revenue due to CIT (see OECD, 2020b, p. 3).

revenue needs – from this, Slemrod (2004, p. 1171) draws the conclusion that CIT rates are determined by something other than revenue needs. In other words, they are not imposed just to “tax as many things as possible.” The beneficiality of CIT is not a given, and if not just for revenue, what do we collect CIT for?

The second well known justification lies in what is called the *benefit principle*. The idea is that governments provide corporations with many cost-reducing benefits, and taxes are a charge levied on these (Slemrod, 2004, p. 1172). The received benefits come, for example, in the form of infrastructure, law enforcement, and educated workforce. The company makes use of these goods and services, and it is only fair that they contribute to the cost. But who is the one actually paying the cost? When a corporation faces taxation, it is not the corporation per se, who bears the effective burden – a corporation making less money translates directly to a corporation paying less dividends, paying lower wages, and charging higher prices. Intuitively, the benefit principle seems applicable if the owners are the ones bearing the tax burden; much less so if the costs are switched onto the workers or consumers. There are also other reasons to be suspicious of the benefit principle. Different businesses utilize the offered benefits in varying ways and magnitudes, and if we view the tax as a charge for these benefits, it makes little sense for a home-office consulting IT company and a multinational car manufacturer to face proportionately equivalent fees. The benefit principle also does not apply well to taxation of intangibles, or any other taxable activity that is divorced from its physical location. (Devereux et al., 2021, pp. 68–70.) It is very unlikely that CIT is the best way to impose the benefit principle. If this nevertheless is something we want to accomplish, a more targeted fee, which takes into account the specific usage of public goods, seems like a much more appropriate policy choice.

Corporate taxes are imposed on a legal form of organization, but the incidence always falls on the associated individuals. From this viewpoint, corporate taxation is not its own separate category of taxation, but it rather plays an important supporting role in the whole system of income taxation. In a sense, corporations are holding unconsumed savings of their owners, making corporate holdings simply another type of saving. Technically, we could just allocate a portion of the corporation’s profit to each associated individual and tax this profit through regular income tax. Why do we then need a separate system for

taxing the corporation? There are two main reasons. First, taxing a corporation is administratively much easier than allocating profits to, for example, thousands of shareholders individually. The second reason – a major rationale for taxing business profits – is that CIT is a *backstop* in the implementation of personal income taxes. (Mirrlees et al., 2011, pp. 408–410.)

If business profit was not taxed, owners could reclassify labor income as business income or retain their profits in the company to avoid taxes entirely. Having made the case that business holding is just a type of saving, allowing this would create a significant distortion in favor of business ownership. Mirrlees et al. (2011) argue that there is no reason for different types of saving to be taxed in different ways, so assuming for a well-coordinated system of taxation (and assuming that capital income taxes are both desirable and already implemented) there is a good case for CIT as a backstop tax in a closed-economy situation (see also Devereux et al., 2021, pp. 59–65).⁹ The same is however not necessarily true for the open-economy case. This is made clear by how withholding taxes¹⁰ work: if an investment is made from country A to country B, the company in country B will pay the withholding taxes only once the investment is repatriated to country A. This is due to the administrative impossibility of following all (distributed *and* undistributed) profit earned by foreign companies with domestic shareholders. (Devereux et al., 2021, pp. 65–68.) With extensive international portfolio investment CIT cannot provide a plausible backstop: shareholders can avoid taxes indefinitely by not repatriating the profits.

Still, due to home bias, outbound investment is a relatively small problem, and there exists evidence that national statutory CIT rates reflect the top individual tax rates (see Clausing, 2007; Gordon & MacKie-Mason, 1995). This suggests that CIT plays a role as a domestic

⁹ These are surprisingly strong assumptions: taxation systems are generally *not* well-coordinated between different types of saving (see Mirrlees et al., 2011, Chapters 13–14), and the theoretically optimal capital income tax rate might be zero in the long-run (see Straub & Werning, 2020, for discussion and counterarguments on the classic Chamley-Judd results showing zero optimal capital income taxation).

¹⁰ Withholding taxes are imposed on certain type of income (such as dividends and royalties) *paid abroad*. The intuition is that the value is created in the jurisdiction where the company resides, so said jurisdiction also has taxing rights on this profit; for convenience, the profits are taxed when they leave the country.

The same profit is also liable for personal income taxes on the part of the recipient. Relief for double taxation is provided usually by the recipient country, through methods to be discussed in 2.5. Accordingly, domestic dividends and royalties are exempt from withholding taxes, as they are taxed through personal income taxes.

backstop tax, and that this role is relatively important. However, the international setting does not raise confidence: it feels as if CIT works as a domestic band-aid for as long as international investment stays at a lower overall level. CIT does not remove the issue, and foreign investment is unlikely to decrease in future. In light of the other negatives we will discuss below, the backstop function might not be enough to justify the current CIT, as it performs the task well more by chance than by design. There is of course also the question: is it performing well? To function as a backstop, the CIT rate has to be comparable with the highest personal tax rates. However, as we will discuss in 2.7.5, the global CIT rates have been going down since 1980s, which has driven a larger wedge between the two rates. Should this evolution continue, the functioning of CIT as a backstop might weaken even further over time (Kari, 2015, p. 11).

Let's sum up with the original question: why do we tax corporations? The above discussion leads us to two plausible answers: for revenue, and as a backstop for personal income taxes. Insofar as we have access to a modern tax authority and the associated toolkit, these offer quite a weak basis for a system with as many distortionary properties as the current CIT. A tax system collecting the same revenue through different means might be a better tax system overall – put simply: a tax system aimed at collecting revenue might not want to impose CIT in its current form. Same goes for the backstop function, even if it is currently important: if we want a tax system that has a backstop for personal income, the current CIT is most likely not the best way to accomplish this goal. If the current CIT is the best we have, maybe we should not tax corporations.

There is one further rationale proposed by Devereux et al. (2021, pp. 70–76): taxing businesses is justified if it is done through a system which meets the criteria introduced earlier. If we had a system that was fair and efficient and could also play the role of backstop, using it would definitely contribute towards a good and principled overall tax system. To analyze the possibility of a system like this, let's now turn the attention to the current CIT. There is surely a potentially useful role for CIT in the tax system of a developed economy, but it bears to repeat once more: taxes should not be imposed just for taxation's sake, and if we cannot correct the problems to be discussed, it might be better just to remove corporate taxes altogether.

2.2 The standard corporate income tax base

We now move on to the first important question a CIT system has to answer: how to determine the base of the tax. The standard CIT is a tax on profit, but what does this mean? The net profit of a company is usually calculated with the profit and loss method¹¹, and the tax base in almost all OECD countries corresponds to this measure of profits and deductible expenses (Mirrlees et al., 2011, p. 412). Economically speaking, company profit can be seen as consisting of two parts: *normal return* and *economic rent*. Normal return is synonymous to the opportunity cost of an investment, or cost of capital. It indicates the minimum rate of return required for an investment to be undertaken: if the expected earnings for an investment are below the normal return, the investor would do better by investing his money elsewhere to gain the world risk-free interest rate. An investment that earns exactly the normal return is referred to as a marginal investment. Profits earned above the normal return, or “supernormal profits”, are called economic rent. To gain economic rent, a company must have market power or assets not easily replicated by competitors. Under perfect competition, economic rents do not exist as firms can only acquire the normal return. (Devereux et al., 2021, p. 24.)

Defining the tax base to consist of profit has some implications due to accounting standards.¹² First, investment is simply a transaction of one type of asset for another, so it is not a deductible expense. Second, although repaying or issuing debt is also merely a change in the asset composition, the possible interest payments *are not* – interest is seen as having an effect on profit, which is why interest expenses are deductible. (de Mooij & Klemm, 2021, pp. 15–16.) Thus, following the earlier definitions, we can say the standard corporate tax base is composed of normal return on equity investment, and economic rent. (Devereux et al., 2021, p. 24.) At zero inflation, and for an asset which depreciates at the

¹¹ Net profit is equal to the difference of recognized income and deductible expenses during the tax period (OECD, 2015, p. 22).

¹² The treatment of loss across the different systems will mostly be consciously omitted in the discussion. For this thesis, it suffices to say that each CIT system has to account for losses in some way, and this is usually accomplished through a carry-forward method, whereby past losses are deductible against future profits.

speed of the determined depreciation schedule¹³, the standard tax base does not distort debt-financed investment decisions: if an investment is made with borrowed money at real interest rate of 3%, the investment only needs to generate the required 3% return to break even (Mirrlees et al., 2011, p. 412).

This however invites some unfortunate consequences for the system as a whole, as the opportunity cost associated with equity finance is not deductible. Mirrlees et al. (2011, pp. 413–416) provide an illuminating example. Imagine a firm that wishes to invest €1000 in year 1 to acquire assets that generate an income of €30 in year 2. These assets suffer no depreciation. Suppose also that the world risk-free interest rate, i.e. the normal return, is 3%. Now, if the firm borrows the €1000 required at 3% interest, it is indifferent as to whether it should undertake the project: the profits in year 2 cover the interest payments, and selling the asset afterwards covers the sum borrowed. The standard tax base does not distort the situation. Even if the profits in year 2 are taxable, the interest paid is deductible, making the tax base exactly zero: for debt financed investment, the firm is liable to pay taxes only for economic rent. The same does not hold for equity financed investments. If the company buys the assets with its own funds, there is nothing to be deducted, and the 30€ profit generated will be taxed as usual – using a 20% CIT rate leaves the company with assets worth 1024€ at the end of year 2. This is less than what the shareholders could have earned if they didn't undertake the project and had instead invested in assets outside the corporate sector to receive the 3% normal return.

The current tax base incentivizes use of debt over equity. In addition to the BEPS issues to be discussed in 2.6.3, this results in more fragile balance sheets for companies, which undoubtedly is not a desirable property for a CIT system. To solve the issue, economists have proposed alternative tax bases, which I will briefly present before we move on with the current system.

¹³ Depreciation schedules are determined for assets which depreciate in value, because this represents a cost to a company, and affects profits. For example, agricultural machinery could be deductible for 25% of their tax carrying value annually.

2.2.1 Alternative tax bases

An obvious solution to remove the debt bias is to simply abolish interest deductibility. This proposal is known as the *comprehensive business income tax* (CBIT), and it equalizes the treatment between debt and equity by also taxing normal returns of debt financed investment. However, CBIT would result in a further distortion, as now the firm from the earlier example would also refrain from the investment with debt finance. This is a necessary result of taxing normal returns: cost of investment will rise. Furthermore, taxing normal returns might affect prices and wages, as it drives a wedge between pre- and post-tax profits – under CBIT, companies will maximize their post-tax profits, possibly passing the costs on to customers or workers. (de Mooij & Devereux, 2009, p. 18; de Mooij & Klemm, 2021, pp. 16–17.) From the viewpoint of optimal taxation, exempting normal returns and taxing only economic rents might thus be the more attractive option. This is the route taken by a proposal known as *allowance for corporate equity* (ACE). ACE would provide a tax relief for the opportunity cost of equity, the size of which is calculated by multiplying the company's equity by a specified ACE-interest rate (Mirrlees et al., 2011, p. 421). If the ACE-rate is set correctly – that is, at the correct level of world risk-free nominal interest rate – marginal investment will not be distorted, and debt bias will be removed. Under ACE, normal returns will be entirely deductible, and the tax will fall only on economic rent. Consequently, the tax will only affect the level of profits above normal return, which means that the prices and wages that maximize the pre-tax profits will also maximize the post-tax profits.

Taxing economic rents is theoretically the better option. Though, in reality, both ACE and CBIT have to be evaluated as a part of a larger tax system, subject to several international and domestic concerns. For example, ACE will narrow the tax base – if we have certain inflexible revenue goals, imposing higher CIT rates alongside ACE might be necessary. The higher rates might, however, have a negative impact going beyond the benefits of ACE. CBIT on the other hand has the opposite effect, which is why many countries might find it the better option. Both reforms are also subject to international BEPS considerations (see de Mooij & Devereux, 2009).

In addition to ACE and CBIT, the third extensively studied option is *cash-flow taxation* (CFT), which also targets only economic rents. CFT and its associated full-scale reform project, destination-based cash-flow taxation (DBCFT) will not be covered in this thesis. Let us instead now continue with the presentation of the current system.

2.3 Allocation of taxing rights

A state's right to tax is derivable from its legal sovereignty, which comes in two forms: power over a territory and power over subjects (OECD, 2015, pp. 22–23). From the perspective of taxation, this implies a legal right for a state to tax both the profits generated within its territory and profit accumulated by citizens under its jurisdiction. Following this idea, it is easy to see how a multinational and its associates can fall under the jurisdiction of multiple governments at once, and as such, be liable to pay taxes to two countries for the same profit. Each country has an incentive to tax as much of the profit as possible, but if every country imposes taxes on the worldwide profits of the multinational without considering the taxes imposed by other countries, international trade would be severely crippled and corporations would be unreasonably penalized for their organizational structure. This is why the second question a CIT system has to answer is particularly important – where should taxes be paid?

When double taxation first came up during the 1920s, the League of Nations began work on formulating the basic principles for the allocation of taxing rights across nations. The compromise they came up with determined the greatest weight in allocation should be given primarily to the “origin of wealth” and secondarily to the “residence of the owner who consumes this wealth” (OECD, 2015, p. 25). These ideas still constitute the two premises on which the international CIT system and its allocation scheme is built on: profit should be taxed only once, and the right to impose this one tax should be given to the nation with the strongest *genuine link* to the profit in question. There are four ways through which a multinational can be linked to a country: through location of its 1) shareholders, 2) parent company, 3) subsidiaries, or 4) customers (Devereux et al., 2021, p. 90). Under existing conventions¹⁴ – following the League of Nations compromise –

¹⁴ There are surprisingly few legal limitations to countries power to tax, and countries can generally unilaterally decide if they want to provide relief from double taxation (Devereux et al., 2021, pp. 86–88;

CIT is imposed primarily in the location of subsidiaries, and secondarily in the location of parent companies. This narrows the definition of a genuine link to a PE of either a subsidiary or the headquarters. If a genuine link (a PE) is found, a corporation is said to have a *nexus* in the country, and consequently it falls under said country's tax jurisdiction (Gadžo, 2018, p. 195). The locations of subsidiaries and parent companies correspond to the central concepts of *source* and *residency*.

The terms “source” and “residency” are prone to cause confusion, as they might refer to different things in different situations. Following Devereux et al., this thesis will use the terms according to their legal meaning:

“A country taxes on a residence basis when it taxes companies that are resident in that country for tax purposes on income arising in that or in another country. A country taxes on a source basis when it taxes companies that are not resident in that country for tax purposes on income deemed to arise in that country. (Devereux et al., 2021, pp. 90–92.)”

Consider a multinational with headquarters in country H, a subsidiary sales company in country S, a subsidiary production facility in country P, and a branch of the headquarters in country B. All the subsidiaries meet the PE threshold. Under the legal reading, countries H, P, and S impose taxes on residency basis on the profit of the subsidiary located within their country. Country B, on the other hand, may tax the profits of the branch on source basis. Because the entity in B is only a branch and not an independent subsidiary, the branch is legally seen as residing in the country of the headquarters, H.¹⁵

Continuing with the example, all of the countries have a genuine link to the multinational, and they all have a right to tax its profits. To solve the issue of double taxation, we still have to determine which part of the multinational's profit is allocated to which country. There is no objective way to do this, so the international allocation is instead based around

Gadžo, 2018). However, international treaties, such as the OECD Model Tax Convention (which is the basis for most of the bilateral tax treaties in the OECD area), establish widely accepted conventional ways to allocate taxing rights internationally.

¹⁵ As a contrast to the legal reading: the typical economist interpretation is that each subsidiary is taxed on source basis, and only country H taxes on residence basis. This is because in an economic sense, the ultimate beneficiary is the parent company, i.e. headquarters, and it resides only in country H (Devereux et al., 2021, p. 91).

bilateral tax treaties and conventions – countries have simply agreed to allocate the profits in a certain way. Typically, *active income* (resulting from participation in concrete business activity, e.g. sales and production) is taxed in the source country and *passive income* (generated without direct participation of the recipient, e.g. interest and royalty revenue) is taxed in the residence country. Thus, countries P, S and H will gain taxing rights to all profits seen as arising within their jurisdiction, i.e. the passive and active income generated by the entity in their country. Country B, on the other hand, can only tax the active income of the branch, whereas the passive income of the branch will be taxed in country H.

A key distinction is that countries are entitled to tax profits seen as arising within their jurisdiction. However, this idea is much more difficult to implement than it initially seems.

2.4 Separate accounting, anti-avoidance, and arm's length principle

Let us still continue with the previous example. Suppose that there is extensive intra-company trade between the sales company in S and production facility in P. Furthermore, the two countries enforce different rates of CIT: 20% and 30%, respectively. The multinational is aware of this, so it decides to lower the transfer price used when the production company sells the final goods to the sales company, remarkably raising the profitability of the sales company and coincidentally bringing the profits of the production company to zero. The multinational has effectively received a 10% tax cut for all the profits of the production company. This is a simple example of profit shifting, made possible by *separate accounting*: each subsidiary's profit is determined separately, even though they actually function as a single entity and will thus accept transfer prices, risks, etc., that truly separate market participants would never agree to.

