IBFD Spillover Analysis
Possible Effects of the Irish Tax System on Developing Economies

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An Roinn Airgeadais
Department of Finance

Foreword from the Minister for Finance

In April 2014 I announced the launch of an innovative new research project, a Spillover Analysis to investigate what effects the Irish tax system may have on the economies of developing countries.

Global tax reform is an essential element of efforts to address global inequality. As recognised in *Ireland's International Tax Strategy*, published in October 2013, the ability of developing countries to raise domestic tax revenues will be a key factor in allowing them to exit from a dependence on Official Development Assistance.

Ireland has a long history of providing overseas aid and assistance to developing countries, and I am pleased to see Ireland taking a lead in this new area of research – we are only the second country in the world to undertake a Spillover Analysis project of this nature.

My decision to commission this Spillover Analysis was prompted by calls from non-governmental organisations for all developed countries to consider the potential impacts of proposed changes to their tax systems on developing countries, as recommended in a 2011 report by the IMF, OECD, UN and World Bank to the G-20 Development Working Group. The analysis completed on behalf of my Department by IBFD is significantly broader in scope, and is in effect a baseline analysis of Ireland's treaty network, tax system, and trade and capital flows with developing countries.

It is my view that, in order to show full commitment and foster a trusting relationship between the developed and developing world, all developed countries should undertake such a spillover analysis. The combined efforts of many countries will be required to form a full picture of how developing economies are affected by other domestic tax regimes.

I am also pleased to note that this Spillover Analysis forms part of a sustained and ongoing series of initiatives relevant to international taxation and other developing country issues which have been pursued by this Government in recent years. These include:

- Ireland's commitment to multilateral international tax reform and our intentions for implementing the OECD's proposals on Base Erosion & Profit Shifting (BEPS), as highlighted in the update on *Ireland's International Tax Strategy* published with Budget 2016.
- Finance Bill 2015 will introduce Country by Country Reporting (CbCR) as agreed at OECD level. The benefit of CbCR for developing countries is one of the key issues highlighted in submissions to this project's public consultation.
- Since 2013, a particular focus of Ireland's tax treaty negotiation policy has been to engage with African countries that wish to extend their treaty networks. A tax treaty was negotiated with Botswana in 2013 and with Ethiopia in 2014, and treaty negotiations with Ghana are nearing conclusion. In addition, Ireland's treaties with

Zambia and Pakistan, signed in 1971 and 1973 respectively and which were identified in this Spillover Analysis as being out of step with modern treaty standards, have now been renegotiated.

- My Department has been proactive in assisting developing countries through engagement with the Financing for Development process, which supports the funding of the 2030 global development agenda. Ireland has supported the development of new and innovative funding streams beyond traditional Official Development Assistance, and supports the Addis Ababa Action Agenda, agreed in July 2015 at the Third International Conference on Financing for Development.

Capacity Building

It is also important for policy-makers to be aware of the substantial increases in complexity in the global tax landscape, and the particular challenges that developing countries will face as a result.

For this reason, capacity building initiatives were identified by IBFD, and in many responses to the public consultation, as being a key factor in enabling developing countries to collect their own tax revenues. Ireland's Revenue Commissioners have in recent years provided significant assistance to the Rwanda Revenue Authority in the use of systemised risk management, resulting in tangible increases in tax revenue collected.

Irish Aid, in collaboration with the Revenue Commissioners, engages under the OECD Tax Inspectors Without Borders initiative with proposals for the provision of support to developing countries. Irish Aid also supports domestic resource mobilisation through the development of Public Financial Management systems in developing countries, and contributes to the OECD work on tax and development, the African Tax Administration Forum, and the World Bank's facility for Investment Climate Advisory Services.

These initiatives all reflect Ireland's "One World, One Future" policy for international development, which commits to an all-of-government approach to international development and recognises that the achievement of international development goals must be underpinned by the ability of all countries, including developing countries, to raise their own revenue.

I hope that this Spillover Analysis will provide a road-map for best practice in Ireland's future interactions with developing countries, and that it will be a model for other countries to follow in conducting such analyses.

Michael Noonan TD
Minister for Finance
13 October 2015

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I. Executive Summary and Findings

It is hardly disputed that the more extreme forms of international tax planning lead to a loss of tax revenue in many states, therefore also affect the tax collection in developing countries.

In this analysis the spillover effects of the Irish tax system on developing countries are looked into. After the Introduction in Chapter II, in chapters III and IV we have analyzed capital and trade flows. Chapters V and VI focus on elements which are relevant for the taxation of companies such as domestic tax legislation, bilateral double taxation conventions and EU directives.

The analysis shows that the Irish tax system on its own can hardly lead to significant loss of tax revenue in developing countries. It is a combination of elements that is involved. It should be said that in international tax planning clever use is being made of the possibilities available under the domestic tax systems of various countries (including mismatches between domestic tax systems) in combination with the limitations and restrictions imposed by double taxation conventions and EU directives.

Income, capital flows and trade flows

Chapter III of the spillover analysis looked into capital and income flows to and from Ireland into developing countries and made a distinction between a group of developing countries with which Ireland had a tax treaty in effect and another group of countries which had no tax treaty in effect with Ireland. Also trade flows were studied as part of the analysis.

Overall, it may be concluded that the Irish investment in specific countries follows the general trend of cross-border investment in emerging and developing countries. Especially somewhat more developed countries with larger GDP and more developed financial markets attract relatively high amounts of foreign investment.

Unfortunately, no separate data are available on SPE investments from Ireland. This implies that a direct distinction between “real” and “diverted” FDI cannot be made. The scope for indirect identification seems extremely limited. Any conclusion will therefore be for the aggregate. Information provided by the Irish CSO states that the overall FDI position in Africa amounted to €219 mln in 2012. This extremely low amount is confirmed by the “inward” FDI database from the IMF (2009-2012) which also shows that overall Irish FDI presence in Asia and Africa is very low.

Overall, the analysis in this chapter shows first that Irish FDI towards the set of emerging and developing countries analysed is very small and plays a marginal role at best in the overall FDI stock of those countries. The available data do not indicate a distinction

between treaty and non-treaty countries in relation to FDI investments from Ireland, which suggests an insignificant impact of bilateral tax treaties on the size and destination of outward FDI from Ireland to these countries.

For the year 2012, total portfolio investment by Ireland is €1,588 bln. The total amount of portfolio investment reflects the influence of Ireland's position as a global centre for collective investment funds. However, only 3 selected tax treaty countries are included: Morocco (€142 mln), Pakistan (€36 mln) and South Africa (€127 mln). These amounts of portfolio investment are very low. When some other developing countries are included in the analysis, investments can be traced in the Philippines and Thailand and marginally in Vietnam. Overall, it seems safe to say that portfolio investments from Ireland are almost exclusively directed at developed countries and marginally at advanced emerging market economies. Again, a clear impact of bilateral tax treaties on the size and destination of outward portfolio investment from Ireland to the selected countries cannot be distinguished, indicating that the Irish tax treaty network is not a significant influencing factor on these investment decisions.

Because the capital and income flows to and from Ireland are so small, we have decided to analyze trade flows as well to determine if spillover effects from the Irish tax system could be identified in goods and services trade flows between Ireland and developing countries. With respect to trade flows, the analysis is based on data from the UN Comtrade database on trade in goods. A group of countries with a tax treaty with Ireland has been compared with a group of similar developing countries that do not have a tax treaty with Ireland.

Trade flows between Ireland and the developing countries consists of differentiated goods, and it is not possible to analyse such transactions at category level for evidence of transfer mis-pricing as there are no directly comparable open-market transactions against which to benchmark prices.

The analysis shows that exports from developing countries to Ireland and imports from Ireland into developing countries are very limited. The data on treaty and non-treaty countries do not show markedly different trade patterns with Ireland. On average, treaty countries have slightly higher exports to Ireland and imports from Ireland, but the difference is not large.

The analysis of trade flows regarding services can only be based on limited data as, contrary to imports and exports of goods, there is no global data base on services. From information provided by the Irish CSO, it appears that the volume of services provided from Ireland to developing countries is – with the exception of South Africa – very small. The lack of detailed data also makes it difficult to determine whether or not correct transfer pricing has been applied in transactions between associated enterprises.

As the overall trade flows are so small, it seems likely that the Irish tax system has little or no spillover effect on the trade with developing countries.

Double taxation conventions

Chapter IV of the spillover analysis takes a close look at the bilateral double taxation conventions concluded by Ireland with developing countries and compares the tax treaties concluded by Ireland with tax treaties concluded by selected other countries with the same developing countries. Ireland has relatively few tax treaties with developing countries, as compared to other major economies. While looking at the various elements of the tax treaties, like the definition of permanent establishment, the withholding taxes on dividends, interest and royalties, the royalty definition, the presence of anti-abuse provisions etc. the treaties concluded by Ireland are to a large extent comparable to tax treaties concluded by the same developing countries with other states included in the tax treaty analysis. It should be mentioned that a number of Irish tax treaties have been concluded in recent years.

This reduction of domestic withholding taxes, however, does not lead to loss of tax revenue in the other state as these other states have voluntarily given up their taxing rights under their domestic law in order to attract FDI and the reduction of withholding tax is not caused by the provisions of the tax treaties.

Most tax treaties concluded by Ireland contain provisions that are similar to those in tax treaties by other developed countries with the same developing countries, and they include several UN-type provisions considered favourable to developing countries. With respect to services, treaties concluded by Ireland often contain either a service PE provision or grant the source state the right to levy a withholding tax. Also the reduction of withholding taxes on dividends, interest and royalties under the tax treaties concluded by Ireland is not significant compared to the domestic withholding tax rates of the Irish tax treaty partners. The notable exception is the relatively old tax treaty between Ireland and Zambia which does not allow the source state to levy any withholding tax on dividends, interest, royalties and fees for technical services. We understand, however, that this tax treaty is currently being renegotiated. Ireland could consider modernizing other tax treaties concluded with developing countries by making it more difficult to claim tax treaty benefits, subject to agreement with the treaty partner countries. This approach fits in with the proposed solutions in the report on Action 6 of the BEPS Action Plan.

Many tax treaties between Ireland and developing countries have been concluded in recent years and contain tax sparing credit provisions which are effected during a limited period of time. The Irish approach to including tax sparing credits in treaties with developing countries does not differ from the approach of many other developed countries and is in accordance with the OECD approach on this issue. **Tax sparing credits are still available under a number of the more recent tax treaties concluded by Ireland whereas similar provisions included in the tax treaties concluded by other developed countries have already expired.**

An exception to the findings mentioned concerns the Irish tax treaty with Zambia. This particular tax treaty is a very outdated tax treaty and does not allow the source state to levy any withholding tax on dividends, interest and royalties. It also lacks even the most basic anti-abuse provisions. From a Zambian perspective this tax treaty should be renegotiated without any further delay. We understand that renegotiations of this tax treaty are already under way.

Domestic tax system of Ireland

With respect to the domestic tax legislation in place in Ireland and the influence of EU directives on the Irish domestic legislation, chapter VI analyses the corporate tax rate, the withholding taxes on dividends, interest and certain royalties and on tax incentives relating to intellectual property rights. The Irish corporate income tax rate of 12.5 per cent for trading income (the rate for non-trading income is 25 per cent) is low and in principle this rate could be interesting for shifting profits from high tax jurisdictions to Ireland. In this respect it should be mentioned that the applicable corporate income tax rates of some developing countries are also significantly higher than the Irish rate applicable to trading income.

Regarding the withholding taxes it should be mentioned that the Irish tax legislation itself provides for significant withholding taxes on dividends, interest and certain types of royalties. The existence of these withholding taxes also implies that it is not possible to pay interest and royalties directly from Ireland to companies resident in tax havens without Irish tax being withheld. These rules are very complex and, as it was identified in Chapters III and IV of this report that trade and capital flows into Ireland from developing countries are limited, giving no indication that Ireland is used as an intermediate jurisdiction for these flows, it was determined that a detailed description of these rules is beyond the scope of this analysis. These withholding taxes may also be reduced (even to 0 per cent) under EU directives and under double taxation conventions.

After the changes made to the residency rules in the Finance Bill 2014, it can be said that the current Irish tax system in general including the system of withholding taxes does not facilitate conduit structures that lead to loss of revenue for developing countries.

In contrast, the tax systems of some other states included in the analysis do not have withholding taxes on interest and royalties and therefore interest and royalty payments may be made from these countries directly to tax havens without any tax being levied on those payments.

In the area of tax incentives, our analysis focused on the current R&D credit and the plans for a Knowledge Development Box. As a company must be within the charge to Irish tax in order to qualify for the R&D tax credit, this incentive is unlikely to be associated with base spillovers due to profit shifting, and it has been stated that it will comply with the EU and OECD rules for the design of such incentives which are currently being finalised. However, it could be said that any preferential tax rate contains a risk for profit shifting and therefore for loss of revenue elsewhere.

EU directives

The Parent Subsidiary Directive and the Interest and Royalties Directive make it possible that dividend distributions and interest and royalty payments between associated enterprises that are resident in different EU member states can be made without the imposition of any withholding tax or corporate income tax. In practice these directives have also been used for international tax planning purposes. For instance the Interest and Royalties Directive makes it possible that a (profit deductible) royalty payment is made without any withholding tax being due to an associated enterprise in an EU Member State that does not levy a withholding tax on royalties. Subsequently the recipient of that royalty payment makes royalty payments to an associated enterprise in a tax haven.

To put an end to abuse of the Parent-Subsidiary Directive, a general anti-avoidance rule was recently added to the Directive. This anti-abuse provision should be included in the domestic legislation of EU Member States by the end of 2015. It is expected that a similar general anti-avoidance rule will also be included in the Interest and Royalties Directive.

IMF Staff report and contributions received from NGOs and the general public

In May 2014 an IMF staff report on spillovers in international corporate taxation was published. Chapter VII of this spillover analysis focuses on this report and the submissions received to the public consultation run by the Department of Finance in connection with this research project.

The IMF staff report distinguishes three types of spillovers: Strategic spillovers; Base spillovers due to real activities; and Base spillovers due to profit shifting. Although the report attempts to quantify negative effects of a country's tax policy on tax revenues in other countries, it does not automatically follow that low tax rates or tax rate reductions are undesirable. Many consider that tax competition to attract real activities is legitimate, and some argue that it is on balance beneficial for all countries, whereas others emphasize that it is generally harmful. About profit shifting, by contrast, there is broad consensus. Profit shifting is usually regarded as problematic and conflicting with international tax norms.

The econometric analysis in the IMF report is rather complex and the interpretation of the results is not straightforward. In addition, the analysis uses a different specification to asses each type of spillovers. The econometric analysis finds large spillover effects due to profit shifting. However, this result is of limited use, as there are some problems with the empirical approach. Probably the analysis does not appropriately capture profit shifting, because it does not cover various key tax havens and looks at standard statutory tax rates only. Ireland is one of the countries for which the use of the standard statutory tax rate is inappropriate to analyse spillover effects over a long time period.

Although some aspects of the empirical analysis seem problematic, the overall report provides a thoughtful discussion of spillover effects in international tax policy and contains many useful insights.

The Irish government requested the general public for input regarding the planned spillover analysis. In response more than 90 contributions were received, 70 of which were largely identical and related to an e-mail campaign. Contributions have been received from NGOs, from academics and from individuals.

Common themes in the submissions received under the public consultation were the following:

1. The need for country-by-country reporting;
2. The need for automatic exchange of information that takes into consideration the difficult position of developing countries with respect to reciprocity;
3. Transfer pricing issues;

4. The treatment of R&D income;
5. The involvement of developing countries in international discussions such as BEPS;
6. Tax treaties;
7. Capacity building initiatives.

These submissions are reviewed in more detail in Chapter VIII.

Capacity building

In recent years more attention is paid to provide technical assistance to developing countries in the area of capacity building. Also some of the public consultation submissions raised this issue. Chapter VIII of the spillover analysis focuses on what has been done in the area of capacity building by international organisations such as OECD and the United Nations and on what has been done by individual states. Although Ireland through IrishAid is already providing some technical assistance to its partner countries in the area of taxation, it could be considered to expand the areas of technical assistance to for instance tax policy and transfer pricing and to expand the number of countries to which this type of technical assistance is provided.

II. Introduction

Although sovereign states are – within certain limitations – free to implement their own legislation, this legislation may also have an effect on other states. This applies especially to taxation where states often compete with each other to attract foreign direct investment (FDI). It does not automatically follow that low tax rates or tax rate reductions are undesirable. Many consider that a certain level of tax competition to attract real activities is legitimate, and some argue that such competition is on balance beneficial for all countries, whereas others emphasize that it is generally harmful.

The differences in tax systems of states have also been exploited in aggressive international tax planning by multinational enterprises. This has led to increased attention of governments and international organizations, such as the International Monetary Fund (IMF), the United Nations, the G20 and the OECD, to the issues of base erosion and profits shifting and tax and development. There is broad international consensus on the issue of profit shifting, being the artificial movement of real or paper profits from one jurisdiction to another. Profit shifting is usually regarded as problematic.

Within the framework of the OECD, the G20 and the United Nations, many actions are currently being undertaken in these areas. It is widely reported that countries have missed significant amounts in tax revenue as a consequence of treaty shopping, exploiting mismatches between domestic tax systems, shifting profits and incorrect transfer pricing.

In May 2014, the IMF staff published a report on spillovers in international corporate taxation[1]. This IMF staff report defines spillovers in international corporate taxation as:

> "the impact that one jurisdiction's tax rules or practices has on others".

The IMF staff report distinguishes three types of spillovers:

1. **Strategic spillovers.** These refer to the effect of changes in a country's tax rate on the tax rates of other countries.

2a. **Base spillovers due to real activities.** These refer to the effect of changes in a country's tax rate on the tax bases of other countries due to shifts in real economic activity.

2b. **Base spillovers due to profit shifting.** These refer to the effect of changes in a country's tax rate on the tax bases of other countries due to profit shifting, which typically occurs separately from shifts in real economic activity.

The first two categories are spillovers from tax competition to attract real FDI activities which according to many jurisdictions are legitimate policy objectives. The third category is the spillover effect which is broadly agreed to be harmful, and which is the focus of attention at the moment.

The report states that spillovers can have macro-economic effects though several channels such as:

- Real and financial flows;
- The corporate income tax base (the base spillover);
- Tax competition by way of offering tax incentives (strategic spillovers); and World prices.

The IMF report focuses on both the base spillovers and the strategic spillovers and identifies with respect to the base spillovers that the tax policy of one jurisdiction frequently impacts the CIT base of other countries by real profits or paper profits being shifted from one jurisdiction to another. Moreover, regarding the strategic spillovers, according to the IMF report, there is increasingly strong evidence for strategic spillovers to have a major impact on FDI decisions.

The IMF report states that the form and severity of spillovers depends on the structure of international tax, but also that the spillovers are "especially marked and important for developing countries" as these countries depend more on corporate tax revenue than more developed economies[2]. The IMF staff Report will be discussed further in Chapter VII.

In October 2013, the Irish government published its principles and strategic objectives with regard to international corporate tax issues in *Ireland's International Tax Strategy*[3]. The Public Consultation Paper regarding the *Spillover Analysis - Possible Effects of the Irish Tax System on Developing Economies*, stated that, as part of its commitment to engage constructively and respectfully with developing countries in relation to tax matters outlined in that Strategy, and in response to calls from the G-20 and civil society groups for all countries to have an awareness of this issue in formulating tax policy, the Irish Department of Finance had decided to undertake a 'spillover analysis'. The spillover analysis was to research what impact, positive or negative, Ireland's tax system may have on the economies of developing countries.

The importance for developing countries of increasing the power to raise and improve their own revenues, rather than continuing the reliance on external aid, has brought tax questions to the fore. Also in developed countries the increased awareness of a "cross border fair share in taxation" generates debate about fairness, justification and accountability.

Within this context, the Irish Department of Finance contemplated various approaches that could be used to assess possible effects of the Irish tax system on developing economies. Therefore, the Irish Department of Finance launched a request for proposals for a research paper dealing with the following questions:

a. Taking into account the differences in the design of the Irish and Dutch tax systems, and the nature of the trade and investment relations of each with developing economies, would the approach for spillover analysis used in the 2013 study commissioned by the Ministry of Foreign Affairs of the Netherlands also be applicable to a study of the effects of the Irish tax system on developing countries?

b. Which other methodologies or approaches could be applied to a study of this nature, to include identification of data and other requirements necessary for the application of the proposed research methodology?

Furthermore, the research was to include:

- Comparative review of the provisions of Irish tax treaties with developing countries as against other significant trading partners,
- Composition effects on the structuring of investment into developing countries resulting from the Irish tax system and the Irish treaty network,
- The relevance of features of the Irish tax system relating to payments of profits onwards to third countries, in cases where investment into a developing country takes place through an Irish entity,
- Analysis of Balance of Payments between Ireland and developing countries, with a view to quantifying any spillover effects identified as part of this analysis.

IBFD was selected to carry out the spillover analysis of possible effects of the Irish tax system on developing economies. The IBFD spillover analysis, which took place in the last quarter of 2014, focuses on the taxation of companies in Ireland and on the question to what extent this taxation has an impact on taxation in developing countries.

As indicated above, the IMF report has identified several factors that may lead to spillovers in corporate taxation. Many of these factors have been included in this spillover analysis, in which the focus will be on:

- Trade and capital flows (chapters III and IV);
- Tax treaties (chapter V);
- The domestic tax regime including tax incentives (chapter VI);
- EU parent subsidiary directive and interest and royalty directive (chapter VI).

Tax treaties and the EU directives have been included in the spillover analysis because these instruments have a significant impact on the domestic tax legislation of states. Tax treaties concluded by countries often limit the possibilities for the source state (which is often the developing country) to apply its domestic withholding taxes on dividends, interest, royalties and fees for technical services in full. In chapters V and VI, we will further elaborate on the inclusion of tax treaties and EU directives in the spillover analysis.

The developing countries selected for the spillover analysis were on the one hand all the African and a number of the Asian[4] developing countries, as well as South Africa, with which Ireland had concluded a tax treaty by 1 September 2014. For the quantitative analysis, a comparison was made between African and Asian countries with which Ireland had a tax treaty which was in force and countries with a comparable level of development with which Ireland had no tax treaties that had entered into force[5]. Several of the countries included in the analysis (Ethiopia, Malawi, Mozambique, Vietnam and Zambia) are key partner countries of Irish Aid, the Irish Government's program for overseas development, managed by the Irish Department of Foreign Affairs and Trade.

Differences between the study carried out for the Dutch Ministry of Foreign Affairs and the Irish spillover analysis.

In the first half of 2013, IBFD and the School of Economics of Utrecht University carried out a research study into Dutch tax treaties with developing countries entitled "*Onderzoek belastingverdragen met ontwikkelingslanden*"[6]. There are some similarities between the study carried out by the IBFD for the Ministry of Foreign Affairs of the Netherlands and the Analysis of Possible Effects of the Irish Tax System on Developing Economies. Both studies examined tax treaties concluded with developing countries as well as income and capital flows with those developing states. In this respect it should be mentioned that, in the tax treaty analysis for the Netherlands' Ministry of Foreign Affairs, less aspects of the tax treaties were examined than in the current study for the Irish Department of Finance. For instance, the current Irish study also considers the presence of tax sparing credits in tax treaties.

There are also other significant differences between these two studies. The study for the Netherlands' Ministry of Foreign Affairs only focused on the effect of tax treaties, whereas the Irish study looks into various aspects relating to the taxation of corporate entities in Ireland.

Therefore, the Irish study is more comprehensive; it considers also elements of the Irish domestic tax legislation and the influence of EU law, more specifically EU directives such as the Parent Subsidiary Directive and the Interest and Royalty Directive.

The economic analysis of this study also looks at trade flows, which aspect was not included in the study for the Netherlands' Ministry of Foreign Affairs.

III. Quantitative Analysis of Capital Flows to and from Ireland

1. Introduction

In this chapter, we investigate the size and composition of Irish FDI and cross-border portfolio investment. In particular, we focus on the issue of whether tax treaties between Ireland and a number of emerging and developing countries have a significant impact on Irish foreign capital positions – that is, capital investment from Ireland into those countries. To this purpose we define a group of six treaty countries: Morocco, South Africa, Zambia, Pakistan, Malaysia and Vietnam and compare them with a group of seven non-treaty countries: Malawi, Tanzania, Ethiopia, Mozambique, Uganda, Thailand and the Philippines. In the group of treaty countries, Morocco and Vietnam take a special position as their treaty with Ireland is of recent date, 2010 and 2008 respectively. Ethiopia and Thailand are in the non-treaty group for this part of our analysis, which focuses on the years 2009 and 2012. Note though that a treaty with Thailand was signed in 2013 and with Ethiopia in 2014.

To benchmark our findings for Ireland, we compare outward Irish foreign investment with that that of a number of other developed countries in Western Europe, both inside and outside of the euro area. First, we have chosen a few small open economies with a relatively large and sophisticated financial sector that are in that sense similar to Ireland. Countries in this group are Belgium, Luxembourg, Switzerland and the Netherlands. Of these only Switzerland does not belong to the euro area, while the others, like Ireland, do. Second, we include a number of larger European economies – the UK, Germany and France. Both their openness and the size of their financial sectors relative to their GDP are typically less pronounced than those of smaller economies like Ireland. However, in absolute size these countries all have large internationally operating banks which make them interesting benchmarks in the analysis of cross-border capital flows. The UK is outside the euro area, Germany and France are in. Overall, the comparison will allow us to put Irish foreign investment in an appropriate perspective.

