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From International Corporate Tax Neutrality to Efficient Investment Policy and its Implication on the Desirable International Tax Policy

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Abstract: The paper challenges the current paradigms in the international tax discourse, mainly known as neutrality theories. Generally put, I will highlight the hidden assumption of the international tax discourse, which is that business ventures, and in the international sphere mainly corporate activity, is costless. I will argue that corporate activity has direct costs on the infrastructure of the country in which the production is taking place, and indirect costs on that country in the form of externalities.

In this regard, I will broaden the scope of the debate from the tax competition paradigm to investment competition. While tax scholars, neutrally, focus on tax competition, countries can compete with each other on investment in two other main commercial fields – the field of spending and publicly provided services, and the field of regulation. Understanding the international dynamic not as "tax competition" but rather as "investment competition" will allow us to further develop our analysis, beyond the limited scope of the current debate. The question, from a worldwide perspective, is the desirability of the investment competition, or in other words, is it a "race to the top" of a "race to the bottom" competition.

The first step of the inquiry will be the examination of the investment competition in regard to direct investment through entities with no limited liability. I will show that in regard to this type of investment, the international investment competition creates a problem of sup-optimal investment in pure and partial public goods. I will address this problem, which is unique only to international markets, as the **first cross border externality problem**. We will see that the problem of sub-optimal investment in public goods cannot be solved through any unilateral tax policy, either direct (taxation connected to the service such as fees) or indirect (for example income or entity taxation).

The second step will concern the problem of over-production due to externalities. The problem of externalities exists in every market, including domestic markets. Yet, in domestic market countries have the incentive to minimize externalities. In the international market on the other hand, countries have no incentive to minimize externalities allocated to other countries. I will address this unique phenomenon of international markets as the **second cross border externality problem**.

This second cross border externality problem will shed new light on the international corporate tax debate. I will argue that both residency based taxation, and what is understood today as territorial (or "source") based taxation (meaning taxing the entity at source while taxing the distributed profits based on the investor's residency) will create extreme inefficiencies from a worldwide perspective. Furthermore, I will show that in a world with non-equal initial distribution of capital, any pure or partial residency based tax system has regressive affect and allocate the profits to high capitalized countries while allocating the costs to low capitalized countries. As an alternative I will offer to adopt a pure source based tax system, taxing both entities and distributed profits at source. In this regard, I will argue that the sourcing rules should be redefined, in order to allocate the tax liability to the same country to which the externalities are allocated.

This framework will enable to examine the national perspective. As a unilateral policy, many countries, such as the US, adopt a pure source based tax system, taxing both the entity and the distribution at source. Yet, most treaties, such as the US model treaty, the UN model treaty and the OECD model treaty deviated from the pure source taxation model and adopt a mixed tax system, splitting the tax between the source and the residency country. While it is clear why high capitalized countries will wish to adopt such a system, it is an undesirable system from the perspective of low capitalized countries. Many reasons, such as economic and political pressure, as well as misguided academic consensus, corruption and others, can explain why low capitalized countries engage in those treaties. Yet, those treaties have negative utility for them. In this regard, a unique example is the one of Brazil, which refuses to provoke its taxation on profit distribution through tax treaties. I would argue that the Brazilian approach regarding corporate taxation should guide low capitalized countries when negotiating a tax treaty.

Introduction

The international tax system is deeply flawed. Policymakers and academics highly disagree about approximately everything, from the normative goals of the system, through the theoretical framework, the empirical evidence and the conclusion that can be drown from them. In this complicated dynamics this paper takes place. It will wish to add to the anyway over crowded set of relevant considerations an additional one - the cost of business ventures - which is relevant both to the worldwide efficiency and the national one.

Generally put, I will highlight the hidden assumption of the international tax discourse, which is that business ventures, and in the international sphere mainly corporate activity, is

costless. I will argue that corporate activity has direct costs on the infrastructure of the country in which the production is taking place, and indirect costs on that country in the form of externalities.

In this regard, I will broaden the scope of the debate from the tax competition paradigm to investment competition. While tax scholars, neutrally, focus on tax competition, countries can compete with each other on investment in two other main commercial fields – the field of spending and publicly provided services, and the field of regulation.

Understanding the international dynamic not as "tax competition" but rather as "investment competition" will allow us to further develop our analysis, beyond the limited scope of the current debate. The question, from a worldwide perspective, is the desirability of the investment competition, or in other words, is it a "race to the top" of a "race to the bottom" competition.

The first step of the inquiry will be the examination of the investment competition in regard to direct investment through entities with no limited liability. I will show that in regard to this type of investment, the international investment competition creates a problem of sup-optimal investment in pure and partial public goods. I will address this problem, which is unique only to international markets, as the **first cross border externality problem**. We will see that the problem of sub-optimal investment in public goods cannot be solved through any unilateral tax policy, either direct (taxation connected to the service such as fees) or indirect (for example income or entity taxation). Therefore, I will argue that this phenomenon can be solved only in one of two ways – tax cooperation or unilateral regulation. In this regard, I will argue that generally, the regulatory mechanism is a more efficient way to approach the problem, and only rare cases and extreme assumptions can justify addressing this problem through the corporate tax.

The second step will concern the problem of over-production due to externalities. The problem of externalities exists in every market, including domestic markets. Yet, in domestic market countries have the incentive to minimize externalities. In the international market on the other hand, countries have no incentive to minimize externalities allocated to other countries. I will address this unique phenomenon of international markets as the **second cross border externality problem**.

Just as with public goods, I will argue that the corporate tax is not an efficient way to address externalities which are industry based (such as pollution) and those can be more efficiently addressed through direct regulation or Pigovian taxes. Once we move to the examination of the international investment market when the investment is done through limited liability entities, mainly corporations, the picture change. The common analysis of international corporate taxation assumes that the corporate form is just an efficient way to conduct large scale business ventures, and therefore there is no substantive reason to treat it differently than other forms of cross border investment. In a previous paper I have explained that this understanding of the corporate form is wrong.[1] Though the corporate form creates some efficiency, by reducing the cost of cooperation, the limited liability of the corporation creates severe costs allocated to non-investors stakeholders. Furthermore, I showed that the ability to distribute profits as dividends and interest payments creates a second layer of externalities, and allocate higher portion of the risk to non-investors stakeholders. The ability of corporation the externalize costs in a domestic market is a pure welfare loss. In this regard, I have argued that the corporate tax should be understood as a Pigovian tax, leading investors

[1] Kalai, Hagai, *From the 'Dividend Puzzle' to the 'Corporate Paradox' (1) - The Problem of Stakeholders' Externalities, Social Welfare and the Limited Liability* (May 14, 2014). Available at SSRN:http://ssrn.com/abstract=2437041 (Hereinafter: **The Corporate Paradox**).

to internalize the cost.[2] In this paper I do not wish to focus on the corporate tax as such, but rather identify the reaction between the corporate form and the international investment market.

[2] Though I have argued that the corporate tax should be understood as a Pigovian tax I did not argue that the current policymakers and literature perceive it as such. On the contrary, most supports of corporate taxation justify the tax as a efficient proxy to tax the individual's income, reducing the administrative costs of taxing the income at the individual level. The opposes of the corporate tax on the other hand agrees that the question is a question of efficiency but argue that the corporate tax is a poor mechanism to tax the individual's income, and other mechanisms, such as mark-to-market taxation might be more efficient.

See, as example for the traditional debate concerning the desirability of the corporate tax:

Shaviro, Daniel N. **Decoding the U.S. Corporate Tax** (2009) ("…corporate level tax is potentially appealing. By using the entity as a collection vehicle, one centralize administration of tax […] the advantage may well be worth the downside" p. 13) and see also p. 37-39; 73-77,89-99; Steven A. Bank, *A Capital Lock-In Theory of the Corporate Income Tax* 94 **Geo. L.J.** 889 (2005-2006) (Hereinafter: Bank); Joseph A. Snoe, *The Entity Tax and Corporate Integration: An Agency Cost Analysis and a Call for a Deferred Distributions Tax* 48 **U. Miami L. Rev.** 1 (1993-1994) (" Investors historically chose the corporate form to save taxes. Corporate rates lower than individual rates, the corporation's power to defer distributing earnings as dividends, and the shareholders' ability to recognize the retained earnings (and untaxed value appreciation) as tax favored capital gains by selling the stock often resulted in a lower over- all tax burden than a single tax at the individual's tax rate" p. 3-4); Anthony P. Polito, *Borrowing, Return of Capital Conventions, and the Structure of the Income Tax: An Essay in Statutory Interpretation*, 17 **Va. Tax Rev.** 467, 472 (1998) (calculating the time period in which tax deferral effectively pays for itself through the opportunity to invest the deferred tax without accounting for the time value of money).

For the opposing approach see, among others:

Charles E. Jr.McLure, *Integration of the Personal and Corporate Income Taxes: The Missing Element in Recent Tax Reform Proposals*" 88 **Harv. L. Rev.** 532 (1974-1975) ("a separate tax on corporation income cannot be justified under commonly accepted canons of taxation." P. 534, and see p. 534-543); George K. Yin, *Corporate Tax Integration and the Search for the Pragmatic Ideal* 47 **Tax L. Rev.** 431 (1991-1992) ("separatists have not been completely willing to cede the high theoretical ground to the integrationists" p. 432); Anthony P. Polito, *Advancing to Corporate Tax Integration: A Laissez-Faire Approach* 55 **S. C. L. Rev.** 1 (2003-2004) ("The classical double taxation system applicable to corporations has been flawed for decades. It has introduced serious allocative distortions into the economy. Its effect on the distributive justice of the tax burden is most charitably described as uncertain, but might also be described as arbitrary and capricious" p. 2).

Two main differences between the traditional approach and the Pigovian approach exist. First, once that tax is understood as a Pigovian tax the tax rate should not be set based on a tradeoff between the efficiency generated by the revenue (for example funding public goods and redistribution) and the deadweight loss created due to the tax. Rather, it should be set based on the externality rate, either in the form of a general average, or, more preferably, as a industrial average. Second, once the corporate tax is understood as a Pigovian tax, the income derived from corporate activity should not be excluded from the individual gross income, and the individual should

In other words, I will ask what the influence of the "corporate paradox" on the international investment market is. While in a domestic market the limited liability creates both efficiencies and inefficiencies, the international corporate market enables countries to capture the efficiencies of limited liability, while allocating the costs to other countries.

This second cross border externality problem will shed new light on the international corporate tax debate. I will argue that both residency based taxation, and what is understood today as territorial (or "source") based taxation (meaning taxing the entity at source while taxing the distributed profits based on the investor's residency) will create extreme inefficiencies from a worldwide perspective. Furthermore, I will show that in a world with non equal initial distribution of capital, any pure or partial residency based tax system has regressive affect and allocate the profits to high capitalized countries (either directly, through the tax authority of the high capitalized country, or indirectly, through the use of tax haven by the capital owners who capture the profit), while allocating the costs to low capitalized countries. As an alternative I will offer to adopt a pure source based tax system, taxing both entities and distributed profits at source. In this regard, I will argue that the sourcing rules should be redefined, in order to allocate the tax liability to the same country to which the externalities are allocated.

This framework will enable to examine the national perspective. As a unilateral policy, many countries, such as the US, adopt a pure source based tax system, taxing both the entity and the distribution at source. Yet, most treaties, such as the US model treaty, the UN model

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not get a deduction for corporate tax paid (just like in the situation where one pays carbon tax, and cannot deduct the carbon tax paid from her income subject to individual tax rates). In regard to international taxation the traditional justification for the corporate tax becomes even more problematic. If the goal is just to tax the individual tax payer using the corporation as a "proxy" in order to reduce administrative costs it seems obvious that the cost of the corporate tax are higher than its benefits, both due to the electivity of corporate residence and the fact that the residence of the corporation is a poor proxy for the residency of the investors.

treaty and the OECD model treaty deviated from the pure source taxation model and adopt a mixed tax system, splitting the tax between the source and the residency country. While it is clear why high capitalized countries will wish to adopt such a system, it is an undesirable system from the perspective of low capitalized countries. Many reasons, such as economic and political pressure, as well as misguided academic consensus, corruption and others, can explain why low capitalized countries engage in those treaties. Yet, those treaties have negative utility for them. In this regard, a unique example is the one of Brazil, which refuses to provoke its taxation on profit distribution through tax treaties. I would argue that the Brazilian approach regarding corporate taxation should guide low capitalized countries when negotiating a tax treaty.

The paper will continue as follows. **Part I** will examine the international verses national efficiency benchmark in the current tax discourse and set the foundation for the following discussion, in which every model will first be analyzed through the worldwide efficiency benchmark and then through the national efficiency benchmark. **Part II** will introduce the main building block of the worldwide tax efficiency debate. **Part III** will focus on the argument that the discourse concerning international competition should shift from separate discussion concerning tax policy and regulation policy to a holistic view of investment policy. In this regard, I will analyze two additional factors in the international investment policy – public spending and externalities. **Part IV** will offer a midway summery. **Part V** will introduce the building blocks for the rest of the analysis. Based on the new framework of investment policy, instead on tax policy, it will analyze the tool kit counties have to attract and discourage investment, and introduce the different manipulations investors can do, mainly tax planning and regulation planning. The dynamic between uses of countries and investors of those policies to advance national and individual interest will guide the rest of the paper. **Part VI** will introduce the current debate concerning the "race to the top" versus the "race to the bottom" in

the tax field and will apply it to the framework of international investment competition. This part will develop the first cross border externality problem, concerning the sup-optimal investment in publicly provided goods and services. **Part VII** will analyze the policy outcomes of the first cross border externality problem. It will show that no unilateral tax, regulation or spending policy can eliminate this problem. Furthermore, I will argue that beside rare cases, the corporate tax is not an efficient mechanism to address this problem. **Part VIII** will focus on the second cross border externality problem. I will argue that generally, externality costs that are allocated by one country to another and are not an outcome of the corporate form should not be addressed through the international corporate tax. On the other hand, I will argue that the corporate form by itself create a double layer externality, allocated to the source country. Therefore, I will argue that each country has the incentive to over produce in other countries. **Part IX** will introduce an alternative international tax policy – a pure source based taxation, which will eliminate the second cross border externality problem. In this regard, I will aim to redefine the source rule and offer a different and efficient sourcing rule than those in place today. Furthermore, I will argue that this policy solves much of the tax and regulation planning problems. **Part X** will conclude.