The OECD Model Tax Convention includes an article to combat this type of profit shifting. Known as the *arm's length principle* (ALP), it requires intracompany transfer prices to be set as if the two companies were independent – or at an arm's length from each other. (Keuschnigg & Devereux, 2013, p. 432.) In practice, this requires every intragroup transfer to be evaluated separately: would this trade have taken place at this

price if the firms were independent?¹⁶ The evaluation is made by looking at comparable transactions between truly separate entities to establish a market price usable as a proxy. Multinationals are then required to complete sales at this proxied market price, and they are not allowed full freedom in transfer pricing.

There is a caveat to this approach: it assumes that the market price is the correct price for multinationals to use in internal transactions. This might not be true. It is very likely that there are benefits that are gained by organizing production chains as a multinational enterprise instead of several separate entities. These synergy gains are completely missed by the ALP approach, even though they might meaningfully affect the economically optimal transfer prices without any malicious intent (see Kane, 2014). On a similar point, Keuschnigg and Devereux (2013) argue that capital market inefficiencies might lead to different optimal transfer prices for multinationals. There is nothing inherently wrong with multinationals sometimes gaining higher profits due to their organizational structure, but because these deviations from market prices are easily interpreted as profit shifting, multinationals are sometimes forced to suboptimal solutions by ALP.

Before we go on to discuss the BEPS issues of the system at length, I will briefly present two other central anti-avoidance rules: *thin capitalization rules* and *controlled foreign company (CFC) rules*. Starting with thin capitalization, as we saw in 2.2, the CIT base encourages use of debt finance. Multinationals are indifferent with regards to the debt-equity ratios between the different subsidiaries, so it has incentives to locate both equity and debt where it is the cheapest. This can be accomplished via inter-affiliate debt: affiliates in high-tax countries can finance their activities through debt issued by low-tax affiliates or through other similar measures. This is known as debt shifting. Thin capitalization rules are intended to combat this by introducing thresholds and tests to evaluate the artificiality of the debt-arrangements. Companies are not allowed to pool debt – i.e. thinly capitalize their operations – beyond certain limits. Thin capitalization rules are further bolstered by interest barriers, limiting the deductibility of interest costs to those arrangements which are deemed non-artificial. (Devereux et al., 2021, pp. 102–103.)

¹⁶ Some jurisdictions evaluate the dealings between the parent company and the subsidiary as a whole, and every single transaction does not need to comply with the ALP on a stand-alone basis (see Schön, 2012).

CFC rules target activities by which a multinational attempts to locate certain income streams to low-tax locations in order to defer residence country taxation. For example, passive income streams from patents and royalties are taxed at different rates in different countries. Therefore, a multinational can benefit from moving valuable intellectual property to a low-tax country. Additionally, the resulting profits can then be detained in the low-tax location, deferring the taxes in the high-tax location (which are taxed on repatriation) possibly indefinitely. The idea of CFC rules in this case is to allow the residence country to tax the accruing passive income in the low-tax country. (Devereux et al., 2021, p. 103.) In essence, CFC rules are meant to establish rules for transactions between a parent company and its foreign subsidiaries, and to give the residence country tools to tax profits it should be entitled to, despite the arrangements by which they come up.

2.5 Double taxation

There is one further point to be mentioned, having to do with the remaining overlap between taxing rights across countries. Consider again the multinational headquarters from earlier, in country H, and its relationship to its sales company in S. Furthermore, assume the sales company pays dividends to the headquarters. There are three separate points at which this profit can be taxed: first, all profit of the sales company is taxed through regular CIT in country S; second, the passive income that leaves country S is taxed by country S via withholding taxes; third, the passive income gained by the headquarters is taxed by country H via its CIT. This is an evident case of double taxation, and bilateral tax treaties are built to also account for these situations. To make the issue clearer, notice that the double taxation happens on the level of the headquarters' profit – the profit of the sales company is taxed only once.¹⁷ Most countries provide relief for this type of double taxation, the specifics of which are determined by the tax treaty between the two countries in question.

¹⁷ To be certain, the whole profit is taxed twice, but the incidence is not borne by the same entity. Double taxation is an issue when it leads to unfair and disproportional tax incidence borne by a single entity.

This same logic can be applied to the supposed double taxation in the case of business-level taxes and investor-level taxes on the same profits – the incidence is borne by the business (or the customers, employees, etc.) and the investor respectively (see Devereux et al., 2021, pp. 77–82).

Conventionally, one of two methods are used: the exemption method or the credit method. The exemption method simply exempts passive income generated by foreign subsidiaries from corporate taxation – the taxation is thus imposed purely on source basis. This is also how the issue is handled in domestic cases: dividends paid by domestic subsidiaries are exempt from taxes and taxed only on the level of the subsidiary. (Mirrlees et al., 2011, p. 443.) The credit method (used in most tax treaties) works by deducting from the residence country taxation the tax already paid abroad. If, for example, your tax liability for a certain income is €100 in the source country and €200 in your residence country, using the credit method leaves you paying €100 in taxes in the source country, and $€200 - €100 = €100$ in your residence country. If the tax rate is larger in the source than in the residence country, credit will be granted for the whole amount of tax liability in the residence country.

We now have a working view of the most important concepts employed in the current system. Let us turn our focus on BEPS.

2.6 Channels of profit shifting

There are quite a lot of transactions and allocation decisions at play in the current system. In essence, it is this need for allocation that lies at the root of the trouble. As long as there are differences in the tax codes between nations, a multinational can benefit from having more of its profit allocated to low-tax jurisdictions. To allocate profits, the system has to: correctly categorize the type of income, apply ALP to many assets it is a poor fit for (to be discussed below), evaluate the formation of a PE regionally, avoid double taxation through exemptions and credits over multiple tax jurisdictions, and restrict *artificial* activity, but not impede real activity – and recognize which is which. One interesting observation is that the system faces conceptual challenges even if the tax systems in all countries were the same, and there was no conflict of interest between nations and firms. In a digitalized environment it is often hard to locate where the value of a multinational is being generated, but it is even harder – if not impossible – to quantify *how much* value is generated regionally. The current system needs to answer this with a concrete number, which is in many cases more arbitrary than not. Arbitrariness gives room for interpretation, and interpretation invites planning.

There are three weak points in the current system: 1) different allocation of taxing rights for countries of source and residency, 2) separation between active and passive income, and 3) separate accounting via ALP. I will next present the most well-known channels of profit shifting and argue that they are facilitated by the three properties just mentioned. Utilizing the theoretical framework for profit shifting as presented by Crivelli et al. (2016) and Keen and Konrad (2013), we can state that there are only two critical questions for a multinational choosing whether to shift profits: “how big is the difference between countries’ tax rates” and “how costly is it to shift profits”. In other words: how much is there to gain, and how easy is profit shifting. This chapter is meant to offer theoretical arguments for why profit shifting is easy in the current system. It also provides a brief overview of the empirical literature, showing the prevalence of many of these channels; this is to make the argument that there is much to gain from profit shifting in the current system, as else it would not be utilized. This chapter will largely make use of the channels identified in Beer, de Mooij and Liu (2020) and of literature cited therein.

2.6.1 Transfer price misuse

The first issue is application of ALP in hard-to-price goods and services. ALP works perfectly well for tangible goods with established markets, but a big part of multinationals’ trade happens with regards to goods and concepts with no markets or established values. Consequently, ALP has been subject to countless guidelines and exceptions to bolster its applicability, making it tremendously complicated for a relatively simple principle. A good indication of this is the fact that 3 of the 15 BEPS actions have to do with application of ALP. Action 8 concerns intangible assets and intellectual property (IP); patents, for example, are subject to wildly different prices with regards to what might seem as minor innovations, which makes comparable transactions exceedingly difficult to find. As ALP cannot be used as an objective measure in these cases, there is considerable room for multinationals to choose favorable transfer prices with tax minimizing purposes. There have been many studies investigating how transfer prices used by multinationals reflect tax rate differences between nations: current evidence is provided, for example, from USA (Flaen, 2017), France (Davies et al., 2018), and the UK (Liu et al., 2020). The empirical evidence shows export prices being higher towards low-tax countries, while import prices exhibit the opposite behavior – this is a

robust observation throughout the literature, even if the magnitude is subject to quite a lot of variation.¹⁸

2.6.2 Strategic location of intellectual property

Taxation of intangible assets is difficult not only due to deficiencies of ALP, but because IP is by definition highly mobile, and its place of value creation is very hard to pinpoint. Not surprisingly, strategic location of IP is another well-documented profit shifting channel. Countries differ in their tax policies both in how they offer tax benefits for R&D activity and how they tax the eventual R&D output. Thus, multinationals can benefit by first locating their (sometimes relatively immobile) R&D activities to where they are most subsidized, and then moving this (usually very mobile) output to where it is least taxed. This movement is hard to price with ALP, and to compound the issue, the R&D output is commonly relocated before it is deemed completed, and before its value is clear in the eyes of the tax authority (Beer, de Mooij, & Liu, 2020, p. 682). Multiple studies have shown that valuable IPs are disproportionately located in low-tax countries: an increase in corporate tax rates generally reduces the likelihood of patent applications in said jurisdiction. An interesting result by Griffith, Miller and O’Connell (2014) shows that there is also considerable heterogeneity with regards to how sensitive patent holdings are to taxes across European countries: the estimated semielasticity in the most sensitive country, Luxembourg, is 3.9, while in Germany, the least sensitive country, it is 0.5. Likewise, heterogeneity is observable between different types of IP: according to Dudar and Voget (2016), trademarks, for example, are significantly more sensitive to tax rate changes than patents.

During the brief overview of the anti-avoidance rules we touched on the CFC rules, which are specifically designed to account for situations like this one. The basic idea of CFC rules is to “break” the separate accounting, and allow for foreign taxation of profits, which (on paper) arise elsewhere, but whose generated value can be seen as located in the residence country. The R&D situation is a book example of this. How, then, is profit

¹⁸ Beer, de Mooij and Liu (2020, p. 663) report semielasticities (the percentage change in transfer price in response to a 1 percentage point change in the tax rate) between 0.5 and 6 based on existing literature. This is a fairly large range, which is attributed to differences between the countries, sectors and estimation methods used in the examined studies.

shifting through this channel still possible? The simple answer might be, that it is not – or at least not in the magnitude reported previously. At this point, most of the central papers are already a few years old. By mid-2020, 49 OECD countries had already enacted CFC rules following the BEPS project Action 3, and the CCCTB project has also enforced CFC-type rules in the Euro-area. There is evidence that robust CFC rules work: they decrease the after-tax profits for multinationals, increase reported profits in high-tax jurisdictions, and cause multinationals to locate fewer subsidiaries in low-tax countries (Clifford, 2019). Therefore, we can expect these measures to produce desirable results. With this in mind, part of the ongoing problem is political rather than economical: if more countries enforced robust CFC rules, the viability of the IP channel would be severely impaired. Nevertheless, CFC rules come with limitations. With the separate accounting principle still in place, CFC rules are limited to “artificial arrangements”, which are again subject to interpretation. In any case, they specifically do not include shifting of real investment abroad, which might hinder their effectiveness in areas of mobile real activity. (Devereux et al., 2021, p. 103.)

2.6.3 Debt shifting

The third issue we faced when discussing the existing anti-avoidance regulation was debt shifting or artificial pooling of debt in high-tax countries. This is another well-established profit shifting channel with empirical evidence: a meta-analysis by de Mooij (2011) estimates that, on average, a one percentage raise in CIT rate is associated with an increase in debt-asset ratio of between 0.17 and 0.28.

With regard to these estimates we can make a similar conclusion as with the previous IP channel – debt shifting might not be as prevalent anymore, due to increased enforcement of thin capitalization rules. By 2020, 67 jurisdictions under the Inclusive Framework had implemented rules following the BEPS project Action 4, and all EU Member States apply an interest cap restricting deductible borrowing costs. Once again, we can expect these rules to generate at least some of the intended results. Blouin et al. (2014) show that thin capitalization rules have an effect on the capital structure of multinationals, and restrictions lower debt-asset ratios as expected. In a more recent study, Merlo, Riedel and Wamser (2020) show that thin capitalization rules affect real location choices of

multinationals, and consistent with these results, they call for coordinated action in implementation of thin capitalization rules – unilateral restrictions come at a cost of losing real investments. The problem is that unilateral measures, while restricting paper profit shifting, simultaneously incentivize shifting of real investment to a location where similar restrictions are not in place. Both Blouin et al. (2014) and Merlo, Riedel and Wamser (2020) show that robust and coordinated thin capitalization rules lower the reported after-tax profits of multinationals, implying larger tax revenues due to decreased debt shifting opportunities.

2.6.4 Tax treaty abuse

Double tax treaties are employed to eliminate double taxation and to encourage international trade and investment. Their bilateral nature allows countries to make preferential treaties with their most important economic partners, but this also introduces a lot of variation to the tax rates and liabilities enforced within. Gaps and mismatches are nearly impossible to control within the worldwide network of tax treaties, which allows multinationals to choose locations in an advantageous way, or to simply set up shell companies to divert payments in an entirely artificial way. Treaty shopping is most commonly studied with regard to withholding taxes, which can be avoided by channeling payments through a chain of countries, whose tax treaties allow for a lower overall tax burden. Mintz and Weichenrieder (2010, pp. 91–109) find, based on data from Germany, that higher withholding tax rates towards a certain country increase the probability that investment directed there is diverted via a third country. Similarly, Balabushko et al. (2017) report estimates of up to 1% of Ukraine’s CIT revenue being lost due to its preferential tax treaty with Cyprus and the subsequent diversion of investment through there.

As an established channel of profit shifting, the BEPS project aims to disincentivize treaty shopping via Action 6. International coordination is critical to succeed in closing the multiple treaty loopholes, and Action 6 is accordingly one of the minimum standard actions, which each member of the Inclusive Framework is required to implement. The basic procedure is simple, but administratively intensive: each bilateral tax treaty has to be adapted to include a method to address treaty shopping. To ease the task, OECD

provides a multilateral instrument via Action 15, which can be used to modify existing treaties simultaneously, without the need to negotiate each one separately.

2.6.5 Risk transfer

We already discussed pricing of IP through ALP, but this is not the only area ALP performs poorly at. Risk is a major component in investment decisions, and high risk is expected to be compensated by higher expected returns. Thus, wherever higher risk is allocated, more profits (or loss) should also be allocated. However, for multinationals, this type of risk allocation does not make sense: even if all the risk is contractually allocated to one subsidiary, the risk is actually borne by the collective shareholders of the multinational. (Schatan, 2021, pp. 60–64.) This makes the multinational generally indifferent as to where the risk is located – save for taxation purposes. Multinationals benefit greatly from locating high-risk investments to countries with lower tax rates to bear a lower tax burden on the higher expected returns.

There is very little well-sourced empirical study on the magnitude of this channel, but the conceptual issues are widely recognized (see Devereux & Vella, 2014). OECD is also well aware of the problem: both actions 9 and 10 deal with application of ALP when risk is involved. Many CFC rules are already adapted to account for risk allocation between multinational affiliates, but they are only as robust as the associated pricing methods, which are largely based around ALP.

2.6.6 Avoidance of PE status

To solve the issue of “who has the right to tax certain profit”, the idea of a PE is invoked. There has to be a genuine link between the country and the generated profit, and this genuine link is determined by the formation of a PE. For allocational and administrative reasons, currently the formation of PE is determined mainly by degree of physical presence: for a jurisdiction to attain taxing rights, there has to be *something* within the jurisdiction to tax. Thus, multinationals can try to avoid tax liability by avoiding the formation of a PE. This can be accomplished, for example, by replacing subsidiaries with commission arrangements, or by taking advantage of the many exceptions permitted for preparatory or auxiliary activity in a country. Action 7 of the BEPS project is meant to combat these types of concrete measures to avoid PE status. Action 1 also touches on PE

issues, but from a different angle: it attempts to solve the issue of PE formation in the case of digital companies, which can have a significant market presence without any type of PE in a country. We will return to this in detail later.

Many of the recent studies employ firm-level data to estimate the effect of different profit shifting channels. As Beer, de Mooij and Liu (2020, p. 666) note, the PE channel cannot be studied in this way, as, by definition, there are no profits reported in the first place. Macro studies on the other hand have not focused on this channel, so there are no reliable estimates of the magnitude of tax avoidance through avoidance of PE. Nevertheless, it is a weakness, at least on a conceptual level.

2.7 Evaluating the current system

At this point it is not unfair to say that the current system functions as a highly institutionalized cat and mouse game between governments' tax officials and multinationals' tax experts. Conceptually, there are a lot of opportunities for tax avoidance, which has led to the inception of multiple anti-avoidance rules, which are at this point a key element of the international CIT system. But is this a good system? Next, we will focus on this question, following the criteria and discussion by Devereux et al. (2021, pp. 113–127). The criteria to be used was introduced in 1.1, and the principles guiding a good CIT system are: 1) fairness, 2) efficiency, 3) robustness to avoidance, 4) ease of administration, and 5) incentive compatibility.

2.7.1 Fairness

As we noted earlier, CIT is difficult to target in a way that ensures fairness between individuals. Thus, we will focus on the two other viewpoints: fairness between countries and fairness between companies.