As part of this analysis it was initially intended to distinguish between “real” and “diverted” FDI, but it was determined that this distinction cannot be made, because no separate data are available on investments from Ireland through Special Purpose Entities (SPEs). The analysis and conclusions in this section are therefore on the aggregate level, including all capital flows.

With respect to portfolio investment, a CSO database which gives annual Irish portfolio positions in portfolio assets for the period 2001-2012, is available. For the year 2012 (the most recent year for which complete information is available), total portfolio investment by Ireland is €1,588 billion. Based on our analysis, it seems safe to say that

portfolio investments are almost exclusively made into developed countries and marginally into advanced emerging market economies. With respect to FDI stocks, the CSO provided only an aggregate for Africa for the period 2004 - 2012 as well as a disaggregated per country view for 2012. Disaggregated data are also available for the whole period 2004-2012, and show similar low FDI stocks with Africa. In the latter year (2012), there is a distinction between equity and reinvested earnings and “other”. We presume that the term “other” covers intercompany loans etc. For the countries selected, all entries in 2012 are confidential – the CSO does not disclose detailed information in the case of small volumes where publication might allow for individual enterprises to be identified. The fact that CSO data states an overall FDI position in Africa of just €219 mln. suggests that the FDI into the selected developing countries is insignificant. This view is confirmed by the “inward” FDI database compiled by the IMF for the period 2009-2012 which also shows that the overall Irish FDI presence in Asia and Africa is quite low. Using this IMF database, benchmarking of the size and composition of Irish FDI against some other developed countries over the most recent years definitely is possible. This, however, is outside the scope of this report.

In general, data availability is limited for many of the developing countries, either because of lack of reporting or because of confidentiality. For that reason, we focus on two years only, 2009 and 2012. The latter year is the most recent for which reasonably complete data on stocks and flows of financial assets are available. In section 2, we focus on FDI, while in section 3 cross-border portfolio investment is analyzed.

2. FDI

a. The Irish Perspective

We start with an overview of Irish FDI, compared to a number of other developed economies. In Table 1, we report a number of stylized statistics for the year 2012. FDI here refers to the stock of outstanding FDI at the end of the year. It measures the total value of Irish direct investment in other countries at the end of 2012. As a benchmark, it is important to know that the stock of global FDI at the end of 2012 amounted to 40 percent of 2012 world GDP.

Table 1: Stylized statistics Outward FDI 2012

Country	GDP (Bln. USD)	FDI/GDP (%)	GDP/ world GDP (%)	FDI/ world FDI (%)
Ireland	**210,6**	**180,4**	**0,3**	**1,4**
Belgium	483,4	97,3	0,7	1,8
France	2611,2	60,1	3,9	5,9
Germany	3426,0	37,9	5,2	4,9
Luxembourg	55,1	5333,8	0,1	11,1
Netherlands	770,1	594,6	1,2	17,3
Switzerland	631,2	181,1	1,0	4,3
UK	2471,6	72,9	3,7	6,8

Source: FDI data come from the IMF Coordinated Direct Investment Surveys (CDIS, outward direction). GDP data are from United Nations Statistics.

The table directly shows that there is enormous heterogeneity across developed countries with respect to their role in cross-border investment. Not unexpectedly, most of the developed countries have relative FDI that exceeds relative GDP, as FDI typically goes from richer, capital-abundant countries to less developed, capital-constrained countries. In particular the small open economies in our sample display disproportionally large FDI compared to their GDP. Ireland, whose GDP accounts for 0.3 percent of world GDP, accounts for 1.4 percent of world FDI. In other words, outward FDI from Ireland is 5 times larger than would be warranted by Irish GDP alone and is almost twice the size of Irish GDP. Countries that seem relatively close to Ireland in terms of their absolute GDP as well as their relative FDI/GDP ratio are Belgium and Switzerland.

The above table directly raises the question what makes these small open economies so attractive as a source of cross-border FDI. First, all the economies in our sample typically have significant financial services sectors, which may play a significant role as facilitator of international capital flows. However, fiscal arrangements, in particular bilateral tax treaties, may influence the allocation of investment by multinational companies too. This chapter looks in detail at the question of whether bilateral tax treaties between Ireland and individual developing countries have an impact on the allocation of FDI originating from Ireland.

Table 2: Outward FDI Ireland 2012

Destination	LX	UK	BM	NL	Conf	US	HUN	Unsp	JS	SWI	**Sum**
%total FDI	18	16	14	14	11	8	6	3	3	2	**94**

Source: FDI data come from the IMF Coordinated Direct Investment Surveys (CDIS).
LX =Luxembourg, UK= United Kingdom, BM = Bermuda, NL = the Netherlands, Conf. = Confidential, US = United States, HUN = Hungary, Unsp. = unspecified, JS = Jersey and SWI = Switzerland

Table 2 provides a first rough picture of the allocation of Irish FDI as of 2012. 94 percent of all Irish FDI goes to a limited set of countries, none of which belongs to the traditional

group of emerging and developing economies, apart from Hungary.[7] Another 4 percent goes to Germany, France, Australia and Canada, leaving only 2 percent for the rest of the world. The common denominator of the destination countries appears to be that they have large financial sectors. Standing out in particular are Luxembourg, Bermuda and Jersey. Overall, the evidence suggests only a very limited part of Irish FDI goes to the developing world, downplaying the role of bilateral tax treaties with such countries.

Two caveats apply. First, a substantial percentage of FDI is labelled “confidential (11)” or “unspecified (3)” and this may in part go to developing countries. Statistical reports on FDI typically classify data entries as confidential when anonymity of the investing companies cannot be guaranteed. This is the case when only a few Irish companies invest in a specific developing country or when one Irish company has a dominant share of FDI to such country. In addition, data collection on FDI is typically incomplete and consists of combining data from multiple sources, which may not be internally consistent and may lead to unspecified FDI in the reports.

Second, a substantial part of Irish FDI goes to global financial centers, like Luxembourg, Bermuda and Jersey, raising the question whether that is the final destination of this FDI. Lack of data prevents a further analysis on this issue.

b. Treaty and non-Treaty countries

We now move to our sample of developing countries, split up in a treaty group and a non-treaty control group, based on treaties in place in 2012. Table 3 contains some stylized facts for the year 2012. To provide a picture as complete as possible, we draw both on statistics of inward FDI reported by our selection of developing countries (labeled FDI1 in table 3) and on statistics of overall outward FDI to these developing countries reported by the investing countries worldwide. For example, in 2012, Malaysia reported a stock of inward FDI - received from other countries – of $132.4 bln. Aggregating available records of outbound FDI into Malaysia from other jurisdictions leads to an amount to $69 bln at the end of 2012.

Table 3: Stylized statistics FDI 2012

Country	GDP (Bln. USD)	FDI1 (Bln USD)	FDI2 (Bln USD)	FDI1/GDP (%)	FDI2/GDP (%)
Treaty					
Malaysia	304,7	132,4	69,0	43,5	22,6
Morocco	96,0	21,4	20,4	22,3	21,3
Pakistan	215,1	23,2	6,2	10,8	2,9
South Africa	384,3	163,5	84,7	42,5	22,0
Vietnam	155,8	-	29,8	-	19,2
Zambia	21,5	11,3	1,4	52,6	6,5
Non-treaty					
Ethiopia	41,6	-	0,3	-	0,7
Malawi	5,7	-	0,6	-	10,5
Mozambique	14,6	13,8	6,0	94,5	41,1
Philippines	250,2	29,5	34,3	11,8	13,7
Tanzania	28,2	12,7	2,4	45,0	8,5
Thailand	385,7	178,0	86,7	46,1	22,5
Uganda	21,7	8,8	1,6	40,6	7,4

Source: FDI data come from the IMF Coordinated Direct Investment Surveys (CDIS).
FDI1 is the FDI reported by the receiving country (inward CDIS);
FDI2 is the sum of the FDI reported by the source countries (outward CDIS). GDP data are from United Nations Statistics.

A few noteworthy points emerge from table 3. First, the treaty countries are on average larger in terms of GDP than the non-treaty countries. In the first group, only Zambia is really small while in the second group only the Philippines and Thailand are relatively large. Second, it matters quite a lot whether the quantum of FDI is measured from the perspective of the destination countries (inward CDIS, labelled FDI1) or from the perspective of the source countries (outward CDIS, labelled FDI2). This holds for the size of overall FDI as well as for the information on the composition of FDI. In general, the FDI2 information has a large number of confidential or unreported data cells due to the fact that, in many cases, the source of the FDI from one country could be traced back to one or a few corporations. The FDI1 data suffer much less from this problem.

For that reason, we prefer to take the FDI1 measure as our benchmark. However, Malawi, Ethiopia and Vietnam do not report size and composition of incoming FDI (FDI1) at all so that we have to rely on the FDI reported by the originating countries (FDI2). The same holds for Tanzania in 2009. Clearly, there is a correlation between lack of reporting and the size of the country's economy. Malawi, Ethiopia and Tanzania all have small GDP and corresponding FDI. Focusing on FDI1, table 2 shows that incoming FDI roughly equals 40-50 percent of GDP. Pakistan, the Philippines and Morocco have below average FDI, while Mozambique is on the other extreme. For FDI2, the percentages typically are smaller. Here, the Philippines is an exception.

We now turn to the composition of Irish FDI. Table 4 contains the overall information for the countries in our sample, split out between treaty and non-treaty countries. Most entries come from the FDI1 (inward CDIS) database. Entries from the outward CDIS database are presented in italics and are aligned on the left of their cell. In the table, the entry "c" indicates non-zero FDI is reported but is not disclosed, "na" indicates no information on FDI is available and "0,00" indicates reported FDI equals zero.

Table 4: Composition FDI Ireland

Country	FDI (mln $)	FDI/FDI Ireland (%)	FDI/GDP Ireland (%)	FDI/FDI host (%)	FDI/GDP host (%)
Treaty					
2009					
Malaysia	*66*	*0,02*	*0,03*	*0,01*	*0,03*
Morocco	14	0,00	0,01	0,01	0,02
Pakistan	57	0,02	0,03	0,03	0,04
South Africa	244	0,08	0,11	0,02	0,09
Vietnam	*c*	*na*	*na*	*na*	*na*
Zambia	214	0,07	0,10	0,34	1,67
2012					
Malaysia	c	na	na	na	Na
Morocco	32	0,01	0,02	0,02	0,03
Pakistan	13	0,00	0,01	0,01	0,01
South Africa	452	0,11	0,21	0,03	0,12
Vietnam	*0*	*0,00*	*0,00*	*0,00*	*0,00*
Zambia	160	0,04	0,08	0,14	0,75
Non-Treaty					
2009					
Ethiopia	*0*	*0,00*	*0,00*	*0,00*	*0,00*
Malawi	*0*	*0,00*	*0,00*	*0,00*	*0,00*
Mozambique	*0*	0,00	0,00	0,00	0,00
Philippines	8	0,00	0,00	0,00	0,00
Tanzania	*0*	*0,00*	*0,00*	*0,00*	*0,00*
Thailand	211	0,07	0,09	0,02	0,08
Uganda	c	na	na	na	na
2012					
Ethiopia	*0*	*0,00*	*0,00*	*0,00*	*0,00*
Malawi	*0*	*0,00*	*0,00*	*0,00*	*0,00*
Mozambique	0	0,00	0,00	0,00	0,00
Philippines	11	0,00	0,01	0,00	0,00
Tanzania	10	0,00	0,00	0,01	0,04
Thailand	229	0,06	0,11	0,01	0,06
Uganda	c	na	na	na	na

"c" indicates non-zero FDI but is not disclosed, "na" indicates no information on FDI is available, and "0,00" indicates reported FDI equals zero.

The dominant message from table 4 is that Irish FDI towards these developing countries is quite small, both for treaty and non-treaty countries. Both in terms of total Irish FDI

– or Irish GDP – and in terms of host country total incoming FDI – or GDP – investment from Ireland into individual developing countries is very limited. For the treaty group, investment in South Africa stands out as relatively large in comparison to the other treaty countries even though FDI from Ireland is only 0,11 percent of total Irish FDI in 2012 and only 0,03 percent of all FDI in South Africa. The other treaty country with more than marginal Irish FDI is Zambia. Note, however, that it declines in absolute and relative terms between 2009 and 2012.

For the non-treaty group, Irish FDI investment in Thailand is in the same range as for South Africa and Zambia, with in total 0,06 percent of Irish FDI in 2012. FDI towards the other countries is close to negligible. Overall, the earlier picture is confirmed, that Irish FDI towards developing countries plays a marginal role at best in the economies of the developing countries. On the basis of the available data, a distinction between treaty and non-treaty countries cannot be made, and given the small magnitude of the FDI stock in these countries, evaluating the income from FDI in the form of dividend or interest appears not very promising even if the data would be available. In turn, this suggests an insignificant impact to date of bilateral tax treaties with such countries on outbound FDI from Ireland.

3. Portfolio Investment

We now turn to foreign portfolio investment, that is, the outstanding amount of cross-border (outward) investment in tradable financial assets like stocks, bonds, bills and derivatives. For this, we use the Coordinated Investment Survey of the IMF for the years 2009 and 2012. Again, we benchmark Ireland against six other financially well-developed countries in Western Europe. Table 5 contains the most relevant stylized facts. For convenience, we reproduce the GDP statistics and add the information on foreign portfolio assets, where we focus on the total of stocks, long term bonds and short term bills.

Table 5: Stylized statistics Foreign Portfolio assets 2012

Country	GDP (Bln USD)	Foreign Assets (Bln USD)	Foreign Assets/GDP (ratio)	GDP/ world GDP (%)	Foreign Assets/World foreign assets (%)
Ireland	**210,6**	**2096,5**	**10,0**	**0,3**	**4,8**
Belgium	483,4	675,5	1,4	0,7	1,5
France	2611,2	2570,1	1,0	3,9	5,9
Germany	3426,0	2760,1	0,8	5,2	6,3
Luxembourg	55,1	3056,5	55,4	0,1	7,0
Netherlands	770,1	1658,0	2,2	1,2	3,8
Switzerland	631,2	1183,5	1,9	1,0	2,7
UK	2471,6	3551,8	1,4	3,7	8,1

Source: FDI data come from the IMF Coordinated Direct Investment Surveys (CDIS, outward direction). GDP data are from United Nations Statistics.

The first observation is, that with respect to investment in foreign portfolio assets, Luxembourg is in a separate category when we compare the stock of foreign portfolio assets to their home GDP. Second, we see that especially the smaller countries have a much larger role in cross-border portfolio investment than warranted by their relative GDP. Ireland's relatively high ratio of foreign portfolio assets to GDP seems to relate largely to its position as a global leader in the administration and management of collective investment funds. In 2012 over €2200 bln assets were under administration in the Irish funds sector, of which over €1200 bln were Irish domiciled funds[8]. A similar relatively high ratio of foreign portfolio assets to GDP holds true for the UK with its global financial center, but not for Germany and France. For Ireland, the fact that its position in foreign portfolio assets in 2012 is about ten times its GDP and accounts for almost 5 percent of global portfolio investment, appears sufficient reason to look more carefully into the composition of these foreign assets and the potential impact of bilateral tax treaties.

Table 6 contains the relevant information. The acronym "FA" stands for the total end-of-year value of foreign portfolio assets owned by Irish investors, reported as outward portfolio investment by Ireland into each of the developing countries in our sample. "FL" stands for the total end-of-year value of foreign portfolio assets invested by global investors in each of the developing countries in our sample, reported as inward portfolio investment by these developing countries. Obviously, for the receiving developing country this is a foreign liability. For example, in 2012 Ireland reported portfolio investment in Malaysia of $5,2 bln. From table 5, we know that total Irish portfolio investment end 2012 was valued at $2,096.5 bln. In combination, this implies that Irish portfolio investment in Malaysia accounted for only 0,25% of overall Irish foreign portfolio investment. From the other side, host country Malaysia reported total inward

portfolio investment into its economy of $155.6bln by end 2012, of which Irish investment accounted for 3,36%.

Table 6: Composition Foreign Portfolio Assets Ireland

Country	FA Ireland (Mln. USD)	FL host (Mln. USD)	FL host/GDP host (%)	FA Ireland to host/total FA Ireland (%)	FA Ireland to host/GDP Ireland (%)	FA Ireland to host/total FL host (%)	FA Ireland to host/GDP host (%)
Treaty							
2009							
Malaysia	1702,8	70305,1	34,8	0,09	0,76	2,42	0,84
Morocco	99,4	2502,9	2,8	0,01	0,04	3,97	0,11
Pakistan	34,6	3329,6	2,1	0,00	0,02	1,04	0,02
South Africa	3384,0	109202,6	38,5	0,17	1,50	3,10	1,19
Vietnam	67,7	4450,0	4,2	0,00	0,03	1,52	0,06
Zambia	13,0	372,4	2,9	0,00	0,01	3,48	0,10
2012							
Malaysia	5235,4	155608,0	51,1	0,25	2,49	3,36	1,72
Morocco	187,4	5905,9	6,2	0,01	0,09	3,17	0,20
Pakistan	47,5	3455,7	1,6	0,00	0,02	1,37	0,02
South Africa	9403,4	176550,5	45,9	0,45	4,46	5,33	2,45
Vietnam	50,1	5954,9	3,8	0,00	0,02	0,84	0,03
Zambia	30,4	869,7	4,1	0,00	0,01	3,49	0,14
Non-treaty							
2009							
Ethiopia	-	80,5	0,3	na	*na*	na	na
Malawi	-	92,6	1,5	na	*na*	na	na
Mozambique	-	224,1	2,3	na	na	na	na
Philippines	1054,5	30651,5	18,2	0,05	0,47	3,44	0,63
Tanzania	-	705,4	3,3	na	na	na	na
Thailand	1282,1	49026,6	17,5	0,07	0,57	2,62	0,46
Uganda	-	190,7	1,2	na	na	na	na
2012							
Ethiopia	-	82,6	0,2	na	na	na	na
Malawi	-	13,7	0,2	na	na	na	na
Mozambique	1,32	606,8	4,2	0,00	0,00	0,22	0,01
Philippines	1637,4	76063,5	30,4	0,08	0,78	2,15	0,65
Tanzania	-	374,6	1,3	na	na	na	na
Thailand	4379,1	103999,5	27,0	0,21	2,08	4,21	1,14
Uganda	14,5	248,5	1,1	0,00	0,01	5,84	0,07

Table 6 shows that there is quite some heterogeneity between as well as within the treaty and non-treaty groups, when considering GDP and overall inflows of foreign portfolio investment. In the treaty group, there are two countries with a 2012 GDP above USD300 bln, Malaysia and South Africa, who also experience a sizable inflow of foreign portfolio investment of around 40 to 50 percent of their GDP. In the non-treaty group there is one comparable country which is Thailand, but even in 2012 it only has

foreign portfolio liabilities of 27 percent of GDP, which is considerably lower than the two countries from the treaty group. The outstanding amount of portfolio investment from Ireland into Malaysia, South Africa and Thailand approximately triples between 2009 and 2012, both in absolute terms and as a percentage of total outward Irish portfolio investment. In terms of the total (inward) portfolio investment position of these three receiving countries, the share of Irish portfolio investment increases too but at a lower rate. This implies that not only Ireland invested more in these three countries, but investors from other jurisdictions did as well. The increase in FDI investment from Ireland therefore appears to reflect a general growth trend in these countries.

In terms of its GDP size, the Philippines (non-treaty) is slightly smaller than the other three countries (Malaysia, South Africa and Thailand) but it receives similar foreign investments to Thailand, both in 2009 (18.2%) and 2012 (30.4%). Irish investment in the Philippines, however, grows less between 2009 and 2012.

In the tax treaty group there are also three medium-sized countries with GDP roughly in the $100-200 bln range, Morocco, Pakistan and Vietnam. In 2009, all of them only have quite limited foreign portfolio liabilities of around 2 to 4 percent of GDP. Morocco displays substantial growth between 2009 and 2012, though in absolute size foreign investments remain small, while in Vietnam and certainly in Pakistan little increase in FDI investment appears to be made. No comparable medium-sized countries with GDP roughly in the $100-200 bln range are present in the non-treaty group.

Finally, there is one small country in the treaty group (Zambia) and five small countries in the non-treaty group. The latter consist of Ethiopia, Malawi, Mozambique, Tanzania and Uganda. In general, portfolio investment in all these countries is extremely small in absolute terms. Relative to the own GDP, foreign investment is comparable to Vietnam and Morocco for Zambia and Mozambique and substantially lower for the others. Overall, Zambia appears to do best in attracting foreign capital. Irish investment in Zambia is neither surprisingly high nor growing surprisingly fast, however between 2009 and 2012. The available data are insufficient to determine what the potential impact of the tax treaty with Zambia was on the development of FDI.

We conclude that Irish portfolio investment in specific countries follows the general trend of cross-border investment in emerging and developing countries. The data show that, within the sub-set of emerging and developing countries analysed, the more developed countries with larger GDP and more developed financial markets attract relatively high amounts of Irish foreign portfolio investment. That holds both for the treaty countries Malaysia and South Africa and for the non-treaty countries Thailand and – to a lesser extent – the Philippines. On the basis of this information, a clear impact of bilateral tax treaties on the size and destination of outward portfolio investment from Ireland to the selected countries cannot be distinguished

4. Conclusion

Overall, the analysis in this chapter shows first that Irish FDI towards the set of emerging and developing countries analyzed is very small and plays a marginal role at best in the overall FDI into those countries. The available data do not indicate a distinction between treaty and non-treaty countries in relation to FDI investments from Ireland, which suggests an insignificant impact of bilateral tax treaties on the size and destination of outward FDI from Ireland to these countries.

Second, the analysis shows that total Irish foreign portfolio investment dominates total Irish FDI reflecting the influence of Ireland's position as a global centre for collective investment funds on these statistics. Disaggregating Irish portfolio investment and focusing on outward investment into our group of treaty and non-treaty countries demonstrates that Irish portfolio investment mostly flows to the more developed countries with larger GDP and more developed financial markets. Again, a clear impact of bilateral tax treaties on the size and destination of outward portfolio investment from Ireland to the selected countries cannot be distinguished, indicating that the Irish tax treaty network has not been a significant influencing factor on these investment decisions.

IV. Relation between tax treaties and trade flows

As our analysis in chapter III found that FDI from Ireland to developing countries is relatively limited and that a distinct impact of tax treaties on FDI location choice could not be determined, it was decided to extend our analysis further to research the possible impact of tax treaties on trade flows.

Tax treaties are concluded between countries for a variety of reasons. Treaty provisions on allocation of taxing rights between the treaty partners and those relating to exchange of information, mutual agreement and non-discrimination provide a stable and certain framework for transactions between the jurisdictions. Tax treaty provisions may also facilitate trade between countries by reducing potential inconsistency and uncertainty regarding transfer pricing rules. In this section we briefly analyse to what extent Ireland's tax treaties with several developing countries affect exports to Ireland and imports from Ireland for these countries.

Transfer pricing involves the setting of a price for goods and services sold between associated enterprises within a single multinational enterprise (MNE). In this context, goods are categorised as either homogenous, being goods which cannot be distinguished from competing products from other suppliers, or differentiated, being goods which do not have exact substitutes. In case of differentiated goods or services, such as MNE intermediate products, a market price for these transactions is often unavailable as there are no directly comparable open-market transactions on which to base a value. Tax authorities may then apply different methods to assess what transfer prices are acceptable to determine taxable income. This can result in partial double taxation (or double non-taxation) of intra-group trading income. Tax treaties enhance the aligning of transfer pricing rules and may thereby increase bilateral trade and investment. This seems to be confirmed in a recent study, which finds that US tax treaties have a positive effect on foreign subsidiary sales of firms using differentiated inputs[9].

To analyse the effect of Irish tax treaties on trade with developing countries, we have compared trade with Ireland between a group of countries that has a tax treaty with Ireland in place and a group of non-treaty countries. This comparison provides a first rough indication of potential trade facilitation effects. Data on trade flows are obtained from the UN Comtrade database on trade in goods. The analysis uses data reported by the developing countries themselves, because these can be compared to total trade reported by each country.

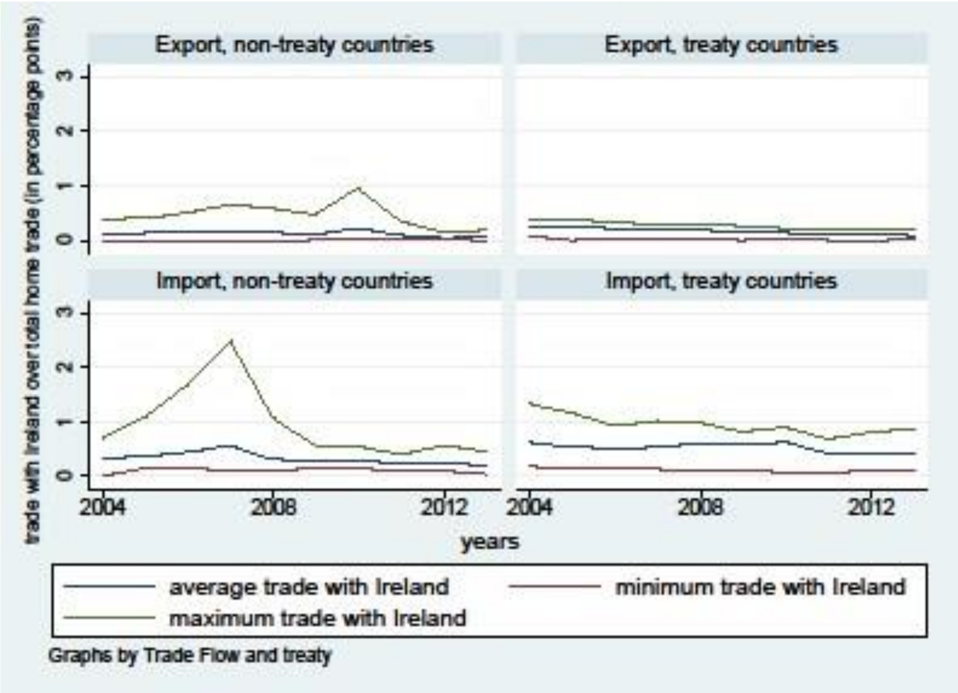
The group of treaty countries consists of Zambia, South Africa, Pakistan and Malaysia.