Part I – What Should We Maximize? The Relationship between Worldwide and National Efficiency in the International Tax System

The international tax scholarship divides between two main efficiency benchmarks – worldwide efficiency and national efficiency.

Extensive academic scholarship dedicated its efforts to analyzing what will be the best international tax policy from a worldwide perspective. The underlining assumption of this group of theories, which I will address as the neutrality theories, is that efficient tax policy is

one that reduce the distortions in the corporate decision making, and the question is how one creates a tax system with minimal distortions, in a world with no full cooperation between countries.

The justification for neutral tax policy can be based either on a **strong normative argument**, which is that the countries should adopt a worldwide efficient system due to devotion to worldwide prosperity even in the cost of domestic loss or on a **weak normative argument**, which is that worldwide efficiency will increase, in the long run, the welfare of the participating nation. This week normative argument is two folded – if the national interest is fully aliened with the international benchmark, a worldwide efficient system can be achieved through unilateral adoption of the efficient tax system. If some countries profit and other lose from the adoption of a tax system which would be efficient from worldwide perspective such system can be achieved only through international coordination, mainly tax treaties. In this regard, if the loss from a national perspective is only due to the lack of coordination (and therefore no one would agree to be the first to change its system) all that is required is an agreement to mutually change the tax systems. If one country will constantly lose even when having the same structure of tax system (for example due to different tax rates and different utility from redistribution) the cooperation would have to be wider, either in the form of compensation of the loosing country or in the form of additional harmonization. Both normative arguments were recently criticized mainly as being unfishable in the current national tax discourse.

Three main criticisms can be identified in the literature concerning worldwide efficiency benchmark.

First, a set of critiques concerns the problem of cooperation.[3] Some neutrality benchmarks require that all countries will adopt the same tax system in order to create a worldwide efficient tax system. Even if all countries see themselves as liable to worldwide prosperity, adoption of different efficiency benchmarks by different countries will lead to an overall inefficient international tax system. In the ninth part of this paper I will address this issue and show that while usually scholars assume that a source based system (an exemption tax system, advocated for by supporters of Capital Import Neutrality (CIN) and Capital Ownership Neutrality (CON)) requires cooperation between all countries no such cooperation is necessary, and unilateral adoption of pure source based system will lead to efficient results. Furthermore, I will argue that once the investment is done through a limited liability entity the residency based tax system is fundamentally flowed and cannot be efficient even if the tax rates will be harmonized.

A second critique concerns the worldwide benchmark itself. It is unclear why countries will agree to increase the efficiency of the worldwide system while decreasing their own welfare. This critique is not developed enough in the current literature which usually focuses on unilateral structuring of tax systems. The extensive focus of unilateral structuring of tax systems is misleading. Most of the significant substantial commerce is done between treaty countries. The United States, for example, has tax treaties with most major economies in the world. The intensive focus on non-treaty relationship seems highly connected to the very common practice of using non-treaty low tax countries in order to reduce tax liability. While this is a significant problem, as will be explained, it has nothing to do with the question of the efficient treatment of foreign income, and is mainly connected to the loose and inadequate allocation of residency and source in the current international tax system. Furthermore, as will

[3]Daniel N. Shaviro **Fixing U.S. International Taxation** (2014) (hereinafter: **Shaviro**), 111-113.

be explain in part IX, the "pure source" based taxation changed (and almost oppose) the current discourse concerning tax and regulation planning.

The treaties dynamics should be analyzed on the same lines of the classic analysis of transactions. If a country can unilaterally improve its position it will do so and it will be Pareto efficient. If it is only concerned with its own welfare, it will do so even in the cost of making another country worse off. But, as noted in the literature, tax systems are not a classic "prisoner dilemma".[4] Country can react to other countries policy unilateral modification. This reaction dynamics, commonly known as the "race to the bottom" can lead to welfare decrease for all countries participating. In such a case, all the participating countries have the incentive to engage in a treaty. Furthermore, even if none reactive dynamics exists, sometimes cooperation can lead to a Kaldor-Hicks efficient outcome. In such situations a treaty that compensates the loosing country can increase the efficiency of both. But, as we will notice in the following chapters the treaty is not a full solution. When countries cannot effectively react to abuse by other countries, for example in the case of public goods, a bilateral treaty cannot create and efficient market and all countries will be worse off due to sub-optimal investment is such services. A third layer of the discussion, which is commonly ignored, is the international tax law and multinational cooperation.[5]

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[4] **Shaviro** Id 3, p. 110.

[5] See in concerning tax law as international law and the need for international institutions Eric T. Laity, *The Competence of Nations and International Tax Law*, 19 **Duke J. Comp. & Int'l L.** 187 (2008-2009) and see also Reuven S. Avi-Yonah, *International Tax as International Law*, 57 **Tax L. Rev.** 483 (2003-2004); Allison Christians, *Hard Law, Soft Law, and International Taxation*, 25 **Wis. Int'l L.J. 328** (2007-2008); Ed Morgan, *International Tax Law as a Ponzi Scheme*, 34 **Suffolk Transnat'l L. Rev.** 71 (2011).

A worldwide efficiency benchmark therefore is necessary not only in order to describe some ideal altruistic world, but also to understand how to use bilateral and multinational cooperation systems in order to increase the welfare of all participating countries.

Part II – the worldwide efficiency benchmark

Even if one finds worldwide efficiency benchmark as appealing, three basic questions have to be taken into account – taxation of what, in order to increase which efficiency margin, and in what way. In this regard, too often scholars skip the first question of the three, assuming the relevant tax is only the entity level tax. Not only partial, this assumption can be hardly explained, both because investors do not ignore other tax liabilities, and because the entity level tax and the individual level tax on income derived from the entity are highly connected. The second question is the question which draws most attention, though the answers still suffer from a double problem – the "one bullet approach" of analyzing one margin instead of multiple margins, and the assumption that only positive efficiency can be created. The third question, of how the efficiency goal is to be achieved, also has a limited scope. Generally put, only two systems are usually taken into consideration – a worldwide residency tax system and a territorial tax system (known also as the source based tax system), and only in concern to the entity level tax. the limited scope of the debate introduce "unsolvable" problems, such as the built-in tension between allowing high electivity of residency and income thus reducing efficiency loss but at the same time reducing revenue or limiting electivity thus increasing revenue but reducing productivity. As we will see, once willing to broaden the debate, those problems are not unsolvable at all. Furthermore, the limitation of the discussion to tax alone,

without examining other mechanisms, such as regulation, hides another layer of possible solutions.[6]

The efficient allocation of capital – CEN v. CIN

The traditional worldwide efficiency discussion, following Musgrave classic analysis,[7] focused on the efficient allocation of capital. Several basic assumptions are the foundation of the debate. First, it assumes that the amount of capital is limited and constant. Therefore, any increase of available capital in one market is fully offset by an equivalent decrease in another market. A second assumption is that investors cannot elect between different residencies. A third assumption is that no distortions are created due to local taxes (such as property tax and tariffs), and local regulation. Put differently, the assumption is that the pre-corporate tax expected return is based on the productivity of the investment itself and is not distorted. A fourth assumption is that all investment has positive utility from the perspective of the hosting country. This assumption, which will be discussed later on in this paper, folds two sub assumptions – that the hosting country has no cost due to the new investment (thus, no public spending is required to maintain the same level of public goods before and after the investment) and that the ability of domestic and foreign investors to create externalities, and their incentive to do so, is the same (in other words, the international structure cannot be abused in order the

[6] Some initial discussion concerning the relationship between tax and trade law in international markets can be found in the discussion by Avi-Yonah in Reuven S. Avi-Yonah, *Treating Tax Issues through Trade Regimes*, 26 **Brook. J. Int'l L.** 1683 (2000-2001) (Hereinafter: Avi-Yonah (2001)). One should note that Avi-Yonah assumes that "Fundamentally, the goal of trade law is to facilitate trade, while the goal of tax law is to raise revenue" (p. 1683). As will be explain in this paper, this assumption assume that the only question is the question of balancing between the dead weight lost of the tax system and the redistribution, while one should also take into account the cost of over attracting investment on the revenue (the spending side).

[7] Peggy B. Musgrave **United States Taxation of Foreign Income: Issues and Arguments** (1969).

reduce liability beyond the ability of domestic corporations to do so). A fifth assumption is that the location of the investment is constant, and the investor cannot gain the high return from the investment by reallocating it to the domestic market.

Under those assumptions, from a worldwide perspective, one would want capital to flow to the investments with the highest return rates. But, if the tax rates are not equal, the corporate tax is bound to create one out of two distortions (or both).

If the tax system equalize the tax rate of domestic and foreign investments, the investor's decision will not be distorted based on the location of the investment. This policy, known as Capital Export Neutrality (CEN) eliminated the distortion in the capital market based on the residency of the investor. The main mechanism to achieve such system is worldwide taxation of residence with Foreign Tax Credit (FTC). On the other hand, if the tax rates are not equal, it will lead to distortion between investors which are residence of countries with high tax rates and investors which are residence of countries with low tax rates. If investors cannot elect between places of residency, this problem is not significant and the investor will still allocate the capital to the best pre-tax investment, knowing she will be subject to the same tax rate for both domestic and foreign investment. But, acknowledging that the main international investment is done by corporations, residency is highly elective.[8] In systems as that of the United States, where residency is based purely on place of incorporation, every investor has a strong incentive to invest through a foreign corporation incorporated in a country with lower tax rates. Furthermore, even if the residency is based on more substantial characteristics, such as place of management, the investor will be willing to lose some value or bear some costs in order to reduce the tax liability. In addition, if the market is efficient and the required return rates are based on the risk of the investment compared to safe investment (such as state bounds)

[8] Daniel N. Shaviro, *The Rising Tax-Electivity of U.S. Corporate Residence* (NYU Law and Economics Working Papers, Working Paper No. 237, Oct.1, 2010) (hereinafter: **The Rising Tax Electivity**).

the capital of investors from high tax countries might be pushed out of the market (they will bear the same risk but have lower after tax return) and used, for example, for consumption, or be locked-in her domestic market.[9]

[9] The last argument of the "lock-in" phenomenon is the foundation for the popular yet highly criticized argument that relative high tax rates in the U.S. System make American corporation uncompetitive. Before continuing, one should note that the problem of this argument can start to reveal the unrealistic assumption of the model at least in three levels. **First**, it is not clear what is "American Corporation" and why should the United States support its competitiveness. For example, a fully owned corporation incorporated in the United States will be a U.S. corporation and subject to the tax in the United States in concern to its foreign investments even if 100% of the shareholders are not Americans. Similarly, American individuals can invest in a foreign corporation and avoid being subject to U.S. Taxes on their foreign source income. While the literature argues that some "home bios" exists, and therefore Americans are more likely to be invested in U.S. corporations[9] recent empirical data suggest that no clear evidence for the existence of home bios exists, at least in concern to multinational corporations, which are the main entities engaged in international commerce. In addition, even if some home bios exist, it is not clear if such home bios is not an outcome for preferential treatment of domestic investors by the tax law or other regulation. For example, the withholding requirement, which exists only in concern to foreign investors, creates an administrative burden on such investors. The risk of exposure of foreign investment to the FIRPTA rules (rules aimed to de-incentivize foreign investments in real property such as land and neutral resources in the United States) in case the corporation over invest in real property require higher monitoring of foreign investor. Another regulatory explanation for the home bios can be limitation of governmental and institutional investors such as pension funds in investing in foreign corporation, and limitation of foreigners to invest in domestic industries for reasons such as national security (see for example: Nadine Tushe, *U.S. Export Controls: Do They Undermine the Competitiveness of U.S. Companies in the Transatlantic Defense Market*, 41 **Pub. Cont. L.J.** 57 (2011-2012)). Simply put, the inability to find what is the real interest of American individuals in "American" corporations is due to the fallacy of the second assumption – residency of corporation is highly elective and does not reflect the residency of investors. **Second,** this argument assumes that the markets are fully sophisticated. As Stiglitz has shown, a fully sophisticated market cannot exist, because in such a market no one will have incentive to analyze new information. In real life it is clear that the markets are not fully sophisticated, and the profit derived by investors is not only based on the risk nominator, but includes additional rent, a sum of profit that is created due to the gap between the full competitive price and the partial competitive price. Taxing the rent will not decrease the competitiveness of the American corporations, but only real allocate more of the profit in the hands of the government instead of the investors. **Third**, even if the tax reduces the competitiveness of American individuals in the investment market, there is no reason to assume that the best way to address this problem is through reducing the entity level taxation of corporations. First, the competitiveness of Americans individuals should be measured based on the total tax burden on income from corporate activity, including the dividend or interest taxes. Second, once those taxes are taken into account, in it not clear why one would prefer to increase the competitiveness of American inventors through reducing the entity level taxes, thus subsidizing foreign investors in U.S. corporations. This issue of addressing the entity level tax while ignoring both other taxes to which the entity is

It should be mentioned that a full CEN system does not exists and all countries limit the ability to claim FTC to the foreign income. Thus, if the foreign country has higher tax rates then the domestic country, the domestic residence will not be reimbursed for the additional taxes paid.[10]

The alternative approach, the Capital Import Neutrality (CIN) aims to equalize the tax rates on all investment in the national market, foreign and domestic. This neutrality goal is usually identified with a territorial tax system with tax exemption for Foreign Source Income (FSI) of residences – both domestic and foreign investors will be subject to the domestic tax rates for any domestic income, and income of residences of the domestic country from foreign investment will be exempt from domestic taxation. While the CIN system solves the problem of distortion between domestic and foreign investment in the market, it creates a distortion between investments in high tax countries and low tax countries. Put differently, investors will prefer investment in low tax countries even if the pre-tax return on the investment in the high tax country is higher.