Let us start by considering fairness between companies.¹⁹ There are at least two paradigmatic senses in which the current system introduces unfairness between companies. Yet, these might be easier to approach if formulated in different terms. First,

¹⁹ In a sense, there is of course no “fairness between companies”, as the incidence is always borne by people. From this viewpoint, the fairness of the tax depends on the incidence of the corporate tax, and whether this incidence is borne in a progressive and equitable way.

multinationals do not pay their fair share of taxes; instead of fairness, we can reformulate this as an issue of the existing system not being sufficiently robust to avoidance. Second, domestic companies have to face a larger portion of the tax burden, which is unfair towards these generally smaller companies; this issue can be formulated in terms of efficiency, as the tax system creates a real economic distortion in favor of multinationals, which might have negative welfare effects. (Devereux et al., 2021, pp. 117–118.) The simple idea here is that fairness is a tough goal to achieve, and it is much easier to locate the causes of deemed unfairness, and assume that fixing them will lead to a more fair system. We will investigate issues of efficiency and robustness to avoidance below.

Another issue of unfairness concerns the allocation of taxing rights across countries. The first argument here is that due to the way taxing rights are allocated, the system favors developed countries in which most of the internationally significant investors reside in. Thus, the taxing rights to large portion of the passive income arising in developing countries is allocated to rich countries, even though it would seem fair for developing countries to receive a larger portion of tax revenues. This is not a BEPS issue, but more a question of international equitability – and something the CIT is not currently built for. (Devereux et al., 2021, p. 118.) As of now, the guiding idea behind CIT is that it is fair for a country to receive taxing rights if genuine economic activity – or value creation – is happening in its jurisdiction. This concept of fairness is not fit to account for international inequality, and as such, the system would require a more fundamental change of approach in its design.

The second strand of arguments concerns the status of market countries, which are currently not receiving their fair share of tax revenues. This is due to the ability of highly digitalized companies to sell products – and to also benefit from their users’ contributions – in market countries without assuming tax liability there. This is a recognized issue that Pillar One is specifically meant to address. Essentially, if taxing rights should be located where value is created, and some value is seen as being created in markets, it is unfair that market jurisdictions currently receive none of the tax revenues. Despite its popularity, this view of value creation as a basis and justification for general allocation of taxing rights is a contested issue, which we will return to later 3.1.3.

2.7.2 Economic efficiency

We have established many channels through which CIT distorts economic activity. In general, costs are induced every time a firm: chooses a location for real activity, which it would not have chosen in absence of taxes; chooses not to invest because of the increased required rate of return; chooses debt instead of equity for tax reasons; chooses to shift profits because the tax benefits compensate for the costs; gains a competitive advantage due to tax reasons; etc. This is not an exhaustive list, but gives an idea of the many potential distortions caused by CIT – every time a decision deviates from the efficient case sans taxes, an excess burden is paid for by individuals through higher prices, lower wages, and smaller after-tax profits. A further worrisome feature is that even though the welfare cost is borne by the international society as a whole, an individual country can benefit greatly from these distortions. If a country can attract businesses by lowering its CIT rate, it can gain access to larger tax revenues despite of the international excess burden. This idea will be further explored in the context of incentive compatibility. (Devereux et al., 2021, pp. 115–116.)

BEPS project does not address efficiency issues, and as highlighted by Devereux et al. (2021, pp. 116–117), it might even exacerbate distortions to real activity. This problem is due to the underpinnings of the system, which the anti-avoidance rules cannot fix. The BEPS measures are concerned with *artificial* activity, so multinationals can always simply locate their real activities to low-tax jurisdictions. Insofar as the BEPS measures make the system more robust to avoidance, multinationals will have to make greater use of real location choices, potentially leading to a more distortionary, less efficient system. Chapter 3 discusses alternative design choices, which would help to also solve the issue of real location choices.

2.7.3 Robustness to avoidance

There are two clear observations one can make based on the many anti-avoidance rules operating in the current system: first, the system by itself is *very* susceptible to avoidance, and second, the extent of this susceptibility should be greatly reduced nowadays. But by how much? We noted before that coordinated anti-avoidance rules should produce intended results, but there are gaps in both coordination and intention of these rules. As

long as implementation gaps remain, there exists opportunities for profit shifting. In addition to this, even countries working under the OECD Inclusive Framework have a degree of freedom when it comes to enforcing the several BEPS actions, potentially leading to weaker versions being implemented when it best suits the country in question. (Devereux et al., 2021, p. 121.)

Even with strict anti-avoidance rules in place, weaknesses remain, the most critical of which is the continuing reliance on ALP. As long as the tax system is built around cross-border transactions and the ensuing separate accounting via ALP, profit shifting is virtually impossible to stop. ALP is simply not fit for all the types of transactions it is used for (see Avi-Yonah & Benshalom, 2011; Schatan, 2021). Even if ALP is made more robust, the continued possibility of profit shifting, and the subsequent need of moderation, induces costs beyond the direct tax revenue losses. Policing transfer prices is administratively intensive and inefficient work, leading to increased complexity and costs faced by both governments and multinationals. On top of this, opportunities of tax avoidance – almost irrespective of whether they are actually taken advantage of – undermine the credibility of the tax system as a whole. Solving the profit shifting issue thus requires a more fundamental reform that addresses the root causes, which cannot be achieved simply via further anti-avoidance regulation.

2.7.4 Ease of administration

The administrative issues associated with the current system have already been mentioned several times. Complexity is invited by 1) the need to attribute and allocate profits with regard to certain thresholds, 2) the anti-avoidance rules which govern both the international allocation and intracompany trade, and 3) the complex accounting practices associated with all of these. BEPS project is not going to provide relief to the situation and might instead worsen it, as the actions are mostly pinned on top of the existing system. Even though coordinated action is beneficial, it is very likely that national tax regimes will become even more complicated as a result, as countries have to pay closer attention to the policies of other nations. For example, it is safe to say that the addition of EU laws has not simplified the legal framework of any member state, and similarly, it is unlikely

that the addition of an international BEPS framework will help to simplify national tax codes.

Furthermore, the functioning of the BEPS project relies heavily on well-established and well-resourced national tax authorities with the ability to implement and monitor the proposed measures. This requires the existence of a working institutional background and the associated bureaucratic machinery with access to robust national datasets and enforcement capabilities. As even the most well operated tax authorities will struggle to apply some of the rules (ALP, for example) in a principled and internationally coherent way, this task might prove entirely too difficult for the poorly resourced countries. (Devereux et al., 2021, p. 123.) There is a real possibility that international implementation gaps will form simply due to administrative difficulties.

2.7.5 Incentive compatibility

A large portion of the taxes in the current system are imposed on mobile factors, such as location of production and IP. As we have seen, this gives firms incentives to shift their mobile activities to low-tax jurisdictions. Countries on the other hand have a motivation to try to attract these activities for higher tax revenues, and these internationally incompatible incentives lead to competition. Tax competition through lowering of statutory tax rates is a well-studied phenomenon, but countries can also attract investment by narrowing their tax base, or by weakening their anti-avoidance rules. This results in an unstable system, which facilitates the much-discussed *race to the bottom* and makes international coordination difficult.

The steady downward trend in CIT rates after the 1990s can in large part be attributed to tax competition between nations (Kari & Ropponen, 2017, p. 16).²⁰ Still, competition over statutory CIT rates has not been particularly aggressive, with larger countries not willing to trade corporate tax revenues for a major competitive edge.²¹ Rather than direct CIT

²⁰ The rapid tax rate cuts during 1980s and the early 1990s were mainly due to countries aligning their tax policies with the Washington consensus in an effort to improve domestic efficiency of taxation. This meant broadening the tax base while cutting marginal tax rates (Williamson, 1993, p. 1332).

²¹ Large economies already attract investment, and they have more to lose and less to gain by lowering their CIT rate. Most aggressive CIT rate cuts are undertaken by tax havens, which tend to be smaller countries wishing to receive more foreign investment (see Dharmapala & Hines, 2009). This might also be in part

rates, developed countries have most intensively competed over taxes on IP, with many countries implementing generous benefits for IP located in their jurisdiction. These schemes, known as *patent box regimes*, have received much attention (see Alstadsæter et al., 2018) and are recognized as “harmful tax practices” under BEPS project Action 5. Competition through other measures is not extensively studied in the literature, but there are significant differences between countries tax policies with regard to treatment of certain types of income and strictness of anti-avoidance rules.²² Countries often participate in competition through some channels, but not necessarily all; and there is some evidence that the channels are interrelated and have an effect on the asserted competitive pressures through other channels (see Choi et al., 2020).

Two big issues are invited by the competitiveness of the current system: first, it presumably drives corporate tax revenues to zero in the long run. Nevertheless, this result has not come to pass, and CIT revenues have been fairly stable in the face of lowering tax rates (see Devereux et al., 2002; and Fuest, Hugger, & Wildgruber, 2020 for more recent results) or have even risen in some cases (see Devereux et al., 2004). In the papers, this puzzling combination of events is mostly attributed to a significant increase in corporate profits before taxes and, to a lesser extent, simultaneous other base-broadening measures. Still, as highlighted by Devereux et al. (2021, pp. 125–126), this stability in the past does not provide a convincing argument for its perseverance in the future. For tax revenues to stay stable, profitability has to keep rising, or tax base has to keep expanding; there will likely be a point in the future where the downward pressure of competition will overtake the upward pressure of economic growth, triggering the race to the bottom. Even if an equilibrium where some countries could maintain a positive CIT rate could be reached – due to some combination of political will, rising cost of relocation, and smaller wedge between rates in high- and low-tax jurisdictions – the capability of CIT to generate revenue is, at that point, greatly hindered.

because status as a tax haven could have a negative effect on the reputation and integrity of the country, which is something central countries are not willing to compromise (Keen & Konrad, 2013, pp. 310–311).

²² Deloitte (n.d.), for example, produces information on tax treatment of different income types across countries.

Coordination is one way to reduce the competitive pressure, but this is the second big issue: coordination between competitors is difficult to achieve. BEPS project has shown that it is possible to a certain extent, but reaching an international consensus, which is not a watered-down version of the often-strict measures actually required, is remarkably difficult. This is evidenced by the fact that no global consensus has been reached with regards to CFC rules or response to digitalization (Devereux et al., 2021, p. 126). This has led many countries to impose interim unilateral measures, such as digital services taxes (see Asen, 2021) and CFC rules not in coordination with the OECD proposals (such as GILTI-rules in USA and Diverted Profits Taxes in UK). Where coordination is achieved, but countries are given discretion in implementation, the competitive pressure encourages enforcement in the mildest manner possible. Also, insofar as the BEPS project manages to make competition impossible through tax base, it might also intensify competition on other levels. One such level could be tax rates, whose general coordination is not even in the negotiations at the moment.

2.8 Conclusions

The current system is one of separation and categorization. We can distinguish three central features: 1) separation of taxing rights across source and residence countries, 2) separation of tax treatment between active and passive income, and 3) separation of multinationals' profit to each subsidiary. There are many ways in which these separations are completely arbitrary, which allows for multiple channels of profit shifting, and has subsequently resulted in a vast treaty network and extensive regulatory structure, which are by now central elements of the system as a whole. Overall, this chapter has argued that the system as it is presented is *not* a good tax system: it does not feel fair; it is demonstrably inefficient; it is by itself exceptionally susceptible for avoidance; and by virtue of the regulatory structure, it is extremely administratively difficult and expensive. Due to the inbuilt competitive pressure, the system is also inherently unstable from an economic theory perspective, and prone to cause international tension from a political one.

This is a grim judgement, but we can very likely do better. Let us next turn to investigate possible remedies.

3 Options for reform and residual profit allocation

The current system has performed sufficiently well for the better part of a decade following its inception in 1920s. All the points presented so far then beg the question: why has the system started failing? One important observation is of course that it actually has not started failing *now*: the system is, and always has been, inherently flawed in the way it deals with certain situations. The problem, and also the source of motivation for reform, is just that these particular situations have become more common, and that the situations themselves have remarkably intensified. Hebous (2020) makes several interesting observations about this evolution of incompatibility. First, the current system was built to account for international companies, but the firms of today would be better described as global companies. In an economy of global supply chains catering to the global market, it is artificial to fragment these elements to conform to national boundaries, which is necessary for the current system to function. There might be no demand for a product in the country in which it was designed, but a huge market for it elsewhere – where is value generated in this case? The current system requires an explicit answer, but answers are nowhere to be found. The current conceptual framework is not a good fit for the global company.

Hebous (2020, pp. 11–16) also notes that there are four related strands of development that have taken place simultaneously with the emergence of global firms. Significant and rapid increases have happened during the 21st century in: 1) international trade in services, notable portion of which is in hard-to-price services, 2) importance of intangible and IP assets in cross-border trade of MNEs, 3) R&D spending by MNEs, and 4) the magnitude of global digital trade. All of these allow for BEPS through venues that are almost impossible to close within the current system. Thus, anti-avoidance regulation is not the result of over-enthusiastic regulators but is instead necessary for the continued functioning of the CIT system. As the issues are likely to intensify even further in the future, the BEPS project has focused on making the system more robust to avoidance. This project, and others, have in many ways been successful with regard to their goals, but have they succeeded in massively improving the whole system? Perhaps not.

How could we approach reforming the system in a more fundamental manner? Returning to the two central questions of CIT design – choices of base and location – there are definite benefits to be gained in introducing coordinated changes to the tax base as discussed in 2.2.1. However, this chapter argues that the choice of location is more critical, especially in the age of mobile tax bases. Next, we will move on to discuss these different location choices.

3.1 Location of taxes

We have already distinguished four ways a multinational can be linked to a country: through location of its shareholders, parent companies, subsidiaries, or customers. In more precise terms, we can impose taxes on corporate profit in: 1) country of residence of the owners, 2) country of residence of the parent company (or headquarters), 3) the country where concrete business activities are undertaken, referred to as *origin country* in this context, or 4) country where the corporation's customers are located, referred to as *destination country* or *market country* in this context. (Devereux et al., 2021, pp. 131–132.) Currently, taxes are located primarily in the origin country, and secondarily in the residence country. We will next study the different options in turn, however omitting the first option, residence of owners; there have been few approaches following this idea, and they all pose considerable administrative problems. In any case, CIT based on residence of shareholders is not a mainstream view, and neither is it forwarded in any concrete policy options nor is it relevant for our upcoming discussion on residual profit allocation.

3.1.1 Origin country taxation and formulary apportionment

It is good to distinguish the problems of the current system from the problems of an origin-based system in general. For example, taxation of IP and relief for debt arrangements could be formulated as to not allow for BEPS even under origin-based systems. Still, some problems are inevitable, especially when origin basis is implemented through separate accounting. The most severe issue concerns the fact that taxation in origin countries does not account for the mobility of economic activity. Where origin basis is implemented and differences in tax rates exist, multinationals will always have incentives to locate activities in low-tax locations; as seen before, this also leads to competition between countries. If artificial relocation is impossible due to strict anti-avoidance rules, multinationals will

simply move real activities, potentially intensifying the distortions leading to a less efficient system. The arguments against such system come easily serviced at this point.

Separate accounting is not the only way to impose origin basis. The other alternative is the so-called unitary business approach, bolstered by formulary apportionment. This system starts by calculating the worldwide profit of the multinational at the corporate level, and then allocating it to different countries using a determined formula. If this formula reflects multinationals' degree of economic presence in different countries, the ensuing system will also be origin-based. Many jurisdictions have entertained the idea of formulary apportionment, and the unitary approach is at the heart of both the European Council's CCCTB and OECD Pillar One.²³ (Devereux et al., 2021, pp. 139–141.) The most obvious benefit of formulary apportionment is the exclusion of ALP, shutting down the possibility of transfer price misuse. ALP is a way to derive approximations of where economic activity takes place and income is generated, but it does so on the basis of highly volatile and easily manipulated intragroup transactions. Formulary apportionment assumes that there are other easily observable indicators of real economic activity, which are also harder to manipulate. These indicators are then used to set up the formula for allocation. (Avi-Yonah & Benshalom, 2011, pp. 390–391.)

USA utilizes formulary apportionment to allocate tax bases at the level of state taxation and has traditionally employed the Massachusetts formula: an equal-weighted average of sales, payroll, and asset shares. A cause of worry is that after these factors are decided, they essentially create an implicit tax on the chosen factors. (Avi-Yonah et al., 2009, pp. 509, 538.) Massachusetts formula thus discourages investment and employment in high-tax locations. Without access to transfer price schemes, this can be expected to result in higher relocation of real economic activity, with possibly significant efficiency costs. If the chosen formula uses origin-based factors, it will necessarily inherit the problems of an origin-based system more generally. Still, the magnitude of these problems might not

²³ Unitary systems require an allocation formula, but allocation formulas can also be utilized outside completely unitary systems, for example in conjunction with ALP. These arrangements would apply formulary apportionment to certain types of income ALP is poorly suited for (see Avi-Yonah & Benshalom, 2011). Pillar One follows this idea: some profit is allocated on separate accounting basis, and some calculated at the corporate level and allocated via formulas.

be as severe as with transfer prices, and formulas are much more easily tweaked than transfer pricing rules. If we observe multinationals reacting aggressively to certain factors, those factors should just be avoided at the benefit of other, more suitable ones (Avi-Yonah & Benshalom, 2011, pp. 390–391). In 1978 the Massachusetts formula was in use nearly unanimously among US states; interestingly, by 2019, most of the states employ only sales (on a destination basis) in their allocation formulae (Devereux et al., 2021, p. 139). Assuming that the states have utilized their 40-year opportunity to partake in a trial-and-error search for the best allocation factors, the results provide at least anecdotal evidence against an origin-based system. We will return to destination-based taxes shortly.