The selected non-treaty countries with available data are Malawi, Tanzania, Ethiopia, Mozambique, Uganda, Thailand (up to 2013), and the Philippines. GDP data is taken from IMF Economic Outlook.

Trade flows to and from Ireland for our sample countries have been divided and this is subsequently divided by total trade and by GDP for individual countries. Then unweighted averages for both the treaty and non-treaty group are taken. The results are graphed over time from 2004 to 2013.

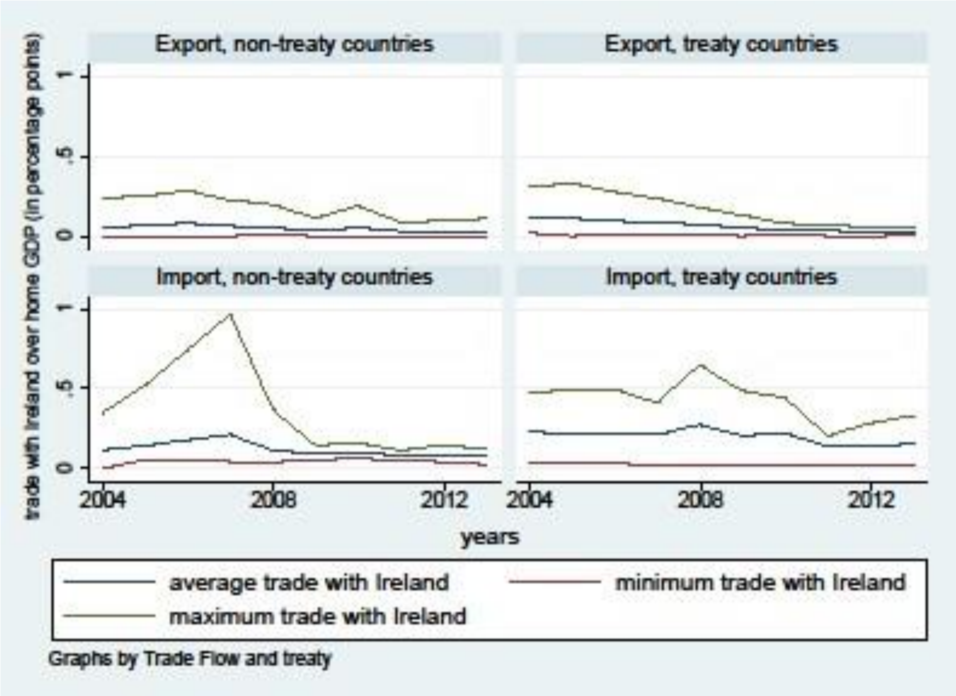
Figure 1 shows goods trade with Ireland relative to total goods trade of the country groups over the reference period. The blue line marks the average amount of trade with Ireland for each group. The green and red lines mark the maximum and minimum amount respectively.

Figure 1:



In the same way, Figure 2 shows trade with Ireland relative to the total GDP of the country groups.

Figure 2



Figures 1 and 2 show that overall goods trade with Ireland for the countries in the sample, whether they have a tax treaty with Ireland or not, is limited. Average exports to Ireland are 0.1-0.2% of the countries' total goods exports. To put these figures into context, in 2012, the share of world goods exports destined to Ireland was approximately 0.4%. The share of goods exports from the selected developing countries going to Ireland is even lower. Moreover, average goods exports to Ireland are around 0.1% of their GDP. goods Imports from Ireland into the selected countries are also limited. For treaty countries, these are on average roughly 0.5% of total imports and 0.2% of GDP.

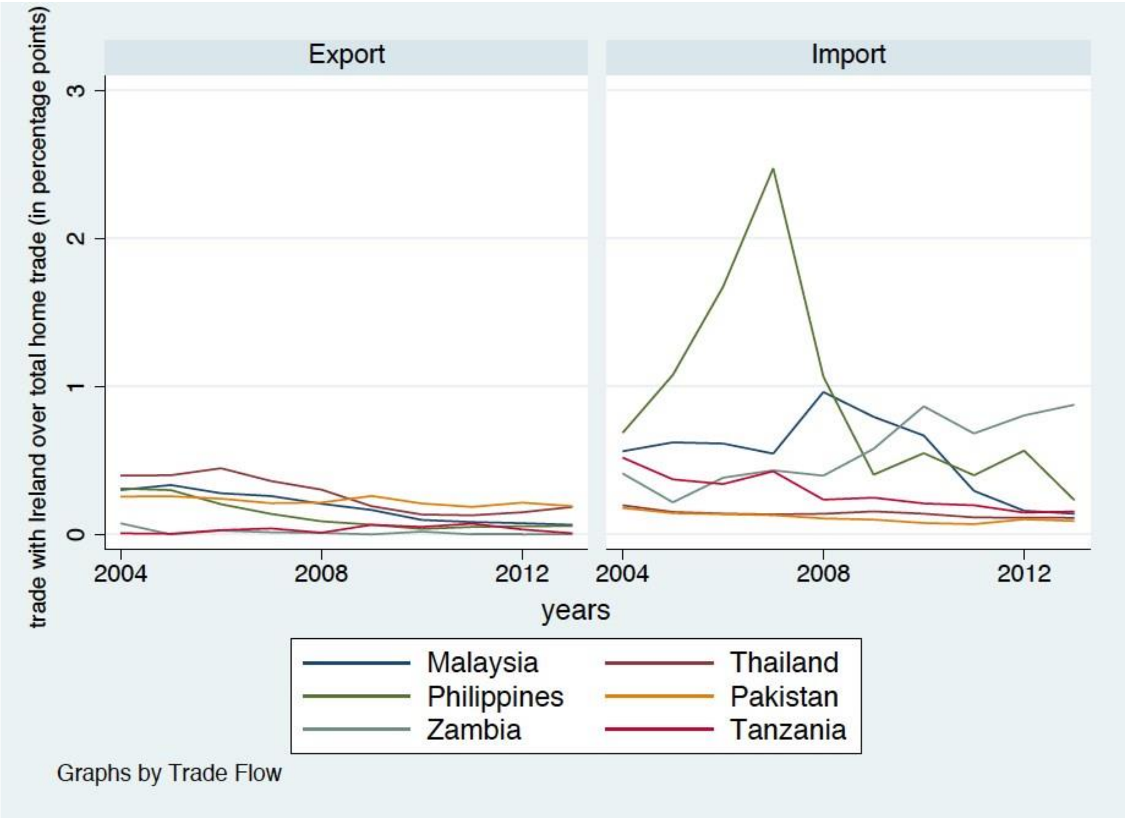
Treaty and non-treaty countries do not have markedly different trade patterns with Ireland. On average, treaty countries have slightly higher goods exports to Ireland and imports from Ireland, but the difference is not large. Moreover, the non-treaty group has outliers for both imports and exports that are larger than the maximum for the treaty group. Looking at trade flows relative to total trade or trade flows relative to GDP yields similar results.

We step back from this relatively coarse approach of comparing averages and instead proceed with comparing individual treaty and non-treaty countries. This allows for direct pair wise comparisons of treaty and non-treaty countries and should reduce the effects of differences in economic characteristics (such as GDP per capita and main export sectors) and geography (route of transportation to/from Ireland) on trade flows. We select the country pairs Malaysia and Thailand, Pakistan and the Philippines, and

Zambia and Tanzania. Each pair has one country that had concluded a tax treaty with Ireland before 2004 (Malaysia, Pakistan and Zambia) and one country that did not have a tax treaty with Ireland during the period of analysis (Thailand signed one in 2013, the Philippines and Tanzania do not have a tax treaty with Ireland). goods Exports and imports are divided by total trade, since comparison between Figure 1 and Figure 2 makes clear that dividing by GDP yields similar estimates.

Figure 3 contains the results.

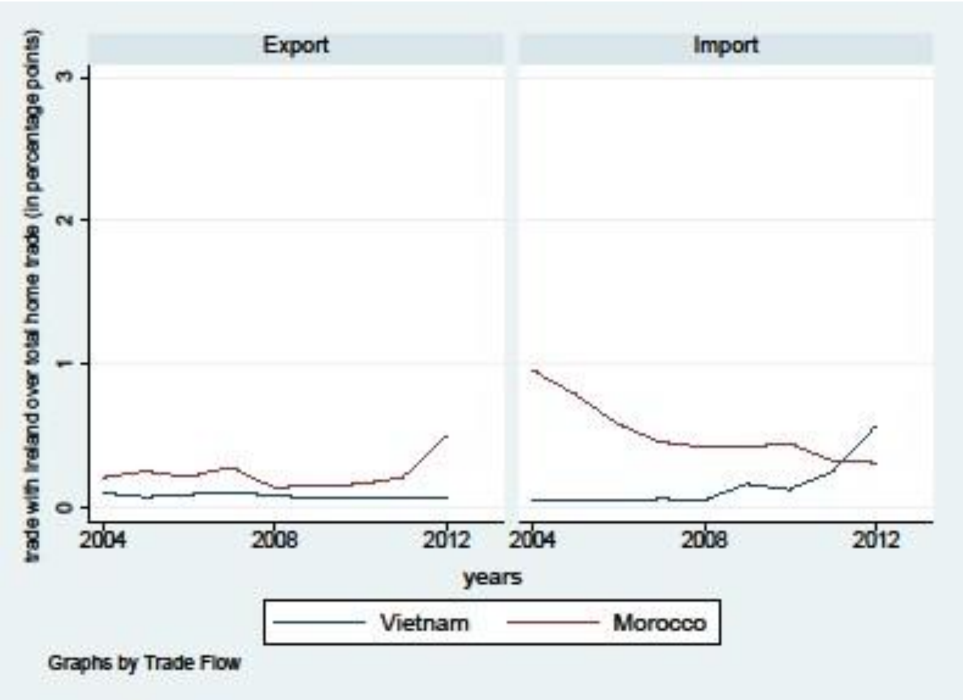
Figure 3



The patterns do not change much compared to the averages of country groups in Figure 1 and 2. Figure 3 confirms that there may be a positive relation between tax treaties and imports from Ireland. The right panel of the figure shows that for most years, the share of imports from Ireland is higher for the treaty countries Malaysia and Zambia than for the corresponding non-treaty countries Thailand and Tanzania. However, it is much smaller for treaty country Pakistan than for the corresponding non-treaty country the Philippines. The left panel of Figure 3 shows that for exports to Ireland, the situation is exactly the opposite. The share of exports to Ireland is lower for the treaty countries Malaysia and Zambia, compared to Thailand and Tanzania, and higher for treaty country Pakistan, compared to the Philippines. This seems to indicate that import and export of goods is determined by other commercial factors rather than by the presence of a treaty.

Figure 4 also shows Irish exports and imports of Vietnam and Morocco. These two countries signed tax treaties with Ireland in 2008 and 2010, respectively. The effect of these two tax treaties can therefore be analysed by looking at developments over time, instead of comparing between countries. Figure 4 shows that the treaties had mixed results on trade flows. Moroccan exports to Ireland and Vietnamese imports from Ireland increased markedly after a treaty was concluded (from 0.1-0.2% to 0.50.6%). However, Vietnamese exports to Ireland remained insignificant (less than 0.1%) and Moroccan imports from Ireland decreased over the whole period (from 1.0% to 0.3%), despite the tax treaties.

Figure 4



To better understand these findings, we also look at trade flows between the six selected countries in Figure 3 and both Belgium and Switzerland. As the previous section already mentioned, these countries are relatively close to Ireland in terms of absolute GDP. Moreover, like Ireland, Belgium and Switzerland are European high income countries with a large services sector, limited natural (mineral) resources, and similar sized agricultural sectors. Thus, their economies have some important similarities with the Irish economy.

The figures 5 and 6 contain the results.

Figure 5

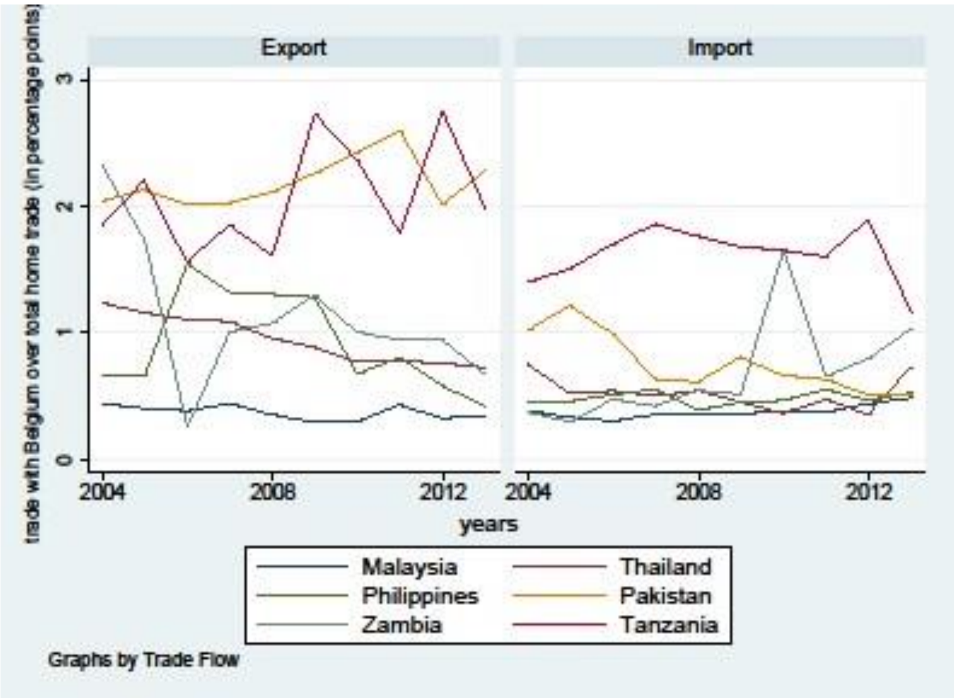
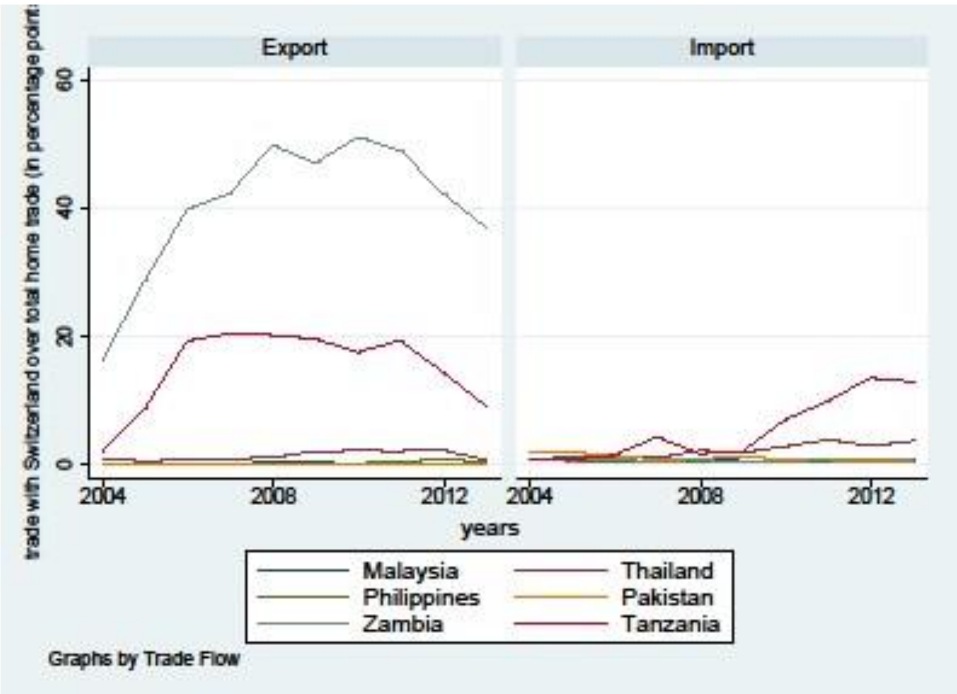


Figure 6



The selected countries have larger trade flows with Belgium than with Ireland, up to almost 3% of total exports and 2% of total imports in the case of Tanzania. This is in line with the higher share of Belgium in world trade, with exports to Belgium accounting for approximately 2.4% of world exports in 2012. In several other respects, the economy of

Belgium is relatively similar to that of Ireland. Of the six selected countries, Belgium has a tax treaty with Malaysia, Thailand and the Philippines. None of the developing countries has particularly high or low trade flows with Belgium.

Trade patterns with Switzerland are rather different. Switzerland is a major export destination for Zambia (up to 50% of total export) and Tanzania (up to 20%), two developing countries in our sample with large commodity exports. The reason is that Switzerland is a global commodities trading hub. These large exports from specific countries contrast with the share of world exports going to Switzerland, which was approximately 1.1% in 2012, in between Ireland and Belgium. Note that Tanzania does not have a tax treaty with Switzerland, but in the case of commodities with readily observable market prices, the risk for double taxation due to transfer pricing disputes would also be limited without a tax treaty.

In conclusion, trade flows between Ireland and both treaty and non-treaty countries are small. The analysis does not show a consistent relation between tax treaties and exports to Ireland or imports from Ireland. Comparison of flows between Ireland and developing countries to flows between Switzerland and developing countries suggests that other economic factors are likely to be more important than the presence of a tax treaty between the jurisdictions. Therefore, a significant effect of a tax treaty with Ireland on export earnings of developing countries cannot be established, based on the small sample size available.

a. Potential revenue loss through transfer mispricing

The issue of revenue loss through incorrect transfer pricing was referenced as an area in several of the submissions to the public consultation conducted by the Irish Department of Finance in connection with this project, and also forms part of the category 'base spillovers due to profit shifting' identified in the IMF staff paper referenced in Chapters II and VII of this report. Profit shifting and transfer mispricing are broadly agreed to be harmful.

By international standards, Ireland's 12.5% corporate tax rate applicable to trading profits is low. There is a general view that low corporation tax rates may lead to underpricing of intracompany exports to, and overpricing of intra-company imports from low tax jurisdictions, in order to shift profits into that lower-tax jurisdiction. This phenomenon is known as profit shifting through transfer mispricing (which is not to be confused with fraudulent profit shifting through activities such as false invoicing between unrelated parties).

We therefore proposed to extend our analysis to try to determine whether transfer mispricing takes place between Ireland and developing countries by looking at trade flows to and from Ireland at a more granular level.

We focus on countries that have significant trade with Ireland. We rank the countries in our sample of treaty and non-treaty countries by the significance of their trade with Ireland, identify the main classes of goods flowing to and from Ireland and see if these are homogenous goods. For such goods, price/quantity ratios can be compared to other countries, such that potential transfer mispricing can be identified.

We focus on data from 2012, as at the time of the research this is the most recent year for which complete information is available. Table 1 shows a ranking of countries with imports from Ireland as a percentage of total imports, as a percentage of GDP and in absolute terms. For each country, the table shows whether the main types of imports are differentiated goods, homogenous goods, or a combination of both. For the four top entries, the main goods categories are specified in the second part of the table.

Table 1A

Country	IE imports (mln USD)	IE imports/total (in percentage points)	IE imports/GDP	treaty	main types of goods
Zambia	70.82	0.80%	0.34%	yes	Differentiated
South Africa	654.96	0.64%	0.17%	yes	Differentiated
Vietnam	647.03	0.57%	0.42%	yes	Differentiated
Philippines	369.99	0.57%	0.15%	no	Differentiated
Uganda	21.03	0.35%	0.10%	no	Differentiated
Morocco	141.86	0.32%	0.15%	yes	Differentiated
Ethiopia	26.16	0.22%	0.06%	no	Differentiated
Malawi (2013)	4.62	0.16%	0.12%	no	Homogenous
Malaysia	314.12	0.16%	0.10%	yes	Differentiated
Tanzania	17.30	0.15%	0.06%	no	Differentiated
Thailand	279.07	0.11%	0.08%	no	Differentiated
Pakistan	44.79	0.10%	0.02%	yes	Differentiated
Mozambique	6.03	0.10%	0.04%	no	Differentiated

Table 1B

Country	IE imports, largest HS groups (% of total IE imports)
Zambia	HS84 machinery (38%), HS38 miscellaneous chemicals (26%), HS2 meat (9%), HS30 pharmaceuticals (9%)
South Africa	HS84 machinery (26%), HS85 electrical machinery (24%), HS30 pharmaceuticals (15%), HS90 precision instruments (7%)
Vietnam	HS85 electrical machinery (74%), HS30 pharmaceuticals (7%), HS72 iron and steel (5%)
Philippines	HS88 aircraft (56%), HS85 electrical machinery (20%), HS30 pharmaceuticals (12%)

HS codes reflect official statistics for international trade:
UN Comtrade commodity list, http://comtrade.un.org/db/mr/rfCommoditiesList.aspx

Table 2 shows a similar ranking, but this time for exports to Ireland. The second part of the table shows the main export categories for the top two entries only, as exports are even smaller than imports.

Table 2A

Country	IE exports (mln USD)	IE exports/total (in percentage points)	IE exports/GDP	treaty	main types of goods
Morocco	106.41	0.50%	0.11%	yes	Differentiated
Pakistan	52.82	0.21%	0.02%	yes	Differentiated
Thailand	343.23	0.15%	0.09%	no	Differentiated
South Africa	112.20	0.13%	0.03%	yes	Differentiated and homogenous
Malawi (2013)	0.92	0.08%	0.02%	no	Homogenous
Malaysia	172.27	0.08%	0.06%	yes	Differentiated
Vietnam	80.98	0.07%	0.05%	yes	Differentiated
Philippines	28.60	0.06%	0.01%	no	Differentiated
Tanzania	1.87	0.03%	0.01%	no	Homogenous
Ethiopia	0.21	0.01%	0.00%	no	Homogenous
Mozambique	0.15	0.00%	0.00%	no	Differentiated
Uganda	0.06	0.00%	0.00%	no	Differentiated
Zambia	0.02	0.00%	0.00%	yes	Differentiated

Table 2B

Country	IE exports, largest HS groups (% of total IE exports)
Morocco	HS88 aircraft (59%), HS62 apparel, not knitted (15%), HS31 fertilizers (12%), HS61 apparel, knitted (10%)
Pakistan	HS63 other made up textiles (34%), HS62 apparel, not knitted (30%), HS61 apparel, knitted (21%)
South Africa	HS71 jewellery (18%) HS87 vehicles (16%) HS47 wood pulp (12%) HS82 tools of base metal (10%)
Thailand	HS84 machinery (67%) HS85 electrical machinery (9%) HS16 meat and fish preparations (7%)

HS codes reflect official statistics for international trade:
UN Comtrade commodity list, http://comtrade.un.org/db/mr/rfCommoditiesList.aspx

Tables 1 and 2 show again, like the previous Figures, that only a few of the selected countries have more than marginal trade with Ireland. Further analysis also indicated that some of the amounts shown in the analysis period are isolated transactions that do not reflect structural trading patterns. In the exports table, for example, Morocco is the top entry due to a one-off aircraft sale in 2012. The tables show that, out of the selected developing countries, only Malawi imports mainly homogenous goods from Ireland and only Malawi, Tanzania and Ethiopia export mainly homogenous goods to Ireland.

A further analysis of potential transfer mispricing and resulting profit-shifting therefore cannot be conducted, as the main trade flows consist of differentiated goods. For such goods, price/quantity ratios cannot be compared against other open market transactions in order to determine any variation in prices because of large quality differences between products in the same category of goods. Although prices can be compared for specific products, such as a certain model of trousers or a specific machine part, each class of differentiated goods contains many unique products.

However, the analysis of the trade figures between Ireland and the developing countries shows that it is unlikely that transfer mispricing, if it is occurring, could have large revenue effects for the selected countries, whether they have a tax treaty with Ireland or not, since overall trade flows are so small.

b. Irish exports of services

A risk of profit shifting through trade mispricing is present for trade in services, as well as for trade in goods. In fact, the risk for mispricing in services exports is relatively large, because these services are typically more difficult to value and comparable market prices are often unavailable. This is especially the case for intra-group license and management fees. It would therefore be useful to analyse imports of Irish services for the selected countries, with a view to identify potential risks for profit shifting through trade in services.

However, comprehensive data are not available as, unlike trade in goods, there exists no global database on bilateral trade in services.

The Irish Central Statistics Office (CSO) was able to provide the total value of Irish trade in services with a range of countries for the purposes of this analysis. For some of the selected developing countries, imports of services from Ireland are roughly equal in value to imports of goods. This applies to South Africa, Pakistan and Ethiopia. In the case of Malaysia, imports of Irish services are roughly half as large as imports of Irish goods. For Morocco and Vietnam, imports of Irish services are many times smaller than trade of goods with Ireland. For the other selected countries, data on bilateral trade in services are unavailable. This means that, of the countries analyzed, South Africa has the largest service imports from Ireland, both in absolute value and relative to total trade, and the other selected countries import only marginal amounts of services from Ireland.