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subject (such as property tax) and taxed to which the investors are subject, such as dividend tax and interest tax is disturbingly shared in the literature concerning international corporate taxation. Once taken onto consideration, the outcome is that all the current tax systems are a mixture of residency and source based taxation (and, to some extent, destination based taxation). I will return to address this issue in when analyzing the "pure" territorial system, compared to the current one. For further reading on the limited power of the competitiveness argument see: Jane G. Gravelle, *Does the Concept of Competitiveness Have Meaning in Formulating Corporate Tax Policy*, 65 **Tax L. Rev.** 323 (2011-2012) (claiming that competitiveness is a ill term to analyze international tax policy) (hereinafter: **Gravelle**); Michael S. Knoll, *The Connection between Competitiveness and International Taxation*, 65 **Tax L. Rev.** 349 (2011-2012) (hereinafter: **Knoll**) (defining two concepts of competitiveness – competitiveness over capital import and competitiveness over foreign investment by domestic corporations. As explained, the second concept of competitiveness is inadequate, because of the high electivity of the corporate residency. The first concept, as will be explain in the following parts, is inadequate because it assumes that capital import is pure profit, and ignores its costs, costs that might limit the desire of countries to compete of capital import); Eric Toder, *International Competitiveness: Who Competes against Whom and for What*, 65 **Tax L. Rev.** 505 (2011-2012).

[10] **Shaviro** *Id* 3, p. 10-14, 103-105.

The CIN system creates, under the assumptions that were previously mentioned, a problem of race to the bottom. In a sophisticated market, a country will prefer to lower its tax rates in order to attract more capital (domestic and foreign), thus increasing the overall revenue. The issue of tax competition will be further explored in part VI of this paper.

From the cost of capital to productivity – the CON benchmark

The traditional CEN and CIN neutrality theories both aimed to increase worldwide efficiency by removing barriers from allocating capital to the investment with the higher pre-tax return. The Capital Ownership Neutrality (CON) is based on the argument that reducing the cost of capital is not the only efficient outcome of free flow of capital.

The argument favoring the CON policy, developed by Desai and Hines,[11] contain two main features – a factual argument concerning the relationship between capital inbound and outbound and a theoretical argument concerning productivity enhancing activities.

The factual argument is that unlike the CEN / CIN model, there is no reason to assume that there is absolute correlation between outbound and inbound capital flow. A dollar spent in India does not mean that the United State market shrinks and the Indian market grows. Another possible outcome is that the equivalent amount of Indian Rupees will be invested in the American market. This outcome, according to Desai and Hines, has empirical support. Examination of the capital markets indicates a two way flow of capital, a phenomenon that cannot be explained by either CIN or CEN. If the efficiency benchmark is reached due to the flow of capital from markets with low cost of capital (which have a lot of available capital and therefore lower return rates for investments) to markets with high cost of capital we should

[11] Mihir A. Desai & James R. Hines Jr., *Evaluating International Tax Reform*, 56 **NAT'L TAX J.** 487 (2003); James R. Hines Jr., *Reconsidering Taxation of Foreign Income*, 62 **TAX L. REV.** 269 (2009).

witness a one way capital flow. In the real world, were capital is more available in some countries than in others, one would assume that the direction of the flow will be from the high capitalized countries to low capitalized countries.[12]

Responding to Desai and Hines, Kane pointed out that the empirical evidence offered by Desai and Hines can, at most, show that there is no absolute correlation between outbound and inbound capital flow, but cannot show that there is no correlation between the two at all.[13] While Desai and Hines, and Kane, following their argument, focus on empirical data concerning the capital flow between high capitalized countries, examination of the capital flow between high capitalized countries and low capitalized countries give additional support to the argument that even if no absolute correlation exists between capital inbound and outbound, some correlation exists between the two, and capital flow more intensely from markets with low cost of capital to markets with high cost of capital.

Furthermore, Desai and Hines focus on the capital inbound and outbound flow by examining corporation. But without examining the underlining individual investors it is hard to learn from such an examination the real movement of capital between countries. For example, in American investors form a corporation in the United Kingdom and the firm fully reinvest in the United States it might be seen as capital import, but it has no substantial difference from direct investment by Americans in the United States.

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[12] In this context, the terms "developed" and "developing" countries are not useful even if the hidden normative evaluation hidden in then is put aside. "Developing" countries such as China might have a lot of available capital. "Developed" countries with high national debt might have low available. While it might be useful to use those terms for other purposes, for example is examining sustainable development, too often they lead to a non clear analytic analysis, gathering together countries with very different relevant characteristics into one group.

[13] Mitchell A. Kane, *Ownership Neutrality, Ownership Distortions, and International Tax Welfare Benchmarks*, 26 **VA. TAX REV.** 53 (2006); Mitchell A. Kane*, Considering "Reconsidering Taxation of Foreign Income"* 62 **TAX L. REV.** 299 (2009).

The theoretical argument of the CON literature is that the capital flow does not only reduce the cost of capital, but can also increase productivity. Five main productivity benefits can be derived from the free flow of capital.

The first benefit, on which Desai and Hines focus, is due to the ownership value imbedded in capital. They argue that if a foreign investor is a better manager of a domestic firm, or vise versa, tax policy which reduces the cross border ownership will decrease worldwide efficiency.

A second benefit is the benefit of synergy. While the ownership benefit increase only the productivity of the foreign controlled corporation, this benefit improves not only the productivity of the foreign investment (and increase the return) by also the productivity of the domestic investment. Using the example of Kane, if a domestic boat corporation buys a foreign corporation owning a known sport brand and therefore is able to increase the value of the boats sold by it and at the same time using the brand to sale the boats increase the value of the brand itself, the additional value to the owners is not due to the ownership itself but due to the synergy between domestic and foreign assets owned by them. It should be mentioned that this synergy added value does not necessarily require a mutual ownership, and could have been achieve through a rather simple contract.

A third benefit is the benefit of economics of scale and integration between corporate activities. This benefit, which is mostly identified with the global chain production, allows the investors the increase productivity by reducing transaction costs between different parts of the production chain. Two remarks should be made in concern to this benefit, which will be developed in the following parts of the paper. The first is that the global production chain is a significant mechanism the shift profit in order to reduce tax liability, and if shifting profits is the reason for the increase in value it is not a true increase in productivity. The second is that

the global chain can also have monopolistic power. As pointed out among other by Fox,[14] the current international competition law lacks the ability to deal with international monopolies and cartels. If this is the reason for the rise in the value of the investment it is not reflecting a real increase in productivity as well.

A forth benefit, which is connected to the previous two, is the benefit of structural innovation. Eliminating disincentives for cross country ownership allowed to create more creative ownership structure and more efficiently allocating risk and profits to different stakeholders. The common argument that structural innovation is efficient[15] will be more broadly explores in the following part of this chapter. For the time being one should note that at least some types of legal and structural innovation, such as innovation which decrease the cost of monitoring or increase liquidity can increase the efficiency.

An interesting sub category of innovation is reducing the cost of capital by spreading the systematic risk. Just as the limited liability of a corporation allows the domestic investor to spread risk between domestic markets and avoid the systemic risk of the industry, cross national ownership can reduce the national market risk, thus exposing the investor only to the international market risk.

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[14] Eleanor M. Fox, *Can We Solve the Antitrust Problems of Globalization by Extraterritoriality and Cooperation - Sufficiency and Legitimacy*, 48 **Antitrust Bull.** 355 (2003); Eleanor M. Fox, *International Antitrust and the Doha Dome*, 43 **Va. J. Int'l L.** 911 (2002-2003).

[15] See for the common assumption of innovation being an efficient mechanism and its critique: Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 **Harv. Bus. L. Rev.** 235 (2012). While Awrey focus of the failure of the innovation theory do to the contested assumptions of efficient market hypothesis, I wish to go in this paper one step farther and to argue that even in a fully efficient market (with no problems of enforcement, administrative cost and so forth) corporate structural innovation can be inefficient, if it is used as a mechanism to decrease liability of investors and allocate them to other stakeholders. Put differently, I argue that one of the fundamental flows in the innovation theory is that it analyze the relationship between innovation and liability from the perspective of the investor, while ignoring the social welfare cost of the innovation.

A fifth benefit is the benefit of spillovers or positive externalities. Unlike the previous benefits, the spillover benefit is not taken into account by the investor, and one would not relocate investments in order to create this additional value. However, both from worldwide and national perspective, spillovers are efficient.[16]

The CON is a significant contribution to the international tax scholarship, by acknowledging that international expected return on investment is not limited to the cost of capital alone, but is also influenced by the productivity, and that the productivity might depend on the structure of the investment. Furthermore, the CON model aliens the worldwide efficiency benchmark and the national efficiency benchmark. The National Ownership Neutrality (NON) assumes that the revenue from the domestic market is constant, because for every dollar exported a foreign dollar is imported. Therefore, if the revenue from the domestic market is constant, and the return of the foreign investment is higher, the total welfare of the state increases.

The outcome of the CON efficiency benchmark, even under the assumption of absolute correlation between inbound capital flow and outbound capital flow, is unclear. While Desai and Hines argue that the CON leads, as CIN, to the preference of exemption, thus creating

[16] In part IX of this paper I will broadly examine the influence of the spillovers argument on international tax policy. In the current literature some have argued that the spillover effect can explain why low capitalized countries encourage capital import (see: Yoram Margalioth, *Tax Competition, Foreign Direct Investments and Growth: Using the Tax System to Promote Developing Countries*, 23 **Va. Tax Rev.** 161 (2003-2004); Reuven Avi-Yonah & Yoram Margalioth, *Taxation in Developing Countries: Some Recent Support and Challenges to the Conventional View*, 27 **Va. Tax Rev.** 3 (2007-2008). In this regard, I will argue that a direct subsidy is a more efficient way to emcorage investments which create spillover. Even if one accepts the framework in which the only way to ecorage capital import is by tax reduction two notions should be taken into consideration. First, it the capital exporting country has a worldwide tax system, tax reduction by the capital importing country creates no incentive for investors, as the total tax burden on them stay constant (see: Kim Brooks, *Tax Sparing: A Needed Incentive for Foreign Investment in Low-Income Countries or an Unnecessary Revenue Sacrifice*, 34 **Queen's L.J.** 505 (2008-2009)). Second, no sufficient empirical data exits concerning the amount of spillovers created by capital import, data which is required for any policy which aim to maximize this margin.

indifference between domestic and foreign owners, this is not the necessary conclusion of the analysis offered by them.

First, the CON analysis is relevant only to FDI. Portfolio investment, such as passive equity and debt investment, has not contribution to productivity. Therefore, the CON analysis might support full exemption for FDI, but not for portfolio investment.

Second, if ownership swops increase the productivity, it is not clear why the 0% tax rate for foreign investment is the right one. The Desai and Hines argument for exemption of foreign income assumes that the only increase in productivity is due to the ownership by residence of the domestic country increasing the foreign source income. If the productivity increase due to the second or third type of benefit of ownership, from a worldwide perspective a subsidy for this type of transactions can be efficient. In other words, if the productivity increases due to the aggregated ownership, from a worldwide perspective such transactions should be incentivized. Therefore, in the NON model, negative tax rates for foreign source income can be the efficient outcome under the assumptions of Desai and Hines.[17]

Third, from a worldwide perspective it is not clear why should the capital residence country subsidize the investment by exempting it from tax. Another possibility which would lead to the same productivity level is that the source country (the foreign country in which the tax payer is engaged) will allow tax credit for the residence based tax. For example, if the tax rates of the country X (the residence country) on foreign source income is 30% and the tax rate of country Y (the source country) is 25%, the exemption model will require X to avoid taxing the foreign income, thus subjecting the income to total of 25% tax rate. If country X is a worldwide tax system with FTC, it will collect 5% tax. Country Y can then allow the corporation a credit for 5% of its income. While this outcome feels intuitively absurd, it is no

[17] **Shaviro** *Id* 3, p. 143-144

different than a situation where residency' countries will be require to offer a positive tax credit in case the foreign tax rate exceeds their own tax rate. In other words, both under the exemption and the credit system the corporation in the example will be subject to 25% tax rate. In both situations the ownership market will not be distorted. The only difference is that in the first situation the residence country receives no revenue, and the foreign country receives 25%, while in the second situation the residency country receives 5% revenue and the foreign country receive 20%. This outcome is not surprising, when one takes into consideration Shaviro's argument that indicate that exemption is just a non-implicit deduction system, which benefits investment in low tax rate courtiers and discourage investments in high tax rate countries.

The fact that the CON analysis cannot indicate who should subsidize the tax difference becomes even clearer when capital import is taken into consideration. As previously explained, the Desai and Hines model assume that the revenue from domestic activity is constant, because for every domestic dollar exported a foreign dollar is important. Therefore, if the domestic revenue is constant, but the return on the capital of residence increase due to the foreign investment, the total national welfare increases. This is not the outcome of Desai and Hines argument themselves. If the capital import is equal to the capital export, but the domestic assets are better owned by the foreign investor, from a national point of view (the NON point of view) as state should subsidize such foreign investment. For example, if the domestic business owned by a domestic residence is earning 100$ and taxed at a rate of 25%, the revenue will be 25$. If a foreign investor steps in and increase productivity by 20%, the new revenue will be 30$. From a NON perspective, the state should be willing to subsidize the foreign investor up to 5$ to encourage the foreign ownership.