The effects of a formulary approach on economic efficiency are hard to quantify, as they depend so much on the particular situation and implementation method. Due to the above observations, it suffices to say that there is no *prima facie* case for adoption or dismissal of origin-based formulary apportionment on efficiency grounds. The benefits of such a system are however much more pronounced in the areas of administration and robustness to avoidance. The first big improvement is that the system is indifferent with respect to intra-group allocation schemes. Thus, transfer pricing and thin capitalization rules can be abolished, massively simplifying the current system. The second main advantage is that after the formula is set, there is no need to identify a location for the earned profit. The profit will simply be determined at the corporate level and allocated irrespective of many concepts central to the current transfer price rules, like risk or ownership. (Devereux et al., 2021, pp. 145–149.)

A formulary approach might very well lead to a better overall tax system. Unfortunately, as with any other reform, the final result depends largely on coordination of the implementation. Unilateral action would almost certainly be to the detriment of the reformer, as it would not provide much relief for BEPS and might instead incentivize multinationals to relocate to a country not operating a formulary system. In the case of multilateral reform, the benefits of the system may be greatly hindered if too many economically significant countries maintain the current system. Similarly, problems can arise if implementing countries can't agree on the definition of the tax base or the allocation formula: if there are no coordinated answers, competitive pressure will lead to

suboptimal results and many of the administrative and avoidance benefits of a formulary system will be lost. (Devereux et al., 2021, p. 146.)

More generally, it is impossible to create a reform where everyone wins. Thus, countries will strategize on the extensive margin and drop out if the system is not beneficial for them. Likewise, countries will strategize on the intensive margin to define the allocation formula and tax base in a way that best suits them. Agreeing to compromises requires a great deal of political will, and as Avi-Yonah and Benschalom (2011, p. 383) put it, the “ongoing (and one could say everlasting)” CCCTB project is very indicative of the difficulties of finding an agreeable compromise. This is markedly worrisome, as the EU has an impressive record of attaining unlikely compromises in trade and monetary policy. A full switch to a worldwide formulary system might seem utopian at the moment, but formulary apportionment may still prove useful as part of a more easily implementable hybrid system. This is a view advocated by both Avi-Yonah and Benschalom, and the OECD through Pillar One. We will return to this idea in much greater detail in chapter 4.

3.1.2 Residence country taxation

Instead of origin basis, the tax system could also be reformed to emphasize the other established method of taxation, based on residence of the parent company. Under a full-scale universal reform, a tax imposed only in the residence country would offer an exceptionally simple and robust system – profit is taxed only once based on the accruing worldwide income of the multinational with no need for separate accounting. However, a universal reform is made very unlikely due to: 1) the administrative difficulties of monitoring accruing profit in foreign subsidiaries, 2) the seemingly unfair resulting distribution of taxing rights across nations, and 3) the incompatible incentives for countries to adopt such a system. A more realistic setting would see a group of countries implementing the reform while introducing relief for tax paid in countries maintaining an origin-based system. (Devereux et al., 2021, pp. 151–152.)

For any realistic residence-based reform, accompanied relief measures are indeed necessary in order to avoid double taxation and its associated issues. In general, there are two broad approaches to taxation of foreign income and relief: countries can operate either a territorial system, which exempts all foreign source income, or a worldwide system,

which taxes all foreign source income but provides relief for taxes paid abroad.²⁴ For worldwide systems, by far the most utilized option for providing relief is the credit method, or more specifically the limited credit method, which imposes a lower bound of zero on the home country tax liability. The credit method enjoys wide support (see, for example, Fleming et al., 2016), even though there is a strand of literature questioning whether it is the best unilateral policy from the home country's perspective.²⁵

The main argument behind residence-country taxation has to do with CIT's backstop function.²⁶ There is a compelling similarity between CIT and personal income taxes: individuals are generally taxed on their worldwide income by the residence country, and insofar as an individual owns shares in a business that generates profit abroad, this worldwide profit should also be taxed in the residence country (Devereux et al., 2021, p. 152). This argument follows – and is often presented as – the *ability-to-pay* principle. The principle states that higher income should lead to higher taxation: those with the best ability to bear a tax burden should do so. This could be avoided if a backstop function is not in effect. From this viewpoint, any and all credit and exemption policies are (at least nationally) an unfortunate compromise, while any possibility of tax deferral (i.e. taxation only on repatriation) represents a fault and goes against ability-to-pay (see Fleming et al., 2001, 2016).²⁷

²⁴ Most OECD countries, including all of the European members, employ at least a partially territorial tax system. Still, countries often place limitations on the exemption of foreign income depending on where it is earned: many EU countries limit their territorial system, i.e. exemptions, only to EU or EEA member states. Many countries also explicitly exclude black-listed countries (see Asen, 2020), whose tax systems do not meet certain international criteria. Excluding tax havens technically does not amount to double taxation, as profits are not effectively taxed in the haven country.

Existence of these sorts of arrangements supports the idea that there are both real and integrity costs associated with excessive international competitiveness, as mentioned in footnote 21.

²⁵ This is because foreign taxes are reimbursed with a one-to-one ratio, making multinationals effectively indifferent to such liabilities. This might hurt the home country's tax revenues in the case where a multinational decides to invest in a high-tax location (gaining credit for the whole tax liability in the home country, i.e. tax is only paid abroad) instead of investing in a low-tax location (gained credit does not cover the whole tax liability, i.e. tax is also paid in home country). This argument advocates a deduction system, which might increase tax revenues in the home country, but often comes with worldwide efficiency costs (see Clausing & Shaviro, 2011; Shaviro, 2010).

²⁶ The case for origin-based taxes can be made through either value-creation argument or the benefit principle.

²⁷ Beyond this, the justification of residence-based CIT based on ability-to-pay is very precarious in the face of significant foreign ownership. If the locations of the shareholders and the parent company are entirely

Despite certain countries wanting to protect the fulfillment of ability-to-pay on a national level, there are three big issues that make full residence-based taxation unlikely even on a smaller scale. First, it incentivizes multinationals to relocate their headquarters to a country which does not enforce worldwide taxes. Parent company locations are inherently mobile, so strong anti-avoidance rules regarding corporate inversions and emigrations are needed to prevent artificial relocation of headquarters. (Devereux et al., 2021, pp. 154–156.) This is both hard in practice (see US anti-inversion rules for an idea) and will likely lead to new businesses locating their headquarters elsewhere.

Second, the existence of origin-based systems alongside the residence-based reform will diminish the attractive qualities of the latter. For the relief system to function, separate accounting is required to locate where the profits are taxed to correctly size the relief. Calculating arising profits in any jurisdiction is a difficult task, which brings up the other big issue of worldwide systems: identifying, monitoring, and auditing subsidiaries' accruing income. This is close to impossible in a robust manner without the help of the subsidiary country's tax authority. Yet, without an existing cooperative system, it is hard to imagine governments taking on administrative duties (and associated costs) for other countries without compelling reasons. For countries struggling with taxing income arising within their own jurisdiction, a worldwide tax on accrual is definitely out of scope. (Devereux et al., 2021, pp. 159–160.)

Third, it is questionable why any one country would actually impose CIT on pure residency basis. Abolishing origin-based taxes would make any country a supremely attractive location for foreign activity, but the tax system would simultaneously severely penalize domestic companies as they would still bear a tax burden in their home country. From the viewpoint of international competition, countries would not want to implement such taxes for fear of driving away parent companies; and if such taxes were already in place, countries would have incentives to undermine them by competing over rates or exemptions for foreign income. (Devereux et al., 2021, p. 161.)

disconnected, the practice of allocating *any* taxing rights to residence countries can be put into question. (Devereux et al., 2021, pp. 156–157.)

Much of the discussion on residence-based taxes takes place in the context of US, which until 2017 was the largest economy in the world to employ a worldwide system. Curiously, the pre-2017 policy taxed US multinationals' foreign source income only on repatriation (due to the administrative difficulties of taxing accruing foreign profits), allowing for infinite deferral of residence taxation. Overall, this resulted in a motivationally incoherent system that also caused US companies to hold significant amounts of capital abroad: before the 2017 reform, the value of US companies' unrepatriated funds was estimated at \$2.6 trillion. (Gravelle & Marples, 2018.) The 2017 Tax Cuts and Jobs Act (TCJA) was an attempt to fix the issue, and it moved the US away from a worldwide system by exempting dividends received by the parent company from its foreign subsidiaries.²⁸ This base narrowing raised worries of further base erosion, so alongside the exemption, TCJA also introduced a new worldwide tax on accruing *global intangible low-taxed income* (GILTI). GILTI is an interesting take on residence-based taxation, and it works as a minimum tax: it estimates a reasonable rate of return for a parent company's foreign affiliates' tangible assets (defined as 10%) and any profit above this is deemed intangible income. On this intangible income US imposes a tax of 10.5%, but it also provides an 80% tax credit for foreign taxes. Thus, the GILTI tax base consists only of foreign intangible income taxed at below 13.125%, as any rate above this will provide full credit for the US tax. (Devereux et al., 2021, pp. 153–154).

OECD Pillar Two follows a similar idea: it would also see countries agreeing on a threshold for effective taxation, and if a subsidiary is taxed below this effective rate, the parent country would impose taxes to bring the effective rate up to the threshold. Thus, both Pillar Two and GILTI strengthen residence-based taxation, representing a marked shift to the trend of residence-based taxes being weakened due to countries moving to territorial systems (Nakayama et al., 2021, p. 263). There are definite merits to a minimum-tax system: it is a way to cash in on many of the benefits of a broader residence-based system, while still being a weaker version and thus suffering less from the associated negative effects. The general goals of Pillar Two are seen to be: 1) to address

²⁸ Resulting in a fourfold increase in repatriated funds in the following year (Gravelle & Marples, 2018).

profit shifting by removing incentives to locate to locations operating below-threshold tax rates, and 2) to address tax competition, by introducing a lower-bound for tax rates internationally (Devereux et al., 2020, p. 6; Nakayama et al., 2021, pp. 257–258). However, the design, implementation, and maintenance of these systems is highly complicated, and there is some doubt whether minimum-tax systems are the best way to achieve the goals they aim for (see Devereux et al., 2020). Perhaps a better solution would be to introduce a more fundamental reform – for example in the form of destination-based taxes.

3.1.3 Destination country taxation and value creation

Currently, there is no comprehensive policy to tax corporations in destination countries, i.e. countries where customers are located and sales are completed. There are of course some taxing rights allocated also to destination countries, but this is not done on destination basis, but rather because economic activity or ownership happens to be located there. This follows from the guiding principle of value creation, exemplified by the mantra “to tax where value is created.” Value creation as a basis for allocation holds considerable intuitive appeal both in terms of fairness and coherence. Prima facie it also forms the basis of non-distribution of taxing rights to destination countries: while value would not exist without markets, there is no “concrete value” being created there. All of these intuitions are somewhat misleading. Value is a concept and holds no meaning of “concreteness” – in this context it is simply confused to claim that there are different kinds of value. There are definitely different sources of value, but arguing for taxing rights for some, but not all sources, seems like a much less principled approach than intuition suggests.

This being said, there is a genuine case for allocation of taxing rights to destination countries on an *origin*-basis due to the “customer-based-intangibles” located there. These include such things as customer relations and existing hardware and infrastructure that promotes use of the company’s products. (Devereux et al., 2021, pp. 169–170.) Nonetheless, this argument is not necessarily convincing either. Value creation often refers to the value chain within the firm, and even if it is necessary for there to be someone to assign the value – the customer – this is not analogous to creation of the product which holds the value (Schön, 2019, p. 1011). Similar idea applies to the customer-based-

intangibles: they merely affect how much a customer is willing to place value in the product, rather than actually partaking in the creation of the product (and its value) itself. There is a certain philosophical element in this argument, and, as often with philosophical arguments, rebuking the other side on completely objective grounds is impossible. Based on value creation, there is a case for not allocating profits to market countries and there is a case for the opposite.

In the context of the current system, the value creation principle can however be questioned altogether. First, it is misguided to disregard allocation to destination countries on the basis of value creation, as the current system does not follow principle either. We noted in 1.2 that OECD defines BEPS as practices that “artificially segregate taxable income from the activities that generate it.” This implies that income and its generation can be segregated if it is not done artificially – which is exactly how passive income is treated in the current system. (Devereux & Vella, 2018.) There is no value created in the residence country, much in the same sense that there is no value created in the market country. The positive interpretation – “to tax where value is created” – is inconsistent in the way it is utilized. Perhaps a better interpretation is the negative one, stating that profit should not be taxed where no value is created. However, employing the negative interpretation in an attempt to deny taxing rights to market countries seems both unprincipled and unjustified: it is nearly undeniable that market countries insert in some meaningful way into the value creation process of any company (see Aslam & Shah, 2021; Devereux & Vella, 2018; Richter, 2019).

Even though the BEPS project is intimately associated with the positive principle of value creation²⁹, OECD Director Pascal Saint-Amans has instead consistently forwarded the negative reading (see Devereux, 2019; Saïd Business School, 2019). Thus, due to no coincidence, the BEPS project has actually followed the negative reading more closely than the positive one. The project has not aimed at redesigning the existing system under the positive principle, but it has instead attempted to remove taxing rights from locations of no value creation. Incidentally, it has also better aligned the system with value creation

²⁹ The foreword of OECD Pillar One blueprint states that one aim of the BEPS project is to “ensure that profits are taxed where economic activities take place and value is created (OECD, 2020d)”.

(Devereux et al., 2021, pp. 109–110). To a large extent, this is because the negative reading is a much more workable principle. For us to strictly “tax where value is created”, it is not enough to determine where value is created – we would also need to establish *how much* is created. This is – if not impossible – always subjective. The negative reading on the other hand can be used to discredit claims of taxing rights of countries which are not linked to the corporation’s profit in a relevant sense.

Value creation is a principle to guide tax design to reflect our intuitions on fairness. While it might (sometimes) succeed in this regard, fairness is not the only criterion tax design should be concerned with. Perhaps the strongest argument against value creation principle can then be given by virtue of the tax system it entails; taxing where value is created distorts location of activities, and thus leads to a flawed system with significant inefficiencies and international competition. It is in order to look at other options.

The largest benefits of taxation on destination basis stem from immobility of consumers. We do not expect customers to relocate because they could pay a smaller tax for a product in some other country. If taxes were imposed where customers are located, it would be hard for multinationals to affect where their profits are taxed. Assuming for universal implementation, such a system would leave location decisions undistorted, as the tax treatment will be the same no matter where the headquarters or subsidiaries are located. Likewise, benefits from profit shifting will be removed, as it does not matter where income arises on intermediary levels – the profit is calculated on a consolidated basis and allocated in a way that is exceedingly hard to manipulate. Incentives for tax competition between countries will also effectively be removed: if taxes are imposed in destination countries, lowering tax rates should neither attract economic activity nor create spillover effects for other countries. We do not need to go much deeper to appreciate that destination basis provides great improvements over the current system in terms of economic efficiency, robustness to avoidance and incentive compatibility. (Avi-Yonah, 2015; Devereux et al., 2021, p. 171.)

However, could such a system be considered fair? The answer is a resounding “maybe”. There are many senses of fairness which are lost in destination basis, but there are also not many who would consider the current system – whose principles destination basis

would violate – fair. The problems concerning fairness and its evaluation are familiar. On a personal level, we would have to distinguish who bears the incidence of the tax and whether the result is fair; on an international level, we would have to determine a principle that would lead to an allocation everybody deems “fair”. Neither one of these is possible on objective grounds, which is a problem permeating all corporate tax design and policies. Fairness is then not sufficient to make a clear case for or against almost any (reasonable) policy. The last criterion, ease of administration, depends largely on how destination basis is implemented. We will next move on to study residual profit allocation, which is a practical way to implement destination basis while also utilizing aspects of the current system.

3.2 Residual profit allocation

Residual profit allocation (RPA) is a full-scale reform program that has quickly gained traction since it was first introduced to the greater audience by Avi-Yonah, Clausing and Durst (2009). There are multiple variations of RPA, but all RPA schemes follow some type of a two-step approach. First, we determine a *routine profit* for all the multinational’s business activities. These consist of the easily tractable revenues – sales, manufacturing, etc. – which will be taxed on origin basis in the country where the routine profit seen to arise. Second, *residual profit* is determined for the multinational on corporate level, defined as the excess profit, i.e. the multinational’s worldwide income less routine profits. Residual profit will then be allocated on destination basis to market countries based on some formula. Different RPA schemes propose different answers to the two central definitions: how to determine the routine profit, and how to allocate the residual profit. For example, the proposal by Avi-Yonah, Clausing and Durst (2009) determines routine profit for a country by estimating a (single) market return for the multinational’s tax deductible expenses there, and allocates the residual profit based entirely on sales. The residual profit allocation by income (RPAI) proposed by Devereux et al. (2021), on the other hand, determines routine profit relative to the specific costs of investment and allocates residual profit based on the level of residual gross income (reflecting more closely where the residual profit is seen as arising) instead of pure sales. In what follows,

the core ideas of RPA will be presented, without going too deep into the details of the specific proposals.