For South Africa, a break-down of services imports from Ireland into main types of services is available. These imports mainly consist of computer services, such as software license fees. As services related to intangible assets often do not have directly comparable substitutes against which a market price can be benchmarked, as has been reported there exists a significant risk of transfer mispricing in such services. Unfortunately, due to lack of more detailed data, it is not possible conduct further analysis of potential mispricing of these services imports.

Conclusion

A direct relationship between the presence of a tax treaty and the volume of goods trade could not be distinguished from the data analysed, indicating that the mere presence of a tax treaty is not in itself a determining factor and that other economic factors are likely to be more important overall in relation to trade flows.

V. Analysis of double taxation conventions concluded by Ireland with developing countries

As part of the spillover analysis on possible effects of the Irish tax system on developing economies, it is important to determine whether or not double taxation conventions concluded by Ireland with developing countries play a role.[10] While the analysis in chapters III and IV of this report show that FDI and trade flows between Ireland and developing countries are small at present it could be expected that these will grow over time, and the effects of tax treaty provisions will become more relevant. At present Ireland has only a limited number of tax treaties with developing countries, therefore, all Irish tax treaties with African and selected tax treaties with Asian developing countries[11] concluded before 1 September 2014 have been included in this analysis. Ireland has pledged to continue to expand its tax treaty network[12].

The use of tax treaties in international tax planning is well known and the impact tax treaties can have on tax revenue foregone in developing countries has for instance been illustrated in research done by ActionAid. In its 2013 report "Sweet Nothings: The Human Cost of a British Sugar Giant Avoiding Taxes in Southern Africa", ActionAid described in detail how the taxable profits of a Zambian resident company were reduced through a number of payments for services to companies belonging to the same multinational group and which were located outside Zambia. Due to the provisions contained in the tax treaties between Zambia and the states in which the companies receiving the payments were resident, including Ireland, Zambian withholding taxes could not be levied, resulting in a loss of tax revenue to Zambia[13]. A new tax treaty between Ireland and Zambia was signed in March 2015. When we refer to the tax treaty between Ireland and Zambia or its provisions in this analysis, we refer to the provisions of the old treaty which was signed in 1967.

Table 1 contains an overview of the tax treaties included in the analysis and the dates on which these tax treaties were signed and the date on which the provisions of the tax treaty became effective.

Table 1: Treaties between Ireland and developing countries included in the analysis[14]

Treaty partner	Date of signature	Effective from
Botswana	10 June 2014	Not yet
Egypt	9 April 2012	1 January 2014
Morocco	22 June 2010	1 January 2012
Pakistan	13 April 1973	1/6 April 1968 (Ireland) and 1 July 1968 (Pakistan)
South Africa	7 October 1997	1 January 1998[15]
Vietnam	10 March 2008	1 January 2009
Zambia[16]	29 March 1971	1/6 April 1967 (Ireland) and 1 April 1967 (Zambia)

1. Introduction and Methodology

Double taxation conventions or tax treaties are agreements between states on the taxation of cross border income. Often tax treaties are bilateral instruments which allocate taxation rights for different types of income between the source state and the residence state. Many states tax their resident taxpayers on worldwide income and non-resident taxpayers on income from sources in that state. This means that, in the case of cross border income, two states may want to tax the same income: the resident state because the recipient of the income is resident in that state and the source state because the source of the income is in that state. Tax treaties are concluded to avoid this type of juridical double taxation.

Tax treaties have a uniform structure and are based predominantly on the OECD Model or the United Nations Model Convention. The OECD Model was originally drafted in the early 1960s and has been updated regularly (the last Update was agreed upon in July 2014) and allocated many taxing rights to the state in which the recipient of the income in a resident. This aspect makes the OECD Model less suitable for capital importing countries, and developing countries are often capital importing countries. The United Nations Model Convention was developed to take the interests of developing countries more into consideration. This implies that under the United Nations Model Convention more taxing rights are allocated to the source state than is the case under the OECD Model. In other aspects however, most provisions of the United Nations Model Convention are identical or largely similar to the OECD provisions.

Most countries that negotiate tax treaties have developed a national model that often contains elements of the OECD Model, elements of the United Nations Model Convention and country specific provisions that relate to the domestic tax legislation of

the country. Although sometimes treaty provisions are the result of negotiations on that specific treaty article, often a tax treaty is the outcome of a negotiation process that involved package deals and overall compromise solutions between the two contracting countries.
In the analysis of the Irish tax treaties with developing countries, the focus is on those aspects of tax treaties that most likely can lead to loss of tax revenue in the other country.

Therefore, the following elements have been studied:

- The Permanent Establishment definition;
- The withholding taxes on dividends, interest and royalties;
- The treaty definition of royalties;
- The treatment of services;
- The presence of anti-abuse provisions;
- Whether the tax treaty contains an other-income article following Art. 21 UN Model;
- The presence of tax sparing credits in the tax treaties

To determine whether or not Irish tax treaties with developing countries are more favourable than tax treaties concluded by the same developing countries with other major economies and common treaty-partners, a comparison is made between the Irish tax treaties and tax treaties concluded with China, France, Germany, India, Luxembourg, Mauritius, the Netherlands, Singapore, Switzerland, United Kingdom and the United States (hereafter: the reference countries).
Table 2 contains an overview of the treaty relations between the reference countries and the developing countries included in the analysis.

Table 2: Overview of tax treaty relations as at 1 September 2014

Countries	**Botswana**	**Egypt**	**Morocco**	**Pakistan**	**South Africa**	**Vietnam**	**Zambia**
Ireland	√	√	√	√	√	√	√
China	√[17]	√	√	√	√	√	√
France	√	√	√	√	√	√	√[18]
Germany	X	√[19]	√	√	√[20]	√	√
India	√	√	√	X	√	√	√[21]
Luxembourg	X[22]	X	√	X	√	√	X
Mauritius	√	X[23]	X[24]	√	√[25]	X	√
Netherlands	X	√	√	√	√	√	√
Singapore	X	√	√	√	√	√	X
Switzerland	X	√	√	√	√	√	√[26]
UK	√	√	√	√	√	√	√[27]
USA	X	√	√	√	√	X	X

√: a tax treaty has been signed
X: no tax treaty exists in this relation.

From Table 2 it appears that, with the exception of Botswana and to a lesser extent Zambia, Ireland's treaty partners included in the analysis have signed tax treaties with most reference countries.

2. Treaty analysis

This section of the report will focus on the content of tax treaties concluded by Ireland as well as other countries with the selected developing countries. In the ***sub-chapter a***, the treaty definition of Permanent Establishment will be analyzed. The ***sub-chapter b*** will focus on the withholding taxes on dividends, interest and royalties as well as on the royalty definition. In the ***sub-chapter c*** the allocation of taxing rights relating to services will be dealt with. ***Sub-chapter d*** will deal with anti-abuse provisions and ***subchapter e*** will address the other income article. Finally, ***sub-chapter f*** will analyze whether or not the tax treaties provide for tax sparing credits. These elements have been chosen because they have the biggest impact on developing countries in their possibilities to levy taxes. For each of the tax treaty elements, the significance for developing countries will be explained in the following sub-chapters.

a. Permanent Establishment

Under tax treaties, in the case of cross border income, the source state of the income is only allowed to tax this income when the enterprise has a permanent establishment (PE) in the source state. As developing countries are often source states, the PE requirement limits their options to tax foreign enterprises carrying on business in their countries. Tax treaties contain a definition of permanent establishment. Under the tax treaty definition, a PE may exist in a number of cases. The most common form of PE is the physical PE, where a fixed place of business through which the business of the enterprise is wholly or partly carries on, is required. Even when there is a fixed place of business, certain activities will be considered auxiliary or preparatory activities that do not lead to a permanent establishment and therefore do not allow the source state to tax any business profits arising from those activities. Activities that are considered auxiliary or preparatory may under some tax treaties include delivery and purchasing activities. This means for instance that when a foreign enterprise only has a warehouse in another state (the source state), the source state has no right to tax the profits of that enterprise. Hence, under certain tax treaties, delivery is a core business activity and therefore the presence of a warehouse or the maintenance of a stock of goods or merchandise for delivery purposes (including a stock agent) leads to a permanent establishment in the source state. Such PE definition can be more favourable for developing countries.

Unless the tax treaty definition of permanent establishment indicates differently, the physical PE definition also applies to the provision of services in another State. Often businesses in developing countries pay significant amounts to non-resident enterprises leading to deductible expenses in the source state without any possibility to tax the non-resident service provider, as under tax treaties the other jurisdiction will often have the taxation rights.

In the case of building sites and construction and installation activities, tax treaties deem a permanent establishment to exist when the activities exceed a certain duration. The shorter the duration threshold for construction activities in the tax treaty, the more possibilities a developing country has to tax the profits of foreign construction enterprises.

Because of the importance of the PE definition, the analysis of the treaty articles on PE will focus on the following elements:

- What is the threshold for building sites and construction and installation projects to become a PE;
- Does the tax treaty contain a service PE provision comparable to Art. 5 (3)(b) UN Model Convention;
- Is delivery a core business activity or an auxiliary activity;
- Does the tax treaty contain a provision for stock agents comparable to Art. 5 (5)(b) UN Model Convention;
- Does the tax treaty contain a specific provision for agents of insurance companies comparable to Art. 5 (6) UN Model Convention.

Table 3 contains the analysis of the PE articles in the Irish tax treaties with the developing countries.

Table 3: Analysis of PE Articles in tax treaties concluded by Ireland with developing countries:

Treaty partner	Duration building sites, etc	Service PE provision	Delivery is not a core business	Stock agent provision	Insurance agent provision
Botswana	6 months	6 months/183 days[28]	√	X	X
Morocco	6 months[29]	6 months[30]	√	X	√
South Africa	12 months	X	√	X	X
Zambia	12 months[33]	X	√	X	X

√: this is applicable
X: this is not applicable

Table 4 contains an overview of the duration threshold for building sites and construction and installation projects in the tax treaties concluded by Ireland with the selected developing countries, compared to the duration threshold contained in the tax treaties concluded by the same developing countries with the reference countries.

Table 4: Duration threshold in tax treaties between the selected developing countries and the reference countries

Country	**Botswana**	**Egypt**	**Morocco**	**Pakistan**	**South Africa**	**Vietnam**	**Zambia**
Ireland	**6 months**	**6 months**	**6 months**	**12 months**	**12 months**	**6 months**	**12 months**
China	12 months	12 months [34]	6 months	6 months	12 months	6 months	9 months
France	6 months	6 months	0/6 months[35]	183 days	12 months	183 days	No duration
Germany	No DTA	6 months	6 months	6 months	12 months	6 months	9 months
India	6 months	90 days	8 months	No DTA	6 months	6 months	9 months
Luxembourg	No DTA	No DTA	6 months	No DTA	12 months	6 months	No DTA
Mauritius	6 months	6 months	No DTA	6 months[36]	9 months	No DTA	9 months
Netherlands	No DTA	6 months	6 months	6 months	12 months	6 months	6 months
Singapore	No DTA	6 months	6 months	183 days	12 months	6 months	No DTA
Switzerland	No DTA	6 months	6 months	6 months	12 months	6 months	1 year
UK	6 months	6 months	183 days	6 months	12 months	183 days	6 months
US	No DTA	6 months	6 months	No duration	12 months	No DTA	No DTA

When the threshold for building sites and construction or installation projects in Irish tax treaties with the selected developing countries are compared with the threshold in tax treaties concluded by the reference countries with the same developing countries, the following picture emerges. It seems that the duration thresholds in Irish treaties – with the exception of the tax treaties with Pakistan and the 1967 Zambia treaty which were in the process of renegotiation at the time of this analysis – are in line with the duration thresholds in the treaties concluded by the reference countries. Whether or not the developing country is able to tax profits relating to construction activities carried out by non-resident construction enterprises in its territory is of course also dependent on any time threshold in its domestic legislation. Therefore, the threshold in the tax treaty is not per se decisive for the source state being able to tax the income. The analysis of time thresholds in the domestic legislation of developing countries is, however, outside the scope of this spillover analysis.

The analysis regarding the service PE provisions in the PE article will be covered in the analysis in the ***sub-chapter c*** on the allocation of taxing rights with respect to services.

Table 5 provides an overview on whether or not delivery activities would lead to the presence of a permanent establishment. Under the approach contained in Art. 5 OECD Model, unless delivery is the core business activity of an enterprise, delivery is considered an auxiliary or preparatory activity that, under Article 5, paragraph 4, subparagraphs a) and b) of the OECD Model, would not lead to the presence of a PE. By contrast, under Art. 5 of the UN Model, delivery is always a core business activity which would lead to the presence of a PE in the other Contracting State when the conditions of Art. 5, paragraph 1, have been fulfilled.

Table 5: Delivery is not a core business activity and does not itself lead to a PE

Country	**Botswana**	**Egypt**	**Morocco**	**Pakistan**	**South Africa**	**Vietnam**	**Zambia**
Ireland	√	√	√	X	√	√	√
China	√	√	√	X	√	√	√
France	√/ X[37]	√	√	X	√	√	X
Germany	No DTA	√	√	X	√	√	√
India	X	X	√	No DTA	√	√/ X[38]	X
Luxembourg	No DTA	No DTA	√	No DTA	√	X	No DTA
Mauritius	X	X	No DTA	X	√	No DTA	√
Netherlands	No DTA	√	√	X	√	X	√
Singapore	No DTA	√	√	X	√	√	No DTA
Switzerland	No DTA	√	√	X	√	X	X
UK	X	√	√	X	√	√	√
USA	No DTA	√	√	X	√	No DTA	No DTA

√: Delivery is an auxiliary activity

X: Delivery is a core business activity

When a comparison is made between the treaties concluded by Ireland with the selected developing countries and the tax treaties concluded by the reference countries regarding the treatment of delivery activities, only a few differences can be identified. In half of the tax treaties concluded by Botswana and in roughly one third of the tax treaties concluded by Vietnam and by Zambia, delivery activities are treated as a core business activity that could lead to the presence of a PE on its own. The tax treaties concluded by Ireland with these three countries will regard delivery activities as an auxiliary activity that will not lead to the presence of a permanent establishment. This may lead to loss of tax revenue for the other Contracting State in cases where the domestic legislation of those countries would consider delivery a core business activity. It is beyond this analysis to determine whether or not this would be the case in the

selected developing countries. Also, it is doubtful that the loss of revenue in this case will be substantial because profits attributable to delivery activities is usually limited.

In table 6 we will compare the inclusion of the stock agent provision as included in Art. 5, paragraph 5, subparagraph b, of the UN Model Convention in the tax treaties concluded by Ireland with the selected developing countries with the tax treaties concluded by the reference countries. The stock agent provision expands the PE definition to cases where an enterprise has in the other contracting state a person that does not qualify as a dependent agent but that maintains a stock of goods and merchandise in the other State from which he regularly delivers goods or merchandise on behalf of the enterprise.

Table 6: The tax treaty contains a provision deeming a stock agent to create a PE

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Ireland	X	X	X	√	X	√	X
China	X	X	√	√	X	X	X
France	X	X	√	√	X	X	√
Germany	No DTA	X	X	√	X	X	X
India	√	√	X	No DTA	X	√	√
Luxembourg	No DTA	No DTA	X	No DTA	X	√	No DTA
Mauritius	√	√	No DTA	√	√	No DTA	X
Netherlands	No DTA	X	X	√	X	√	X
Singapore	No DTA	X	X	√	X	X	No DTA
Switzerland	No DTA	X	√	√	X	√	X
UK	X	X	X	√	X	X	X
USA	No DTA	X	X	√	X	No DTA	No DTA

√: the tax treaty contains a provision determining that stock agents create a PE
X: the tax treaty does not contain a provision deeming stock agents to constitute a permanent establishment

Apart from the Irish tax treaties with Pakistan and Vietnam, none of the tax treaties concluded by Ireland contains the stock agent provision from Art. 5, para. 5, subpara. b of the UN Model Convention. As the provision is included in the tax treaties less often, as can be seen from the comparison to the reference countries, it appears that several developing countries consider the inclusion of this provision in their tax treaties to be of a lower priority. It is questionable whether the inclusion of the stock agent in the PE definition would lead to substantial additional tax revenue for the selected developing countries because the amount of profits that can be attributed to the activities of such a stock agent are limited.

Table 7: The tax treaty contains a provision deeming an insurance agent to create a PE

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Ireland	X	√	√	X	X	√	X
China	X	√	√	√	X	√	X
France	X	X	√	X	X	X	X
Germany	No DTA	√	X	√	X	X	X
India	√	X	√	No DTA	X	X	√
Luxembourg	No DTA	No DTA	X	No DTA	X	X	No DTA
Mauritius	X	√	No DTA	X	X	No DTA	X
Netherlands	No DTA	X	X	X	X	X	X
Singapore	No DTA	X	√	X	X	X	No DTA
Switzerland	No DTA	√	√	√	X	√	X
UK	X	X	X	X	X	X	X
USA	No DTA	X	X	X	X	No DTA	No DTA

√: the treaty contains a provision deeming an insurance company to create a permanent establishment for the insurance company
X: the tax treaty does not contain a specific provision deeming an insurance agent to create a permanent establishment for the insurance company

Although the insurance agent PE provision is less often included in tax treaties than some of the other PE provisions[39], developing countries may lose some tax revenue when the tax treaty does not contain such a provision. A number of Ireland's tax treaties with developing countries include a provision that deems insurance companies to have a permanent establishment in the other contracting state when an agent in that other state collects premiums or insures risks in that other State. The analysis of Table 7 also shows that only a few of the selected developing countries appear to prioritise having such a provision in their tax treaties.

b. Withholding taxes on dividends, interest and royalties and royalty definition

In this paragraph the withholding taxes on dividend, interest and royalty payments in tax treaties concluded by Ireland with the selected developing countries are compared with the withholding taxes on the items of income agreed upon in the tax treaties concluded by the reference countries with the same developing countries. The level of withholding taxes contained in tax treaties has become one of the most important elements in international tax planning. Further, as many developing countries heavily rely on withholding taxes to collect tax revenue, a tax treaty that significantly lowers the withholding taxes that may be levied by the source state may lead to a substantial loss of tax revenue for a developing country.

Dividends

Table 8 contains an overview of the tax treaty withholding tax rates for dividends paid by a company which is a resident of the source state to a recipient in the resident state. A distinction is made between intercompany dividends (or participation dividends) and portfolio or investment dividends. The table also provides the domestic withholding tax rates for the developing countries. The lower rate of withholding tax on dividends applies – unless otherwise indicated – for shareholdings of at least 25 percent in the capital of the company paying the dividends.

Table 8: Taxation rights for the source state regarding dividends in % of the gross payment.

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Domestic	0[40] / 7.5	0	0[41] / 15	10	0 / 15	0[42] / 5[43]	0[44] / 15
Ireland	**5[45]**	**5 / 10**	**6 / 10**	**10**	**5[46] / 10**	**5[47] / 10**	**0[48]**
China	5[49]	8[50]	10[51]	10[52]	5[53]	10[54]	5[55]
France	5 / 7.5	0	15[56]	10[57] / 15	5[58] / 15	7[59]/10[60]/15	0[61]
Germany	No DTA	15[62]/20[63]	5 / 15	10[64] / 15	7.5[65]/15	5[66]/10[67]/15	5 / 15
India	7.5 / 10	0	10[68]	No DTA	10[69]	10[70]	5 / 15
Luxembourg	No DTA	No DTA	10 / 15	No DTA	5 / 15	5[71]/10[72]/15	No DTA
Mauritius	5 / 10	5 / 10	No DTA	10[73]	5[74] / 15	No DTA	5 / 15
Netherlands	No DTA	0 / 15	10 / 15	10 / 20	5[75] / 10	5[76]/7[77]/15	5 / 15
Singapore	No DTA	15[78]	8[79] / 10	10/12.5[80]/15	5[81] / 10	5[82]/10[83]/12.5	No DTA
Switzerland	No DTA	5 / 15	7 / 15	10[84] / 20	5[85] / 15	7[86]/10[87]/15	0[88]
UK	5[89] / 12	20[90]	10[91] / 25	10[92]/15[93]/20	5[94]/15[95]/10	7[96]/10[97]/15	5[98] / 15
USA	No DTA	0[99] / 20[100]	10 / 15	10	5[101] / 10	No DTA	No DTA

Table 8 shows that – with the exception of the 1967 Irish tax treaty with Zambia and to some extent also the Irish tax treaty with Morocco – the tax treaties concluded by Ireland do not in general provide for lower withholding taxes on dividends in comparison to the withholding taxes levied under the domestic legislation of the selected developing countries. Therefore, again with the exception of Zambia (under the terms of the 1967 treaty), the possible revenue loss for the selected developing countries will be negligible. Also with respect to tax treaties concluded by the developing countries with the reference countries, again with the exception of some tax treaties concluded by Zambia, the domestic withholding tax rates in the selected developing countries on dividends is largely maintained in the tax treaties.

Interest

Table 9 gives insight into the withholding taxes agreed upon between Ireland and the reference countries with the selected developing countries. The table will mention the rate as is indicated in the tax treaties. Where for specific types of interest an exemption from withholding tax in the source state applies, this will be mentioned in an endnote. However, no reference will be made to interest paid or received by a Contracting State, a political subdivision or local authority thereof.

Table 9: Taxation rights for the source state regarding interest in % of the gross payment.

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Domestic	0[102] / 15	20	10	10	0[103]/15[104]	5	0[105] / 15
Ireland	**7.5**	**10[106]**	**10**	**0**	**0**	**10**	**0**
China	7.5	10	10	10	10[107]	10	10
France	10[108]	15[109]	10[110] / 15	10[111]	0[112]	0[113]	0[114]
Germany	No DTA	15[115]	10	10[116] / 20[117]	10	10	10
India	10	20	10	No DTA	10	10	10
Luxembourg	No DTA	No DTA	10	No DTA	0	7[118]	No DTA
Mauritius	12[119]	10	No DTA	10	0[120]	No DTA	10
Netherlands	No DTA	12[121]	10[122] / 25	10[123]/15[124] /20	0	7[125]	10
Singapore	No DTA	15	10	12.5	0	10	No DTA
Switzerland	No DTA	15[126]	10	10[127]	5	10[128]	0[129]
UK	10	15	10	15	0	10[130]	10
USA	No DTA	15[131]	15	10	0	No DTA	No DTA

Table 9 demonstrates that the rate of withholding tax on interest is often significantly reduced under tax treaties and in some cases no taxing right is left for the source state. This applies to tax treaties concluded by Ireland as well as tax treaties concluded by the reference countries. Interest paid is also often an expense which is allowed as a deduction for CIT purposes in the source state, thereby reducing corporation tax revenues for the source state. In the case of Ireland's tax treaties, the reduction on interest withholding tax under the tax treaty applies especially to the tax treaties concluded by Ireland with Pakistan and Zambia, both of which are older treaties. These provisions have the potential to give raise to a loss of interest withholding tax for Pakistan and Zambia (and as from 1 January 2015 also for South Africa), however, the analysis of income and FDI data (see Part VI) shows that the actual loss of revenue for these countries seems limited. It is understood that Ireland was in the process of re-negotiating its tax treaty with Pakistan at the time of this analysis, and an updated tax treaty with Zambia was signed in March 2015.

Royalties

Royalty payments have been widely used in international tax planning to erode the tax base in high tax jurisdictions and to shift profits to states without CIT or with low CIT rates. Often states levy a withholding tax on royalty payments under their domestic legislation. Under tax treaties these withholding taxes are often reduced. Art. 12 OECD Model for instance allocates the taxation right on royalty payments exclusively to the state of residence of the recipient of the royalty payments. In contrast, Art. 12 UN Model provides for a shared taxing right with a limited taxing right for the source State. This means that developing countries maintain more taxing rights and possibly lose less tax revenue when the tax treaty follows the approach contained in the UN Model.

In Table 10 we provide an overview of the withholding taxes agreed upon in tax treaties concluded by the selected developing countries with Ireland and the reference countries.

Table 10: Taxation rights for the source state regarding royalties in % of the gross payment.

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Domestic	0[132] / 15	20	10	15	12[133]/15[134]	5[135] / 10	20
Ireland	**5[136] / 7.5**	**10**	**10**	**0**	**0**	**5[137]/10[138]/15**	**0**
China	5	8	10	12.5	7[139] / 10	10	5
France	10	15	5[140]/10[141]	10	0	10	0
Germany	No DTA	15/25[142]	10	10	0	10	10
India	10	20	10	No DTA	10	10	10
Luxembourg	No DTA	No DTA	10	No DTA	0	10	No DTA
Mauritius	12.5	12	No DTA	12.5	0[143]	No DTA	5
Netherlands	No DTA	12	10	5[144]/15[145]	0	5[146]/10[147]/15	10
Singapore	No DTA	15	10	10	5	5[148] / 10	No DTA
Switzerland	No DTA	12.5	10	10	0	10	0
UK	10	15	10	12.5	0	10	10
USA	No DTA	15	10	0	0	No DTA	No DTA

Table 10 shows that several Irish tax treaties lead to a significant reduction of royalty withholding tax in the source state. The reduction of source state taxing rights regarding royalties under a number of tax treaties concluded by Ireland (Morocco, Pakistan, the 1967 Zambia treaty) is more significant than is available under many of the tax treaties concluded by the reference countries with the same developing countries. Compared to the rate provided for in the domestic legislation of Egypt, the rate is reduced by 50 per

cent and the Irish tax treaties with Pakistan and Zambia remove source state taxation of royalty payments completely. These provisions could potentially lead to loss of tax revenue for Egypt, Pakistan and Zambia. However, the analysis of income and FDI data and trade flows (see Part III and IV) shows that the actual loss of revenue on royalty payments for these countries seems limited. Also, as already noted above, it is understood that Ireland was in the process of renegotiating its tax treaty with Pakistan at the time of this analysis and an updated tax treaty with Zambia was signed in March 2015.