At this point one might feel that the CON and NON leads to an absurd outcome – residence should be incentivized to increase the national welfare by investing in foreign markets, and foreigner should be incentivized to invest in the domestic markets. I will soon

turn to explain the blind spots of the CON and NON which leads to this absurd outcome. Before, one should not that this outrages outcome is not just a nice theoretical model. Many countries use tax, direct investment, indirect investments and monetary policy, political power and so on to encourage capital import (usually under the title of "job creation", for example by creating "free trade" zones or by offering preferential tax treatment), and at the same time use the same tools (for example, allowing tax deferral) to encourage capital export (usually to "encourage the local market" which will lead to the creation of more jobs). Of course that this policy leads to wired outcome that even if the best owner of a domestic asset is the residence, domestic investors will be discouraged from holding domestic assets. In order to retrieve the lost domestic capital and to support the local businesses, thus, surprisingly, creating more jobs, one should give benefits for domestic capital "locked-out" in foreign markets. This is what led to the fascinating phenomenon of huge multinational corporations, such as apple and GM, receiving and extreme tax cut ("tax holiday") in order to repatriate their foreign capital. When considering the fact that at least not all of the investors in those multinationals are American individuals, the meaning is not just loss of revenue and decrease in the effective progressivity of the system, but also pure loss of capital, which is allocated outside of the American system.

The Multiple Margins Problem

As pointed out by Shaviro, the CEN and CIN debate is ill structured, even if one adopts the worldwide efficiency as the normative framework.[18] While the formalistic legal structure assumes only two possibilities – a worldwide taxation with FTC and a territorial taxation with

[18] **Shaviro** *Id* 3, p 10.

full exemption, there is no reason to limit the debate to those two possibilities. The bottom line question is what should be the tax rates to which foreign investment are subject, and what is the treatment of the foreign taxes paid. For example, a system closer to CIN system can be achieved by reducing the tax rate on foreign source income or allowing bigger deduction then the foreign tax actually saved.

This last example, which might seem ridicules at first, can be used to illustrate another important failure in the common analysis of tax incentives for foreign investment. The exemption regime is not different in nature than reducing taxes on foreign income (and is actually reducing them to 0%). But the exemption system assumes two assumptions. First, there is no reason to subsidize beyond 100% of the domestic tax liability, and second, that an equal subsidy for all foreign investments is desirable.

In this regard, the ownership benefits are just another margin to be considered when deciding the tax rate on foreign source income and the rate of subsidy for foreign investment.

The outcome from Shaviro's critique challenges the effort of the previous literature to find a "one bullet" solution. In a world in which the tax systems are not harmonized, each of the tax policies creates some efficiencies and some dead weight loss. The CEN residency based taxation creates efficiency in regard to the decision to invest in the domestic market or abroad, but discourage the movement of capital to the market with the highest return on capital. In other words, the cost of capital in the low capitalized markets will be above the efficient level. Furthermore, the residency based tax system prevents the maximization of ownership benefits. The CIN on the other hand enable efficient competition concerning the cost of capital but will lead to an inefficient allocation of capital, and capital will be drown to low tax countries even if the pre-tax efficient investment is elsewhere. As the residency based taxation, the source based taxation might lead to loss of ownership benefits, unless an empirical unproven and unlikely assumption is adopted of full asset swop.

This multiple margins problem reveals the empirical challenge of the international tax discourse. Even if one wishes to maximize worldwide efficiency, unless full tax harmonization is achieved, the efficient outcome is one of second best world.

Yet, Shaviro's challenge to the neutrality theories accepts its fundamental assumption, under which the pre-tax market is assumed to be efficient. Therefore, a tax rate of 0% will lead to worldwide efficiency maximization, and the question left to be answered is the optimal tax policy in a second best world, in which countries to not reduce their tax rate to 0% or adopt identical tax rates.

The multiple margins analysis is also Shaviro's starting point to analyze to national perspective. The formula is similar, though the empirical data is different. The question is what tax rates on foreign income and what amount of subsidy of foreign tax paid will maximize the return for the domestic market, both to the capital owners and as part of the revenue.

As previously explained, I wish to deviate from this model, by undermining the basic assumption of "cost free" investments. Once one identify the costs created by investments, both directly by burdening the publicly supplies services and indirectly by creating externalities, there is no reason to expect any tax policy to be able, by itself, to maximize efficiency (and in other words, the efficiency of the tax policy is depended on the spending and regulation policy). Furthermore, once the costs of investment are taken into account the national framework change – it is not longer only "grab as much as you can" policy, but rather – "import the income, export the cost" policy.

Part III –The Third Margin – The Cost of Conducting Business

The discussion so far followed the traditional international tax literature, identifying two sets of margins. The first was the margin of the cost of capital. The second was the margin

of ownership benefits. We have seen that from a worldwide perspective, both a full source based taxation and full residency based taxation creates distortions in the investment market, preventing the most efficient allocation of capital and ownership. Source based taxation will derive investment to low tax countries, even if the pre-tax return in the high tax country is higher (unless one accept the unfounded empirical claim under which the size of the national markets do not change due to capital movement, because for every exported dollar a dollar is imported). The residency based taxation, even if applied in a way that will prevent any electivity, will distort the ownership benefits, and give a competitive advantage to investors from low tax countries. In the real world, in which residency is highly elective, the outcome is movement of residencies to low tax countries. Therefore, even if one cares only for worldwide efficiency, a desirable tax policy should be a tradeoff of the two margins.

Yet, all the neutrality theories share a common blind spot. They assume that the tax is pure redistribution mechanism. In other world, all three neutrality theories are based on the assumption that the market would have been efficient if no tax was laid at all.[19] From a national perspective the outcome is that countries will always prefer addition foreign investment as long as they can capture any portion of the profit. This fundamental assumption of the neutrality theories is unexplained. It is well agreed that domestic taxes function not only as a redistribution mechanism, but also as a mechanism to provide for public goods. As we will see in following part VI the international tax literature concerning tax competition has already identified this function of the tax as a major part of the tax debate. In addition, a third well

[19] See, for example Toby Rogers, *Using Prisoner's Dilemma to Evaluate Corporate Tax Reform Proposals* (SSRN-id2303950, June 2013) "Many classical economists are unconcerned about the decline in the corporate income tax rate because they see the tax as inefficient and would like to see it abolished altogether" (p. 2).

known function of taxation is as a regulatory instrument – the Pigovian tax force the entity to internalize the externalities caused due to its activity.[20]

Once public goods and externalities are taken into account the entire picture change. There is no reason to assume, even in a perfect market model, that any of the neutrality benchmarks is enough in order to create an efficient global investment market. The efficient global investment market requires, just as efficient domestic investment market, consideration of the efficient tax rate. An investor might prefer, for example, to invest in a country with high tax rates which allocate more of its budget to publicly provided goods and services. Similarly, an investor might prefer a high tax country with lower rate of liability, thus allocating greater portion of the risk to the domestic population, on a low tax country. Put differently, the traditional neutrality approach focus only on one part of the investor utility function – the tax payment for the country of investment. Yet, the investor utility function is influenced also by the return from the country through direct spending (as publicly provided goods and services) as well as through indirect spending, such as reducing the risk of the cost of regulation (for example environmental law requirements).

One should note two aspects of this new framework.

First, one can easily note that the term "neutrality" is ill fitted for the purpose of maximizing worldwide efficiency. There is no reason to assume that different countries will have the same efficient benchmark for liability and public goods. I will return to this point later on. At this point it is enough to understand intuitively that different public goods may have different costs to different countries (for example, access to the sea is much cheaper to a country

[20] For example, Wu explains the role of tax and regulation as follows: "Taxation is a form of regulation, and regulation is a form of taxation. Regulation, broadly defined as public law, is a form of taxation in that it imposes costs on certain parties and redistributes benefits to other parties, I just as taxation and government spending do together" (**Wu**, *id* 21, p 171).

with long shoreline that a country with short and highly populated shoreline). The same is true concerning externalities. For example, a country with wide open spaces might have less cost for noisy factory than a country that is highly populated. Therefore, from worldwide efficiency perspective, one should not aim for neutrality, but rather for a policy which will lead all countries to an efficient spending policy on publicly provided services and efficient level of liability, taking into account the unique characteristics of each country. Furthermore, a model with no tax and no spending will not lead to an inefficient outcome. As with all public goods, without a central supply of the service the outcome will be sub-optimal performance of the market.

Second, tax neutrality is meaningless as a normative goal as long as the two other state depended variants are not set to an efficient level.[21] Put in the bluntest form, a country with high tax rates but direct subsidy for foreign investors might be more attractive than a country with low tax rates. This is of course true even if the subsidy is not in the form of cash but in the form of better support for businesses. Therefore, even if "neutrality" is a normative goal, the neutrality should be of the total incentive for investment in a country and not only in consideration of tax. This notion will be widely addressed in the following part of the paper, concerning international investment competition.

[21] A interesting work in this regard was done by Wu, who argued that the tax policy and the non-tax regulation substitute leads to the conclusion that tax neutrality has no meaning once the regulation system is not consistent (for example, once one has a worldwide tax system but a territorial regulation system). Yet, Wu does not take into account the costs of externalities and of publicly provided services and focus only on the direct costs of the regulation to the country. On this foundation Wu comes to the conclusion the regulation can disincentives capital export even if the tax system is neutral. This analysis, as though important to the current one, still assumes as a baseline that a full neutral market would have been efficient. In the following parts I will show first that neutrality is not a desirable normative goal from either a worldwide perspective or domestic perspective, and second, that the basic assumption that the non-regulated market will be efficient is false.

Alexander Wu, U.S. *International Taxation in Comparison with Other Regulatory Regimes*, 33 **Va. Tax Rev.** 169 (2013)

Understanding the normative question from a worldwide perspective as a question of "efficient investment market" instead of the limited question of efficient tax policy detached from other economic consideration, allows us to redefine the normative goal. The desirable policy from a worldwide perspective is the one maximizing the total return on capital, which is depended on the level of public goods and externalities, minus the cost of the public goods and externalities.[22] The tax rate, in this ideal world, should be set only to afford the efficient level of public goods or to serve, together with regulation, as a Pigovian tax, reducing the costs of externalities.

This framework will guide the rest of the paper. In the following part I will examine what types of competition countries can engage in concerning international investment, in a model with no cooperation. Following that, in parts VI and VII I will show that if no limitation on investment exists, the international competition, in regard to public goods, leads to a sub-optimal outcome. Furthermore, I will examine the question what is the desirable tool to address this problem. Parts VIII and IX will examine the interaction of externalities with the international market and lead to the desirable structure of international tax policy as a pure source based system.

Part IV - Midway Summery

The analysis so far went through two milestones. First, I have discussed the efficiency benefits that where identifying in the current international tax policy which focus on the maximization of the return on capital from two perspectives. The first perspective was the

[22] One should note that there might be more margins then tax, benefits and regulation. Yet, those are the main three fields that the international commerce filed focus on. A wide set of margins that are traditionally not addressed in standard economic analysis is military threats and symbolic power. Those margins might, to some extent, explain why governments adopt policies which are inefficient from an economic stand point. Though important, in this paper I will focus on economic power under the assumption that other non-economic consideration are not in force.

perspective of the cost of capital. I introduced the two main policies discussed in the literature concerning the maximization of the return on capital based on its efficient allocation – the CEN and the CIN. The second perspective was concerned with production maximization. Under the CON analysis, efficient international market should allocate assets to the owner which will maximize their production. As we sew, following Shaviro's critique, even if one aims to maximize worldwide efficiency, the one bullet approach cannot supply an adequate framework for a policy. As an alternative, Shaviro offers to analyze the policy as a question of multiple margins, or as a question of tradeoffs. One should not aim to maximize only one margin, but rather should aim to maximize the efficiency as a whole, taking into consideration all three margins.

All three models, as well as the multiple margin analysis, are based on the realistic assumption that the tax rates will not be harmonized. In a word with harmonized tax rates, under the neutrality theories framework, the market will be an efficient market, independent on the tax rate itself (and the most efficient market will be one with 0% tax rate).

Second, I have challenged this fundamental assumption. I argued that the efficient market to which all neutrality theories aim for is truly efficient only under two assumptions. First, it assumes that the return on capital is not depended on the public spending or that countries provide the efficient level of public spending while funding it for other resources. Second, it assumes no social costs of business in the form of externalities. I have shown that two conclusions can be made once those two aspects are taken into account. First, tax neutrality by itself will not lead to efficient worldwide market if the regulation and spending policies are not efficiently designed. In addition, a "neutral" policy, or a harmonized policy, will not be efficient at all, as long as different countries can provide public goods and services for different costs, and will bear different costs due to externalities.