There are two guiding ideas behind RPA schemes: first is to reap the benefits of allocating profits on a destination basis, and the second is the principle of minimal reform (Devereux et al., 2021, p. 191). RPA is appealing because, as we will soon see, it alleviates many of the deficiencies of the current transfer pricing system, while still keeping its core intact – RPA can easily be seen as simply a modification or an extension to the existing system instead of a completely separate one. This minimizes cost of reform and makes it possible to use the existing bureaucratic framework and transfer pricing experience of experts. By keeping taxing rights of routine profit in the country of origin, RPA will also not result in a shockingly different allocation of tax revenues internationally. These are all important factors in making the reform possible in reality.

3.2.1 Routine profit

Utilizing the idea of outsourcing, routine profit can be defined as the profit a third party would expect for taking over the functions of the subsidiary (Devereux et al., 2021, p. 201). In practice, this requires data from comparable businesses to estimate the return one would expect, and some measure of the scale of business for which the expected return will be calculated. The standard method is the “cost-plus” approach, which applies an estimated mark-up to relevant costs.³⁰ Put simply, routine profit (π^r) in jurisdiction i is

$$\pi^r = \mu c_i$$

where μ denotes the single mark-up applied to costs, and c_i denotes the relevant costs in i (Devereux et al., 2021, p. 337). In general, this can readily be interpreted as being equal to the normal return to real investment.³¹

³⁰ The choice of method is not critical, but routine profit *should not include* any measure of the multinational specific residual profit.

³¹ Routine profit and normal return (and likewise economic rent and residual profit) are not synonyms, but they are conceptually close enough to each other that they can be used interchangeably for this thesis’ purposes.

More specifically, routine profit should be equal to the normal return an independent contractor requires for the job, considering he does not bear the full risk and will get paid regardless of the outcome. A multinational performing the same function will bear the whole risk, which is reflected in its normal return.

There are then two relevant questions: how to evaluate the mark-up, and how to determine which costs should be considered. The straightforward method of using total costs is inadvisable, as taxing intermediate goods leads to a cascading impact of the tax on the supply chain. This causes potentially significant distortions to final sales prices. Consider two firms, X and Y, both subsidiaries of a multinational company operating with a normal return of 10%. Firm X uses €100 worth of labor and gains a profit of €110 from selling its product to firm Y, which again uses €100 worth of labor and sells the final product for €220. Both firms make a profit of €10, netting the multinational the required rate of return of 10% for its investment of €200. To highlight the cascading problem, assume that we levy a 20% tax on the routine profit, calculated using a fixed mark-up of 10% for all costs. The routine profit in X is thus the labor cost times the mark-up, or €10. Levying the 20% tax means the firm will go below the required rate of return, so X has to raise the sale price by the amount of the tax, now selling the product to Y for €112. The routine profit for Y using the total costs are now $(€112 + €100) * 0.1 = €21.2$. Accordingly, applying the tax raises the price of the final good to €226.24. The problem is that if the same functions were undertaken by a unified firm, its routine profit would be $€200 * 0.1 = €20$, and taxing this profit at 20% allows the sale of the final good at a price of €224 – which is lower than for the multinational and presents an obvious inefficiency. (Devereux et al., 2021, pp. 203–205.)

The longer the supply chain, the more severe the effect of taxes on final prices – this is why under value-added tax systems producers are allowed to deduct the tax on their inputs. A similar mechanism is required by RPA, and there are two ways to implement it: either by excluding intermediate goods or by calculating on a case basis the applicable rate of return with regards to the chosen costs. Under a fixed mark-up system (for example, 10% mark-up for all relevant costs), it is generally impossible to distinguish how far along the supply chain a particular business is, so excluding intermediary goods is the only option. This is because the total costs will rise the closer we are to the final link, and subsequently, the real mark-up with regards to total costs will generally become smaller.

Thus, the routine profit and normal return for a multinational are unlikely to be exactly equal. (Devereux et al., 2021, p. 202.)

As in the previous example, the mark-up for Y with regards to its total costs is only €220 / €210 \approx 1.048 or 4.8% compared to X's 10% for the same profit. Devereux et al. instead propose a nonfixed mark-up, determined on a case basis by the mark-up used by a comparable third party. This allows for the use of the second method, as we can determine the mark-up with respect to the costs we decide to use and achieve the same result. Consider again firm Y – we can now look at a comparable third party, which is on the same stage in the supply chain, and either determine the mark-up relative to its labor costs (10%) or total costs (4.8%). (Devereux et al., 2021, pp. 205–206.)

This system might sound complicated and imprecise, requiring a lot of data and subjective estimations of comparability. This intuition is to a large extent true. Yet, it is how the current transfer pricing system functions. We have seen that there are a large amount of transactions ALP is a poor fit for, but estimating normal returns for real economic activity is not one of these – there exists a wealth of data for independent operators in marketing, manufacturing and R&D that can be utilized to give a fairly accurate estimates of the mark-ups to be used in determining routine profit. Furthermore, these are activities transfer pricing specialists perform on a daily basis. Utilizing these well-established practices for areas they are best suited for is precisely in line with the principle of minimal reform.

3.2.2 Residual profit

After the routine profit is set, calculating the residual profit is a straightforward matter. Basically, residual profit (π^R) for any multinational is equal to the sum of income less expenses and routine profit over each jurisdiction, or more formally:

$$\pi^R = \sum_i (s_i - (1 + \mu)c_i)$$

where s_i denotes third party sales and c_i (for simplicity) the total costs in i . The simplest way to approach allocating this profit is through what Devereux et al. (2021, pp. 217–218,

338) call the top-down method³², which uses a set of weights λ_i (such that $\sum_i \lambda_i = 1$) to allocate the profit across jurisdictions as

$$\pi_i^R = \lambda_i \pi^R .$$

Different RPA schemes offer different solutions for determining the weights. To take advantage of the immobility of the consumer, the most obvious weighting scheme is to simply use sales revenues. However, there is a caveat to this simple approach: it is indifferent between levels of profitability across jurisdictions (Devereux et al., 2021, p. 227). For example, suppose subsidiaries in countries A and B both sell a specific product for €20, but the manufacturing costs are €10 and €17 respectively. Assuming for 100 units sold and a normal return of 10% for both, the residual profits are €900 for A and €130 for B. Using weights based on sales revenue will split the total in half between A and B, leaving €515 in residual profits to be taxed in each. Yet, it could be argued that country A should gain a larger portion of the tax revenues reflecting its higher profitability – based on the prevailing intuition of value creation, there is a sense in which allocating more profits to A seems to lead to a more fair allocation.

Indifference between levels of profitability might also lead to inefficiencies. Suppose the multinational from the previous example is considering expanding to country C, where it could produce and sell 200 units at the cost of €10 but at the price of only €11 per unit. Additionally, suppose that countries impose different rates of taxes – 20% in A and B, and 30% in C, for both residual and routine profit – and that the multinational will expand to C if it earns at least a 7% after-tax profit from the project. The pre-tax profit in C would equal €200, and using a 10% mark-up would define routine profit at €200 and residual profit at €0; after taxing only the profits arising in C, the project will net a profit of €140, which is equal to the required 7%, and the project will move ahead. Now, consider allocation of residual profit by sales revenue: the total residual profit is still €1030, of which roughly €360 is now allocated to C and €335 to A and B each as per the share of

³² Conversely, the bottom-up method utilized in RPAI starts by calculating a residual gross income in each market country (reflecting how much residual income is generated in said jurisdiction) and allocates the profit with regards to the share of residual income generated in each jurisdiction. This method requires utilizing residual gross income, so it cannot be used for allocations based on sales revenue or other factors. (Devereux et al., 2021, pp. 210–211, 226.)

total sales. This brings the total tax burden of the multinational to €356 due to the expansion to C, up from €260 if the project wasn't undertaken. Due to the higher tax burden following the allocation of residual profit to country C, the after-tax profit of expanding to C is just €104, which is not enough to justify the project. (Devereux et al., 2021, p. 228.) There is a real possibility that allocation on pure sales basis will distort investment decisions at the margin.

From a tax avoidance viewpoint, perhaps an even more troubling result can be achieved by looking at the previous example and supposing the tax rate in C is zero. This clearly incentivizes investing in C to shift residual profit there. In an extreme case, the subsidiary in C could even be making a loss and investment there would still be profitable, if the tax benefits are large enough. Multinationals can also take another route, and simply buy a low profit margin business with a high turnover in a low-tax jurisdiction. (Devereux et al., 2021, pp. 229–230.) These issues are caused by the fact that allocation by sales is not sensitive to where the residual profit actually arises. However, this is not a necessary feature of RPA schemes. For example, the RPAI proposed by Devereux et al. allocates a larger portion of the worldwide residual profit to countries where more residual profit arises. Conversely, it allocates no residual profit to countries which generate none, such as country C in the last example, avoiding the distortion just described. The specific implementation of RPAI will not be covered here, but these examples are meant to highlight the fact that the chosen allocation scheme can have great impact on real economic activity, and we have to be critical of the chosen method.

3.2.3 Tax base

As it has been presented so far, RPA schemes follow the standard corporate tax base: they tax return on equity investment and provide relief for the cost of debt finance. This definition is accompanied by the familiar issues of debt shifting and economic inefficiency associated with taxing normal returns. We do not cover the other main reform option, destination-based cash-flow taxation (DBCFT), but it bears to point out that DBCFT does not face these problems: it taxes only economic rents, which is in part why DBCFT might *prima facie* come across as the more attractive option. However, it is important to highlight that for RPA the choice of the standard tax base is a conscious

rather than a necessary one. Choosing the standard tax base conforms to the principle of minimal reform – there are no theoretical reasons as to why RPA could not accommodate for example an ACE system described in 2.2.1. In its core, RPA is a solution to the question of international allocation of profit, and tweaking definitions and parameters in a way that targets only economic rent is perfectly possible. As work on implementing any type of RPA is still in progress, there is no literature – as far as I am aware – investigating how RPA could best be modified with this purpose. No doubt this will become a prime subject should international implementation of RPA schemes pick up in the following years.

Due to the way RPA allocates residual profit, there is an element of formulary apportionment built within RPA. Under full formulary apportionment, countries have to agree on two things: the formula, and the profit this formula is applied to. The reason is that if countries differ in how they define the tax base, they will also claim contradicting entitlements to tax revenues based on their own measure of profit. (Devereux et al., 2021, p. 259.) This is why the CCCTB project aims to first establish the Common Corporate Tax Base across EU member states, and only then introduces consolidation through formulary apportionment. We have already established the difficulty of the task: countries are not keen to make compromises with regards to their tax bases and competitive status. Does RPA, which also relies on international agreement over the value of residual profit, then stumble into the same everlasting issue of tax base harmonization? Fortunately, no – there are a few elements to RPA that make its implementation possible even without an internationally harmonized tax base.

First point to note is that the current system does not require a harmonized tax base, even though similar issues of one country's tax base affecting another's do come up, especially in relation to relief provided for tax paid abroad. There is no reason to assume a switch to RPA would worsen the situation or change the nature of these compromises. Under RPA, such agreements would have to be made mainly with regards to routine profit; countries associated with trade between affiliates have to agree on the costs and transfer prices they use in determining routine profit arising in each jurisdiction. After these are settled, the exact routine and residual profits to be taxed follow straightforwardly from accounting values. One further issue concerns special provisions, such as R&D benefits, but these are

easily accommodated in the framework just described. The benefits simply have to be separated from the transfer prices: routine and residual profits are first determined normally and countries are then free to adjust the tax burden on the profit allocated in their jurisdiction, leaving other countries' tax bases unaffected. (Devereux et al., 2021, pp. 259–260.)

RPA's functionality and practicality depend heavily on definitions and chosen methods. Implementation challenges and the solutions of Pillar One specifically will be covered in more detail in chapter 4. Still, RPA provides a new framework for CIT that has several benefits over the current system in the larger picture. Let us next turn to the established criteria to give a more precise presentation of the benefits of the reform.

3.3 Motivating the shift to RPA

The effects of the current system's choices of tax base and location evaluate poorly with regards to our criteria. RPA differs from the current system in many important ways: 1) instead of source and residency, taxing rights are divided between origin and destination countries, 2) instead of active and passive income, origin countries retain taxing rights to routine profit, while destination countries have a right to tax the residual profit, and 3) only routine profit is subject to separate accounting. Next, we will focus on the effects of these choices, following the presentation of Devereux et al. (2021, pp. 237–256) and utilizing the familiar criteria: 1) fairness, 2) efficiency, 3) robustness to avoidance, 4) ease of administration, and 5) incentive compatibility.

3.3.1 Fairness

At the risk of repetition: fairness is a tough criterion to apply, as it requires knowledge on who we want to target and whether we actually succeed in it. Incidence of taxes intended to target owners might disproportionately fall on employees, and this effect might even differ considerably between firms (see Fuest et al., 2018). Comparing different systems on fairness grounds is thus not a straightforward matter. Nevertheless, RPA will, in all probability, affect the incidence of corporate taxes: by locating taxing rights to market countries we can expect part of the incidence to move from the current immobile

production factors³³ to customers in market countries. Whether this is more or less fair than the current system is up to debate. (Devereux et al., 2021, p. 247.)

Still, there is a particular sense of fairness captured by RPA. Allocating no tax revenues to market countries seems less fair than the RPA alternative – though, as we discussed in 3.1.3, arguing for this on a principled basis might be uncomfortably philosophical for economists. Still, this sentiment appears to enjoy support as evidenced by Pillar One and digital services taxes, although many of the concrete proposals are still based on some idea of value creation in market countries. In principle, this goes against the motivation of RPA, which allocates residual profit to market countries not because value is created there, but because it is more efficient and leads to a better system. However, in keeping the treatment of routine profit in line with value creation, RPA also captures the inherent fairness aspect of value creation, avoiding the seemingly arbitrary distribution of taxing rights under full destination-based reforms, such as DBCFT.

We noted before that the question of “corporations not paying their fair share of taxes” is easier to approach when reformulated in terms of robustness to avoidance. But, assuming “their fair share” means “more”, there is evidence that RPA leads to a fairer result. Beer et al. (2020) find that residual profit forms a large part of the total profit of the largest multinationals, and estimate that allocating this residual profit under RPA would increase global CIT revenues by around 8%. There is also a distributional element involved: Beer et al. (2020) estimate that investment hubs and tax havens would face the largest decreases in tax revenues, while low-income countries would gain the largest increases. This is largely due to low-income countries being more susceptible to the avoidance issues of the current system than advanced economies – under current system, low-income countries lose more, and under RPA they would gain more. If international equitability is within our concept of fairness, making a case for RPA on these grounds should be easy.

3.3.2 Efficiency

We already discussed the tax base of RPA, and assuming the reform is not accompanied by a tax base reform, RPA will inherit the deficiencies of the current system on this part.

³³ Immobile production factors currently bear the largest tax burden, as under origin basis mobile capital tends to be located in low-tax countries.

The main benefits of RPA instead lie in its effects on location choices when compared to the current system. Let's start by looking at the case of universal adoption.

Even under RPA, taxes will still affect location decisions to an extent. Where countries differ in their tax rates on routine profit, multinationals will benefit from locating real activity to low-tax locations. However, these benefits are restricted to routine profits: taxation of residual profit will, in principle, not affect location decisions, as the tax will not be levied in the country of origin. There are usually significant costs associated with shifting and maintaining real activity in low-tax jurisdictions, and these costs can be justified only by large (often residual) profits that now face a lower tax rate. Incentives for such a shift are greatly reduced if only the tax on routine profit is affected. For example, assume a business has costs of €100 in a field for which routine profit is calculated at 10% mark-up. Suppose also that the business is highly profitable: it actually makes a profit of €150, or a 50% mark-up on costs. Furthermore, the business is currently located in a country with a 30% tax rate and is considering moving to a country with a 10% tax rate. Under current system, the move is worth it if the increase in costs associated with the shift is roughly under 11% – the increase in costs to offset the tax savings has to be quite significant.³⁴ Under RPA, only the routine profit is subject to the lower tax rate, defined now as €10. The tax savings are thus only €2, and an increase in costs of only 2% will wipe these savings out. The margins for shifting real activity for tax reasons become much smaller. This is true even if companies could exaggerate the routine profit (as ALP is still only an approximation): if we misidentified the routine profit in the last example to be €15, the tax savings would still be offset by only 3% increase in costs. (Devereux et al., 2021, pp. 239–240.)

As for R&D or other functions associated with generating residual profit, RPA should not affect location decisions beyond the generally small portion of routine profit. R&D facilities are assigned routine profit based on how much an independent contractor would require for its functions, and the resulting IP will be taxed in market countries. Switching

³⁴ The tax burden in the high-tax country is €15, leaving the company with a net profit of €35. If the company moves to the low-tax location, but its costs increase by 11%, this leaves them with €39 in pre-tax profit, for which the tax burden is €3.9, leaving a net profit of €35.1. If costs increase beyond this, they will offset the tax savings.

the location of IP will not have an effect on the tax liability. To be certain, special benefits provided by countries, such as R&D subsidies, will still affect location decisions. However, as we already mentioned, these provisions should be granted outside the RPA framework, and they should thus only affect the tax revenues of the country in question. (Devereux et al., 2021, p. 240.) Even so, countries can still compete over routine profits via special provisions, but these revenues are generally smaller than in the current system, which should diminish the incentives for aggressive competition.