In the case of the tax treaty between Ireland and South Africa royalty payment cannot be subjected to tax in the source. However, judging from the tax treaties concluded by South Africa with the reference countries, this seems to have been a deliberate choice made by South Africa in their treaty negotiations.

Royalty definition

Once the source state is granted the right to levy a withholding tax on royalties, the royalty definition becomes relevant to determine under which circumstances the royalty withholding tax can be levied. The current OECD Model defines royalties as “payments of any kind received as a consideration for the use of, or the right to use, any copyright of literary artistic or scientific work including cinematograph films, any patent, trade mark, design or model, plan, secret formula or process or for information concerning industrial, commercial or scientific experience.” The UN Model contains a broader definition of royalties that also includes payments for the use of, or the right to use, industrial, commercial or scientific equipment (leasing income). If a tax treaty contains a royalty definition that follows the definition of the UN Model, the source state may also impose a tax on leasing payments made from that state to a recipient that is resident in the other state. It should be mentioned that income from the leasing of aircraft is covered by Art. 8 (Shipping and air transport) under several tax treaties concluded by Ireland.
Table 11 analyzes how often leasing income is included in the royalty definition.

Table 11: The royalty definition in the tax treaty includes “payments for the use, or the right to use … industrial, commercial or scientific equipment”.

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Ireland	√[149]	√	√[150]	X	X[151]	X[152]	√
China	X[153]	√	√[154]	√	√	√	X
France	√[155]	√	X	√	√	√	X
Germany	No DTA	√	√[156]	√	√	√	√
India	√	√	√	No DTA	√	√	√
Luxembourg	No DTA	No DTA	√	No DTA	X	√	No DTA
Mauritius	√	√	No DTA	√	X	No DTA	X
Netherlands	No DTA	√	√[157]	√	X	X	√

Singapore	No DTA	√	√[158]	√	X	√	No DTA
Switzerland	No DTA	√	√	√	X	√	√[159]
UK	√	√	√[160]	√	X	X	√
USA	No DTA	X	X	X	X	No DTA	No DTA

X: the royalty definition in the tax treaty follows the current definition from the OECD Model and does not include leasing payments.
√: the royalty definition follows the definition from the UN Model and does include leasing payments.

The analysis of the royalty definition in tax treaties shows that many of Ireland's treaties have a wider definition of "royalties" than is the case under Art. 12, paragraph 2, of the OECD Model. Exceptions are the Irish tax treaties with Pakistan and Vietnam. The royalty definition in Ireland's treaties with these two countries follows the OECD model, whereas other treaties concluded by those countries often include the UN definition of royalties and therefore grant more taxing rights to the source state (including a right to levy a withholding tax on leasing payments).

By following the royalty definition from Art. 12, paragraph 3, UN Model, the source state may more often apply its royalty withholding tax. In general, it can be said that the higher the withholding tax rate for the source state is under the treaty and the broader the royalty definition in the tax treaty, the less likely it will be that the source state will forego significant amounts of tax revenue with respect to royalty payments made from that source state. However, such tax treaty policy may also result in deflection of trade to other countries which may have potential for a net negative effect for the developing country.

c. Treatment of services

When dealing with the allocation of rights regarding income from services, tax treaties provide for different rules. Under the OECD approach, in principle the normal rules of Art. 5 (Permanent establishment) and 7 (Business profits) apply. This means that the source state cannot tax income from services provided by a resident of the other Contracting State unless the service provider has a permanent establishment in the source state. If that happens, the source state may tax the income that is attributable to the PE in the source state (on a net income basis).

Under the UN approach the provision of services may create a permanent establishment if the services are provided inside the territory of a Contracting State by employees or other personnel engaged by the enterprise when the provision of services for the same or a connected project last for more than 6 months or 183 days. Once there is a service PE in the source state, that state may tax the income that is attributable to that PE (on a net income basis).

A number of tax treaties provide for a different way to allocate taxing rights with respect to income from services. Under these tax treaties the state in which the payor is a resident has a limited taxation right by way of a certain percentage of the gross amount of the payment for the services. In this case it is often also not relevant where the services have been rendered. Table 12 provides an overview of the treatment of income from services under the tax treaties included in the analysis.

Table 12: The tax treaty treatment of income from services

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Domestic	15% WHT	20% WHT	10% WHT	15% WHT	15% WHT[161]	5[162]/ 10%[163] WHT	20% WHT
Ireland	Service PE	Service PE	Service PE	OECD	OECD	7.5% WHT[164]	OECD
China	Service PE	Service PE	Service PE	12.5% WHT[165]	Service PE	Service PE	Service PE
France	Service PE + 7.5% WHT[166]	OECD	OECD	10% WHT[167]	OECD	OECD	OECD
Germany	No DTA	OECD	OECD	10% WHT[168]	OECD	7.5% WHT[169]	OECD
India	Service PE + 10% WHT[170]	OECD	10% WHT[171]	No DTA	10% WHT[172]	10% WHT[173]	10% WHT[174]
Luxembourg	No DTA	No DTA	OECD	No DTA	OECD	Service PE	No DTA
Mauritius	Service PE + 15% WHT[175]	Service PE	No DTA	OECD	OECD	No DTA	OECD
Netherlands	No DTA	OECD	OECD	Service PE	OECD	Service PE	OECD
Singapore	No DTA	Service PE	OECD	10% WHT[176]	OECD	Service PE	No DTA
Switzerland	No DTA	OECD	OECD	10% WHT[177]	OECD	Service PE	OECD
UK	Service PE + 7.5% WHT[178]	OECD	OECD	12.5% WHT[179]	Service PE	OECD	OECD
USA	No DTA	OECD	OECD	OECD	Service PE	No DTA	No DTA

OECD: No special provision for services
Service PE: in the PE article a specific provision regarding the furnishing of services is included
X%WHT: a withholding tax on the gross amount of the payment applies.

From the table it appears that the domestic tax legislations of all selected developing countries provide for the imposition of a withholding tax on payments for services. Such a withholding tax will usually apply to individuals as well as to companies. In the case of

South Africa the withholding tax will be effective as from 1 January 2015. Therefore, the potential loss of tax revenue for the selected developing countries is significant. However, closer inspection shows that the tax treaty policy of the selected developing countries on this issue appears to be diverse. In the case of Botswana, the right to levy a withholding tax is almost always maintained under the tax treaty, albeit often with a reduced rate. In contrast, tax treaties concluded by Morocco and South Africa seldom allow these states to apply their domestic withholding taxes to service payments made to non-resident enterprises.

In the case of Botswana, with respect to income from services, the tax treaty between Ireland and Botswana allocates the least taxing rights to the source state. The other tax treaties included in the analysis concluded by Botswana, with the exception of the tax treaty with China, provide also for a withholding tax. A similar picture emerges also regarding the Irish tax treaty with Pakistan. In these cases there is a potential risk for the treaty partner to lose tax revenue under its tax treaties with Ireland.

In contrast, in the tax treaty relations of Vietnam, only the treaties with Germany, India and Ireland contain a provision allowing the source state to levy withholding tax on payments for services that have been provided.

d. Anti-abuse provisions

This paragraph will focus on whether or not the tax treaties included in the analysis contain anti-abuse provisions. Anti-abuse provisions in tax treaties may be useful instruments in combatting treaty shopping and improper use of tax treaties. Without anti-abuse provisions, it may be too easy to claim the tax treaty benefits and the unintended use of tax treaties may be harmful for revenue collection by source states (generally developing countries).

Many countries have included anti-abuse provisions in their domestic tax legislation. Sometimes these anti-abuse provisions are of a general nature such as GAARs and in other cases more specific anti-abuse provisions such as for instance CFC rules, thin capitalisation rules, anti-tax haven rules, or anti-dividend stripping rules have been introduced in domestic legislation.

Although the OECD Commentary clearly indicates that, generally speaking, domestic anti-abuse provisions can be used also when a double taxation convention is being applied, case law from different countries provides for a mixed picture. Therefore, to combat treaty abuse, in recent years more and more anti-abuse provisions have been included in tax treaties themselves. The first step, being the inclusion of the beneficial ownership test, was made in 1977. More recently, main purpose test provisions and

Limitation-on-benefits or LOB-clauses have been included in double taxation conventions. Also the Report on Action 6 of the Action Plan BEPS that was published on 16 September 2014 proposes, amongst other recommendations, the inclusion of LOB clauses in tax treaties.

Table 13 provides an overview of the anti-abuse provisions included in the treaties that were analysed. The table makes a distinction between the beneficial ownership test and other anti-abuse provisions.

Table 13: The presence of anti abuse provisions in the tax treaty

Country	Botswana		Egypt		Morocco		Pakistan		South Africa		Vietnam		Zambia	
	b.o.	other	b.o.	other	b.o.	other	b.o.	other	b.o.	other	b.o.	other	b.o.	other
Ireland														
China	√	√[180]	√	X	√	X	√	X	√	X	√	X	√	X
France	√	X	√	X	√[181]	X	√	X	√	X	√[182]	X	X	X
Germany	No DTA		√	X	X	X	√	X	X	X	√	X	X	X
India	√	X	X	X	√	X	No DTA		√	X	√	X	X	X
Luxembourg	No DTA		No DTA		X	X[183]	No DTA		√	X	√	X	No DTA	
Mauritius Netherlands	√	X	√	√[184]	No DTA		√	X	√	X	No DTA		√	X
Singapore	No DTA		√	√[185]	X	√[186]	√	X	√	√[187]	√	X	X	X
Switzerland	No DTA		√	X	√	X	√	X	√	X	√	X	No DTA	
UK	No DTA		√	X	√	X[188]	√	X	√	X	√	X	X	X
USA	√	√[189]	√	X[190]	√	X	√	X	√	√[191]	√	√[192]	X	X
	No DTA		X	X	X	√[193]	X	X	√	√[194] N	No DTA		No DTA	

From the table it becomes clear that very few tax treaties contain anti-abuse provisions other than the beneficial ownership test. The tax treaties concluded by Ireland are in accordance with tax treaties concluded by other countries. In quite a few cases, including one of Ireland's treaties (Pakistan), the analysed treaty did not contain the beneficial ownership test. The reason for this finding is that many treaties have been concluded several decades ago and these treaties, since they became effective, have not been updated. It could be maintained that outdated tax treaties are more problematic for capital importing countries than for capital exporting countries, because without anti-abuse provisions treaty benefits, including reductions or exemptions from withholding taxes intended to protect tax revenues for developing countries, are more easily available. Several countries are currently in the process of negotiating updates to their older tax treaties – for example it has been reported that the Ireland-Pakistan and the Netherlands – Zambia treaties are in the process of being renegotiated. Further, the proposed outcome of the OECD BEPS project - a multilateral instrument – intends, among other features, to increase anti-abuse protections in treaties.

e. Other income

The other income article determines which state is entitled to tax those items of income that have not been dealt with in the other distributive rules of the tax treaty[195]. Generally speaking there are two options with respect to the allocation of the taxation rights of other income. Under Art. 21 OECD Model Convention there is an exclusive taxing right for the state of residence unless the other income is attributable to a permanent establishment situated in the other state. In that case, the state in which the PE is situated may also tax the other income as part of the profits that are attributable to the PE.

Under the second option, based on Art. 21, paragraph 3, of the UN Model Convention, the taxing rights are always shared between the source state and the state of residence. Art. 21 UN Model may allow the source state to levy tax on items on income such as alimony and social security payments. For international tax planning and this spillover analysis these additional taxing rights are generally less relevant, although it has been reported that some source states have invoked Art. 21 UN Model with the aim to apply their domestic withholding tax on service payments, which seems to be an incorrect application of the tax treaty (see subchapter c).

Table 14 will provide an overview of the Other Income Articles in the tax treaties included in the analysis.

Table 14: The other income article is according to Art. 21 OECD Model Convention or Art. 21 UN Model Convention

Country	**Botswana**	**Egypt**	**Morocco**	**Pakistan**	**South Africa**	**Vietnam**	**Zambia**
Ireland	OECD	UN	UN	X	OECD	UN	OECD[196]
China	OECD	OECD	OECD	UN	UN	UN	OECD
France	UN	UN	OECD	OECD/UN[197]	OECD[198]	OECD	UN
Germany	No DTA	UN	OECD	OECD/UN[199]	OECD[200]	OECD	OECD
India	UN	UN	OECD/UN[201]	No DTA	UN	UN	UN
Luxembourg	No DTA	No DTA	UN	No DTA	OECD	OECD	No DTA
Mauritius	OECD	UN	No DTA	UN	OECD[202]	No DTA	OECD
Netherlands	No DTA	OECD	OECD	X	OECD	OECD	OECD
Singapore	No DTA	UN	UN	UN	UN	UN	No DTA
Switzerland	No DTA	X	OECD	X	OECD	X	UN
UK	UN	X	OECD	X	UN	OECD[203]	OECD[204]
USA	No DTA	X	X	X	OECD	No DTA	No DTA

OECD: State of residence has an exclusive taxing right regarding other income; UN: The source state may tax other income arising in the source state; X: the tax treaty does not contain a provision regarding other income

Table 14 shows that most countries in their tax treaties with developing countries are willing to accept an other-income article that also gives a taxing right to the source state. In this respect, the Irish tax treaties are similar to the ones concluded by other countries.

f. Tax sparing credits

Almost all developing countries use tax incentives in order to attract foreign direct investment (FDI). Often these tax incentives take the form of tax holidays and reduction of CIT and withholding tax rates. FDI investment often takes place through a local subsidiary company. The local subsidiary distributes profits and makes other payments such as interest and royalty payment to a parent or investor company in another jurisdiction. However, unless a participation exemption applies in the investor jurisdiction, economic double taxation may occur whereby profits are taxed both in the subsidiary company (as trading profits) and in the parent company (as investment income).

Ireland, as well as many other countries, applies the ordinary credit method to avoid double taxation with respect to dividends, interest and royalties received from abroad. Under the ordinary credit method, the state of residence grants relief for the avoidance of double taxation by reducing the amount of tax payable in that state by the lesser of the following two amounts:

- The actual amount of tax paid in the source state; or
- The amount of tax payable in the state of residence on the foreign sourced income.

When the tax paid in the source state is reduced as a result of a tax incentive, the foreign tax credit available for offset will be correspondingly lower, leading to additional tax being levied on the foreign source income by the state of residence. The sacrifice by the source state therefore does not benefit the investor but the state of residence, and therefore can undermine the intended aim of the tax incentive to the source state.

This phenomenon can be addressed by including tax sparing credits in double taxation conventions. Tax sparing credits are a special form of double taxation relief sometimes used in tax treaties mainly with developing countries. Where a developing country grants tax incentives to encourage foreign investment, the country where the recipient of the income is resident may give a credit against its own tax on income received from the developing country for the tax which would have been paid in the developing country if the tax had not been "spared" under the provisions of the tax incentives.

The OECD in its 2001 report “Tax Sparing, a reconsideration” has called upon the OECD Member States to limit the inclusion of tax sparing credits in tax treaties as it was determined that tax sparing credit provisions had in some cases been abused in

international tax planning structures. On the other hand, tax sparing credits were an important element for many developing countries to attract FDI. For this reason, according to the OECD report, tax sparing credits can only be included in tax treaties if the following conditions have been met:

- The GDP per capita of the other State is significantly lower; and
- The tax sparing credits are with respect to specifically mentioned measures to attract FDI.

If these conditions are met tax sparing credits could be effective for a limited period of time.

In Table 15 an overview of tax sparing credits provisions in the various tax treaties is provided.

Table 15: The tax treaty provides for tax sparing credits.

Country	Botswana	Egypt	Morocco	Pakistan	South Africa	Vietnam	Zambia
Ireland	X	X	√[205]	√	X[206]	√[207]	√
China	X	X	X	√	X	√	X
France	X	X[208]	√	X	X	√	X
Germany	No DTA	√	√	X	X	X[209]	X
India	X	X	√	No DTA	X	√	√
Luxembourg	No DTA	No DTA	√	No DTA	X	X[210]	No DTA
Mauritius	X	X	No DTA	√	X	No DTA	X
Netherlands	No DTA	X	X	√	X	X[211]	√
Singapore	No DTA	X[212]	√[213]	√	X	√	No DTA
Switzerland	No DTA	√[214]	√	√[215]	X	√	X
UK	√[216]	√[217]	√[218]	√[219]	X	√[220]	√[221]
USA	No DTA	X	X	X	X	No DTA	No DTA

X: The tax treaty does not provide for tax sparing credits;
√: The tax treaty provides for tax sparing credits.

The table illustrates that many states, with the notable exception of the United States, are willing to grant tax sparing credits to developing countries. However, especially in more recent tax treaties, in accordance with the OECD report mentioned above, these tax sparing credits are granted only for a limited number of years. Older tax treaties that provide for tax sparing credits are usually not limited in time. The Irish approach does not differ from the approach of many other developed countries and is in accordance with the OECD approach as mentioned before.

The issue of tax sparing credits and the efficacy of tax incentives to attract FDI has been the subject of international debate. This need to include tax sparing credits in tax

treaties is related to the practice of many developing countries to grant tax incentives. Whether or not tax incentives are useful instruments to attract FDI has been widely debated and could also be a topic that can be addressed in capacity-building initiatives for developing countries, which will be discussed further in chapter VIII.

3. Conclusion

Tax treaties increase the certainty for investors about the tax consequences of cross border investment and therefore play an important role. However, tax treaties may also lead to loss of taxing rights for states. In this chapter we have analyzed how the tax treaties concluded by Ireland with developing countries relate to the tax treaties concluded by selected reference countries with the same developing countries. In the analysis, we have focused on the inclusion of elements of Art. 5 of the United Nations Model Convention in the definition of permanent establishment, the withholding tax rates agreed upon for dividends, interest and royalties, the tax treaty treatment of services, whether anti-abuse provisions have been included in the treaty and whether tax sparing credits are available.

Generally speaking, the analysis shows that Ireland’s treaties do not deviate from tax treaties concluded by the reference countries and they include several UN-type provisions considered favourable to developing countries. Especially with respect to services, treaties concluded by Ireland contain often either a service PE provision or grant the source state to levy a withholding tax.

The two older tax treaties concluded by Ireland are not very favourable to developing countries. However, these older treaties were being renegotiated at the time of this analysis. A new tax treaty with Zambia was signed recently and negotiations with Pakistan were under way at the time of this analysis.

VI. Domestic Irish Tax Legislation and EU Directives

1. Introduction

For the purpose of this spillover analysis, the Irish domestic tax system is also important as the domestic tax legislation determines the applicable residence rules, the tax rates, tax incentives, etc. in cross border situations. Tax treaties and the EU directives play a significant role in this regard. However, neither directives nor tax treaties create taxation rights but they merely limit the taxation rights that exist under the domestic legislation. We would like to emphasize that most countries design their tax systems in such a way that they are attractive locations for FDI. As long as tax competition between states does not become a race to the bottom, competition between states for FDI may not be per se a negative thing.

Countries have different strengths, such as for example the size of their population (and therefore domestic market), their geographic location, and the availability of natural resources, and therefore compete on different bases to attract investment into their jurisdictions. Competition between States based on tax rates or regimes, provided that it is open and transparent and adheres to agreed international standards, is generally speaking not agreed to be harmful. In chapter 2 of this spillover analysis, we referred to the IMF Staff Paper “Spillovers in International Corporate Taxation” which made a distinction between spillovers due to tax competition to attract real FDI activities and spillovers due to profit shifting which is broadly agreed to be harmful. This IMF staff paper will be further discussed in chapter VII.

Ireland due to its peripheral geographic location within the European Union and small domestic market, uses a number of factors such as its tax system, young educated workforce, EU and Eurozone membership to gain a competitive edge as an attractive location for FDI.

The analysis of the Irish domestic legislation focuses on the taxation of companies. Therefore, the taxation of employees is not included in the analysis. Further, the focus is exclusively on direct taxation. The analysis focuses on a number of key characteristics of the Irish tax system, but does not include issues like compliance costs or the availability of Advance Pricing Agreements (APAs) under mutual agreement procedures between competent authorities. It should be mentioned however that, when considering the aforesaid and according to “Paying Taxes 2014, the global picture”, Ireland performs better than many other EU Member States in all areas (total tax rates, hours to comply and number of tax payments to be made)[222].

Ireland as an EU Member State is obliged to implement EU directives in its domestic legislation which means that the content of these EU directives may also be relevant for the spillover analysis. In paragraph 3 of this chapter, the use of certain EU directives and their impact on developing economies will be discussed.

2. Elements included in the analysis

The analysis of the Irish domestic tax legislation concentrates on:

a. The statutory corporate tax rate;
b. Withholding tax rates on outbound dividends, interest and royalties;
c. Tax incentives available in Ireland (e.g. accelerated depreciation and the treatment of R&D income).

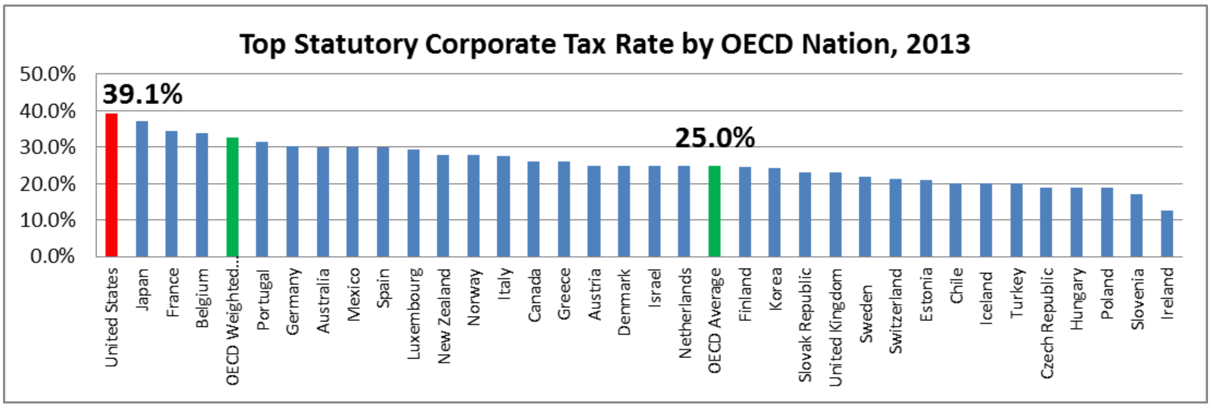
It should be stated that our original proposal for this analysis proposed also to include the Irish corporate tax residence rules. However, due to the changes to the residence rules included in the Finance Act 2014 which take effect as from 1 January 2015 (which will bring an end to the so-called "Double Irish" two-tier structure used in aggressive tax planning), it is no longer possible for an Irish incorporated company to be tax resident anywhere other than in Ireland or a treaty-partner country[223] and therefore an extensive analysis of this element of the Irish domestic legislation is no longer a priority. It is however worth noting that the quantitative analysis in chapter 3 of this spillover analysis seems to suggest that the effect of the old residence rules on developing countries was insignificant, and they are unlikely therefore to have given rise to significant negative spillover effects on those developing economies.

a. Statutory corporate tax rate

The statutory corporate income tax rate for active business income in Ireland of 12.5 per cent is among the lowest in both the European Union and the OECD Member States[224]. This rate applies only to active trading income. A higher 25 per cent rate of corporation tax applies on non-trading and investment income, and a rate of 33 per cent applies on company chargeable gains.

Table 1 provides an overview of the statutory corporate income tax rates applicable in 2013 in the OECD Member States. The rate for Ireland is the rate for trading income; a 25 per cent rate applies for non-trading income.

Table 1



Source: http://taxfoundation.org/blog/another-study-confirms-us-has-one-highest-effectivecorporate-tax-rates-world

The Irish statutory corporate income tax rate for trading income is also significantly lower than that of many developing countries, where the statutory corporate income tax rates are around 30 per cent, and in many cases even higher.

In general it can be said that significant rate differences may often lead to attempts to shift profits from the high tax jurisdictions to low tax countries. For businesses tax is merely an expense and minimization of expenses is a key driver in many enterprises. However, in the case of Ireland, the rate of 12.5 per cent does not apply to non-trading income which is taxed at a rate of 25 per cent which means that real business activities need to take place in Ireland in order for the 12.5 per cent tax rate to apply to profits.

b. Withholding taxes on dividends, interest and royalties

International tax planning often means shifting profits from high tax jurisdictions to jurisdictions where there is no or low taxation. In order to get to the desired results, profits in high tax source states may be reduced by allocating profits to functions carried out in the low tax jurisdiction, and through interest, royalty and service payments from the high tax source state to low tax jurisdictions. As a result, Intellectual property rights such as patents and group finance activities tend to be located in tax havens. When these payments are made from developing countries, these payments are generally subjected to relatively high withholding taxes as tax havens generally have not been able to conclude tax treaties to reduce these withholding taxes.