As an alternative, I argued that even if one aims to maximize worldwide efficiency, she should not aim for tax neutrality, but rater for efficient investment policy. Such policy will not necessarily require tax harmonization, spending harmonization or regulation harmonization. Yet, I have not discussed what should be, in the light of this new framework, the efficient investment policy, either from a worldwide perspective or a domestic one. To this challenge I will turn now. The following part of the paper will introduce the building blocks of the analysis that will follow, and will examine each of the three elements of the investment policy – the tax policy, the spending policy and the regulation policy. We will see that in regard to all three a double dynamic occurs – different countries can set a different policy and can compete on investments, and investors can "game" the system by electing between tax, regulation and spending regimes. In parts VI and VII I will show that even in a world with no gamming and externalities, un-harmonized investment policies will lead to sub-optimal performance of the market due to underfunding of public goods. Afterwards, in part VIII and IX I will add the externalities aspect to the mixture. I will argue that the competitive international market leads to an outcome under which the tax rates are equal to the externalities caused by the foreign investment (and therefore, if the externalities are prevented to big extent by regulation the corporate tax should be lower than in the case where the regulation does not effectively limit externalities). Yet, I will show that the current international tax policy, in any of its variations, inherently fails to lead investors to internalize a significant portion of their externalities. From a worldwide perspective I will argue that both residency based taxation and what we usually address as "source" based taxation leads to an inefficient outcome. I will argue that the efficient tax policy, from a worldwide perspective, is a policy of "pure source" taxation – both on the entity and any distributed profit from it, as the policy of Brazil. I will discuss, in this context, the definition of source and argue that the source of the income should be allocated to the place in which the externalities occur. In addition, I will show that from a national perspective high capitalized countries have no incentive to shift toward a pure source based international tax

system. As for the low capitalized countries I will argue that if the tax rate is set as a true Pigovian taxation (and is equal to the cost of externalities) they have incentive to unilaterally change to pure source based taxation. The final parts of the paper will also address the issue of tax, regulation and subsidy gamming by investors. I will show that the current system of residency or partial source taxation, combined with a definition of source that is detached from the place of externalities leads to a poor and inefficient policy. Yet, I will argue that the current international project to fight gamming, such as BEBS, is poorly designed, as they maintain the inefficient structure of the international taxation and the inefficient definition of source. While those projects serve the interests of the high capitalized countries, they do not lead in any way to a more efficient investment market. As an alternative, based on the pure source tax analysis, I will argue that once a pure source tax policy is adopted the problem of tax and regulation planning decrease significantly. The only challenge which remains is in the case where several countries bear the costs of externalities.

Part V – The Scope of Investment Competition

The majority of literature concerning international commercial competition focuses on tax competition.[23] Additional type of competition identified in the literature is regulation competition.[24] While the literature concerning the two is extremely different, a wide similarity exists between them. In this part of the paper I will describe the structure of the two types of competition, and we will see that both are two folded – competition on real production, and

[23] In this regard Wu mentions that "Taxation and regulation are in some sense substitutes, yet regulation is generally given minimal or no consideration in the international tax policy literature" (Wu, Id 21, p. 207).

[24] Cristie Ford, *Financial Innovation and Flexible Regulation: Destabilizing the Regulatory State*, 18 **N.C. Banking Inst.** 29 (2013-2014)

competition concerning entitlement to profits or reducing costs. In the following parts we will explore the efficiency outcome of the investment competition.

Tax competition

The basic assumption in the tax competition literature is that each country will desire to increase the overall portion of the investment surplus captured by it (either by the tax authorities or by domestic capital owners), even if the meaning is reducing the tax rates and increasing the base. The major tensions in the literature concerns the components of this formula – how do countries increase their base and what is the surplus of the investment.

As to the first question, how do countries increase their base, two main types of tax competition exist – increasing the base by attracting real production and increasing the base by attracting entitlement to profits, without changing the production structure, by structural entity innovation or structural tax and accounting innovation.[25]

Tax incentives for production shifting

The "classic" base shifting is relocating real production to low tax countries, even if the efficient production would have accrued in the high tax country. This type of tax based distortion of the market is deeply embedded in the Capital Import Neutrality (CIN) benchmark – the underlining assumption of the CIN discourse is that under a CIN model investors will chose between two similar investments in high tax country and in a low tax country. This assumption is generally true in concern to some industries, such as textile, where there is no

[25] The three tax avoidance mechanisms described here generally follow the separation offered by Avi-Yonah between "production tax haven", "traditional tax havens" and "headquarters tax havens". See Reuven S. Avi-Yonah, *Globalization, Tax Competition, and the Fiscal Crisis of the Welfare State*, 113 **Harv. L. Rev.** 1573 (2000) (hereinafter: **Avi-yonah (2000)**).

unique advantage to one country over other countries. Yet, many other industries are dependent of local advantages. Such advantages can be natural competitive advantages, such as natural recourses, better weather to grow crops and so on, or on social competitive advantage, such as better infrastructure, highly educated population, and lower level of corruption.

To illustrate this type of tax competition, imagine a corporation producing cars. The cost of producing an engine is 100 and can be produced only in country A. The cost of producing the rest of the car is 100 no matter where produced. The car is sold for 1,000. Corporation X which produces engines can buy the rest of the car form corporation Y which is also resident of country A. The pre-tax surplus will be 800 and the after tax profit will be 400, which will be spited between the X and Y. if the surplus is split 50-50, both X and Y will profit 200 after tax return. But corporation X can also outsource the production of the rest of the car to corporation Z in country B, which have 10% tax rate. While the pre-tax surplus remains 800, the after tax surplus depends on the division between the contracting parties. While for X every dollar of pre-tax income is worth 50C after tax, for B every dollar is worth 90C. If there is no negotiating power difference between Y and Z, Z will be willing to provide the same service for a much lower price. For example, if the surplus is still divided 50-50, X will earn 200 but Z will earn 360. If Z will be willing to a 60-40 division X will increase its profits, and earn total of 240 after tax, and Z will earn 288.

Furthermore, the additional surplus will lead X to engage in business with Z even if the reduce the total value of the car. For example, if a car built with Z car parts is sold only for 900 X will still prefer to engage in business with Z and not with Y.

One should note at this point that while in the following tactic that will be discussed of price transfer the transaction has to be made by the same entity holding both assets, this type of tax avoidance can occur between unrelated parties.

The fact the different tax rates creates incentives to relocate production does not necessarily mean that the relocation in inefficient, either from a worldwide perspective or a national perspective. The efficiency or inefficiency of the tax rates will be discussed in the following part of the paper. Yet, if the tax rate is not aimed to reflect the cost of the investment, but rather to achieve other goals, such as redistribution, the outcome might be that production will relocate to countries will less efficient pre-tax return.

Tax planning through transaction innovation

While a real movement of production has high productivity cost for investors, one can shift the base of the investment through reallocating the legal entitlement. A good example for such tactic is the title passage rule. Under the U.S. tax system, a sale done by a foreign corporation to domestic corporation will be seen as done in the United States (and therefore subject to source taxation) if the legal title was transferred in the United States. Clearly, there is no substantive difference between passing the title a mile outside of the U.S. territorial water and passing it in the U.S. territorial water. The fact that the same substantial transaction can lead to different tax outcomes is a pure tax arbitrage. The tax payer can maintain the same level of productivity while reducing the tax liability. The ability to shift the source of the income without substantially changing the structure of the investment becomes even higher in the modern world where transactions take place through the internet.[26] Similarly, other types of structural innovation concerning the sourcing of taxes lead to tax reduction as well. For example, the formalistic requirement for Permanent Establishment in a country which is built

[26] See Rifat Azam, *Global Taxation of Cross Border E-Commerce Income*, 31 **Va. Tax. Rev.** 639 (2012); Rifat Azam, *The Political Feasibility of a Global E-Commerce Tax*, 43 **U. Mem. L. Rev.** 711 (2012-2013)

in to most tax treaties can be played in order to shift the source of the income, thus reducing the tax liability.

The mirror figure of tax and structural planning concerning the source of the income is planning concerning the residency of the tax payer. Shifting the place of residency, especially of artificial entities, such as corporations, is a main mechanism to reduce tax liability both due to the ability to avoid residency based taxation (such as in the case of the US) and due to the ability to engage in treaty shopping. Different tax rates for similar substantive activity can also be created to do the structuring the investment as a foreign branch or foreign subsidy, using different combinations of transparent entities and non-transparent entities or using derivatives to achieve a desirable substantial outcome without triggering a tax event. The most extreme structural innovation in order to reduce tax liability is the abuse of tax havens. Tax planning structures, such as the double Irish with a Dutch sandwich are based on creating a multilayer investment structure, combining different types of entities, in order to allocate profits to countries with low or none tax liabilities on source and on residency. Indeed, some have identified the residency electivity as one of the major problems of residency based corporate taxation.[27]

Several notions should be made in concern to this type of tax avoidance.

First, unlike reducing tax through moving real production or assets, reducing tax liability through restructuring the business does not influence the productivity itself. Yet, different investment structures can create costs by reducing the ability of investors to efficiently allocate risks and benefits between the stakeholders. Furthermore, any tax planning has some

[27] **The Rising Tax Electivity**, *supra* 8.

administrative costs for the tax payer, and requires that tax authority to enforcement costs, both inefficient from the public's perspective.

Second, similar to shifting the assets themselves, the reduction in the tax liability caused by restructuring investment does not require common ownership of all the participating parties and entities.

One should note that some argue that tax planning and tax havens might be efficient from a national perspective, if a subsidy for capital export or capital import is efficient but do to political constrains countries cannot directly reduce the tax rate on multinational investments. In such situation, allowing tax avoidance is a tool of the government to effectively reduce the tax rate on multinational capital.[28] I will explain in part IX of the paper why, even if a subsidy for capital import or capital export is desirable using the corporate tax in order to provide it is not efficient. Yet, it should be noted as this point that even under the assumptions of Hong and Smart, which focus only on the entity level taxation, the tax planning creates mixed results, as not all investments are as easily relocated. Furthermore, Hong and Smart do not include in their model the costs of conducting business, and assume that any capital import is efficient and increase the domestic welfare. I will attend to this problem broadly when examining the second cross border externality problem in part VIII of the paper.

Tax planning in multinational corporations

[28] Q. Hong and M. Smart, *in Praise of Tax Havens: International Tax Planning and Foreign Direct Investment*, 54 **European Economic Review**, 82 (2010); D. Dharmapala, *What Problems and Opportunities Are Created by Tax Havens*? 24 **Oxford Review of Economic Policy**,661 (2009).

The strongest version of tax reduction is the transfer pricing mechanism, which arises when the same owner own both the entity in the high tax country and the entity in the low tax country. As pointed out by Kane[29] the transfer pricing debate usually mix two types of unconnected tax reduction mechanisms. The first is reducing tax liability through allocating the surplus of the transaction to the low tax rate country. This surplus is identifies by Kane as a synergy profit, which is the additional value created due to the ability of the mutual ownership to reduce the costs more efficiently then contractual agreement.[30] The ability to reduce tax liability by shifting the surplus to the low tax country is no different than the ability of two separates parties to do so, as was discussed previously. The additional surplus created by the synergy increases the amount of profit which can be shifted, but does not change the substantial analysis. The second type of tax reduction mechanisms is by artificially increasing the costs in the high tax rate country and allocating the profits to the low tax rate country. If the sub corporation which is subject to low tax rates sell assets, products or services to the parent corporation which is subject to high tax rates for price which exceed the real value of the transaction, the outcome will be shifting income to the low tax rate country. The problem becomes more severe when intangibles are used for transfer pricing due to two reasons. First, while structuring such a transaction in concern to tangibles requires physical movement of production and assets, thus influencing the productivity of the corporation, the movement of intangible has no influence on the productivity of the corporation. Second, it is much harder to

[29] Mitchell A. Kane, *Transfer Pricing, Integration and Novel Intangibles: A Consensus Approach to the Arm's Length Standard* (forcoming).

[30] This theory, as the ownership theory previously discussed, is base on the incomplete contract argument, mainly claiming that contractual agreement cannot efficiently alien the interests of the contracting parties. While this theory became popular as a legal normative justification for the corporate form, it has no significant empirical support, and there is significant evidence that contractual stakeholders are many time better monitoring agents. Furthermore, even if some reduction of monitoring cost is due to the mutual ownership theory, it seems almost impossible to assess the efficiency value of the mutual ownership and differentiate it from other benefits investors receive from such ownership, such as tax reduction.

identify the "real" market value of transactions in intangibles due to the lack of cooperative markets. Two other problems, which are not attended in the literature, create even a broader difficulty of indentifying and regulating transfer pricing in concern to intangibles. Unlike the bundle of right owner has in concern real assets, such as land, it is very simple to disaggregate and allocate rights in intangibles between different parties in different parts of the world. In addition, the practice of transfer pricing in concern to intangibles is so commonly used, it is hard to establish a length arms price based on the market for intangibles. It should be noted though that other transactions can have similar characteristics. For example, transactions concerning management services might also be easily structured in different ways and hard to value.

Several aspect of the transfer pricing mechanism should be taken into consideration.

First, the tax system does not influence the pre-tax decisions of the corporation. Thus, if the efficient benchmark is tax neutrality, allowing allocating profits for tax purposes without requiring real change in the investment structure or the location of the production is more efficient from a worldwide perspective. The outcome of transfer pricing in such a model is only distributional – it reduces the worldwide revenue. Only if the neutral tax system creates over-productivity which can be reduced through the tax system the transfer pricing will create efficiency problem.

Second, it is true to any mechanism the allocate profit to a mutually owned entity in a low tax country. A good example for such allocation of profits can be seen through the consumption tax system. While the corporate income tax focus on the profit of the corporation as the base of taxation, most countries (except the United States) generate additional revenue through consumption taxation, mainly Value Added Tax (VAT). The consumption tax focuses on the destination of the sale. Just like income tax, unconnected corporation can reduce the cost of the tax by allocating the real sale to a low tax country or structuring the transaction so the

sale will be perceived as occurred in the low tax country (for example by using the title passage rule). In both cases while the end individual consumer cannot relocate (which is the basic argument of supporters of moving to consumption taxes in domestic markets[31]), the corporation involved in transactions between corporations can shift to low tax rate countries just as in the case of the corporate income tax. The additional transfer pricing problem is similar as well. The investor will generate the profit in the low value added rate country, and will further sale the asset to the high VAT country for a price equal to the cost. While the value added in the two step transaction is identical to the value added if the sale was done directly, the investor will reduce her tax liability.