There is one further location-choice effect that we have to mention: that of the intermediary business. Taxing residual profits in market countries is attractive because of the immobility of the individual consumer. However, immobility is not guaranteed if the buyer is another business. Suppose that company X buys raw materials and other intermediate goods from a range of other firms. The businesses selling to X will now have a part of their residual profit located in the country of X. For the sake of example, assume that company C sells its whole stock to X, resulting in all of C's residual profit to be located in country of X. C would benefit from X being located in a low-tax country, and if the prices paid by X reflect the higher tax burden of C, also X would benefit from locating to a low-tax country. This leads to a distortion if X would have lower costs elsewhere if not for tax reasons. The magnitude of this inefficiency is hard to measure, and there currently exists no empirical evidence for either location choices of intermediary companies or the elasticity of sales prices with regards to different residual profit tax rates. (Devereux et al., 2021, pp. 240–241.) These questions will become more topical if RPA schemes are implemented more broadly.

The case of unilateral adoption is interesting. If we assume a single country adopts RPA, it amounts to an aggressive competitive maneuver, essentially transforming the RPA country into a tax haven from the viewpoint of countries maintaining the current system (Avi-Yonah et al., 2009, p. 519.) Consider three countries – A, B, and C – of which only A adopts RPA. If a company sells to either B or C, it will be incentivized to relocate to A, where it will be taxed for only a portion of its profits: if the country of destination does not tax on destination basis, residual profit will not be taxed. Conversely, if a company is located in B or C and sells to A, it will face taxes for its full profit in the country of production, on top of which it will be taxed for its residual profit in A. This might lead to

double taxation if country A and the country of production cannot agree on the amount of residual profit and associated relief precisely. (Devereux et al., 2021, pp. 251–253.) Unilateral adoption will make any country a more attractive location for economic activity. This obviously comes with worldwide social costs, albeit these additional costs might be small if companies are already extensively shifting profits in this manner.

3.3.3 Robustness to avoidance

We have already noted that if RPA follows the standard corporate tax base, debt shifting will remain an issue on conceptual level. However, the switch towards formulary apportionment makes it possible to combat debt shifting through other measures. In fact, both the proposals by Avi-Yonah, Clausing and Durst (2009, p. 546) and Devereux et al. (2021, pp. 220–221) include a mechanism to allocate interest expenses to all the affiliates in a multinational group “in a manner that is consistent with [...] determining the source of such expenses” or “on the basis of income or assets”, respectively. The general idea is that debt arrangements benefit the multinational group as a whole, and as such, the costs of this benefit should also be allocated appropriately. To be sure, this is not a necessary feature of RPA, but it is a highly appealing reform object that is supported by the RPA framework in general. Currently, such allocation schemes have not been attainable as countries have not been willing to pay interest deductions for costs directly incurred by affiliates outside of their jurisdiction (Devereux et al., 2021, p. 221). However, RPA represents a marked shift in how multinationals are viewed from a taxation viewpoint; if countries agree to formulary allocation of residual profit technically arising in their jurisdiction, it is an easy conceptual bridge to cross to also allocate interest expenses internationally. This is especially true for RPAI, which requires allocating costs more generally. Let’s again examine the case of universal adoption first.

If such a provision is included in the chosen RPA reform – which it most likely will, and definitely should – incentives for debt shifting will largely be eliminated. Furthermore, allocation of interest expenses promotes abolishing interest relief for within-company debt entirely³⁵, as it makes little sense to allocate within-company expenses within the

³⁵ The RPAI proposal explicitly includes provisions to exclude within-company debt.

company. Also, if a multinational attempts to shift third-party debt by manipulating the factors determining the allocation, for example by shifting income or asset holdings to a higher-tax location, they will inadvertently increase their overall tax liability as well. This will eat away most of the benefits of a higher debt relief. (Devereux et al., 2021, p. 242.)

RPA and formulary approaches in general are reforms targeting the current deficient transfer pricing rules, which attempt to estimate a single price reflecting both the routine and residual profit. Benefits of RPA are indeed most marked with respect to BEPS related to transfer prices. First, location of IP will become meaningless. Legal possession of IP will generally not be associated with any routine profit, and the generated residual profit is disconnected from the location of ownership. Also, within-company royalty payments will not insert into the relevant costs used in calculating profit, so they are effectively ignored for tax purposes, affecting neither regional routine profits nor international residual profit. Second, RPA is robust with regard to transfer price manipulation – ALP can readily be used to enforce prices determining routine profit, and residual profit is either insensitive to specific location (as with allocation by sales) or very hard to manipulate (as with allocation by residual gross income). (Devereux et al., 2021, pp. 242–243.)

RPA provides a much more robust system than the current alternative, but no system is perfect. There is an avoidance issue associated with the earlier problem of location of intermediary businesses. Suppose a highly profitable multinational produces goods it wants to sell in high-tax country A, but instead it sells the goods to an independent distributor in low-tax country B, who in turn sells the products to the final customers in A. Assuming that the independent distributor is not massively profitable, most of its profit is deemed routine, and taxed in B along with all the residual profit of the multinational. The location of final sales, A, loses most of its tax revenues due to the multinational and the distributor being independent. If the distribution was handled through the multinational, country A would gain taxing rights on an appropriate portion of the multinational's residual profit. The resulting allocation is not intended and allows the multinational to shift profits to a low-tax location. This is of course a fairly specified issue in contrast with the widespread profit shifting of the current system, but nevertheless an issue to be fixed in implementation. In essence, some mechanism has to be available for

market countries to “look through” the distributor to calculate the relevant residual profit of the original producer. Even overlooking the enforcement issues, this might prove challenging from the viewpoint of international law. (Devereux et al., 2021, pp. 243–244.) We will return to this in the context of Pillar One.

Unilateral adoption is problematic from the viewpoint of robustness to avoidance, as the RPA country will effectively become a tax haven. The treatment of interest payments and within-company debt especially might raise issues, if within-company debt is fully excluded in the RPA country but relief is provided as usual for the interest payment in other countries. Additionally, the RPA country will become a zero-tax patent box regime, as IP is not associated with any routine profit, and the residual profit is not taxed unless done so in the destination country. Similarly to the interest payments, the RPA country will also not tax the inflow of royalty or license payments due to IP located there, which is an issue if deductions for these are allowed in the country of payment. The losers in the case of unilateral adoption are the other countries still maintaining the current system, who will face intensified BEPS as a result. (Devereux et al., 2021, pp. 253–254.)

3.3.4 Ease of administration

RPA includes elements both simplifying and complicating certain aspects of administration. The greatest benefits will be gained in terms of anti-avoidance rules and transfer pricing disputes. RPA will completely close off some channels of avoidance while weakening others, greatly reducing the need for constant monitoring. Similarly, RPA will reduce the burden of transfer price estimation in the most difficult cases. On the other hand, calculating residual profit and taxing it in market countries will introduce new challenges.

First, calculating residual profit is an information-intensive task, requiring cooperation between countries. Collecting and then reviewing this data will require notable administrative effort. Nevertheless, this is not out of scope for a reform program: the BEPS project outlines a framework for international information sharing through country-by-country reporting, indicating both a political will for – and an actual move towards – a system that would directly benefit implementation of RPA. (Devereux et al., 2021, p. 246.) Second, there are certain issues that will require flexibility from the current system,

notably the case of remote sales. Allocating profit to different subsidiaries is perfectly in line with the current practice, but RPA needs to also account for the cases where the current PE standards are not met. Especially for digital companies, there might not be a subsidiary in a market country to allocate profits to, and sales are completed remotely. If such cases are not accounted for, this could lead to substantial distortions to location choices by allowing multinationals to evade tax in the market country. Thus, RPA requires recognizing the allocation factors in each jurisdiction (e.g. sales revenues), no matter the specifics of how the sales are organized.³⁶ Revision of double tax treaties is required to achieve this, and some device has to be specified to induce declaring sales in a market country. One option could be a withholding tax on sales, enforced by the market country, creditable against tax collected on residual profit. (Devereux et al., 2021, pp. 219–220.) Regardless of the chosen method, administrative costs will be associated both with introducing and maintaining such a system.

Universal adoption would simplify the international accounting challenges: if each country's tax authority makes the distinction between routine and residual profit, these numbers are fairly straightforward to measure against each other and use as a basis for allocation. Still, even unilateral adoption should not be an insurmountable issue from an administration perspective. Routine profit is easily calculated unilaterally, and while some problems might come up having to agree on amount of residual profit with countries not making the distinction, this is just one of the issues to solve while negotiating the double tax treaties to better fit the RPA framework.

3.3.5 Incentive compatibility

International tax competition for countries is always a balancing act between two counteracting factors: on the one hand countries want to raise more tax revenue, on the other hand they want to attract investment. The first object supports raising tax rates and combating avoidance, while the second does the opposite. As we have seen, this leads to an often-incoherent system, where countries enforce strict rules on certain channels while maintaining lax monitoring on others. RPA introduces some further complexity to these

³⁶ Subject to some *de minimis* clause, setting a lower bound to amount of sales which justifies allocation of residual profit.

considerations, since countries are now free to choose different rates for the two levels of taxation instead of one. (Devereux et al., 2021, p. 249.)

In principle, one benefit of taxes on residual profits is the immobility of the consumer base. Hence, countries can choose the tax rates for residual profits without fear of tax base spillover. We have however seen that immobility is not always guaranteed, notably when the customer is another business. Accordingly, it is possible for countries to attract economic activity with lower residual tax rates to an extent, inviting some competitiveness and downward pressure on residual tax rates. Nevertheless, it is unlikely that this effect is large. Instead, most of the competition under RPA can be expected to focus on taxation of routine profit. Companies will still find it attractive to move to low-tax locations, but the associated benefits are limited to the routine profit. This supposedly leads to weaker incentives for countries to compete over economic activity. However, countries wishing to compete will have to do so more aggressively. There might well be a larger downward pressure on tax rates on routine rather than residual profit, suggesting that countries may choose larger rates for the latter. In an extreme case, tax rates on routine profits could even be driven to zero, and RPA could still function as a full destination-based tax on residual profit. (Devereux et al., 2021, pp. 249–250.)

We have noted that unilateral adoption of RPA is an aggressive competitive move, likely resulting in lower tax revenues for countries maintaining the current system. To remain competitive, other countries have powerful incentives to also adopt RPA, and these incentives are likely to be larger the greater the size of the unilaterally adopting country (Avi-Yonah et al., 2009, p. 519). Interestingly, some countries might even opt for a more extreme measure and try to outmaneuver RPA by introducing a completely destination-based system such as DBCFT (Devereux et al., 2021, p. 256). Thus, a great benefit of RPA (and destination-based systems in general) is that if adopted universally, it results in a much more efficient and stable system; and if adopted unilaterally, it creates incentives directing to universal adoption.

We now have an outline for RPA, and a description of its main strengths and weaknesses. Let us next turn our attention to its applications in real world – what are the scope and

central definitions to be made internationally, and how (and how well) is the base of RPA utilized in OECD Pillar One.

4 OECD Pillar One

Action 1 of the BEPS project is titled “Tax challenges arising from digitalization.” The public discourse often takes a narrow view on the topic, focusing on the value creation by digital companies in countries without taxing rights. The OECD’s 2015 Action 1 Final Report however pressed two points: 1) the whole economy is becoming digitalized, so “ring-fencing” the digital economy through, for example, digital services taxes, is not a sufficient long-term solution, and 2) digital economy is not associated with unique BEPS issues, but there are key features to digital economies which exacerbate existing BEPS risks. As such, Action 1 should not be understood as introducing new forms of taxation on digital companies, but rather as an extension or a modification to the current system in order to make it more suitable for digitalized economies in general. In addition to this, even though Action 1 involves elements of profit allocation in its solution, it is explicitly not aimed at modifying the allocation principles underlying the current system (see IIEA, 2020). The conceptual basis of Action 1 is that digitalization has made it increasingly possible to create value in market countries, so market countries should be allocated taxing rights accordingly. There simply have been no tools to enforce this allocation before. This is a common source of confusion, as Action 1 will result in a re-allocation of taxing rights, but it is not meant to in fact re-allocate taxing rights, but rather enforce the allocation as it is meant to take place under the principles of the current system.

In simplest possible terms, the problem Action 1 attempts to solve is that there are profits currently gained in the digital economy that are not properly taxed, where “properly” reflects the consensus of the current system. The Action 1 solution to the issue is built on two complementary pillars. Pillar One targets the profits that arise in market jurisdictions without any physical presence of the multinational in said jurisdiction. This type of profit is very difficult to manage in an origin-based system: the locations of factors of production and sales are wholly disconnected, which makes pinpointing value creation and enforcement of origin-based taxes extremely difficult. It is in any case clear that some value should be attributed to the market jurisdiction, especially if there is an element of

user created value in play, such as with online platforms or social media. We have thus far established that destination-based policies are a valuable tool in taxing this type of mobile activity, and Pillar One draws upon the same ideas, and more specifically, the RPA.

In addition to the divorced location of sales and production, the exceptionally mobile tax bases of digitalized companies allow them to easily relocate to jurisdictions with no efficient taxation. Pillar Two is meant to tackle this problem by imposing a worldwide minimum rate of taxation imposed in the residence country. Together, Pillars 1 and 2 supposedly offer a workable solution to the main issues invited by digitalization. Next, we will focus on the specific choices that characterize the Pillar One style implementation of RPA. Pillar One is still a work in progress, and there are a number of open issues that require political decisions (see OECD, 2020d, pp. 11–12), but the outline and central ideas are already in place. The next section will follow the presentation of the 2020 OECD Blueprint for Pillar One.

4.1 RPA in the style of Pillar One

From RPA viewpoint, there are two key factors forming Pillar One: the inconspicuously named “Amount A” and “Amount B”. These correspond to ideas of residual and routine profit, respectively, but with some key differences.

4.1.1 Amount A

The profit allocable to recognized market jurisdictions is called Amount A, which corresponds to a measure of the consolidated residual profit of the multinational. Yet, there is a reason Amount A is not simply called residual profit, marking a significant departure between Pillar One and the RPA schemes presented earlier: only part of the residual profit is allocated to the market jurisdictions. This part forms the Amount A. Allocating only a portion of residual profits to market jurisdictions reflects the value creation sentiment – i.e. only part of the value is created in market jurisdictions – and is explicitly stated to “ensure that other factors such as trade intangibles, capital and risk, continue to be remunerated and allocated residual profit (OECD, 2020d, p. 120).”

The treatment of Amount A will proceed in three steps: first, worldwide residual profit is determined for a multinational based on some agreed upon profitability threshold. Thus, pre-tax profits exceeding, for example, 10% of revenues, are considered residual profit.³⁷ The second step quantifies Amount A as a fixed percentage of the residual profit calculated in the first step. On full destination-based taxation of residual profit, this percentage is naturally one hundred. Surprisingly, Pillar One opts for percentages much smaller than this, with OECD (2020d, p. 124) Blueprint suggestions ranging from 10% to 30%. The remaining major portion of residual profit will continue to be taxed with the current system and an ALP-estimate for both the routine and residual profit. The third step allocates Amount A to the eligible market jurisdictions based on some formula employing revenues attributed to different jurisdictions. This is similar to the weighting by sales revenue, as discussed in 3.2.2.

Amount A is plainly overlaid on top of the existing system to capture the residual profits seen as arising in market jurisdictions. Yet, taxation of residual profit is not limited to market jurisdictions, and origin countries still retain a major part of residual profits, which are not estimated through consolidated accounts, but rather through the familiar ALP of the current system. This approach is consistent with OECD's view that ALP is a sufficient estimator to capture both the residual and routine profit arising in certain jurisdictions – a view, which has been argued against in this thesis. Nevertheless, the coexistence of ALP and formulary allocation brings up some issues not faced by the RPA schemes from earlier. A mechanism is included in Pillar One to specifically account for *double counting*, which is an issue if a country already has taxing rights over certain residual profit in the current system, but it would in addition be allocated Amount A as a market jurisdiction – this would mean the residual profit of the company is taxed twice (OECD, 2020d, pp. 128–129).

Unlike RPA, Pillar One requires us to distinguish which function generates the residual profit. The problematic case is the one, where some functions already capture the residual profits of the sales functions, meaning the same residual profit Amount A tries to allocate. The OECD (2020d, pp. 129–131) Blueprint identifies at least two such activities:

³⁷ The OECD (2020d, p. 123) Blueprint considers thresholds ranging from 8% to 25%.

marketing and distribution. For these, a *safe harbour* is implemented. If a multinational performs marketing or distribution functions in some country, the way the safe harbour works is by first determining Amount A allocable to the country as a market jurisdiction³⁸ (for example, return on sales of 1.5%), and then adding it together with some estimated fixed return for the routine activity performed there (for example, 2%). This results in a safe harbour return of 3.5%. If the subsidiary reports profit margins higher than this, it is assumed that the full residual profit allocable there is already captured through taxation of the routine functions through ALP, and Amount A will not be paid on top of this. Conversely, if the profit margin is lower, Amount A will be paid to remunerate the residual profit seen as arising in the jurisdiction, not yet captured by the taxation of routine activities there. (OECD, 2020d, p. 220.)