In order to circumvent these withholding tax barriers, interest, royalty and services payments from source countries are sometimes made to entities located in an intermediary state that has both a tax treaty in place with the source country and a domestic tax system or treaty network that allows for a large part of the income received to be passed on, either as the same type of income or as a different type of

income, to another group company located in a tax haven without the imposition of withholding taxes. As has been mentioned, tax havens have not been able to conclude many tax treaties, hence the presence and the level of withholding taxes on dividends, interest and royalties according to the domestic legislation of a country is a very important factor in international tax planning. When a state does not impose a withholding tax on dividends, interest and royalties but has a large tax treaty network, such a state may be used as a resident state for conduit companies as described above.

In light of the above, it was decided to also include the Irish system of withholding taxes and the EU Parent-subsidiary and Interest-and-royalty directives in the analysis.

The Irish tax system provides in principle for a 20 per cent withholding tax when an Irish resident company distributes dividends to its shareholders. Similarly, a 20 per cent withholding tax may be applied in the case of interest payments made to non-residents and in the case of patent royalties paid to non-residents.

The Irish withholding taxes may be reduced when EU-directives apply or as a consequence of the application of double taxation conventions between Ireland and the state in which the beneficial owner to the dividends, interest and/or patent royalties is a resident.

The Irish domestic withholding taxes provide some protection against use as an intermediate jurisdiction. These rules are very complex and, as it was identified in Chapters III and IV of this report that trade and capital flows into Ireland from developing countries are limited, giving no indication that Ireland is used as an intermediate jurisdiction for these flows, it was determined that a detailed description of these rules is beyond the scope of this analysis. Therefore, this sub-chapter only provides a general overview and not a detailed description.

An intermediate role whereby interest and royalty payments are made first to a company which is a resident of another European Union member state that does not have withholding taxes on outbound interest and royalties payments before payments are made to companies outside the EU, is however an option. Further analysis of the EU-directives is contained in section 3.

c. Tax incentives available in Ireland

The Irish statutory corporate income tax rate applying to trading income of 12.5% is already favourable compared to that of other European Union and OECD Member States, and was designed as such in order to attract substantial Foreign Direct Investment. In addition to the headline corporate tax rate, the availability of various types on tax incentives is often a major driver of location decisions in international tax planning. The recent success in other jurisdictions of patent boxes and similar measures

seems to prove this. In the case of Ireland the following aspects are worthwhile mentioning:

i. The R&D Tax Credit. Sections 766, 766A and 766B of the Irish Taxes Consolidation Act (TCA) 1997 (the Act) provide for a tax credit for certain expenditure on research and development (R&D) activities, plant and machinery and buildings. The credit is given at 25% of allowable expenditure. In the case of group companies, the tax credit is available on a group basis.

To qualify for the R&D tax credit, the following conditions must be fulfilled:

- the applicant must be a company;
- the company must be within the charge to Irish tax;
- the company must undertake qualifying R&D activities within the European Economic Area (EEA);

in the case of an Irish tax resident company, the expenditure must not qualify for a tax deduction under the law of another territory. As a company must be within the charge to Irish tax in order to qualify for the R&D tax credit, this incentive is unlikely to be associated with base spillovers due to profit shifting.

ii. The holding company regime. Like many other States, Ireland has a holding regime[225] which provides that – subject to certain conditions – capital gains from the alienation of participations are exempt from Corporation Tax. The conditions to be met are the following:

- The participation must be at least 5 per cent of the ordinary share capital of the subsidiary;
- The participation is in a company which is either a resident of an EU Member State or a resident of a State which has concluded a double taxation convention with Ireland;
- The company in which the participation is held should be either a trading entity or part of a defined trading group; and
- The participation must have been held for at least 12 of the preceding 24 months.

iii. It has been reported that Ireland is considering the introduction of a new corporation tax incentive, a Knowledge Development Box, which will provide an effective tax rate for intellectual property income that is below the normal headline rate of corporation tax. Many states, including many EU Member States have in recent years introduced favourable tax regimes for R&D and intellectual property income.

Both the European Commission and, as part of the Action Plan Base Erosion and Profit Shifting, the OECD are currently looking into regimes with a view to determine whether

these regimes constitute illegal state aid (EU focus) or harmful tax practices (OECD focus). The exact features of the new Irish Knowledge Development Box regime have not yet been published at the time of conducting this spillover analysis, but it has been stated that it will comply with the EU and OECD rules for the design of such incentives which are currently being finalised.

It is our understanding that preferential IP tax regimes may erode the tax base in other countries as it becomes attractive to hold IP rights in states that have an attractive IP regime in place. In the states that import technology (often this includes developing countries) royalty payments are deductible expenses thus leading to a reduction of the tax base for CIT in those states. On the other hand, these favourable IP regimes most likely would reduce the possibilities to fully credit any royalty withholding tax that was payable in the source state.

3. EU-directives

a. Introduction

As discussed above in chapter VI, section 2 under b., payments from source countries are sometimes made to entities located in an intermediary state in order to circumvent withholding tax barriers in the source country. Provisions which relieve or remove withholding taxes in a country's domestic legislation may therefore give rise to negative spillover effects, if they facilitate the use of that country as an intermediate state.

In the area of the taxation of companies a number of EU-directives have an impact on withholding taxes in domestic legislation. These EU directives have been agreed upon by the EU Member States to facilitate cross border investment, the common market and free trade and EU Member States are obliged to implement these directives in their domestic tax laws. However, these directives may also be relevant for international tax planning.

This part of the spillover analysis will look at these EU-Directives and how they may lead to revenue loss in developing countries. The EU-directives included in the analysis are the following:

- The Parent-Subsidiary Directive;
- The Interest-and Royalties Directive.

b. Parent-Subsidiary Directive

On 23 July 1990, the European Union adopted the Parent-Subsidiary Directive[226] exempting intra-EU intercompany dividends both in the source state (implying no withholding tax may be applied on dividend distributions) and in the residence state (either the dividends received are excluded from the taxable CIT base, or relief for tax paid in the source state must be given when taxing the distributions in the residence state) when certain conditions have been met.

The Parent-Subsidiary Directive can be used in international tax planning through interposing a holding company in another EU Member State, if this would give rise to a more favourable withholding tax result when distributing profits directly to parent companies which are located outside the European Union

The Directive as originally adopted did not contain an anti-abuse provision, and in recent times concerns were raised that it could be used in international tax planning through interposing companies in EU Member States to combine tax treaty benefits with the benefit of the Parent-Subsidiary Directive.

In July 2014, a proposal to revise the Parent-Subsidiary Directive with a view to close loopholes which are being used for a particular type of tax planning arrangements (i.e. hybrid loan arrangements) and to introduce a general anti-abuse rule in the Directive was approved by the EU Member States, and agreement was reached on these proposals in 2014.

It is expected that the changes made to the Parent-Subsidiary Directive will greatly reduce the options for international tax planning.

c. Interest and Royalties Directive

The EU Council adopted the Interest and Royalties Directive on 3 June 2003[227.] The Interest and Royalties Directive (hereafter: the I-R directive) aims to eliminate tax obstacles in the area of cross-border interest and royalty payments between associated enterprises. The I-R directive abolishes withholding taxes on interest and royalty payments arising in an EU Member State if certain conditions are met.

Art. 4 of the I-R directive excludes certain payments from the scope of the directive. Art. 5 of the I-R directive stipulates that the directive shall not prevent “the application of domestic or agreement-based provisions required for the prevention of fraud or abuse”. Art. 5 further states that EU Member States are entitled to deny the benefits of the

directive "in the case of transactions for which the principal motive or one of the principal motives is tax evasion, tax avoidance or abuse".

If the conditions are fulfilled the I-R directive facilitates interest and royalty payments between associated enterprises that are resident in various EU Member States. The directive in combination with domestic tax legislation can also be used in international tax planning. The I-R directive in combination with the absence of any withholding tax in another EU Member State can potentially allow a non-EU parent company to receive interest and royalties free from any EU withholding tax.

It is our understanding that discussions are under way within the European Union to amend the I-R directive with a view to include a general anti-avoidance provision similar to the one that has been agreed upon to be included in the Parent-Subsidiary Directive. It remains to be seen whether such a provision would be effective in cases where the interposed company receiving the interest and/or royalty payments has sufficient substance.

Conclusion

The domestic tax system of a country is an important factor in a spillover analysis. Therefore, several elements of the Irish tax system such as the corporate tax rate, the withholding taxes on dividends, interest and royalties were analyzed. The Irish corporate income tax rate of 12.5% is low. However, this rate applies only to trading income and is therefore tied to real substantive activity while a rate of 25% applies to non-trading income. With respect to dividends, interest and certain types of royalties the Irish tax legislation provides for taxation at source when payments are made. In the area of tax incentives, our analysis focused on the current R&D credit and the plans for a Knowledge Development Box. It has been stated that the Knowledge Development Box will comply with the EU and OECD rules for the design of such incentives which are currently being finalised.

As Ireland is an EU Member State, we also examined the EU Parent-Subsidiary and the Interest and Royalties Directives as these directives are used to facilitate relief from withholding taxes. The recently adopted anti-abuse provisions in the Parent Subsidiary Directive and the ongoing discussions on the inclusion of similar anti-abuse provisions in the Interest and Royalty Directive are intended to put an end to unintended structuring with the help of EU directives.

VII. Views on Reports and Feedback from public consultations

1. IMF report on spillovers in international corporate taxation

For a better understanding of potential international spillover effects of corporate tax rates, it is useful to review the quantitative analysis included in the IMF staff report[228] on spillovers in international corporate taxation (IMF 2014). The IMF report is one of the key academic publications on tax policy spillovers.

The full report discusses a broad range of tax policy issues, including tax treaty networks and mismatches between the national tax rules of different countries. It draws from existing literature and experiences of IMF technical advice projects. By contrast, the econometric analysis presented in the section "Assessing the spillovers" and Appendix III is limited to spillover effects of corporate tax rates. Insights from this analysis could be relevant for Ireland because of the country's relatively low statutory tax rate. The separate quantitative analysis in Appendix IV of the report will not be discussed here, as the IMF regards that analysis *"a very preliminary exercise"*, mainly because of data issues.

The first part of the report section on quantification of spillovers mentions that international investment positions are strongly influenced by tax considerations, as some of the main apparent sources of FDI are conduit countries. For a diverse group of three OECD and six non-OECD destination countries, Ireland does not appear among the largest sources of FDI. This contrasts with the Netherlands, for example, which is in the top-3 for four of the nine countries.

The remaining parts present the econometric analysis, which distinguishes three types of spillovers: strategic spillovers and base spillovers. The analysis then tries to further distinguish base spillovers related to real activities from those related to profit shifting. The various types are briefly described below.

1. **Strategic spillovers**. These refer to the effect of changes in a country's tax rate on the tax rates of other countries. For example, if Germany lowers its corporate income tax rate by 5 points, then countries like France and the Netherlands may respond by lowering their own tax rates by several points as well. These responses are strategic spillover effects.

2a. **Base spillovers due to real activities**. These refer to the effect of changes in a country's tax rate on the tax bases of other countries due to shifts in real economic activity. For example, if Germany lowers its corporate tax rate, then the corporate tax base in countries like France and the Netherlands will decrease

because some existing businesses and new investments that generate taxable profits will be moved to Germany.

2b. Base spillovers due to profit shifting. These refer to the effect of changes in a country's tax rate on the tax bases of other countries due to profit shifting, which typically occurs separately from shifts in real economic activity. For example, if Germany lowers its corporate tax rate, then the corporate tax base in countries like France and the Netherlands will also decrease because some multinationals will shift more profits from these countries into Germany (or less profits out of Germany into these countries).

Although the analysis attempts to quantify negative effects of a country's tax policy on tax revenues in other countries, it does not automatically follow that low tax rates or tax rate reductions are always undesirable. Some consider that tax competition to attract real activities is legitimate or argue that it is on balance beneficial for all countries, whereas others emphasize that it is generally harmful. About profit shifting, by contrast, there is broad consensus. Profit shifting is usually regarded as problematic and conflicting with international tax norms.

The econometric analysis in the IMF report is rather complex and the interpretation of the results is not straightforward. In addition, the analysis uses a different specification to asses each type of spillovers. Therefore the three types of spillovers will be discussed separately, including a brief review of the data and econometric specifications. To put this review into context, it should be reminded that the econometric analysis is only one part of the report. Even though some aspects of the empirical analysis seem problematic, the overall report provides a thoughtful discussion of spillover effects in international tax policy and contains many useful insights.

a. Strategic spillovers

The analysis of strategic spillovers relates a country's tax rate to the average tax rate of all other countries. It uses annual data on corporate income tax rates in 103 countries, excluding oil-dependent ones, for the period 1980-2013. The analysis finds that countries respond substantially to changes in tax rates elsewhere. If the tax rates of all other countries fall by 1 point (for example from 30% to 29%), then the average country responds by reducing its own tax rate by 0.5 - 1 point depending on the model specifications.

The model looks at country-specific responses relative to global developments in tax rates over time.[229] For example, if from one year to another the average tax rate of all countries falls by 1 point, and a specific country reduces its tax rate by 3 points in response to previous changes in nearby countries, then the specification recognises this as a relative lowering by 2 points. By contrast, if a specific country's tax rate remains constant while the average rate falls, the specification recognises this as a relative

increase in the country's rate. Thus, the analysis depends on country-specific developments relative to the global downward trend, with some countries reducing their tax rates more quickly or more strongly than others.

The analysis only considers changes in tax rates during the period of analysis. If a country decides to lower its tax rate because more and more firms relocate to a neighbouring country with a much lower but constant tax rate, the econometric specification does not recognise this policy response as a strategic spillover. That means the results do not fully reflect strategic spillovers resulting from increasing capital mobility and increasing possibilities for profit shifting. Considering the substantial global downward trend in tax rates, though, the focus on changes in tax rates in other countries seems appropriate.

The analysis uses normal statutory corporate income tax rates. Strategic responses with regard to determination of the tax base (rather than the tax rate) are not considered, but for overall tax rules such responses are a relatively minor issue. . In a later extension of the analysis, the researchers also looked at the effect of effective average tax rates, for a sub-group of developing countries for which these data are available. This way the analysis also takes into account special tax regimes, such as tax holidays and export processing zones where special tax rules apply (common in developing countries) or special regimes for certain types of passive income (common in tax havens). This is highly relevant because tax competition between developing countries often takes the form of special regimes or discretionary exemptions. The extension of the analysis produces similar results.

The response of a country is modelled as a function of last year's tax rates in all other countries, as a simple average or weighted by GDP. The original analysis does not consider the distance between countries or their economic similarity. In the model, for example, Kenya's tax rate is more dependent on tax policy in Japan (which has a large GDP weight) than in Tanzania or Uganda (which both have a very small GDP weight). In reality, however, tax competition mainly takes place at the regional level. Therefore the researchers have also performed an additional analysis that does take factors such as distance and economic similarity into account. The results are similar to those of the original analysis.

To summarise, the econometric analysis finds large strategic spillovers at the global level as well as more specifically among countries that are likely to compete for foreign investment. These findings seem robust, as later extensions of the analysis have addressed the main weaknesses of the original model. The findings suggest that Irish tax policy – like the tax policy of other EU Member States – may cause strategic spillover effects on other European countries. However, it remains difficult to say whether Irish tax policy also directly affects tax rates in developing countries.

b. Base erosion due to real activities

The analysis of base erosion due to real activities is more complex. It relates changes in a country's corporate tax base to the average tax rate of all other countries one year before. The main specification finds that if the tax rates of all other countries fall by 1 point, the average country's corporate tax base is reduced by 3.7%[230] because real activities are shifted abroad. Considering that corporate tax rates have fallen by some 5 points worldwide over the last decade, this spillover effect is quite large.

The analysis uses an implied tax base, which is estimated by taking the ratio of corporate tax revenues to GDP (from IMF country reports) and dividing it by the statutory corporate tax rate. This is because comprehensive country data on the size of the corporate tax base are not available. A simple calculation illustrates the approach. If a country's corporate tax revenues are 5% of GDP and the tax rate is 25%, then the implied tax base is 5% of GDP / 25% = 20% of GDP. The authors point out that statutory tax rates and average effective tax rates are strongly related. As mentioned above, a later extension of the analysis also used average effective tax rates for a sub-group of developing countries. The results are similar to the original analysis, which shows that the findings for tax competition among developing countries themselves are robust.

The main specification models base spillovers as a function of GDP-weighted tax rates of all other countries worldwide. However, many small countries are faced with virtually the same GDP-weighted average tax rate of other countries. This key variable varies substantially among large economies only, notably the US, China, Japan and Germany, because it excludes their own GDP-weighted tax rate from the calculation of the average rate. As a consequence, the results are mainly driven by observations for large economies and may not represent the strategic behaviour of smaller economies. An alternative specification that relates base spillovers to the simple average of foreign tax rates gives a much smaller and less significant effect.

To summarise, the econometric analysis finds large spillover effects due to shifts in real activity. However, because the main specification uses GDP weights, it does not focus on tax policy in relatively small countries. The analysis provides a global estimate of spillover effects and provides little information about spillover effects caused by Ireland's tax policy in particular.

c. Base erosion due to profit shifting

The analyses of base erosion due to real activities and due to profit shifting are very similar. There is only one difference. The base erosion analysis relates changes in a country's tax base to the tax rates of all other countries, because shifting of real activities mainly takes place to and from large economies. By contrast, the profit shifting analysis relates changes in a country's tax base to the tax rates of a list of "tax havens"[231], as profits are mainly shifted into tax havens. The analysis finds that the base erosion effect due to profit shifting is as large as that of real activities.

The selection of tax havens included in the analysis requires special attention. It is based on a list of tax havens from a report to the US Congress[232]. This list contains many small jurisdictions that have a high level of financial secrecy, such as Liberia, Lebanon, Jordan, Tonga, Vanuatu, Belize, St. Lucia, and Montserrat. These countries facilitate tax avoidance and evasion on private wealth held offshore, but they are hardly relevant for corporate profit shifting.

On the other hand, the list excludes certain jurisdictions that have facilitated profit shifting due to special regimes or special features of the tax system. Moreover, various key jurisdictions from the US Congress list of tax havens are not included in the analysis, possibly because no data are available for these countries. The main jurisdictions not included in the analysis are Bermuda, Cayman Islands, British Virgin Islands, Jersey, Guernsey and Curaçao (previously the Netherlands Antilles). Thus, a large part of global profit shifting is not captured.

For some jurisdictions included in the analysis, the use of standard statutory tax rates is problematic. Certain profits in Ireland used to benefit from the former IFSC and manufacturing regimes, for example. While the standard Irish tax rate for trading income was lowered from 40% in 1994 to 12.5% in 2003, the tax rate for these special regimes remained constant at 10% until the regimes were phased out and the rates rose to 12.5%. Similarly, profits in Switzerland often fall under the special holding or mixed company regime. The statutory Swiss tax rate, which fell from approximately 31% in 1990 to 25% in 2000, is hardly relevant for these profits.

Summary on findings regarding the IMF report

The IMF staff report distinguishes different types of spillovers: Strategic spillovers; Base spillovers due to real activities; and Base spillovers due to profit shifting.

Although the IMF staff report attempts to quantify negative effects of a country's tax policy on tax revenues in other countries, it does not automatically follow that low tax rates or tax rate reductions are always undesirable. Many consider that tax competition to attract real activities is legitimate, and some argue that it is on balance beneficial for all countries, whereas others emphasize that it is generally harmful. About profit shifting, by contrast, there is broad consensus. Profit shifting is usually regarded as problematic and conflicting with international tax norms.

The econometric analysis in the IMF staff report is rather complex and the interpretation of the results is not straightforward. In addition, the analysis uses a different specification to asses each type of spillovers.

The econometric analysis finds large spillover effects due to profit shifting. However, these are only tentative results, as the empirical approach has important limitations: it does not cover various key tax havens and looks at standard statutory tax rates only. Ireland is one of the countries for which the use of the standard statutory tax rate is problematic to analyse base spillover effects over a long time period.

Although some aspects of the empirical analysis seem problematic, the overall IMF staff report provides a thoughtful discussion of spillover effects in international tax policy and contains many useful insights.

2. Public Consultation Contributions

The Irish government requested the general public for input regarding the planned spillover analysis. In response more than 90 contributions were received, 70 of which were largely identical and related to an e-mail campaign.

Contributions have been received from NGOs such as Oxfam, Christian Aid, ActionAid and the Debt and Development Coalition Ireland, from academics such as Jim Stewart, Associated professor in Finance, School of Business Trinity College in Dublin and Dr. Sheila Killian, Kemmy Business School, University of Limerick, and from individuals such as Ms. Claudine Gaidoni and Ms. Deirdre Kelly.

In this chapter, the feedback received will be analyzed and commented upon. All respondents welcome the Irish initiative for a spillover analysis. However, based on the responses, the topics that they felt needed to be addressed in such an analysis vary.

Topics that were suggested to be included in the spillover analysis can be summarized as follows:

1. The need for country-by-country reporting;
2. The need for automatic exchange of information that takes into consideration the difficult position of developing countries with respect to reciprocity;
3. Transfer pricing issues;
4. The treatment of R&D income;
5. The involvement of developing countries in international discussions such as BEPS;
6. Tax treaties;
7. Capacity building initiatives.

In addition to these recurrent topics, several respondents have mentioned other topics as well. These other topics will be addressed at the end of this chapter.
As the focus of the spillover analysis is on corporate taxation, issues such as the absence of a public register of the real owners of companies, trusts and foundations are outside the scope of the research and these issues have therefore not been addressed. It is, however, acknowledged that also these issues play a role in international tax planning.

1. Country-by-country reporting

Various organisations such as EU and OECD are currently working on country-by-country (CbC) reporting initiatives. For instance, the European Commission launched a public consultation on 25 June 2014 regarding the CbC reporting by extractive and forestry industries[233]. In September 2014, the OECD published its report on BEPS Action Point 13 regarding transfer pricing documentation. This report calls for a 'master file', 'local file' and CbC reporting. On 6 February 2015, guidelines have been published by the OECD with respect to CbC reporting. These various initiatives are aiming for an implementation of the outcome of the EU and OECD discussions without further delay.

2. Automatic Exchange of Information

There seems to be consensus that Automatic Exchange of Information is one of the ways forward in combating aggressive international tax planning. In 2014, the OECD launched a format for a Common Reporting Standard (CRS) and on 29 October 2014 in Berlin, 51 jurisdictions including Ireland signed an agreement to automatically exchange information. It is expected that many developing countries are at least for the time being unable to exchange information automatically. This would then imply that these countries will also not receive information as exchange of information is based on reciprocity. It has been suggested that information will be exchanged to developing

countries without those countries being obliged to exchange information automatically. It is felt that this suggestion only addresses part of the problem since it is often less likely that these countries are able to process information which they have received. Therefore in such cases the effectiveness of automatic exchange of information will be seriously affected.

In view of what is mentioned above, it would be better that developed countries would provide technical assistance to developing countries to enable these countries to gather, process and exchange information. Such assistance should not only focus on providing the necessary hardware but also on capacity building of tax officials.

Automatic exchange of information is still in its infancy and whether automatic exchange of information will seriously affect spillovers awaits to be seen. For that reason, the impact of automatic exchange of information has not been included in the spillover analysis.

3. Transfer pricing issues

In many contributions received, transfer pricing is mentioned as one of the major causes of loss of tax revenue in developing countries. In the case of transfer pricing in developing countries, it is important to distinguish between the transfer pricing rules and the application of such rules by tax administrations of developing countries. In recent years the current transfer pricing rules, which are based on the arm's length principle and legal reality, have been challenged by many institutions. In this respect, also the OECD/G20 BEPS project is addressing various aspects of transfer pricing rules as these rules have been identified as potential enablers for base erosion and profits shifting. Ireland, like other OECD Member States, is actively involved in the BEPS related activities in OECD. It would be premature to unilaterally address transfer pricing prior to the completion of the BEPS project. The overview included in the Oxfam contribution of unilateral measures taken by major economies such as Brazil, China, India and South Africa should not per se be followed by smaller developing economies as such measures may be counterproductive, especially for smaller economies.

It was suggested that developing countries also lose tax revenue through incorrect application of transfer pricing rules. Tax administrations in developing countries often lack the skills as well as the often expensive Transfer Pricing databases that are necessary to determine the correct transfer prices.

Dr. Sheila Killian has suggested that when the Irish tax authorities would be confronted with a transfer pricing case where too high profits are attributed to Ireland, that the Irish tax authorities would exchange such information spontaneously with the tax authorities of the state(s) that have lost tax revenue as a consequence of the incorrect transfer pricing. Although the idea sounds very sympathetic and is also to some extent also practical as tax treaties do allow for spontaneous exchange of information, there

are a number of issues attached to the suggestion. The Irish tax authorities may be required to adjust the taxable income reported by the taxpayer downwards whereas it is very uncertain that the taxpayer in the other State will be confronted with a corresponding adjustment resulting in a higher tax assessment. As has been indicated previously, tax administrations in many developing countries lack the skills, expertise and the required databases to successfully adjust the taxable profits of a taxpayer in that state which belongs to an MNE. The end result could be that in total even less tax would effectively be paid. In this respect, we would prefer that assistance is provided to these tax administrations to enhance their transfer pricing capability.

4. The treatment of R&D income

Ireland, like many other countries, has a tax incentive for expenditure on R&D, and is proposing to introduce a Knowledge Development Box under which income from intellectual property may be taxed at a lower rate than the statutory corporate tax rate. Several contributions draw attention to such regimes which may contribute to decisions to locate Intellectual Property Rights in states where the income is taxed at a low rate, while at the same time in developing countries deductions for royalties paid are available at the higher, statutory CIT rate.