Generally put the tax avoidance problem in international commerce nexus between distortions of real level of efficient productivity and reducing distribution. The less dependence there is between a real or legal characteristic of the investment and the tax, the smaller the distortion in the market will be (even though the level of correlation between the characteristic and the distortion might change), but the problem of tax avoidance (and of race to the bottom, which will be discussed in the next part) and therefore of lower distribution will rise. As we will see, once the negative social cost of the corporate structure is taken into account, the problem of tax avoidance, even if only through transfer pricing, becomes not only a problem of distribution but also a problem of efficiency.

Regulation competition

As with tax competition, counties can attract investment by modifying their regulation and reducing the cost of the investments, either by reducing the regulatory standards (such as minimal wage and environmental regulation) or by reducing the cost of violation of regulation

[31] See Daniel Shaviro, Beyond the Pro-Consumption Tax Consensus, 60 **Stanford L. Rev.** 745, 745-47 (2007).

and the liability of the foreign investors. The main difference between tax competition and regulation competitions is in regard to the allocation of the costs and profits in the country. Tax competition directly influence the revenue collected from the foreign investor, and both the cost (loss of revenue due to low tax rates) and the benefit (the increased base) are directly influencing the national budget. Regulation competition on the other hand allocate the costs to the society influenced by the regulation (for example the employees and tort creditors) while increase the general revenue. If the country is fully taking into account the utility of all those influenced by the regulation, the result will not be any different than in the case of tax competition. Yet, in real world dynamics, where many times policy makers are less concerned with the welfare of underprivileged parts of the population, the democratic deficit might lead to a more intense regulation competition than tax competition. Two types of regulation competition should be taken into account – direct regulation competition, done by reducing the cost of regulation, and indirect regulation competition, done by allowing investors to avoid the domestic regulation.

Direct regulation competition

Regulation incentives for production are important part of the international investment competitions. Countries can attract investors either by reducing the required standard, or by reducing the cost of violation of the regulation. In the following part I will examine the limits of regulation competition. Yet, one should note that countries can reduce the cost of regulation in two ways.

First, they can reduce the cost of regulation by creating a more efficient regulatory system. This approach toward regulation was identified in the literature, though usually not a part of the discussion concerning regulation competition. Reducing bureaucracy costs, creating

legal certainty and so forth is the most obvious mechanism to attract investors. A second mechanism to attract investors is eliminating trade barriers. This mechanism is more complicated. Trade barriers, from a national perspective, can be efficient. When a domestic capital owner invest in the domestic market all the surplus is captured by the domestic capital owner. If a foreign capital owner is engaged in the same investment, only the source tax portion of the profit is captured by the domestic market. Eliminating trade barriers is efficient only in one of two cases. If the marginal investment in the domestic market would not have occurred without the foreign capital, and the whole surplus was lost, the domestic country can profit from eliminating the trade barriers. Additionally, if the domestic capital owner has equivalent investment abroad, the total domestic welfare might increase in dependence to the available investments in foreign markets. In other words, the efficiency of eliminating trade barriers in depended, at least to some extent, on the cooperation of foreign countries. In this regard, trade barriers are not just direct limitation of foreign capital. Different legal systems creates trade barrier as well. Indeed, much of the effort to eliminate trade barriers focus of regulation harmonization.

Indirect regulation competition and regulation planning

While the direct regulation competition is highly depended on the national policy makers, additional sphere of regulation competition concerns, as with tax competition, the ability of investors the avoid liability and cost by structural innovation. Corporations can (and do) reduce their exposure to domestic regulation in many ways. The major mechanism for regulation planning is using artificial entities in order to move between jurisdictions. The American corporate market is a good example. Corporation can incorporate in any states, thus choosing the state with the most convenient corporate law for investors. In the international markets, one usually notices corporations requiring from contractual creditors to agree to a

preferable jurisdiction or international arbitration forum. Furthermore, while it might be more complicated to structure the investment in order to avoid some types of regulation, such as environmental law, tort law, customer protection law, anti-discrimination law and other legal rules that are usually subject to the jurisdiction of the place of production, it is not impossible to do so. Most countries have complicated rules concerning their ability to address a case that occurred in multiple jurisdictions, such as deferring to the jurisdiction with the highest relationship to the issue at question. No matter how the rules concerning multiple jurisdiction of any country are structured, the transaction can be structured in order to allocate the case to the jurisdiction with the preferable treatment from the investor's perspective. Furthermore, even if one country decides not to defer at all to the jurisdiction of other countries, most countries refuse to fully cooperate. In the private law field countries are not necessarily willing to enforce foreign decisions and injunctions, as well as to share information. In the criminal law field, many countries, such as France, do not allow extradition of their own residences.

As in the case of tax competition, the ability to elect between jurisdictions is not necessarily inefficient. Yet, one should note that just as with tax, the ability of investors to reduce regulatory cost is two folded – she can do so by moving real production, even if the pre-regulatory decision is distorted, and she can do it by legal innovation, without distorting the decision concerning the place of production.

<u>Publicly provided goods and services</u>

Direct subsidy

1. *Through tax (tax expenditures, FTC, exemption)*

Our discussion concerning tax incentive to attract foreign capital has already implied that no substantial different between tax incentive and subsidy exists. In this regard, while the

classic treatment of deductions and credits in the tax discourse is as mechanisms to identify the true income of a tax payer, it is not the case concerning international tax discourse. For example, in the domestic tax discourse deductions for office supplies are just an adjustment of the gross income in order to tax only the real net-income. While deductions are usually case by case defined (though some deductions, like depreciation and the "standard deduction", are requiring proving the existence of an asset but are formula based[32]) credits are a less accurate, yet administratively cheaper, mechanism aimed to achieve the same goal. Child care credit for example is much due to the complexity in real life to measure child care expenses.[33] Though both system can be used, and are used, in order to achieve other public goal, and as an alternative to spending (usually addressed as "tax expenditures"), they are usually inefficient, both because they require a positive tax liability (unless positive tax credit is granted) and because unlike direct redistribution, they distort the individual behavior.[34] The important thing is that this portion of the deduction or the credit has nothing to do with the measurement of income. For example, if the child care credit is deliberately over valued in order to incentivize woman to join the workforce, the same affect can be done by taxing correctly income after

[32] See, for the classic approach to deductions and the use of formula to simplify the tax system and reduce administrative cost John R. II Brooks, *Doing Too Much: The Standard Deduction and the Conflict between Progressivity and Simplification*, 2 **Colum. J. Tax L.** 203 (2011).

[33] Indeed, in one of the most exciting Israeli tax cases the Supreme Court allowed child care deductions, which led the legislator the legislate a credit in order to avoid the high administrative costs of child care deductions (see Tsilly Dagan, *Ordinary People, Necessary Choices: A Comparative Study of Childcare Expenses*, 11 **Theoretical Inq. L.** 589 (2010). Similar discussion can be found in concern to other mix private/business expenses such as commuting (see Tsilly Dagan, *Commuting*, 26 **Va. Tax Rev.** 185 (2006-2007)).

[34] Many times the tax expenditure mechanism is used to avoid legal limitations on spending, even though the spending through the tax expenditures creates inefficiencies compared with direct spending. See Steven A. Dean, *The Tax Expenditure Budget Is a Zombie Accountant*, 46 **U.C.D. L. Rev.** 265 (2012-2013).

deducting only the real cost of the child care and then granting working woman with children a subsidy.[35]

Maybe the most famous tax expenditure (of more bluntly - hidden subsidy) is the deduction of state taxes for federal income purpose in the United States. The state tax deduction has two main affects – it create a hidden subsidy of states by the federal government (because for every dollar of state tax paid the federal government receives a portion of a dollar less),[36] and it averages to some extent the different tax rates of the states (because for every dollar of state tax the tax payer pays she reduces her federal tax liability in a portion of a dollar).[37] Of course, if the federal government decided to allow state tax credit is will fully subsidize the

[35] See in this regard David Gamage & Darien Shanske, *The Trouble with Tax Increase Limitations*, 6 **Alb. Gov't L. Rev.** 50 (2013) (Hereinafter: **Gamage & Shanske**). In their paper they broadly examine the problem of using the tax exemption mechanism in order to disguise public spending, therefore overriding limitation on state government's spending and budget. For discussion of the same phenomenon in the national level see Daniel N. Shaviro, **Do Deficits Matter?** (1997).

[36] Louis Kaplow, *Fiscal Federalism and the Deductibility of State and Local Taxes Under the Federal Income Tax*, 82 **Va. L. Rev.** 413 (1996). Kaplow analyze the desirability of the tax deduction not only based on the mesurment of the "real" income, but also based on the underlining goals of the income tax as redistribution (see p. 471-490).

[37] As a matter of positive law, a different mechanism to prevent states from abusing the state income tax deduction was the non discriminatory requirement under the commerce clause, though the limits on discriminatory tax treatment by state, giving preferential treatment to their own citizens, were reduced in the case of **Department of Revenue v. Davis**, 553 U.S. 328, 128 S. Ct. 1801 (2008). See for elaborated discussion of the Supreme Court opinion and the consequences concerning tax and subsidy discrimination: Edward A.Zelinsky, *The False Modesty of Department of Revenue v. Davis: Disrupting the Dormant Commerce Clause through the Traditional Public Function Doctrine*, 29 **Va. Tax Rev.** 408 (2009-2010) ("Davis also reflects the unforgiving nature of the dormant Commerce Clause case law proscribing discriminatory taxes. The Supreme Court has generally treated states' discriminatory taxes as per se unconstitutional. In Davis, the Court deployed the traditional public function category to avoid this unforgiving case law and thereby protect Kentucky's income tax statute from dormant Commerce Clause scrutiny it would otherwise fail" p. 410); See also for general revue of the limitation of state tax and spending and the inefficient design of the regulation Gamage & Shanske, *Supra* 35, and concerning the use of the federal income tax to stabilize states, among other through deductions see Darien Shanske, *How Less Can Be More: Using the Federal Income Tax to Stabilize State and Local Finance*, 31 **Va. Tax Rev.** 413 (2011-2012).

state tax (for every dollar paid to the state the tax payer would pay a dollar less to the federal tax authorities) and fully average the tax systems. Such a system will be fully equivalent to a residency based tax system with FTC. In the federal authorities decided to revoke the federal tax all together it will be the same as the territorial based tax system with full exemption. The important thing to notice, for our purpose, is that the relationship between the state and the federal tax systems, though deduction, exemption or credits, has nothing to do with the measurement of the income. The only two relevant questions are, given a constant income, what will be the total tax burden to which it will be subject, and how the revenue will be distributed between the states and the federal treasuries.

This is true also in regard to international taxation. The FTC is just a way to indirectly split the revenue from the income between two countries. It is not different then a scenario in which the residency country would tax the income with no tax credit but would pay the source country directly a payment equal to the income sourced to it multiplied by the source country's tax rate, and the source country in return will impose not source taxation. An exemption system is the same as taxing the resident tax payer the full tax and then giving it a grant equal to the income multiplied by the tax rate of the source country. Simply put, in both cases the tax treatment of the foreign income is a subsidy. In one, the FTC, the country is willing to subsidize the domestic capital owner up to the foreign tax paid by her, and in the other the country is willing to further subsidize the domestic capital owner up to full revenue that would have been collected if the investment was done back home.

The understanding that FTC and foreign income exemptions have nothing to do with the classic deduction or exemption system and that those are just mechanisms a tax jurisdiction can incentivize investments in another tax jurisdiction is an important one. It allows framing the debate around the real questions. The first is a question of substance – is it, from a national perspective, desirable to subsidize foreign investment by residences (capital export) and to

what extent and is it desirable to subsidize foreign investor in the domestic market (capital import). The second is a question of structure – if a subsidy is desirable, what is the efficient way to structure this subsidy. In a different paper I have argued that there is no reason, from a national standpoint, to subsidize capital export and import through the corporate tax system, and that countries can achieve the same benefits through more direct subsidies to the capital owners (instead of subsidizing the entity).[38] This is not the goal of the current paper. Yet, after examination of the race to the bottom concerning public goods, I will turn to focus on the race to the bottom concerning externalities, and take into account the role of subsidies in structuring a national tax policy.

Direct subsidy not through the tax system (industrial support)

Just as though the tax system, a country can choose to subsidizes investments directly. If no limitation due to international norms and agreements where in place, any outcome that can be achieved through the tax system can be achieved through a direct subsidy. Yet, as a matter of description, the direct subsidy policies of many countries are extremely different from the indirect subsidy through the tax system.

The main difference is the ability of countries to create a discriminatory subsidy system. While many countries de-facto create discriminatory tax policies in order to incentivize different types of investment and the help local businesses, the general norm governing the tax law is of non-discrimination. In many domestic law systems discriminatory tax treatment of corporations is illegal and even unconstitutional and the general norm is one of equalizing the tax treatment of different industries. Furthermore, most, if not all, tax treaties directly forbid

[38] Hagai Kalai, *Restructuring Foreign Tax Credits, Increasing Efficiency and Eliminating the Entity Residency Electivity Problem*. http://ssrn.com/abstract=2486733 (hereinafter: **Restructuring Foreign Tax Credits**)

tax discrimination and there are only rare cases in which countries directly provoke this limitation.[39] The direct subsidy regime is somewhat different. Countries many times subsidize based on type of industries, and not limitation on such subsidy in the international commercial law exists. Furthermore, though in extreme cases a subsidy granted only to local investors might be seen as a violation of the WTO agreements, at least in this point at time those cases are rare and limited to most extreme discriminatory treatment. The WTO is unlikely to be able to prevent, for example, a subsidy in the form of an overpaid stock purchase by the state of a domestic corporation.