4.1.2 Amount B

Double counting is an issue specifically caused by not cleanly separating routine and residual profit, resulting from the unwillingness to limit the taxing rights of origin countries to routine profit. In fact, for Pillar One, calculating routine profit in the earlier RPA sense is only relevant in the cases where the ALP estimate includes the same residual profit Amount A is trying to allocate. The role of routine profit in Pillar One is fairly minor – and entirely subservient to ALP – which is reflected in the relatively narrow focus Amount B receives in the OECD Blueprint. In essence, Amount B is the same as the routine profit discussed in the context of RPA: a fixed return estimated by looking at comparable businesses. Still, there are certain conceptual differences. First, Amount B will be applied only to those functions for which the ALP estimate includes residual profits allocated under Amount A: namely, marketing and distribution.³⁹ Utilizing

³⁸ Seen to reflect the value created in markets.

³⁹ The Blueprint is – perhaps intentionally due to pending questions concerning the scope and implementation – noticeably vague on the points relating Amount A and Amount B together in RPA fashion. The purpose of Amount B is explicitly stated to be two-fold: “First, Amount B is intended to simplify the administration of transfer pricing rules [...]. Second, Amount B is intended to enhance tax certainty and reduce controversy between tax administrations and taxpayers (OECD, 2020c, p. 155).” There is a definite benefit gained in these terms in removing the overlap between Amount A and the ALP estimate, but this benefit is not articulated in these terms even once in the Blueprint. It is instead repeatedly stated that Amount B is meant to “approximate results determined in accordance with the ALP (OECD, 2020c, p. 15).” This is certainly true to an extent, but it is odd that the key difference is not noted: ALP includes an estimate of the

Amount B in these areas solves the issue of double counting, but the safe harbour rules are in place in case Amount A and Amount B are implemented separately. Second, the way it is presented, Amount B is not meant as a stand-alone tool to evaluate routine profit. Rather, it is meant to be a streamlined approximation and a proxy for ALP, which could even be overturned if a sufficiently robust comparable market price to be used for ALP can be found (OECD, 2020d, p. 156).

This highlights a deeper conceptual difference between Pillar One and RPA in general. Working in the value creation framework, ALP gives a certain approximation of the underlying value creation process of a multinational and allocates the resulting profit accordingly; RPA, on the other hand, gives a different approximation and allocation for the same process. It is safe to say that neither one of these is objectively correct. (Avi-Yonah & Benshalom, 2011, pp. 381–383.) In chapter 3 it was argued that the RPA approximation nevertheless leads to a better result. Despite the faults of ALP being widely recognized, OECD seems to double down on the principle: Pillar One works on the presumption that the ALP approximation is correct, and RPA methods are utilized only to approximate the ALP result. This is a curious workaround to the dysfunctionality of ALP in these areas, which OECD still seems to be reluctant to admit. We will return to the evaluation of Pillar One in a moment, but first, let us focus on some of the key definitions and the scope for Pillar One.

4.2 Implementation in practice

The theories presented by academics enjoy the benefit of abstraction, often avoiding the complexities of real world by virtue of simplification and aggregation. OECD does not have the same luxury, and as such, much of the work on Pillar One is focused on definitions and specific applications of the presented principles to different real-world situations. These definitions determine how the system functions in practice, and as we have seen, certain choices have great effect on the workings of the final system.

residual profit, whereas Amount B using a fixed return estimated via comparable transactions will not include residual profits due to, for example, synergy gains within the multinational.

4.2.1 Scope

Any reform will have to make a choice over which firms are included. There are several dimensions to this choice: participation can be limited, for example, with regards to type of legal organization, type of activity, or size of the business. In general, we wish the choice to be made in a way that does not distort the incentives of economic agents sans taxes. In addition, two opposing factors have to be considered: if the reform raises tax revenues in general, then a wider scope will lead to larger revenues, but also to larger administrative costs. Conversely, a narrower scope will diminish revenue gains, but is also accompanied by lower administrative costs. (Devereux et al., 2021, pp. 182–184.) In practice, determining the scope is then a function of this cost-benefit analysis.

The scope of Amount A is covered extensively in the OECD (2020d, pp. 19–63) Blueprint. There are two key elements: an activity test and a threshold test. The activity test is meant to limit the scope to firms partaking in activities which are particularly challenging for the current system: *automated digital services*⁴⁰ (ADS) and *consumer-facing businesses*⁴¹ (CFB). This reflects the two areas where it is most clearly thought that value is being created in the market jurisdiction without it being taxed there.⁴² An important distinction is that business-facing businesses are excluded from the scope: a firm producing intermediary goods sold to other firms is not liable for Amount A. From the earlier RPA framework this might look like an arbitrary choice, but it has to be remembered that OECD presumes ALP is an accurate measure of the value created by a subsidiary. The problem, then, is simply that ALP cannot separate the value created in

⁴⁰ Services, which are provided over the internet and, once set up, require only minimal human involvement on the part of the service provider (OECD, 2020d, p. 20). These include such services as social media platforms, online search engines and online gaming (OECD, 2020d, p. 25). Specifically excluded are, for example, online sale of non-digital goods and services for customers, and customized online services requiring human involvement (OECD, 2020d, p. 33).

⁴¹ Consumer-facing business is one that supplies typical consumer-products or services to individuals for personal use. Sales can take place either directly or indirectly. In addition, regardless of the supply chain, a business is consumer-facing if it holds the rights to intangible property connected with aforementioned goods or services. (OECD, 2020d, pp. 39–40.) Specifically excluded are, for example, ADS, natural resources, and financial services (OECD, 2020d, p. 49).

⁴² Limiting the scope to ADS and CFB based on value creation is a very contested issue, subject to many of the points discussed in literature with regard to digital services taxes. In essence, the value created by these functions might not be sufficiently different to value created by other out-of-scope activities to merit the limitation to ADS and CFB on this basis (see Grinberg, 2018).

market jurisdictions from the total value created by a subsidiary. This is what the new taxing right effectively tries to solve. It can be argued that this is not a problem for intermediary businesses, since the problematic value is created in final markets, and similar value is not created at the level of intermediate manufacturing. From this view, it is somewhat justified to only apply Amount A to customer-facing businesses; though, it is also hard to see how customer-based intangibles would not insert similarly into the value creation process regardless of whether the customer is a business or an individual.

Much work is dedicated to the implementation of the activity test to gauge whether a certain activity falls within the intended definition of ADS or CFB. In practice, the activity test will refer any activity to predetermined “positive” and “negative” lists: the activity is in scope of Amount A if: 1) it is in the positive list, or 2) if it fulfills the criteria for either ADS or CFB *and* is not on the negative list.

As with any reform, there are considerable administrative and implementation costs to consider with Pillar One. With this in mind, the scope of Amount A is intended to only include the largest multinationals, for which it can be argued the benefits outweigh the costs. This is achieved through two threshold tests. First, global revenue of a multinational is assessed to exclude smaller multinationals; at this point, an annual threshold of €750 million is considered. Next, for the multinationals above the first threshold, foreign in-scope revenues are determined to evaluate whether the associated Amount A is large enough to be allocated. If a multinational has no significant foreign ADS or CFB revenues the administrative costs of Amount A are likely to eat away the benefits; thus, a de minimis threshold will be established for foreign in-scope revenue, and firms below the threshold will not be liable for Amount A. The size of this threshold is not yet explicated in the Blueprint.

4.2.2 Distinguishing the market jurisdiction and the new nexus

The idea and clear definition of a market jurisdiction is important for any system wishing to allocate profits there. There are two interrelated elements: first, how to determine if a country is a “market jurisdiction” and second, how to accurately determine how much revenue is actually sourced within each country. We have already encountered this issue in relation to location of intermediary businesses versus the location of final consumption

in 3.3.3. Delineating where the profits of a multinational arise is important for allocation purposes.

The new nexus rules determine whether a market jurisdiction is entitled to an allocation of Amount A, but they do not alter the existing nexus rules in any other way or for any other purpose. For a country to be allocated Amount A as a market jurisdiction, the multinational needs to have a “significant and sustained engagement in the market” of the country in question (OECD, 2020d, p. 64). However, there is some debate between the Inclusive Framework members on the interpretation of this phrase: other countries consider sales revenues to be enough to indicate “a significant and sustained” engagement, while other countries argue for higher nexus standards, more closely tied with value creation. The current OECD (2020d, pp. 64–65) approach aims for a compromise. For ADS, which can operate without any concrete ties to a jurisdiction, a nexus is formed based only on sales revenues, i.e. annual revenues above some amount X; for CFBs, which usually require some coordination with customers, a “plus factor” is considered in addition to sales revenues. This is an unfortunate consequence of the value creation argument, as the need for a plus factor follows from the view that sales on their own are not enough to establish that value is created in the markets. It is accepted for ADS, as there simply are no other reliable indicators. The plus factors being considered are mainly derivatives of the standard PE definitions.⁴³

The natural next question concerns revenue sourcing. If a multinational sells a final product to an independent distributor, who in turn makes the final transaction with the customer in another country, does the multinational have a significant and sustained engagement in the final market jurisdiction? The OECD approaches the issue with a list of case-based indicators that can be used to determine where the revenue is seen to be derived from. In practice, a sourcing rule is identified for each type of in-scope revenue, which includes a hierarchical list of indicators⁴⁴ that multinationals can use to identify and

⁴³ Curiously, thought is also given to treating some oversized profits Y (above X) as a plus factor (see OECD, 2020c, p. 65) – in my mind, coherently justifying this in the value creation framework is far from obvious if even possible at all.

⁴⁴ For example, for directly sold consumer-facing goods, the sourcing rule determines the revenue is sourced from “the jurisdiction of the place of final delivery of the good to the consumer”. The first indicator for “the place of final delivery” is the location of the retail storefront that directly sells the goods. If the first indicator

report the jurisdiction the revenue is sourced from. For the aforementioned case of the independent distributor, both the multinational and the distributor are identified as CFBs and are separately liable for Amount A on this count. For the distributor, the sourcing rule for directly sold goods is employed, and the revenue is seen to be derived from the final market jurisdiction. For the multinational, the sourcing rule for goods sold through an independent distributor is employed, and this also states that the revenue is derived from the final market jurisdiction. (OECD, 2020d, p. 79.) If the firms exceed the other relevant thresholds, both firms will have a part of their residual profit allocated to the jurisdiction of the final sales. In general, the sourcing rules are created in such a way that the relevant market jurisdiction is always the jurisdiction of the final sales.

4.2.3 Tax base

There are several design choices associated with the tax base of the new taxing right. More than specific economic goals, these have to do with functional implementation, subject to massive amounts of technical work. Nevertheless, they are still helpful to mention, and insert meaningfully to the functioning of the final system.

First, we have the familiar issue of tax base harmonization: countries have to agree on the size of Amount A tax base. On surface, this simply requires that countries agree on the value of the consolidated profit of the multinational, but the issue is more complicated. There are inherent discrepancies between the valuations of countries, due to differing accounting standards. Requiring countries and multinationals to switch to a common system would be administratively challenging and very expensive and would be unlikely to lead to benefits worth the immense costs. Accepting the different standards, OECD (2020d, p. 102) also notes that making harmonization adjustments on a case-basis would also be extremely complex, and likely still lead to conflicting measures. Instead, the Pillar One solution depends on a standardized definition of profit before taxes and accepts some variation between the outcomes. A mechanism is promised to be included to assure no materially inconsistent outcomes result from the different standards. The precise mechanism is however not explicated in the Blueprint.

is not applicable, the second indicator will be used, which is the location of the final delivery address of the good. (OECD, 2020c, p. 79.)

A second issue concerns multinationals which derive profits from multiple sources, only some of which are in scope of Amount A. This can lead to fairly complicated and arbitrary-looking demarcations of taxing rights: for example, a firm providing both automated cloud computing services and customized packages of the same product would be liable for Amount A only for the profits attributed to the sales of the automated functions. The tax base of Amount A consists of only profits of in-scope activities, so under Pillar One, multinationals are required to report their profits using segmented accounts for CFB, ADS, and out-of-scope activities individually. This applies to all multinationals, as this information is required to assess the formation of the Amount A nexus. After this, some de minimis clause is applied to the worldwide revenues of multinationals to determine whether the size of Amount A is calculated based on the segmented accounts, or whether the consolidated profit of all activities is utilized.⁴⁵ If a multinational exceeds the threshold, it is further subjected to a case-base analysis on whether segmentation is necessary and on what basis the segmentation takes place. The most natural way is to follow the basic accounting standards for distinguishing different recognized business segments, but other factors such as geographical segments can also be utilized. (OECD, 2020d, p. 108.)

Third issue in context of the tax base has to do with treatment of losses. Pillar One takes the simplistic approach: Amount A rules are applied similarly at the level of the group (or segment) no matter if the outcome is profit or loss. Losses are not calculated individually between subsidiaries, and they are instead simply summed to one consolidated account together with the profits from which Amount A is calculated.⁴⁶ In theory, one particularly unsuccessful subsidiary could then eat away the entire tax base of Amount A. The system will also utilize the common carry-forward method, allowing past losses to be deducted from future profits (OECD, 2020d, p. 112). Positive tax base for Amount A will only occur after historic losses accumulated by the group have been earned out. OECD (2020d,

⁴⁵ The idea being that for smaller companies, the cost of segmentation overweighs the benefits. The proposed easiest way to achieve a segmented calculation for Amount A is to first calculate the consolidated Amount A tax base for all activities. The consolidated profit margin is then used as a proxy for the in-scope profit margin, which in turn is then applied to the in-scope revenues. (OECD, 2020c, p. 106.)

⁴⁶ In the case of segmentation, the losses incurred by the different segments will only insert into the consolidated account of said segment.

pp. 114–115) is currently also considering whether the carry-forward should also include so called “profit shortfalls”, where the final profit is not negative, but less than the agreed upon profitability threshold – or in other words, where residual profit is negative. In theory, allowing negative residual profit to be deducted would improve neutrality for firms with volatile profits or profitability cycles longer than the standard tax year. Still, allowing such deductions would complicate the system, which OECD is very averse towards. On this issue, like many others, we will simply have to wait for the final proposal.

4.2.4 Elimination of double taxation

Pillar One is designed as an overlay to the existing profit allocation rules, which means it does not change the functioning of the underlying system. As such, profits will continue to be allocated under ALP as in the current system, on top of which we add the new allocation mechanism. This presents an obvious case of double taxation on top of the already discussed double counting, as residence countries likely partake in the same residual profit allocated under Amount A. Thus, a tax relief is necessary, which brings up the central question: which jurisdiction is responsible for paying the relief? Double taxation arises when a company liable for Amount A tax is also taxed on the basis of ALP, which includes a measure of the same residual profit. This indicates that the jurisdiction of the subsidiary (or headquarters) who is responsible for paying Amount A, should also provide the relief – and more often than not this is the residence country.

There are very difficult conceptual issues in defining who bears the Amount A tax burden within a corporate group. This is because the residual profit seen as created in the market jurisdiction does not materially arise in the market jurisdiction; it simply exists as a portion of the profit of the multinational, arising in a subsidiary or headquarters in some other jurisdiction. The question then is, which entity’s residual profit includes the residual profit generated in the specific market jurisdiction? This might be simple to answer if there is one country of residence, but for complex organizational structures, the question is nearly impossible. Nevertheless, a paying entity – i.e. the entity bearing the Amount A tax burden – has to be decided, and the proposed process follows four steps (OECD, 2020d, p. 136). First step utilizes a set of indicators to assess whether a certain within-group entity makes a “material and sustained contribution” to the residual profit of the

multinational – i.e. does residual profit arise in said subsidiary or headquarters. Second step evaluates whether the entity identified is profitable enough to actually carry Amount A tax liability. Third step judges which paying entity is most connected with each market jurisdiction and allocates the Amount A tax liability accordingly. A market jurisdiction’s residual profit is seen as arising in the paying entity most connected with said jurisdiction, and consequently, relief should only be provided by the paying entity’s jurisdiction on this part of residual profit. If there is only one paying entity, this step is naturally unnecessary. The fourth step will be utilized if there are no sufficiently strong connections between market jurisdictions and the paying entities, in which case the relief paid will be proportional to the profitability of the different paying entities.

After the paying entity is determined, and the amount of doubly taxed income is calculated, the jurisdiction will simply utilize the exemption or credit method discussed earlier to provide the relief. The elements presented so far form the key mechanisms of Pillar One. Let us next turn to evaluate the system just described.

4.3 Evaluating Pillar One

We have seen that RPA has several benefits over the current system with regards to our set criteria. Pillar One follows a similar framework, so there are no conceptual reasons as to why similar benefits would not follow also from Pillar One. There are however several differences as opposed to RPA presented earlier: 1) Pillar One is much narrower in scope, 2) it allocates only a part of the residual profit to market countries, and 3) it exists alongside the framework of the current system. To evaluate the effects of these choices against RPA, we will again make use of the five criteria: 1) fairness, 2) efficiency, 3) robustness to avoidance, 4) ease of administration, and 5) incentive compatibility.

4.3.1 Fairness

In general, Pillar One is subject to many of the same conclusions we reached in the context of RPA before. However, even without again repeating the problems concerning fairness judgements, we can safely state that the revenue gains associated are a central factor in whether the general population views any reform as “fairer”. Returning to the sentiment presented in the very first paragraph of this thesis, it is commonly believed that

multinationals do not pay their fair share of taxes. Insofar as this is understood as saying multinationals benefit from oversized profits which could practically be taxed more, there is also empirical backing to this idea. However, the way Pillar One restricts the scope of RPA has major consequences to the resulting revenues and allocation.