We have addressed these issues in some detail in chapter VI of this spillover analysis.

5. The involvement of developing countries in international discussions such as BEPS

There has been criticism from many sides that developing countries hardly play a role in ongoing discussions on international taxation such as the current discussions on Base Erosion and Profit Shifting (BEPS). As far as the BEPS discussions are concerned, it should be mentioned that recently the OECD published a paper "The BEPS Project and Developing Countries; from Consultation to Participation"[234] which contains an overview of the involvement of many developing countries in the BEPS discussions. According to the OECD, 14 developing nations are now structurally involved in the BEPS process (Albania, Azerbaijan, Bangladesh, Croatia, Georgia, Jamaica, Kenya, Morocco, Nigeria, Peru, Philippines, Senegal, Tunisia, and Vietnam)

In May 2015 an ad-hoc BEPS meeting on the proposed multi-lateral instrument in Paris was attended by delegates of over 90 countries. However, although developing countries can attend these meetings, often the lack of funds are a main obstacle for participation in the discussions by developing countries. Some developing countries receive financial assistance which enables them to participate but this seems to be done on an ad hoc basis.

6. Tax Treaties

Chapter VI of this spillover analysis contains a thorough analysis of the relevant provisions of tax treaties concluded by Ireland with a number of developing countries and a comparison of tax treaties concluded by selected developed countries with the same developing countries. It has been found that only a small number of tax treaties included in the analysis contains anti-abuse provisions other than the beneficial ownership test. The public consultation submissions raise concerns that the lack of more robust anti-avoidance provisions in many tax treaties may contribute to the implementation of tax avoidance schemes and therefore the loss of tax revenue.

We feel that the allocation of taxing rights under a multilateral tax treaty (as is suggested by Oxfam) will not be the way to go forward. Bilateral tax treaties offer possibilities to address undesirable use of tax treaties (i.e. treaty shopping) by including tailor made anti-abuse provisions. It seems that a multilateral tax treaty may offer more planning opportunities than bilateral treaties do. It is also important that many bilateral tax treaties contain more anti-abuse provisions than are currently included in both the OECD and United Nations Model Conventions that only contain the beneficial ownership test in Art. 10 (dividends), 11 (interest) and 12 (royalties).

In this respect, in addition to the General Anti-avoidance rule recommended by the European Commission, one could think about adopting the anti-abuse provisions that are included in the report on BEPS Action Point 6 (Prevention the Granting of Treaty Benefits in Inappropriate Circumstances) in tax treaties. However, it is questionable whether tax administrations of developing countries would be able to apply in practice complex LOB-provisions as included in that BEPS report. Therefore, it may be useful to develop and include a “LOB light” provision in tax treaties with developing countries and to provide assistance with capacity building in this respect. In our analysis of tax treaties concluded by Ireland and other countries with the selected developing countries, we have already signalled the need for updating older tax treaties and the need for including anti-abuse provisions in these treaties.

We can agree with the suggestion made by Oxfam that developing countries should make a careful cost benefit assessments before concluding tax treaties. It is also important to have a similar assessment for tax incentives and other tax expenditure introduced in domestic legislation of those countries.

7. Capacity Building

Many of the submissions highlighted the importance of capacity-building initiatives to assist developing countries in relation to both tax policy and tax administration. These points are addressed further in chapter VIII.

Oxfam

In addition to a number of the common themes already addressed above, the submission from Oxfam also raised two further specific issues: the loss of tax revenue due to the signing of tax treaties, and proposals for a multilateral tax treaty approach and tax treaty considerations.

Loss of tax revenue due to the signing of tax treaties

In its contribution Oxfam refers to an ActionAid report that states that Ghana and Zambia have lost taxes as a result of signing tax treaties with the Netherlands and Switzerland because of the reduction of withholding taxes. In the case of Zambia it should be emphasized that Zambia only very recently embarked on updating their very outdated tax treaty network. Further, it should be pointed out that it may be too simplistic to consider a loss of tax revenue merely because a tax treaty reduces the withholding tax rates on dividends, interest, royalties and fees for technical services; this may be true with respect to existing investments, however the study carried out by IBFD for the Ministry of Foreign Affairs of the Netherlands showed a sharp increase of investment into Ghana immediately after the signing of the tax treaty. It is unclear whether investments would be made into Ghana without that tax treaty.

In its contribution Oxfam refers to an estimated revenue loss for developing countries of EUR 771 million due to the tax treaty network of the Netherlands. The amount calculated by SOMO is very questionable as the tax treaty rate is compared to the domestic withholding tax rates without taking into account tax incentives or lower applicable withholding tax rates.

A multilateral tax treaty approach and tax treaty considerations

Oxfam calls for the support of a multilateral tax treaty approach as the number of tax treaties becomes unmanageable and because bilateral tax treaties may be unfavourable for poorer countries. Oxfam points at the Multilateral Convention on Mutual Administrative Assistance in Tax Matters and suggests an expansion of the number of signatories. Expanding the number of signatories of this Convention is as such a worthy goal as it facilitates the cooperation between tax administrations in the fields of exchange of information, assistance in the collection of taxes and joint audits. However, this multilateral convention does

not divide taxing rights between the signatories as is done under bilateral tax treaties.

Oxfam rightly points at the fact that dealing with ‘tax havens’ is first and foremost a matter of political will. However, from the tax treaty analysis included in chapter VI, it appears that some developing countries may be quite willing to enter into a tax treaty relationship with low-tax or no-tax jurisdictions.

Christian Aid

In addition to a number of the common themes already addressed above, the submission from Christian Aid also highlighted specific concerns regarding amounts of lost tax revenue of developing countries.

Christian Aid refers in its contribution to research it commissioned and which is said to show that, between 2005 and 2007, EUR5.8 bln in capital flowed into Ireland arising from trade mispricing, of which EUR268 mln. came from the poorest 49 countries in the world. According to the research commissioned by Christian Aid at least EUR 160 bln. is lost annually by developing countries to tax abuse.

The amounts Christian Aid refers to have been calculated by using the price filter analysis, which is a method that is frequently used. When using this method, it is of the utmost importance to know which data have been used, which data has been left out, and the justification thereof.

There have been several empirical studies with respect to income shifting[235]. These studies mainly involve estimates of income shifting from high-tax to lowtax jurisdictions. There is also research from developing countries[236]. Kar and Cartwright-Smith suggest approximately USD 370 billion in profits were shifted out of developing countries[237]. A critical note with respect to these studies should be made: Leite mentions that these figures are not widely accepted and academic literature raised questions with respect to the methodology and the strength of the conclusions[238]. Leite continues that these studies do not allow any conclusions on the role of transfer pricing because they do not use company-level data.

Eden concludes that there is evidence of transfer pricing manipulation (TPM). The strongest evidence of transfer pricing manipulation comes from transaction level studies of US intra-firm import and export studies and from firm-level studies using Chinese tax data. Eden continues that no dataset is perfect; so the various estimates are flawed. Still the balance of the evidence suggests that income shifting does occur through the manipulation of transfer pricing[239].

We agree with Christian Aid that transfer mispricing is likely to lead to a significant loss of tax revenue in developing countries. However, based on the literature that has been published, we are unable to confirm the amount mentioned in the Christian Aid commissioned research.

ActionAid

The submission from Action Aid raised a number of issues in addition to the common themes discussed above.

In its contribution, ActionAid uses a definition of spillovers which is different from the definition used by IMF staff in their 2014 report on spillovers in international corporate taxation. In this spillover analysis, we have followed the IMF distinction between base spillovers and strategic spillovers.

ActionAid also refers in its contribution to the research it has carried out regarding a single company's activities in Zambia. The existing tax treaty between Ireland and Zambia facilitated a significant reduction in corporate tax revenue in Zambia. The case mentioned by ActionAid has been discussed in chapter 6 of this analysis. It should be stressed however that more Zambian tax treaties are not in accordance with today's standards and should have been renegotiated or terminated already some time ago. In this respect it should also be mentioned that Zambia and Ireland signed a new tax treaty in March 2015, and that this new treaty is now in the process of ratification. As we have discussed in chapter VI, tax treaty maintenance has not been on the agenda of many developing countries for many years and it is only recently that these developing countries have paid more attention to the question whether their tax treaties are still up-to-date.

Tailor made solutions
We can also agree with the ActionAid view that solutions should be tailored to the capacity of developing countries. As is also addressed in chapter VIII of this spillover analysis, a legal framework that is in accordance with internationally accepted principles is only part of the picture. Tax laws and treaty provisions need to be applied by tax officials that have the correct skills set. Therefore, treaty provisions and domestic legislation should take into consideration the capability of tax officials and technical assistance should also focus on capacity building.

Tax treaties

Many of the points raised in the ActionAid contribution have been addressed in chapter of this spillover analysis. However, we cannot agree with the statement in the ActionAid contribution that significantly increasing source taxation does not have to increase double taxation, nor necessarily deprive the corresponding treaty partners of tax revenues. Withholding taxes are levied on gross income, while the recipient of that income is subjected to tax in his state on residence on net income. With higher withholding taxes relief for the foreign tax credit cannot be effected completely which leads to double taxation.

ActionAid refers further to the United Nations Model Double Taxation Convention between Developed and Developing Countries (the UN Model) and alternatives to this Model Convention and the OECD Model Convention that have been developed over the years. It should be stressed that tax treaty negotiations are usually based on the national models of the states that have embarked on negotiating a tax treaty. Further, the analysis of tax treaty provisions in chapter VI has shown that developed countries are often quite willing to include provisions in their tax treaties with developing countries that allocate more taxing rights to the developing countries. However, once again, like domestic tax legislation, also tax treaties need to be adjusted regularly and often tax treaties with developing countries stay in place unchanged for a (too long) period of time.

In general terms, it can be said that over the last decades, the UN Model has gained ground in various areas and also some OECD Member States strive for the inclusion of UN Model provisions in their tax treaties.

As has already been discussed in chapter VI, countries in general and developing countries in particular should exercise caution in deciding with which countries they should conclude tax treaties.

VIII. Capacity Building

Several of the contributions received draw attention to the need for technical assistance regarding capacity building of tax administrations and tax officials of developing countries. Also the G8 Lough Erne Declaration of 18 June 2013 calls for technical assistance to be provided to developing countries, and the need to scale up domestic resources has also been central to ongoing discussions around the Post 2015 Sustainable Development Goals.

Where originally technical assistance in the area of taxation used to be focused on assisting countries in designing and drafting their tax systems, in recent years the focus has shifted more and more on capacity building of tax officials to correctly and effectively apply the tax legislation and international obligations.

In recent years many organizations such as the OECD, the United Nations, WorldBank, the International Monetary Fund (IMF), the African Tax Administration Forum (ATAF) and the Inter American Center of Tax Administrations (CIAT) have initiated technical assistance in this area[240]. Within the framework of the OECD, the Tax Inspectors Without Borders (TIWB) initiative has been started. Also several individual countries have provided technical assistance of this type to many developing countries. Examples are:

- the German technical assistance GIZ for instance recently financed a study on tax gaps in selected South East Asian countries, sponsored a United Nations/CIAT tax technical conference and provides training to tax officials in Georgia on tax treaty application;
- Malaysia invites delegates from developing countries to attend various courses at its Tax Academy; and
- The Netherlands' Ministry of Foreign Affairs financed a one week training event on tax treaty maintenance which was attended by 9 African partner countries of the Netherlands. Further assistance in the area of capacity building is expected.

Ireland has already provided tax technical assistance of this nature. In 2008 the Office of the Revenue Commissioners, Ireland, signed a Memorandum of Co-operation with the Rwanda Revenue Authority (RRA). Technical assistance provided to Rwanda under this MoU involved the development of a Tax Risk Management system which is similar to the Risk Evaluation, Analysis and Profiling system of Irish Revenue. Under the MoU it is also possible to exchange expert personnel on a short time basis. Since the MoU with Rwanda was signed Irish tax officials provided training to their colleagues from Rwanda both in Rwanda and in Ireland. This technical assistance is said to have positive effects

in revenue collection in Rwanda, the enforcement of tax arrears and in risk based tax auditing.

At present Irish Aid is in the middle of a three year financing arrangement (2013-2015) contributing to ATAF's core work, and builds on previous contributions during the period 2010-2012. Ireland, via Irish Aid is also a voluntary contributor to the OECD Tax and Development Programme, created in 2010, which aims to enhance the enabling environment for developing countries to collect appropriate and adequate tax revenues and to build effective states.

We feel that although quite a few developing countries have already been provided with technical assistance in the area of capacity building, more efforts need to be made for sustainable development in these countries enabling them to raise fair amounts of tax revenue. Ireland could consider assisting the Irish Aid programme countries[241] more in tax matters. It is necessary however that the areas of assistance are carefully chosen in collaboration with these countries and that proper coordination between donor countries and organizations take place as most of the Irish Aid programme partners also receive assistance from other countries and organizations. Areas of assistance that could be considered for further capacity building may include the following:

- Transfer pricing including the development of transfer pricing regulations and thereto related databases;
- Tax auditing and investigation of multinational enterprises;
- The setting up of a training curriculum for tax officials;
- How to set up an effective exchange of information system; and
- How to design and evaluate tax incentives to ensure a net benefit to the developing country.

Conclusion

It is important that developing countries are able to raise tax revenue. Due to increasing complexity driven by efforts to combat base erosion and profit shifting, tax administrations are facing more and new challenges. Although assistance in capacity building is already on the agenda of international organisations and of individual countries including Ireland, it may be considered to expand capacity building assistance to tax policy, transfer pricing, exchange of information, tax auditing and tax investigation.

IX. Pen portraits of the staff involved in the Spillover Analysis

Lambert Kosters: leader of the tax technical part of the project

IBFD Senior Principal Research Associate; Lecturer at the University of Nijmegen; having over the 25 years of professional experience including policy advice on (international) direct tax legislation, drafting tax laws and guiding laws through parliament. Mr. Kosters has extensive experience in negotiating tax treaties and conducting mutual agreement procedures including oil and gas taxation and on transfer pricing issues. He acted as Project Leader and Senior Expert in international technical assistance projects for numerous revenue authorities, i.e. in Nigeria, Georgia, Bhutan, Malaysia, Singapore, Vietnam, Saudi Arabia, Qatar, China, and Malta. At the IBFD, he is responsible for developing and conducting programs on international taxation and tax treaties, tax policy, tax administration and tax reform. He is a lecturer at the University of Nijmegen teaching International taxation for master students.

Clemens Kool: leader of the economic part of the project

IBFD Associate; Professor in Finance and Financial Markets at Utrecht University; having over the 33 year of professional experience in economics and econometrics in the field of academic and applied research, lecturing, and international assignments. His research and teaching interests focus on issues related to monetary theory and policy, European monetary and financial integration, the establishment of the international financial system, the functioning of international financial markets, banks and other financial organizations, including the role of financial regulation and supervision. He has published in various academic and professional publications. Furthermore, he acted on many occasions as advisor to the national and provincial government and various financial institutions. In cooperation with the IMF, he offered workshops for professionals in the field of international macroeconomics and financial markets.

Jesse Groenewegen:

IBFD Associate; Project Associate in charge of data mining, data collection and data processing, and Drafting conclusions.
Conducted and executed several research projects involving the collection and analysis of financial and economic data; at the Netherlands Bureau for Economic Policy Analysis examined the existence of scale economics in banks; lead research on the effects of implicit government guarantees on funding costs of too-big-to-fail banks (quantified the values of such guarantees and compared them to estimates from the Bank of England and from several academic papers).

Francis Weyzig:

IBFD Associate; Contributor to the economic part of the project.
Senior Policy Advisor at Oxfam Novib; Independent Consultant; having over 10 years experience in conducting academic and applied research projects and advising on economic, financial and fiscal policies. Previous research projects include a study of the effects of Dutch tax policy on developing countries for the Netherlands Ministry of Foreign Affairs. Mr. Weyzig holds a PhD on taxation and development from Radboud University Nijmegen and published various peer-reviewed articles and book chapters on taxation of multinational firms, financing for development, and corporate responsibility. He is a member of the BEPS Monitoring Group, a network of tax specialists making recommendations for global tax reform, and of the European Commission expert group on automatic exchange of financial account information. Mr. Weyzig previously worked as research manager for the Sustainable Finance Lab, a Dutch network of academics that develops ideas for a more sustainable financial sector, policy advisor financial stability at the Dutch central bank, and researcher at the Centre for Research on Multinational Corporations (SOMO).

Anna Bardadin:

IBFD Government Consultancy Project Manager, in charge of the coordination and management of processes. She has over the 20 years of experience managing and coordinating international assignments for governments and governmental agencies, mainly in developing economies, in the field of public administration and tax policy issues. Experienced in processing, phasing and implementation of information flows. Former deputy Librarian at the IBFD Library and Documentation Center.

X. Annex: List of abbreviations

ATAF	African Tax Administration Forum
BEPS	Base Erosion and Profit Shifting
CbC	Country-by-country (reporting)
CDIS	Coordinated Direct Investment Survey
CFC	Controlled Foreign Company
CIAT	American Center of Tax Administration
CIT	Corporate Income Tax
CSO	Central Statistics Office
CRS	Common Reporting Standard
DTA	Double Taxation Agreement
ECOFIN	Economic and Financial Affairs Council
FDI	Foreign Direct Investment
G20	Group of Twenty*
GAAR	General Anti Avoidance Rule
GDP	Gross Domestic Product
IBFD	International Bureau of Fiscal Documentation
IMF	International Monetary Fund
IP	Intellectual Property
I-R Directive	Interest and Royalties Directive
LOB	Limitation of Benefits
MoU	Memorandum of Understanding
OECD	Organisation for Economic Co-operation and Development
PE	Permanent Establishment
RRA	Rwandan Revenue Authority
SPE	Special Purpose Entity
UK	United Kingdom
UN	United Nations
USA	United States of America
WHT	Withholding

*
Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom, United States and European Union

XI. Endnotes

[1] The IMF staff report can be downloaded from http://www.imf.org/external/np/pp/eng/2014/050914.pdf

[2] The IMF staff report estimates that base spillovers for developing countries are two or three times larger and statistically more significant compared to OECD Member States. [3] This document can be downloaded from: http://budget.gov.ie/Budgets/2014/Documents/Department%20of%20Finance%20International%20Tax%20Strategy%20Statement.pdf

[4] Although according to the International Monetary Fund's World Economic Outlook Report of April 2014 and World Bank data, Malaysia and Thailand are considered to be developing countries, the analysis does not include the tax treaties between Ireland with Malaysia and Thailand.

[5] A tax treaty between Ireland and Ethiopia was signed in November 2014 and a tax treaty between Ireland and Thailand was signed in November 2013.

[6] The title can be translated as "Research into tax treaties with developing countries".

[7] For comparison, only 44 percent of total Dutch FDI goes to the countries in Table 2. [8] http://www.irishfunds.ie/fs/doc/statistics/stats-factsheet-december-2014-copy-2.pdf

[9] Blonigen, B.A., Oldenski, L., & Sly, N. (2013). The Differential Effects of Bilateral Tax Treaties. *(Working Paper)* University of Oregon.

[10] In the case of the Netherlands, organizations such as OxfamNovib and SOMO have taken the view that tax treaties are a major factor in loss of tax revenue in developing countries. A study commissioned by the Dutch Ministry of Foreign Affairs and conducted by IBFD showed that tax treaties concluded by the Netherlands in general did not reduce withholding taxes on dividends, interest and royalties further that was the case in tax treaties concluded by the same developing countries with other countries.

[11] Although according to the International Monetary Fund's World Economic Outlook Report of April 2014 and World Bank data, Malaysia and Thailand are considered to be developing countries, the analysis does not include the tax treaties between Ireland with Malaysia and Thailand.

[12] Department of Finance – Competing in a Changing World, A Road Map for Ireland's Tax Competiveness, October 2014.

[13] This ActionAid report can be downloaded from http://www.actionaid.ie/sites/files/actionaid/sweet_nothings.pdf

[14] Although according to the International Monetary Fund's World Economic Outlook Report of April 2014 and World Bank data, Malaysia and Thailand are considered to be developing countries, for this research Malaysia and Thailand are not considered as developing countries in view of their GDP per capita..

[15] An amending protocol to the Irish-South Africa was signed on 10 February 2010 and the amended provisions are effective from 1 January 2013 (1 January 2012 with respect to the changes to the dividends article)

[16] It has been reported that a new tax treaty has been initialed on 14 March 2014. However, as the new tax treaty has not been signed yet and no further details are available, the existing tax treaty of 1971 is included in the analysis.

[17] A tax treaty between Botswana and China was signed on 11 April 2012. The provisions of this DTA are not yet effective.

[18] The tax treaty between France and Zambia is an extension of the 1950 DTA between France and the United Kingdom to Zambia.

[19] It has been reported that a new tax treaty between Egypt and Germany has been initialed in 2012. No further details are currently available.

[20] A new treaty was signed between Germany and South Africa on 9 September 2008. The provisions of this new tax treaty are not yet effective. The analysis is based on the tax treaty between Germany and South Africa that is currently effective and which was signed on 25 January 1973.

[21] It has been reported that a new tax treaty between India and Zambia was initialed on 20 February 2013.

[22] It has been reported that a tax treaty between Botswana and Luxembourg was initialed in 2012. No further details are currently available.

[23] A tax treaty between Egypt and Mauritius has been signed on 22 December 2012. The provisions of this tax treaty are not yet effective.

[24] It has been reported that a tax treaty between Morocco and Mauritius has been initialed on 7 February 2014.

[25] A new tax treaty between Mauritius and South Africa was signed 17 May 2013. The provisions of this new tax treaty are not yet effective. In the analysis the provisions of the existing tax treaty between Mauritius and South Africa have been considered.

[26] The tax treaty between Switzerland and Zambia is an extension of the 1954 tax treaty between Switzerland and the United Kingdom.

[27] A new tax treaty between the United Kingdom and Zambia was signed on 4 February 2014. The provisions of this new treaty are not yet effective. The analysis is based on the tax treaty between the United Kingdom and Zambia that was signed on 22 March 1972.

[28] For services provided by an individual, the 183 days test does not apply per project but as a whole

[29] Duration is including supervisory activities in connection with the building site or the construction, assembly or installation project.

[30] Art. 5, paragraph 3, of the tax treaty between Ireland and Morocco stipulates further that a person carrying on activities in a Contracting State (including offshore activities) in connection with the exploration for and exploitation of natural resources situated in that Contracting State shall be deemed to carrying on a business through a permanent establishment in that Contracting State. In this case no time threshold applies.

[31] Duration is including supervisory activities in connection with the building site or the construction, assembly or installation project.

[32] Art. 5, paragraph 3, of the tax treaty between Ireland and Vietnam stipulates further that a person carrying on activities in a Contracting State (including offshore activities) in connection with the exploration for and exploitation of natural resources situated in that Contracting State shall be deemed to carrying on a business through a permanent establishment in that Contracting State. In this case no time threshold applies.

[33] Also for supervisory activities in connection with construction, installation or assembly projects.

[34] The 12 months test applies within a period of 24 months and includes supervisory activities in connection with a building site, a construction, assembly or installation project.

[35] For building sites there is no threshold, for assembly project a minimum duration of 6 months apples

[36] The 6 months test applies in any twelve month period.

[37] Art. 5, paragraph 5, of the tax treaty between Botswana and Frances stipulates that "delivery" made out of the stock of goods or merchandises situated in a Contracting State will constitute a permanent establishment therein if operations other than storage, display, transport or other preparatory or auxiliary operations are carried on in that State out of this stock or facilities

[38] Occasional delivery is an auxiliary activity that does not lead to the presence of a PE. When delivery is more than occasional it is considered a core business activity.

[39] See The UN Model in Practice 1997–2013, Prof. Wim Wijnen nad Prof. Jan de Goede, Bulletin for International Fiscal Documentation, March 2014, p. 118 – 146.

[40] The rate of 0 % applies when dividends are paid by Botswana Investment and Trade Centre companies.

[41] The rate of 0 % applies to dividends paid by companies operating in export free zones.

[42] The rate of 0 percent applies to dividends paid to non-resident companies.

[43] The rate of 5 percent applies to dividends paid to non-resident individuals.

[44] The rate of 0% applies to dividends paid by mining companies, priority sector companies, companies engaged in the assembly of motor vehicles, economic zone and industrial park developers/investors.

[45] The rate of 5% applies to all dividends.

[46] The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

[47] The rate of 5% applies to intercompany dividends for participations of at least 70% of the voting power in the company paying the dividends.

[48] The rate of 0% applies to all dividends.

[49] The rate of 5% applies to all dividends.

[50] The rate of 8% applies to all dividends.

[51] The rate of 10% applies to all dividends.

[52] The rate of 10% applies to all dividends.

[53] The rate of 5% applies to all dividends.

[54] The rate of 10% applies to all dividends.

[55] The rate of 5% applies to all dividends.

[56] The rate of 15% applies to all dividends.

[57] The rate of 10 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

58 The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

59 The rate of 7% applies to intercompany dividends for participations of at least 50% in the capital of the company paying the dividends.

60 The rate of 10% applies to intercompany dividends for participations of at least 25% in the capital of the company paying the dividends

61 The rate of 0% is subject to taxation in the state of residence.

62 The rate of 15% applies to all dividends received by a company.

63 The rate of 20% applies to the taxation of individuals on net income.

64 The rate of 10 percent applies to cases where the recipient holds at least 20 percent of the capital of the company paying the dividends.

65 The rate of 7.5% applies when the recipient of the dividends has at least 25% of the voting power in the company paying the dividends.