Though a full description of the subsidy regime in different countries is beyond the scope of this paper, those two notions are important for the following analysis – the ability to discriminate between industries and the ability to discriminate based on the nationality of the investor.

One should note, just as with tax competition and regulation competition, that subsidy competition leads to similar dynamics. If the subsidy is structured to depend on real commercial activity in the country, it will distort the pre-subsidy efficient allocation of capital, and reduce the overall worldwide welfare. If the subsidy is loosely connected to real commercial activity, and is based for example on the entity's nationality, it will not distort the allocation of capital but will lead to subsidy planning.

[39] A significant exception in R&D tax benefit for domestic corporations. See, for example: Margaret McKerchar & Ann Hansford, *Achieving Innovation and Global Competitiveness through Research and Development Tax Incentives: Lessons for Australia from the UK*, 27 **Austl. Tax F.** 3 (2012),. Yet, many countries can council tax discrimination by engaging in tax contracts with corporations, thus reducing their effective tax rate without revealing the discriminatory tax treatment.

Indirect subsidy

1. *Public spending on publicly supplied services*

In addition to indirect subsidy through tax policy and preferential regulation, and direct subsidy, a country can attract investment by supplying publicly provided services. Doing business in a country has some cost for the state in which the business in done. Both domestic and foreign corporation needs access to roads, airports, land, legal system and so on to conduct business. A country can supply a wide range of such services. As a normative matter, supplying some of those services, which will be addressed as public goods, is one of the fundamental functions of the state. As a matter of positive analysis, countries supply many times services other then public goods for different reasons.

As a matter of theory, pubic good is a state provided service which would not have been supplied by the market due to market failure. The traditional view addresses "pure public goods" – services and good that once supplied no one can be deprived from (and therefore everyone whishes to become a free riders) and that are non-competitive (meaning that the use of the good by one does not deprive any other from using the same good).[40] Both terms are under reaching, at least for the use of this paper.

The limitation of the definition of public goods to goods supplied due to the lack of ability to deprive access a significant group of services supplied by the state due to other market failures. The insurance market is a good example. Due to information gaps it is hard to create a sustainable insurance market. The healthy will avoid acquiring health insurance, raising the average cost for each insurer, and therefore pushing other groups out of the insurance cycle.

[40] For wide analysis of public goods see Richard Cornes, **The Theory of Externalities, Public Goods, and Club Goods** (2nd ed. 1996).

Other market failures can also lead to a state intervention. For example, some time central regulation can reduce the transaction costs that would have been needed to achieve that same result through the market (this is the classic benefit of scale). In such cases, like the printing of money and providing currency stability, the efficiency created due to the reduction in transaction costs might exceed the efficiency loss due to the central regulation. Other market failures, such as cognitive biases may lead to similar results. In addition, sometimes preventing accesses to the publicly provided good or service might have a significant cost. Take for example a road which is not in high use. Putting a toll station might cost more than its benefit. Another example is legal services. Many times it is hard to assess, case by case, the cost of the service, and most of the public funding of courts and other legal mechanisms is done directly and not by imposing fees. Last, in the real world states many times decide to provide free access to a service for other normative reasons. Many countries provide education, health, legal services and so forth due to their conception of human rights. Though in each of those cases one can also argue that a market failure exists, at least to some extent, and therefore it is also efficient to provide the services though the state to all, the scope of those services will be many times defined not base on pure cost-benefit analysis but also on other normative considerations.

On this foundation, many times the state will supply public goods and services that are competitive. Though some public goods, fireworks for example, are definitely non-competitive, the non-competitiveness term is too narrow to capture many publicly provided services. Even if the public good or service is of a competitive type, in the case where it is inefficient to prevent access (fully or partly, for example by requiring a standard fee) or in the case that the state decides for any other reason not to prevent access, the nature of the good or service as competitive does not change its status as a freely provided good or service.

The outcome is that publicly provided goods and services should be seen as standing on a scale. On the one side there are "pure" public goods – public goods which are accessible

to all, and that are impossible for the market to provide due to a market failure or for any other reason. On the other side there are public goods which are provided by the state for any reason, and that can be correctly priced, and that the state can (and is willing to) limit the supply only to those who bear the full price. In between there is a wide variation of partial public goods – publicly provided goods and services which the state can partly deprive access to by imposing a fee for the use of them.

Part VI – The First Cross Border Externality Problem

The question is the international investment competition efficient or not was directly expressed in the tax competition literature, and was analyzed from an international efficiency benchmark. Simply put, countries can undercut the tax rate of other countries in order to expand the tax base and therefore maintain the same revenue or even increase it. But, the existence of tax and regulation competition does not mean the competition is inefficient. In this part of the paper I will introduce the two main approaches concerning investment competition.

The race to the top analysis goes as follows. Doing business in a state has some costs for the state in which the business in done. Both domestic and foreign corporation needs access to roads, airports, land, legal system and so on to conduct business. Those costs will limit the minimal tax on foreign investors (mainly the corporate tax) – a country will not reduce the tax rate beyond the cost of conducting business. The corporation will be willing to pay up to the value of the publicly supplies benefits either directly (as a price or a fee) or indirectly, through the corporate tax. Unsurprisingly, this explanation for the corporate tax is usually referred as the "benefit theory".[41] The surplus between the cost of production and the value for the

[41] Stephen E. Shay., "*What's Source Got to Do with It?" Source Rules and U.S. International Taxation*, 56 **TAX L. REV.** 81 (2002).

corporation will be divided by the state and the corporation. If the market is fully competitive, the tax rate will exactly reflect the costs of publicly provided services and not surplus will be captured by the source country.[42]

A common argument opposing the benefit theory is that in domestic markets, the corporate tax is not only conceived as aiming to maximize efficiency, but also as a mechanism to indirectly tax individual and promoting redistribution. Therefore, understanding the tax on foreign corporation as a benefit tax cannot explain why the rates on foreign and Domestic Corporation are equal, and if the benchmark is efficiency alone the redistribution goal is lost.[43] This critique, though appealing, is not well articulated. There is no real reason to assume that the redistribution goal should be achieved based on the entity level taxation. The fact that a specific society aims for some balance between efficiency and redistribution does not mean that all taxes should be structured to achieve the same balance. Because different taxes create different efficiency losses, one can achieve the same end goal of redistribution with less efficiency cost by reducing taxes in markets with high elasticity (and therefore high tax based distortions) and increasing taxes in markets with lower elasticity (for example inheritance tax). In the corporate market context, if corporation are highly elective in concern to their residency, but individual are not, eliminating the redistribution portion of the entity level tax and increasing the redistribution aspect of the dividend or interest tax will maintain the same level of redistribution with less distortion of the international corporate market. I will later on come back to the question how should dividends and interest taxation be conceived and argue that those taxes should also be seen as Pigovian taxes, unconnected to any addition income tax

[42] The origins of the race to the top argument can be found in the writings of Tiabout and other. See, for literature review: Hendrik Vrijburg, *The Effect of Excessive Tax Planning and Tax Setting on Welfare: Action Needed*, 7 **Erasmus L. Rev.** 13, 16-18 (2014) (hereinafter: **Vrijburg**) and the reference given there.

[43] See Reuven S. Avi-Yonah, *Globalization, Tax Competition, and the Fiscal Crisis of the Welfare State*, 113 **Harv. L. Rev.** 1573 (1999-2000).

imposed on the individual tax payer. At this point it is enough to understand that even if the dividend or interest taxation was purely for redistribution purpose, it would be a more efficient to allocate the redistributive tax at the individual level and not at the entity level.

As we have previously noted, the different entity tax rates of different countries leads, in a territorial system, to movement of investments from high tax countries to low tax countries. Under the benefit theory, this is not a bad outcome. Countries would compete to most efficiently supply public services, and the competition would lower the tax rates to the cost of the public services. Efficient countries would be able to attract investment either by reducing the tax rate to the cost of public services, or by improving the quality of public services. The last type of competition would lead to additional worldwide efficiency, which is the benefit of scale. Different business requires different combination of public services. While production of goods will highly depend on the quality of roads and airports, high tech industry might be less depended on those and more dependent of the quality of the public education. The competition of the quality of services will draw the production of goods to one country, allowing several corporations to use the same infrastructure instead of multiple supply of the same infrastructure in separate countries. From a worldwide perspective this will be a race to the top.

But the race to the top is only a partial description of reality.

A significant problem with the race to the top argument, which has begun to draw some academic attention, is that is lack adjustment for markets failures, such as monopolies and cartels.[44] The international market today reminds in many ways the domestic corporate markets 100 years ago – it lacks transparency, competition law (and enforcement) and other mechanisms that were introduced to the domestic law in order to reduce market failures.

[44] See *supra*, footnote 14.

Furthermore, a significant portion of the domestic legislation aims to reduce corporate externalities, such as externalities on the environment. Such laws rarely exists in the international law, and even if they exists, gets low attention by the privatized legal systems governing international transactions (such as international arbitration forums, the WTO and so on, all appointed by international corporate community).[45]

In this regard, the ability of investors to game the tax and regulatory systems are a form of market failure that arise in all markets, though has way more significant effect when international markets are under review. The race to the top model assumes no gap between the "in books" costs imposed on investors through tax and regulation and the effective tax paid and regulation burden on the investor. As pointed out by Hasen, this assumption is false in real world commerce.[46] This problem of tax and regulation avoidance has drown, during the years, a growing attention in the international tax policy debate. Yet, the current debate too often skips the basic question – what is the tax supposed to do, and immediately jumps to the question how can tax avoidance tactics be discouraged (for example through tax treaties, BEBS project and other mechanisms). In other words, the tax gamming literature is still based on the assumption that the tax system is just a redistributive mechanism, and does not serve any efficiency purpose (and therefore the goal in to create a tax system which create as little distortion as possible).[47] As will be discussed in the following parts of the paper, this is an inadequate assumption.

The race to the top description would stay false even if all those market failures were corrected, and international commercial ventures were subject to similar rules as domestic

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[45] See **Avi-yonah (2001)**, id 6, 1689-1692; Diane Ring, *Who is Making International Tax Policy: International Organizations as Power Players in a High Stakes World*, 33 **Fordham Int'l L.J.** 649 (2009-2010).

[46] David Hasen, *Tax Neutrality and Tax Amenities*, 12 **Fla. Tax Rev.** 57 (2012).

[47] See: **Vrijburg**, *Supra* 42, 14-16, addressing the problem of the current tax planning debate, which avoid the fundamental question of the initial efficient allocation of revenue to which the regulation should aim.

business venture. That is due to the cross border externality problem. Therefore, I will assume for the following part that not problem of gamming or other markets failures exists, and point the basic flew of the race to the top argument.

The cross border externality problem is based on the understanding that when exporting capital a country loses some revenue (in a territorial system the entity level tax revenue and in worldwide system the FTC) but maintains the profit for the individual shareholders and the revenue from taxation of interest and dividends. At the same time, it reduces both the direct costs of the business (for example the burden on the roads) and the indirect costs such as the costs of externalities on tort creditors or the environment.

Where does the cross border externality problem analysis lead us?

Let's first examine a worldwide residency based tax system with no coordination. In such a system, the revenue from the corporation profit will be fully collected by the residency country, and the source country will collect no revenue. Such a system will lead to a competition between countries over the residency of corporation, as it is pure profit – the residency country collect all the revenue, but does not bear any of the costs of the corporations. Obviously, such a competition can end up in practically 0% tax rate. This type of competition was previously discussed, and is the problem of electivity. The higher the ability of countries to "lock-in" the residency of the corporation, for example by moving from defining the corporation based on place of incorporation to defining it based on place of effective management or by defining the residency of the corporation based on the residency of the investors (like in the case of Controlled Foreign Corporations (CFC), it will be able to raise the entity level tax without reducing the base. The most efficient way to eliminate the tax competition in such system would be full integration, for example in the form of eliminating the entity level tax and taxing only the individual investors. The only reason in such tax system for a country to want to attract foreign investment is either if the investment has positive

spillovers (as will be addressed soon, a pure worldwide system does not exists anywhere – some of the corporate profit is captured be the dividend tax, which is based on the residency of the investors and not on the residency of the corporation, and another portion is captured by other taxes such as income tax on the salaries of employees, source entity tax, consumption tax and property tax).

But the problem of race to the bottom in a worldwide taxation goes even dipper. Even if the corporations are lock in to a specific residency, but different countries have different amount of spending on public good, the corporations will allocate their activity to the country with the higher level of public good. This dynamic will result in two outcomes.

First, the costs of partial public goods will increase. This outcome can explain why a country will wish to prevent foreign investments directly (through regulation) or indirectly (through advancing domestic corporation using tariffs and subsidies).

The second, and even more problematic, outcome is that countries with better public goods will attract corporate externalities. Corporations will allocate risks to the source country, but no benefit for the source country will arise. The outcome will be a sub-optimal investment in public goods, because in addition to the direct cost of supplying those to local population and resident corporations, an additional cost will be attached to them in the form of the foreign investor, the burden it imposes on the public good, and the additional externality costs it brings with it.

To illustrate, Assume the following scenario – a U.S. corporation, fully owned by American shareholders, can invest in the U.S. or in India 100$ and have return of 500$ after a year, but the cost in burden on public infrastructure will be 100$ and the cost of externalities in case of bankruptcy will be 100$. If they will invest in the U.S., the social profit will be 200$. If they will invest in India, the social profit will be 400$. In such a situation, the U.S.

government has a good incentive to subsidize the foreign investment up to 199$. The outcome becomes even more alarming when the corporate activity has a negative utility. Assume the instead of the 100$ externality cost, the cost of externalities is 400$. No country would want to allow such an investment in its domestic market, because it has a negative utility of -100$. If the same investment is moved over sees, the social utility for the U.S. will be 400$. In this case, the country should be willing to subsidize the investment up to 399$. The corporation would agree to shift the business abroad even for a subsidy of 1$.