In the context of full RPA, Beer et al. (2020) reported estimates of global revenue gains of around 8%. Accurately locating the cause (and the exact magnitude) of these gains is obviously difficult, but as RPA does not in principle broaden the tax base, most of the gains can likely be attributed to tax bases moving from low- to high-tax locations. The effect is then simply due to the efficient curbing of profit shifting. If this is the case, the revenue gains should be some function of the scale of profit shifting and the effective rate of taxation faced by the shifted profits. Yet, literature provides wildly different estimates of the scale of profit shifting, inviting volatility also to the estimates of possible tax revenue gains. The OECD estimate of \$100-\$240 billion revenue loss due to profit shifting corresponds to roughly 4% to 10% of global CIT revenues. Some authors have presented findings that profit shifting is actually much more prevalent (see Clausing, 2016; Tørsløv et al., 2018; Wier & Reynolds, 2018) and argue this estimate is dramatically understated. Other recent papers have, however, also reached estimates consistent with the OECD result (see Blouin & Robinson, 2021; Fuest et al., 2021). Still, even working with the lower bound of the OECD estimate, there is a clear fairness argument to be made in favor of a system capable of raising global CIT revenues by 4%.

This argument loses much of its power in Pillar One. In a recent paper, Fuest et al. (2020) estimated the Pillar One effect on German tax revenues and found it to be close to zero. OECD (2020c, p. 15) has made similar calculations, reporting estimated global CIT revenue gains of 0.2% to 0.5% for Pillar One using mid-level choices for yet undecided parameters. In addition, no marked difference is found between revenue gains for low versus high income countries (OECD, 2020c, p. 18). If there was a fairly obvious argument via international fairness for RPA, its power is also certainly diminished in Pillar One. In addition to effects of Pillar One, the economic impact assessment by OECD (2020c) looks at Action 1 as a whole, also reporting the tax revenue effects of Pillar Two. These are found to be larger than those of Pillar One, with estimates ranging from 1.7% to 2.8% of global CIT revenues. These are due to both the direct revenues from the

established minimum tax rate as well as reduced profit shifting. As Pillar Two is the more aggressive measure to combat BEPS than Pillar One, this is to be expected. In total, the OECD estimates for tax revenue gains for Action 1 are between 1.9% and 3.2%, of which Pillar One is responsible for only a small minority. This highlights the fact that, working in the value creation framework, Pillar One is simply a tool to reach an intuitively “fairer” allocation by locating profits in market jurisdictions. The tax revenue benefits have to be seen as arising from the BEPS project as a whole. If the other actions manage to close major loopholes, and if OECD estimates are correct, we can even expect revenue gains similar to those estimated by Beer et al. simply due to reduced profit shifting. If allocating taxing rights to market countries is seen as fair, there is a mild fairness argument to be made in favor of Pillar One, albeit not as obvious as with full RPA.

The points made above largely set the tone for this evaluation. Pillar One is based on a framework which, if utilized to its full extent, could fix many of the issues of the current system. Instead, Pillar One operates on a narrower scope and in the framework of the current system with all its issues, which are then meant to be accounted for by the other actions of the BEPS project. All of this is not to say the BEPS project or Pillar One are ill-motivated: if the framework is politically set in stone, the BEPS actions might be the best course of action. They might even be successful with regards to revenue goals. However, the aversity towards a broader reform comes with a cost: there are inherent issues with the current system, only some of which are possible to solve within the BEPS project.

4.3.2 Efficiency

As Pillar One is not aimed at a fundamental reform, it is unsurprising it also makes no changes to the existing tax base. The associated inefficiencies of taxing normal returns and incentives for using debt finance are still an issue under Pillar One.

As for location decisions, the effects of Pillar One are nearly nonexistent in comparison with full RPA. The OECD (2020c, p. 11) Economic Impact Assessment notes that Action 1 “could enhance the efficiency of global capital allocation by increasing the importance of non-tax factors in investment decisions”, which means that taxes have less effect on location choices. This statement, conditional as it is, is certainly true. However, Pillar One

only affects largest multinationals in the fields of ADS and CFB. Firms outside the scope will retain their normal incentives to shift profits, albeit in an environment that should be more robust to avoidance. For firms inside the scope, full RPA would limit the benefits of profit shifting to routine profit, but under Pillar One 80% (or 70%-90% depending on the final proposal) of residual profit will still be tied to the origin country. The idea of RPA was not to eliminate the possibility of profit shifting entirely, but to make the margins for profitable shifting significantly smaller. By widening the margins Pillar One will lose most of these benefits. On the other hand, as Pillar One allocates Amount A based on sales revenue, the fact that Amount A is smaller also diminishes the possible inefficiency effect of subsidiaries with different levels of profitability, as discussed in 3.2.2.

The treatment of R&D and ownership of IP will remain problematic under Pillar One. Passive income will continue to be estimated with ALP, which the BEPS project aims to bolster via Actions 8-10. In the context of full RPA, we noted that incentives for aggressive competition over IP would likely be curbed as the associated residual profits would be smaller; again, it is likely that the small reallocation percentage is not enough to gain these benefits. We have already discussed the treatment of intermediary businesses in the distribution chain for CFBs, but it bears to point out again that intermediary businesses selling to other businesses are exempt from Pillar One. These firms will retain their profit shifting incentives. This demarcation might also affect firms which produce goods with dual use, both as a final and an intermediary good. Whether these firms will react by differentiating their product for intermediary use only is an interesting question, but this effect might also be diminished by the small amount of residual profit which is allocable to destination countries.

In sum, the scope and limitations of Amount A are likely to diminish most of the benefits of a switch to an RPA system. Consequently, also the problems associated with a full switch are made less severe. This corroborates the previous statement by OECD Economic Impact Assessment: there might be a small efficiency benefit. But only for a small group of multinationals – and the total effect is likely to be close to zero. There are few efficiency reasons to implement a system such as Pillar One.

4.3.3 Robustness to avoidance

Consistent with the principle of minimal reform, Pillar One does not reform the tax base in a way that would remove incentives for debt shifting. Instead, debt shifting too is left to be resolved by tighter regulation, introduced via Action 4.

The current ALP system will still be in full force under Pillar One, so the system will be just as robust to avoidance as the anti-avoidance regulation – strengthened by BEPS project – can make it. The facts of the matter will still remain the same: a single ALP estimate consisting of both the residual and routine profit is incapable of solving the conceptual issues of regional value creation, central to the current system. As long as the system is dependent on value creation, there are ways to manipulate the ALP estimate in fields it is poorly applicable to. Manipulation can be restricted to an extent, but at great costs on both administrative ease and simplicity of the system. Having made the case for full RPA, the justification for the current system – with or without Pillar One – is, at least theoretically, hard to find.

Pillar One is subject to a myriad of definitions and thresholds. These invite complexity and can give rise to new avoidance opportunities, which are also recognized by OECD. Some of the largest issues concern the segmentation framework, and the subjectivity of some of the definitions. Consider a multinational operating two interrelated companies producing ADS – if one of the subsidiaries is highly profitable and the other is not, the combined profit margin might reduce or completely eliminate Amount A tax liability (OECD, 2020d, p. 106). If the firms are materially independent, using a segmented account might be preferable to ensure fair taxation of the high margin business. However, making the distinction in the case of complex business models might be difficult and leave opportunities for multinationals to combine profits in a preferential way.

Another related issue has to do with intersegmental transactions. If a multinational segments its accounts to calculate Amount A, it might try to move profits from one segment to another in order to move them out-of-scope of Amount A (OECD, 2020d, p. 110). For this reason, OECD proposes excluding all intersegmental transactions for calculating Amount A. However, it is also recognized that this might lead to misallocation if one segment incurs significant costs for an investment that is profitably utilized in

another segment. For now, we will have to wait for the final proposal. Still, it is evident that segmentation of multinational's profits in this sense is bound to be arbitrary in the same way as is segmenting any profit on locational basis. Ironically, it is thus consistent with the system it is applied to – though unfortunately not to the benefit of either the system as a whole or the problem it tries to solve.

Other problems might arise with regards to the other thresholds and definitions, but we will touch on these in the next section.

4.3.4 Ease of administration

The negatives of Pillar One are most highlighted in the area of administration. As the current system will proceed to function as normal, Pillar One will only invite further complexity by overlaying a new taxing right with new rules and definitions on top of the existing, already complex rules and definitions. The more levels of separation there are, the more complex is the system. For Amount A these problems start from the beginning: first it has to be assessed whether a firm provides ADS or if it is a CFB. Then, specific functions within the firm have to be evaluated, often subject to very difficult and subjective rulings: for example, a service-package involving ADS and related non-ADS services *might* be considered in-scope if the “ADS represents a substantial part of the overall service, and the non-ADS elements derive significant benefits from their connection to the ADS elements (OECD, 2020d, p. 36)”. Evaluating these cases will require considerable effort from both the firms and the tax officials, which is both inefficient and harms tax certainty.

Similar and possibly even more severe issues are present on the CFB side, where many types of business models such as franchising and licensing have to be included. In addition to this, even the basic definition of a CFB is fairly subjective and rests on distinguishing if the goods or services provided are “of a type commonly sold to consumers”. These types are in-scope of Amount A even if they are sold to companies, whereas regular intermediate products sold by business-facing businesses are not. For dual use products, which are sold as both intermediary and final goods – such as car tires and batteries – only those sold to consumers are in scope. The differentiating factor could be as simple as packaging: industrial products are not packaged or sold in an individual consumer-

friendly manner. (OECD, 2020d, pp. 45–46.) Accurate and efficient monitoring of in- and out-of-scope activities will no doubt entail a significant workload. After the in-scope functions have been determined, all the overlaps between the current system have to be also accounted for: the need for safe harbor and segmentation has to be evaluated, and the “paying entity” has to be identified. These complicate the system even further, which is unfortunate, because such problems do not come up in a full RPA system.

There are some complications that are a necessary feature of RPA schemes, namely the new nexus and revenue sourcing rules, and tax base harmonization. These have been discussed in chapter 3, and the Pillar One solutions are in accordance with the points made earlier. In the full RPA proposal, the costs of the solutions are mostly offset by the simplification of administration in other areas. Same is not true for Pillar One, which does not provide the possibility for narrower anti-avoidance regulation or help solve a large portion of the transfer pricing disputes. Instead of solving old ones, Pillar One will lead to new disputes concerning the new taxing right and its relation to the existing system. BEPS project as a whole will of course address many of the old issues, but we have already made the case that if used to its full extent, the Pillar One framework could eliminate many of them altogether.

4.3.5 Incentive compatibility

In 3.3.5 we concluded that full RPA will largely restrict the international competition over tax rates to routine profits, and that the benefits associated with competing are generally smaller. Again, the scope and size of Amount A will diminish this effect: location choices will remain meaningful and countries will still have incentives to compete aggressively over economic activity.

As the BEPS project is by definition a multilateral action with coordination requirements and monitoring, the other incentive compatibility questions are not as severe as with unilateral approaches. Still, the proposal is not universal, and it is fair to ask as to what extent it encourages other countries to adopt a similar system – assuming of course, that universal adoption is the optimal case.⁴⁷ Earlier with full RPA we noted that a unilateral

⁴⁷ This question is demonstrably more impactful for Pillar Two, for which it has been argued that it actually incentivizes staying out of the proposal (see Devereux et al., 2020, p. 2).

reform is an aggressive competitive move; does the adoption of Pillar One by several significant economies also incentivize rest of the world to implement a similar system? With the base of the current system functioning under Pillar One, no one country would likely benefit much from implementing a similar system. Interestingly though, introducing a more radical reform, such as DBCFT or full RPA, will remain an attractive option even unilaterally. From the viewpoint of BEPS project countries, this reformer country would effectively become a tax haven as discussed earlier, which might even incentivize a broader reform in the Pillar One countries also.

5 Discussion

The concrete design choices determining where and how much taxes are paid internationally have a great effect on the functioning of the economy. This thesis has argued that international CIT should be designed in a principled manner leading to the best possible outcome with regards to certain important criteria. The welfare costs of a bad system can be immense, which highlights the need for a critical evaluation of the different policy options. The evaluation of this thesis has attempted to show that: 1) there is much to improve in the current system, 2) there are design options leading to better results, like residual profit allocation presented in chapter three, and 3) despite employing the same conceptual basis as residual profit allocation, Pillar One is not enough to fix the issues underlying the current framework on which it is overlaid.

The allocation scheme of the current system rests on three points of separation. First, the profit of each within-group entity is determined separately; second, the income of each within-group entity is separated into active and passive income, and; third, the taxing rights to each within-group entity's profit is separated between source and residency countries, so that source country taxes the active income and residence country taxes the passive income. Following these definitions, the current system was found to be exceedingly susceptible to base erosion and profit shifting, which in turn has necessitated the creation of an extensive regulatory structure, in the form of anti-avoidance and transfer pricing rules. This structure is responsible for much of the complexity of the current system and is associated with significant administrative costs, while also harming tax certainty of both governments and multinationals. Furthermore, the current system

incentivizes locating economic activity to low-tax locations incentivizing international tax competition and giving rise to economic inefficiencies. This is largely the result of an origin-based system of taxation, based on the view that taxing rights should be located where value is created. The view promoted in this thesis is that instead of value creation, corporate income tax systems should be designed following principles that lead to the best possible system. Value creation, and the current system it entails, is demonstrably not the best possible system. As an alternative, this thesis encourages a conceptual shift towards taxation on destination basis, as implemented under residual profit allocation.

There are points of separation in residual profit allocation, but they were found to be much more functional than the choices made in the current system. First, only routine profit of each within-group entity is determined separately; second, the profit of the multinational is separated into routine and residual profit on a corporate level; third, routine profit will continue to be taxed in the source country, whereas taxation of residual profit is moved to market countries. Residual profit allocation was found to be much more robust towards avoidance and, utilizing the immobility of the consumer, it solves many of the issues associated with the current system. It is recognized that any reform is accompanied by costs and inefficiency upon introduction. However, insofar as a reform is necessary for the continued functioning of the international tax system, residual profit allocation is an attractive option, as it provides an impactful reform while keeping intact many of the working properties of the current system.

When OECD first presented ideas underlying Pillar One, they were met with positive anticipation, as they hinted towards a more fundamental reform in RPA fashion. Unfortunately, as also explicated in this thesis, Pillar One is too narrow in scope to reap the benefits of full residual profit allocation. This is of course intended: Pillar One is simply meant to be a tool in the framework of the current system to reach a certain allocation of tax revenues. From the view of this thesis, Pillar One still presents a missed opportunity: it *is* a residual profit allocation system, impaired by its narrow scope and subservience to the current system. There are no a priori conceptual reasons as to why a system such as Pillar One would not produce similar beneficial results as full residual profit allocation. However, it is clear that the parameter choices – namely the small portion of residual profit actually allocable to market jurisdictions – are, when viewed

against the full residual profit allocation, enough to severely limit the positives of introducing such a system.

There are two other points to consider. First, Pillar One is introduced as part of a massive program intended to target many of the issues of the current system simultaneously. It is possible that the other BEPS actions will solve the main issues of the current system, whereby Pillar One does exactly what it is supposed to: allocate a small portion of the profits to market jurisdictions, reflecting the amount of value created there. However, it is argued in this thesis that many of the issues of the current system are not solvable in the existing origin-based framework. Thus, the possibility of manipulation cannot be ruled out and must be met with consistent monitoring based on a complex system of rules. There are costs to such a system, which are hard to justify when a better option is available. The related second point is that as Pillar One is introduced alongside the current system, the administrative difficulties of both are exacerbated. From the point of view of the current system, introducing Pillar One to simply allocate some profit to market jurisdictions might be far too costly to be worth the benefit. And from the view of Pillar One, it can be questioned why the current system has to be kept functional – the scope could simply be broadened to make for a more fundamental reform. There is merit in compromises to reach a gradual reform, but it is also justified to question whether the reform in question is too minimal to gain sufficient benefit to outweigh the costs.

This thesis has attempted to provide a high-level overview of many different topics related to international corporate income tax architecture. As with all overviews, the broad view taken has necessitated sacrificing details on many occasions. This is especially true with the large amount of rather technical literature covered in this thesis. For most part, the discussion has been focused on providing the intuition on many of the ideas and topics, with less focus on detailed examples and algebraic notation. This choice comes at the cost of comprehensiveness; but insofar as I have been able to provide a consistent and coherent treatment from topic to topic, where gaps are found, they simply denote something to expand upon in later work.

The BEPS project is currently a highly topical research subject, and there are multiple fruitful projects to be undertaken in conjunction with the topics of this thesis. In addition

to more theoretical work for example on the topic of the segmentation framework, a great deal of empirical research is required to evaluate the responses of firms to certain parameter and policy choices to reach the best possible final version of Pillar One. Also, estimation could be undertaken to evaluate tax revenue effects utilizing certain country-specific parameters to assist countries in preparing for the full implementation of the system. On a more reformist view, work could be done on investigating potential routes to bring Pillar One closer to a full residual profit allocation system.

Most of this thesis carries negative undertones towards both the current system and the concrete reform program presented by OECD. I believe most of these undertones to be justified, as a better system is available and also attainable with enough political will. However, it is important to interpret this negativity only with respect to this better option. One key result of this thesis is that a reform is required. BEPS project is definitely a step in the right direction, and it is very possible that political reality does not allow for a more radical reform at this point in time. In this regard, Pillar One is a valuable tool to introduce elements of destination-based taxation to the system. One can hope it is just the first step towards a more fundamental switch of taxing rights to destination countries and to a better international corporate tax policy altogether.

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