66 The rate of 5% applies to intercompany dividends for participations of at least 70% in the capital of the company paying the dividends.

67 The rate of 10% applies to intercompany dividends for participations of at least 25% in the capital of the company paying the dividends.

68 The rate of 10% applies to all dividends.

69 The rate of 10% applies to all dividends.

70 The rate of 10% applies to all dividends.

71 The rate of 7% applies to intercompany dividends for participations of at least 50% in the capital of the company paying the dividends or has invested more than 10 million US-dollars in that company.

72 The rate of 10% applies to intercompany dividends for participations of at least 25% but less than 50% in the capital of the company paying the dividends and has invested no more than 10 million US-dollars in that company.

73 The rate of 10% applies to all dividends.

74 The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

75 The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

76 The rate of 5% applies to intercompany dividends for participations of at least 50% in the capital of the company paying the dividends or has invested more than 10 million US-dollars in that company.

77 A rate of 10% applies to intercompany dividends for participations of at least 25% but less than 50% in the capital of the company paying the dividends and has invested no more than 10 million US-dollars in that company. Protocol provision VII reduces the rate from 10 to 7% when the dividends are exempt under the participation exemption provided for in the Dutch CIT.

78 This rate applies when Egypt and/or Singapore would introduce a withholding tax on dividends, which currently is not the case.

[79] The rate of 8 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

[80] The rates of 10 and 12.5% apply to intercompany dividends; the 10% rate applies to dividends distributed by companies that are engaged in an industrial undertaking; the rate of 12.5% applies when this is not the case.

[81] The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

[82] The rate of 7% applies to intercompany dividends for participations of at least 50% in the capital of the company paying the dividends or has invested more than 10 million US-dollars in that company.

[83] The rate of 10% applies to intercompany dividends for participations of at least 25% but less than 50% in the capital of the company paying the dividends and has invested no more than 10 million US-dollars in that company.

[84] The rate of 10 percent applies to cases where the recipient holds at least 20 percent of the capital of the company paying the dividends.

[85] The rate of 5 percent applies to cases where the recipient holds at least 20 percent of the capital of the company paying the dividends.

[86] The rate of 7% applies to intercompany dividends for participations of at least 50% in the capital of the company paying the dividends.

[87] The rate of 10% applies to intercompany dividends for participations of at least 25% but less than 50% in the capital of the company paying the dividends.

[88] The rate of 0% is subject to taxation in the state of residence.

[89] The rate of 5% applies when the recipient of the dividends has at least 25% of the voting power in the company paying the dividends

[90] The rate of 20% applies to all dividends.

[91] The rate of 10 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

[92] The 10% rate applies to dividends distributed by companies that are engaged in an industrial undertaking when certain voting power requirements are met.

[93] The rate of 15% applies when the beneficial owner is a company.

[94] The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the capital of the company paying the dividends.

[95] The rate of 15% applies in the case of qualifying dividends paid by a property investment company

[96] The rate of 7% applies to intercompany dividends for participations of at least 50% in the voting power of the company paying the dividends.

[97] The rate of 10% applies to intercompany dividends for participations of at least 25% but less than 50% of the voting power of the company paying the dividends.

[98] The rate of 5% applies when the recipient of the dividends has at least 25% of the voting power in the company paying the dividends.

[99] The rate of 15% applies to all dividends received by a company.

[100] The rate of 20% applies to the taxation of individuals on net income.

101 The rate of 5 percent applies to cases where the recipient holds at least 10 percent of the voting power of the company paying the dividends.

102 The rate of 0 % applies when interest is paid by Botswana Investment and Trade Centre companies.

103 The rate of 0% applies until 31 December 2014.

104 This rate of 15% applies as from 1 January 2015.

105 The rate of 0% applies to interest on savings and deposit accounts and received by individuals.

106 No withholding tax can be levied with respect to interest received by a a resident of the other Contracting State on loans made, guaranteed, or insured by that other State or an instrumentality thereof.

107 No withholding tax can be levied in respect of interest on debt-claims indirectly financed by the Government of the other State, a political subdivision, a local authority and the Central Bank thereof or any financial institution wholly owned by the Government of that other State.

108 An exemption applies when:
the interest is paid in respect of a loan granted or guaranteed by a financial institution of a public character with the objective of promoting exports and development, if the credit granted or guaranteed contains an element of subsidy; or the interest is paid in connection with the sale on credit of any industrial, commercial or scientific equipment, or with the sale on credit of any merchandise or the furnishing of any services by one enterprise to another enterprise.

109 No withholding tax can be levied with respect to interest received by a resident of the other State if such interest is paid in respect of any loan granted, guaranteed or assumed by that other State or by one of its public bodies, directly or, in the case of France, by the intermediary of the Compagnie Française d'Assurance du Commerce Extérieur (COFACE), or, in the case of Egypt, by the intermediary of any Egyptian equivalent of the COFACE

110 The rate of 10% applies to interest on on term deposits and cash vouchers.

111 No withholding tax can be levied in respect of interest arising in a Contracting State shall be exempt from tax in that State if it is beneficially owned by a resident of the other Contracting State and is derived in connection with a loan or credit extended, endorsed or guaranteed by the "Compagnie Francaise d'Assurance pour le Commerce Exterieur" (COFACE), or, subject to the agreement of the competent authorities, by any institution of a Contracting State with responsibility for public financing of external trade.

112 Required is that the interest received is subject to tax in the state of residence.

113 The treaty does not contain an interest article. Therefore, interest is covered by the other income article.

114 The rate of 0% is subject to taxation in the state of residence.

115 No withholding tax can be levied with respect to interest received by a a resident of the other Contracting State on loans made, guaranteed, or insured by that other State or an instrumentality thereof.

116 The rate of 10% applies to interest received by a recognized banking institution.

117 No withholding tax can be levied in respect of interest on loans guaranteed by Hermes-deckung.

118 Under the condition that Luxemburg does not levy a tax at source on interest paid to a resident of the Vietnam.

119 No withholding tax can be levied with respect to interest that is paid in respect of a loan granted or guaranteed by a financial institution of a public character with the objective of promoting exports and development, if the loan granted or guaranteed contains an element of subsidy.

120 Under the new tax treaty between Mauritius and South Africa, a rate of 10% applies.

121 No withholding tax can be levied with respect to interest received by a a resident of the other Contracting State on loans made, guaranteed, or insured by that other State or an instrumentality thereof.

122 The rate of 10% applies when interest is paid to an enterprise of the other State.

123 The rate of 10% applies in respect of interest received by a bank or financial institution, and in respect of interest received in virtue of a contract of financing or of delay in payment relating to the sale of industrial, commercial or scientific equipment or to the construction of industrial, commercial or scientific installations as well as of public works.

124 The rate of 15% applies in respect of intercompany interest (the minimum shareholding is 25% in the company paying the interest)

125 The rate of 10% which is provided for in the tax treaty between the Netherlands and Vietnam is under protocol provision VIII reduced to 7 percent as long as the Netherlands does not levy a withholding tax on interest paid to residents of Vietnam. Further, no withholding tax can be levied on interest in respect of a loan made by or guaranteed or insured by the Government of that other State including political subdivisions or local authorities thereof, the Central Bank of that other State or any other financial institution owned or controlled by the Government of that other State.

126 No withholding tax can be levied on interest on loans in connection with the sale or credit of equipment or merchandise and on interest on a loan granted by a bank.

127 No withholding tax can be levied in respect of interest arising in Pakistan and paid to a resident of Switzerland if the loan or other indebtedness in respect of which the interest is paid is an approved loan. The term "approved loan" means any loan or other indebtedness approved by the competent authority of Pakistan for the purposes of Clause (72) or Clause (90) of Part I of the Second Schedule to the Income-tax Ordinance 2001 or for the purposes of any other substantially similar incentive program.

128 No withholding tax can be levied in respect of interest arising in Vietnam and derived by a financial institution which is a resident of Switzerland with respect to loans guaranteed or insured or financed by the Swiss Confederation.

129 The rate of 0% is subject to taxation in the state of residence.

130 No withholding tax can be levied in respect of interest arising in Vietnam which is paid to and beneficially owned by a resident of the United Kingdom if it is paid in respect of a loan made, guaranteed or insured, or any other debt-claim or credit guaranteed or insured by the United Kingdom Export Credits Guarantee Department.

131 No withholding tax can be levied with respect to interest received by a resident of a Contracting State with respect to loans made, guaranteed, or insured by that Contracting State or an instrumentality thereof.

132 The rate of 0 % applies when royalties are paid by Botswana Investment and Trade Centre companies.

133 The rate of 12% applies until 31 December 2014.

134 This rate of 15% applies as from 1 January 2015.

135 The rate of 5% applies to royalties derived by a non-resident individual.

136 The rate of 5% applies to leasing income.

137 The rate of 5% applies to royalties that are paid as consideration for the use of, or the right to use, any patent, design or model, plan, secret formula or process, or for information concerning industrial or scientific experience.

[138] The rate of 10% applies to royalties that are paid as consideration for the use of, or the right to use, a trade mark or for information concerning commercial experience.

[139] The withholding tax on leasing income amounts to 10% of 70% of the gross payment, leading to 7% withholding tax

[140] The rate of 5% applies to cultural royalties

[141] The rate of 10% applies to royalties in respect of the grant of licences for use of patents, designs, models, plans, secret formulas and processes

[142] The rate of 25% applies to royalty payments in respect of the use of, or the right to use, trademarks.

[143] Under the new treaty between Mauritius and South Africa a rate of 5% applies

[144] The rate of 5% applies to cultural royalties.

[145] The rate of 15% applies to industrial royalties, trademarks and leasing income.

[146] The rate of 5% applies to royalties that are paid as consideration for the use of, or the right to use, any patent, design or model, plan, secret formula or process, or for information concerning industrial or scientific experience.

[147] The rate of 10% applies to royalties that are paid as consideration for the use of, or the right to use, a trade mark or for information concerning commercial experience.

[148] The rate of 5% applies to royalties that are paid as a consideration for the use of, or the right to use, any patent, design or model, plan, secret formula or process, or for the use of, or the right to use, industrial, commercial or scientific equipment, or for information concerning industrial, commercial or scientific experience.

[149] Profits derived from the rental of ships or aircraft if such ships or aircraft are operated in international traffic or if such rental profits are incidental to other profits described in Art. 8, paragraph 1, may be taxed in the state in which the person carrying on the enterprise is a resident.

[150] Includes also agricultural equipment

[151] Profits derived from the rental of ships or aircraft if such ships or aircraft are operated in international traffic or if such rental profits are incidental to other profits described in Art. 8, paragraph 1, may be taxed in the state in which the person carrying on the enterprise is a resident.

[152] It should be noted that income from the rental on a bareboat basis of ships or aircraft may be taxed in the state in which the person carrying on the enterprise is a resident under Art. 8.

[153] Payments for technical and consultancy services are considered royalties.

[154] Includes also agricultural equipment

[155] Only payments for the right to use, industrial, commercial or scientific equipment involving a transfer of know-how.

[156] Includes also agricultural equipment

[157] Includes also agricultural equipment.

[158] Includes also agricultural equipment.

[159] The royalty definition includes rentals and like payments for the use of industrial or commercial machinery or plant or scientific apparatus.

160 Includes also agricultural equipment.

161 The 15% withholding tax on technical fees applies as from 1 January 2015.

162 The rate of 5% applies to general services.

163 The rate of 10% applies where technical fees qualify as royalties under Vietnamese domestic legislation.

164 Under Art. 13 of the tax treaty between Ireland and Vietnam a 7.5% withholding tax applies to payments, in consideration for any services of a technical, managerial or consultancy nature.

165 Under Art. 13 of the tax treaty between China and Pakistan a 12.5% withholding tax applies to any consideration (including any lump sum consideration) for the provision of rendering of any managerial, technical or consultancy services by a resident of a Contracting State in the other Contracting State (including the provision by such resident of the services of technical or other personnel) but does not include consideration for any activities mentioned in paragraph 3 of Article 5 or Article 15 of the Agreement (dependent personal services).

166 The PE definition in the tax treaty between Botswana and France contains a service PE provision and art. 21 of that tax treaty allows the withholding of 7.5% for management, consultancy and technical fees.

167 Under Art. 13 of the tax treaty between France and Pakistan a 10% withholding tax applies in respect of payments as an any consideration (including any lump sum consideration) for the provision or rendering of any managerial, technical or consultancy services by a resident of a Contracting State in the other Contracting State.

168 Under Art. 12 of the tax treaty between Germany and Pakistan a 10% withholding tax applies to payments in consideration for any services of a managerial, technical or consultancy nature.

169 Under Art. 12 of the tax treaty between Germany and Vietnam a 7.5% withholding tax applies in respect of payments, in consideration for any services of a managerial, technical or consultancy nature rendered in the Contracting State.

170 The PE definition in the tax treaty between Botswana and India contains a service PE provision and art. 13 of that tax treaty allows the withholding of 10% for technical fees.

171 Under Art. 12 of the tax treaty between Morocco and India a 10% withholding tax applies to payments of any kind in consideration for the rendering of managerial, technical or consultancy services including the provision of services by technical or other personnel not being income from dependent personal services.

172 Under Art. 12 of the tax treaty between India and South Africa a 10% withholding tax applies in respect of payments of any kind received as a consideration for services of a managerial, technical or consultancy nature, including the provision of services by technical or other personnel, but does not include payments for services mentioned in Article 15 (income from dependent personal services).

173 Under Art. 13 of the tax treaty between India and Vietnam a 10% withholding tax applies in respect of payments, in consideration for any services of a technical, managerial or consultancy nature.

174 Under Art. 14 of the tax treaty between India and Zambia a 10% withholding tax applies to "payments, in consideration for any services of a managerial, technical or consultancy nature".

175 The PE definition in the tax treaty between Botswana and Mauritius contains a service PE provision and art. 22 of that tax treaty allows the withholding of 7.5% for management, consultancy and technical fees.

176 Art. 13 of the tax treaty between Pakistan and Singapore provides for a 10% withholding tax for payments as for the rendering of any managerial, technical or consultancy services (including the provision by the enterprise of the services of technical or other personnel), not being income from dependent personal services.

177
Art. 13 of the tax treaty between Switzerland and Singapore provides for a 10% withholding tax for payments as for the rendering of any managerial, technical or consultancy services (including the provision by the enterprise of the services of technical or other personnel), not being income from dependent personal services.
178
The PE definition in the tax treaty between Botswana and the United Kingdom contains a service PE provision and art. 13 of that tax treaty allows the withholding of 7.5% for technical fees.
179
Under Art. 13 of the tax treaty between Pakistan and the United Kingdom, a 12.5% withholding tax applies to payments of any kind to any person, other than to an employee of the person making the payments, in consideration for any services of a technical, managerial or consultancy nature.
180
Art. 23 of the tax treaty between Botswana and China stipulates that nothing in the treaty shall prejudice the right of each Contracting State to apply its domestic laws and measures concerning the prevention of tax avoidance, whether or not described as such, insofar as they do not give rise to taxation contrary to this Agreement.
181
The beneficial ownership requirement is included in the dividends and interest articles only and is not included in the royalty article.
182
The tax treaty between France and Vietnam does not contain an interest article. Interest is covered by the other income article which does not contain the beneficial ownership test.
183
The 1929 Luxembourg Holding companies have been excluded from the application of the tax treaty
184
Protocol provision 1 stipulates that in the case of Mauritius, the exemption or reduction in tax as provided under Articles 10, 11 and 12 of the Agreement shall not apply to persons registered under the Financial Services Act 2007 (formerly incorporated under the International Companies Act) whose income or profits are not taxed at the normal corporate tax in Mauritius or any income tax comparable thereto. 185
Art. 10, paragraph 4, stipulates that the lowering of withholding tax on participation dividends to 0% shall not apply if the relation between the two companies has been arranged or is maintained primarily with the intention of securing this reduction.
186
Art. 10 of the tax treaty contains a main purpose test with respect to the entitlement of the rate for participation dividends. 187
Art. 10, paragraph 4, stipulates that the lowering of withholding tax on participation dividends shall not apply if the relation between the two companies has been arranged or is maintained primarily with the intention of securing this reduction.
188
Under Art. 26, paragraph 3, of the tax treaty, the competent authorities may also consult together concerning measures for the avoidance of abuse of any kind of the Convention.
189
Main purpose test provisions can be found in Art. 10, 11, 12, 13 and 22.
190
It should be noted that Art. 27, paragraph 1, contains a remittance base provision.
191
The dividends, interest and royalties articles in the tax treaty between South Africa and the United Kingdom contain a main purpose test.
192
The interest and royalties articles in the tax treaty between Vietnam and the United Kingdom contain a main purpose test.
193
Art. 24 of the tax treaty between Morocco and the United States stipulates the following: A corporation of one of the Contracting States deriving dividends, interest, royalties, or capital gains from sources within the other Contracting State shall not be entitled to the benefits of Article 10 (Dividends), 11 (Interest), 12 (Royalties), or 13 (Capital gains) if:

(a) by reason of special measures the tax imposed on such corporation by the first-mentioned Contracting State with respect to such dividends, interest, royalties, or capital gains is substantially less than the tax generally imposed by such Contracting State on corporate profits, and

(b) twenty-five percent or more of the capital of such corporation is held of record or is otherwise determined, after consultation between the competent authorities of the Contracting States, to be owned, directly or indirectly, by one or more persons who are not individual residents of the first-mentioned Contracting State (or, in the case of a Moroccan corporation, who are citizens of the United States).

[194] The tax treaty between South Africa and the United States contains in Art. 22 a limitation-onbenefits article.

[195] The other income article may be relevant to allocate the taxing rights regarding social security payments and alimony and in some case also regarding gambling income, gifts and inheritances.

[196] Art. XVII contains a subject to tax condition.

[197] The source state may tax if a resident of a Contracting State derives income from sources within the other Contracting State in the form of lottery prizes and awards.

[198] Art. 21, paragraph 1, contains a subject to tax condition.

[199] The source state has a taxing right if if a resident of a Contracting State derives income from sources within the other Contracting State in the form of lottery prizes and awards

[200] Art. 21, paragraph 1, contains a subject to tax condition.

[201] The source state has a taxing right with respect to income from sources within the other Contracting State in the form of lotteries, crossword puzzles, races including horse races, card games and other games of any sort or gambling or betting of any form or nature whatsoever

[202] Art. 21, paragraph 1, contains a subject to tax condition.

[203] An exception applies with respect to income paid out of trusts or the estates of deceased persons in the course of administration

[204] Art. 22 contains a subject to tax condition.

[205] The tax sparing credit applies until 1 January 2017

[206] The tax sparing credit provision was eliminated as from 1 January 2010.

[207] The sparing credit applies until 1 January 2019

[208] The tax sparing credit provision in the tax treaty expired on 31 December 2009 (Art. 24, paragraph 2)

[209] The tax sparing credit provision ended on 1 January 2007

[210] The tax sparing credit provision ended on 1 January 2006.

[211] The tax sparing credit provision ended on 1 January 2006.

[212] The tax sparing credit provision in the tax treaty expired on 31 December 2014 (Art. 23, paragraph 5)

[213] The tax sparing credit provision applies until 1 January 2020.

[214] The tax sparing credit applies to interest and royalties only

[215] Only with request to interest a tax sparing credit of 10 per cent is available.

216 In cases where a development approval order is made under Section 52 or a tax agreement is entered into under Section 54 of the provisions of the Income Tax Act of Botswana, a tax sparing credit applies during a period of 12 years from the date the tax treaty has entered into force.

217 The tax sparing credit applies provided that relief from United Kingdom tax shall not be given by virtue of art. 22, par. 3, in respect of income from any source if the income arises in a period starting more than 10 years after the exemption from, or reduction of, Egyptian tax was first granted in respect of that source

218 The tax sparing credit applies provided that relief from United Kingdom tax shall not be given by virtue of art. 22, par. 1, in respect of income from any source if the income arises in a period starting more than 10 years after the exemption from, or reduction of, Moroccan tax was first granted in respect of that source

219 The tax sparing credit applies provided that relief from United Kingdom tax shall not be given by virtue of art. 23, par. 1, in respect of income from any source if the income arises in a period starting more than 10 years after the exemption from, or reduction of, Pakistani tax was first granted in respect of that source

220 The tax sparing credit provision ended on 1/6 April 2005.

221 The tax sparing credit applies provided that relief from United Kingdom tax shall not be given by virtue of art. 22, par. 1, in respect of income from any source if the income arises in a period starting more than 10 years after the exemption from, or reduction of, Zambian tax was first granted in respect of that source.

222 PWC and WorldBank/IFC – Paying Taxes 2014, the global picture, http://www.pwc.om/gx/en/payingtaxes/assets/pwc-paying-taxes-2014.pdf

223 However, for existing cases the old residence rules remain effective until 1 January 2020.

224 The CIT rate in Cyprus is also 12.5% and Estonia does not tax undistributed profits. Further, it should be stressed that the Corporation Tax rate in Ireland on investment and non-trading income is 25 per cent.

225 Section 626B TCA1997

226 Council Directive of 23 July 1990 on the common system of taxation applicable in the case of parent companies and subsidiaries of different Member States**.** *The Parent-subsidiary directive was later amended by the Council Directive 2011/96/EU of 30 November 2011.*

227 Council Directive 2003/49/EC of 3 June 2003 on a common system of taxation applicable to interest and royalty payments made between associated companies of different Member States, *Official Journal L 157 , 26/06/2003 P. 0049 – 0054. The I-R directive was later amended by the Council Directive 2004/76/EC of 29 April 2004 and the Council Directive 2006/96/EC of 20 November 2006.*

228 The Staff Report on Spillovers on International Corporate Taxation was prepared by IMF staff and completed on May 9, 2014 to brief the Executive Board on May 23, 2014. The Executive Directors met in an informal session, and no decisions were taken at this meeting. The policy considerations in the paper should be attributed to IMF staff and not to the IMF or its Executive Board. The analysis was prepared by the staff of the Fiscal Affairs Department and has benefited from comments and suggestions by staff from other IMF departments, as well as by Executive Directors following their discussion of the report on May 23, 2014.

229 The specification includes year-specific effects.

230 The implied corporate tax base is reduced by 0.3% of GDP.

231 www.wikipedia.org describes "tax haven" as a state, country or territory where, on a national level, certain taxes are levied at a low rate or not at all. In paragraph 47 of the 1998 OECD Report "Harmful Tax Competition, an Emerging Global Issue", the following is mentioned:
"47. Many fiscally sovereign territories and countries use tax and non-tax incentives to attract activities in the financial and other services sectors. These territories and countries offer the foreign investor an environment with a no or only nominal taxation which is usually coupled with a reduction in regulatory or administrative constraints.

The activity is usually not subject to information exchange because, for example, of strict bank secrecy provisions. As indicated in paragraph 42 and 43, these jurisdictions are generally known as tax havens."

232

Gravelle, J.G. (2013). *Tax Havens: International Tax Avoidance and Evasion*. Congressional Research Service Report for Congress (Washington: Congressional Research Service).

233

See http://ec.europa.eu/internal_market/consultations/2014/extractive-forestry/index_en.htm

234

http://www.oecd.org/tax/strategy-deepening-developing-country-engagement.pdf

235

Examples are: D. Harris, R. Morck and J. Slemrock, Income shifting in US Multinational Corporations. In: Studies in International Taxation, ed. A. Giovanni, R.G. Hubard and J. Slemrod, Cambridge, MA: National Bureau of Economic Research, 1993, p. 227-308; H. Grubert, Intangible income, intercompany transactions, income shifting and the choice of location, National Tax Journal 56 (1, part 2), 2003, p. 221-224; M. McDonald, Income shifting from Transfer Pricing: Further evidence from Tax return Data.
OTA Technical Working Paper 2 (July), Office of Tax Analysis, U.S. Department of the Treasury, Washington DC, 2008; K.A. Clausing, Tax Motivated Transfer Pricing and US Intrafirm Trade Prices, Journal of Public Economies, 2003, 87 (9-10): 2207-23

236

D. Kar and D. Cartwright-Smith, Illicit Financial Flows from Developing Countries 2002-2006, Global Financial Integrity, Washington, DC, 2008 http://gfintegrity.org/storage/gfip/executive%20%20final%20version%201-5-09.pdf, accessed 10 October 2014.

237

D. Kar and D. Cartwright-Smith, Illicit Financial Flows from Developing Countries 2002-2006, Global Financial Integrity, Washington, DC, 2008 http://gfintegrity.org/storage/gfip/executive%20%20final%20version%201-5-09.pdf, accessed 10 October 2014.

238

C.A. Leite, The role of transfer pricing in illcit financial flows, Draining development?, Controlling Flows of Illicit Funds from Developing Countries, World Bank, ed. Peter Reuter, 2012, p. 251

239

L. Eden, Transfer pricing manipulation, Draining development?, Controlling Flows of Illicit Funds from Developing Countries, World Bank, ed. Peter Reuter, 2012, p.

240

For an extensive overview of technical assistance provided by different organizations and countries up to 2012, see the background paper "Norms and Policy Setting, Identification of Gaps, and Exploration of Opportunities for Creating Greater Synergies in respect of Technical Assistance in Tax
Matters" by Prof. Dr. Victor van Kommer
(http://www.un.org/esa/ffd/tax/2012TaxMatters/Ibfd_BackgroundPaper.pdf).

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The Irish Aid programme countries are: Ethiopia, Lesotho, Malawi, Mozambique, Sierra Leone, Tanzania, Uganda, Vietnam and Zambia.