Two additional steps should be taken to notice the full extent of the problem.

First, assume that the country is not allowed to prevent the entrance of foreign investors to the domestic market.[48] In this situation the source country can do one of two things – it can subsidize the domestic corporations or reduce the domestic corporate tax rate[49], in order to push out the foreign investors or it can reduce the level of public goods supplied by it. If the domestic corporate tax rates were optimal, the meaning is that it will become sub-optimal. In order for such a reduction to be effective, it has to reduce the domestic corporate tax rates more than the cost of the investment. If we return to our example, in order to push out the American corporation, India will have to offer a domestic corporation a subsidy of 399$ in order to engage in a business venture that has a negative utility. The other option, reducing the supply of public

[48] Indeed, countries which tried to prevent the entrance of foreign corporations, mainly developing courtiers, have faced intensive international pressure.

[49] Reducing tax rates only for domestic corporations might raise the question of discrimination between corporations, which is not allowed in most tax treaties. I part VI I will address the "anti discrimination" requirement in tax treaties. For the time being it should be noted that the discourse of "discrimination" seems absurd. First, corporations are not human beings, and there is no reason to entitle them to human rights. Second, countries always discriminate between their citizens and foreigners, and for certain there is no reason to assume the corporations are entitled to more rights the humans.

goods, also leads to sub-optimal outcome and countries will have to compete on who is supply a lower level of public good, in order to de-incentivize foreign investment.

The second step reveals the full extent of the problem. In a worldwide system the assumption is that countries cannot set a different tax rate for profits from domestic and foreign investments. Therefore, when India, in our example, is incentivizing the domestic corporation to push the U.S corporations out of the domestic market it simultaneously reduces the tax rates on domestic earning from investments outside of India. But if more Indian corporations will start allocating costs to the U.S., the U.S. will act exactly the same, and reduce its corporate tax.

Generally put, if residency of corporations is highly elective, a worldwide tax system creates a tax competition concerning the allocation of the corporate residency. This tax reduction tactic is similar to the transfer pricing tactic (and actually, the transfer pricing is just using the separate entity of corporation in order to make the residency of the profits a low tax country). The lower the electivity of residency becomes, the greater the cross border externality problem becomes and countries have greater incentive to allocate their corporate activity and its costs to other countries. The cross border externality problem, unless prevented by regulation, leads to sub-optimal corporate tax rates and to sub-optimal spending on public goods. The ability of countries to react to each other leads to a race to the bottom, reducing the effective tax rate (either directly or through subsidies). Of course that regulation preventing foreign investment will be in direct contradiction to the free flow of capital ideal.

An interesting notion concerning the CEN race to the bottom is that the race will not stop at a 0% tax rate, and countries will prefer to subsidize their residence in order to shift the cost of their investment to foreign countries.

One might think this analysis is farfetched. It is not. Actually, this is exactly what foreign tax credits are. A FTC is relevant only in a mix tax system were the source country collects some revenue by taxing corporate income in its territory. If one does not assume full capital swop, the foreign tax credit is a subsidy of the residency country to the source country. As pointed out by Shaviro, it might seem wired that one country will willingly subsidize another country due to pure altruism. And yet, the U.S. continues to allow foreign tax credit. Understanding the FTC as reflecting the export of the cost of the capital to a foreign country explains why one would allow FTC. The only problem is that the costs of investments also lead to the conclusion that even if one could reveal the "real" residency of corporations (for example by examining the residency of the shareholders) the CEN will still be an inefficient benchmark from a worldwide perspective, because it will lead countries to under invest in the supply of public goods and allocate costs to other countries.

One might ask, at this point, why countries would be willing to subsidize publicly provided services and goods for foreign investors. In other words, won't the race to top model lead countries to set the tax rate to compensate for direct and indirect costs? Though the answer was already hinted in the previous analysis, at this point it can be fully articulated.

In a close market, the state can provide public goods by imposing a tax on all those who might enjoy the public goods, and the price of the public good is divided between them.[50] Once the market is an open market, and investors can elect between different countries the picture change.

If the state has to supply the public good anyway, for the need of the domestic population, the competition over investment will lead it to provide the public good for free to

[50] The question how should the government price public goods and how should it collect the revenue exceed the scope of this paper. For our purpose, it is enough to assume that the same evaluating mechanism which is used in the domestic market can be used in the international market.

foreign investors. Trying the impose any portion of cost on the elective entity will just drew it away to other countries that does not allocate the cost of the public good on the investors. Put differently, the spending on the public good is a sunk cost, and will not be taken into consideration when trying to attract additional investments. It the service is a partial public good, such as roads (in which the initial investment is high by the cost of each additional user is low), the countries will be willing to reduce the tax burden on the foreign investor up to the marginal cost of additional user of the public good.

On the other hand, if the state does not supply the public goods anyway, and they are only needed in order to attract foreign investors, the outcome will be sup-optimal funding of the public goods. All countries will know that they cannot collect the sunk costs of the public goods and services, and can impose tax only up to the marginal use of any additional user. In such situation, no country will have the inventive to invest the initial investment in the public good. Take for example the building of an airport – if the country can choose between building its own airport and using the airport of a neighbor country the last option will be far more attractive. The use of the neighbor airport will cost them only the marginal cost of additional user while building a new airport will cost the full price. Of course, the neighbor country will have the same set of incentives.

It is true, that other considerations can lead a country to invest in publicly supplies services even if it knows it will not be able to collect the full cost of those services. For example, if the electivity of investors is only partial, being the first to offer a new public good or service can attract investors which will stay even if other countries will offer in the future the same public goods for lower price.

The first cross border externality problem therefore goes as follows. Countries will compete over investments as long as the investment has positive utility for the country, taking into consideration the marginal costs of the investment in the form of direct expenses (on partial

public goods) and indirect expenses (such as externalities). If countries where capable to fully price the costs allocated to it and charge the investor for them, the market would be efficient, and the tax, spending and regulation level of each country would have been set to the efficient level. Yet, some of the costs of conducting business cannot be allocated to the investor. In this category, costs of pure public goods and the initial investment in partial public goods cannot be allocated to the investor in a competitive investment market. In addition, the cost of externalities which cannot be regulated will also lay on the domestic society. The lack of ability to impose the full costs of the investment on the investor leads to two outcomes. From the perspective of the capital importing country the level of investment in public goods and services will be set as a tradeoff between the additional value from attracting additional investment and the cost, which cannot be compensated for, of the initial investment in the public good. From the perspective of the capital exporting country, each country will have the inventive to subsidized capital export, abuse publicly provided goods and services of other countries and allocate externalities to them as long as the portion of the profit that will be return home (through tax and directly to the domestic capital owner) is higher than the full return of the investment, minus the cost of publicly provided goods and services and the costs of externalities. In this regard, a state will have a greater incentive to subsidize capital export concerning investment that require public goods which do not exist at all (thus avoiding both the initial investment and the marginal costs) than in the case where the initial investment was already done the all that is saved is the marginal cost of additional user of the partial public good.

Part VII - Tax policy, trade policy and the first cross border externality problem

The analysis so far led to the conclusion that lacking any coordination, counties will have incentive to abuse publicly provided goods and services supplied by other countries rather

than supplying the same goods and services in the domestic market. How does this analysis influence the desirable tax policy from a worldwide perspective?

First, as previously discussed, any tax policy will create some level of sub-optimal investment in public goods and services. The "payment" for the publicly provided goods and services, when a competition exists between different countries, is set to the marginal cost of the good or services.

Second and more important, the level of sub-optimal investment in public goods and services, in a world where no additional externalities are allocated to the source country is independent from the tax policy. The total tax burden that a source country (a capital importing country) can imposed on the foreign investor without losing the investment to other countries is depended only on the marginal cost of the public goods and services. Any other tax imposed on the income by the capital exporting country change the distribution between the capital owner and the state, but do not change the total portion of the profit which is drown back to the capital exporting country.

For example, assume country A has a full exemption system, while country B has a residency based tax system with FTC and a 50% tax rate. The profit from the investment in country C is 1000 and the marginal cost for country C is 100. The initial cost of the public good was 400. Country C will set its taxes on the investment to 100 (or a bit higher if the market is not completely competitive). The surplus of 900 will be fully captured by the capital owner of A, while in the case of B the 900 will be split – 450 will be collected as taxes and 450 will be captured by the capital owners. In both cases, the amount of subsidy that the capital exporting country should be willing to provide is not depended on the foreign country tax policy, but rather on the question does the cost of domestically providing the public goods and services exceed the cost of exporting the capital. Therefore, A and B should be willing to subsidize the investment up to the amount of 500 (if the market is not fully competitive and the country

supplying the public good can receive some return beyond the marginal cost of the additional user, the subsidy will be somewhat lower). Of course, the example assumed that the C is already providing the public goods and services, and therefore do not take into account the initial investment in them. If all three are not supplying the public goods or services, no one of them will have the incentive to supply it as it will be only partly compensated. The investment, which has a positive utility, will not come to life. This is the classic tragedy of the commons, but unlike to classic example, this time it is not one field which is under used, but rather the whole international investment market, which operated in sub-optimal level.

As a matter of policy, two questions arise. First, one should ask is the tax system, and mainly, the international corporate tax, the most efficient way to address the problem of sub-optimal investment in public goods. The second is what international policy will eliminate the first problem of cross border externalities.

The first question presents a tradeoff. In an ideal world, without litigation and enforcement costs, it is clear that the most efficient way to fund publicly provided services, at least up to their marginal cost, is through direct payment for the use of the publicly provided good or service. Though in practice it is hard and expensive to assess case by case costs, many publicly provided services are funded by a unique tax or fee, detached from the general corporate taxation. Court fees, city taxes and road tolls are all examples to services which are funded through a more direct payment which is connected to the use of the good or the service, and not through laying a general tax system. A unified corporate tax, in this regard, is an extremely inefficient mechanism to fund publicly provided goods and services. This is true not only in regard to publicly provided goods and services which are public goods, but to all benefit provided by the hosting country. In other words, the benefit theory ignores the possibility to tax or charge for the benefit itself, instead of averaging the total costs of the benefits to one general corporate tax rate. Though depended on the empirical data, it seems almost clear that

only in rare cases the reduction of enforcement costs will justify the use of such imprecise mechanism as the corporate tax in order to fund state provided benefits.

While in many cases countries which are supplying the goods and services prefer a direct tax or fee instead on using the corporate tax system in order to fund state provided benefits, capital exporting countries do not structure their subsidy rates in dependence to the foreign publicly provided good. This is a wired phenomenon. Just as in the case of capital importing countries, a direct subsidy which is depended on the type of business venture and the profit from using an already existing public good in a foreign country will be way more efficient than a general subsidy of capital export. In other words, just as in the case of capital import, the capital export subsidy policy concerning the profits from the use of foreign public goods should be structured as a industry based subsidy (or in some cases as a case by case subsidy) and not as a general tax policy applied to all corporations.

The second question, how can the utility loss from sub-optimal investment in public goods can be decreased is more complicated. It is clear, from the previous analysis, that no country can unilaterally solve the problem. Furthermore, a general bilateral of multilateral corporate tax agreement, such as the argument in favor of "minimal tax", is also far from satisfying, because the tax rates will have nothing to do with the benefits provided by the country, and the incentive to avoid supplying the benefits and use the public goods and services provided by other countries will remain the same as if no minimal tax was imposed.

Efficient mechanism to treat the first cross border externality problem should be structured around the public goods and benefits themselves. Determining a standard fee for the use of public goods and services in multinational agreement such as the WTO can be a way more efficient mechanism to solve the sub-optimal spending on public goods than any tax mechanism.

Without further exploring the desirable structure of an international commerce agreement concerning minimal fees for publicly provided goods and services, several notions should be taken into account at this point. First, no unilateral tax policy, or any other unilateral policy, can efficiently reduce the first cross border externality problem. In other words, the competition between countries concerning investments is always, at least in part, a "race to the bottom" in which everyone loses. Second, as a matter of positive description, the benefit theory might explain taxes which are depended on a service or good provided, but cannot explain the corporate tax, neither from the residency side (the subsidy) or from the source side (the tax rate). Third, as a normative matter, only in rare cases corporate tax is an efficient way to address the first cross border externality problem.

Part VIII – The Second Cross Border Externality Problem

As with direct public spending, externalities of business ventures lead to a similar dynamics of investment competition, and can lead to a race to the top or race to the bottom in dependence of the ability of the country to be fully compensated for the costs allocated to it.

The race to the top dynamic evolves due to the different costs of externalities to different countries. If the same business venture will create higher costs in country A then in country B, and both countries are fully compensated for those costs either through regulation or Pigovian taxation, the investment competition will be efficient. Take for example noise hazards. If country A is highly urban, the social costs of the noise hazards will be higher than the costs for country B which is rural. Country B therefore will set the Pigovian tax rate to be lower than country A, attracting the business ventures. From a worldwide perspective this is an efficient outcome – the gain from the business venture will be the same, but the total costs

of it will be lower. In other words, the business venture will be attracted to the country in which the social utility is the highest.

Once externalities cannot be compensated for, just as with public spending, the cross border externality problem arises. Each country has the incentive to export costs and to draw profits. For example, if country A can invest in country B, creating a return for country A of 100 and cost for country B of 200, it will be willing to subsidize the investment up to 99, though if the investment was done domestically it would prefer it would not have been done at all. From A's perspective, the utility of the investment is 100. From B's perspective the utility of the investment in -200. From a worldwide perspective the utility of the investment is -100.

In this regard, two types of externalities should be taken into consideration.

The first type is externalities which are created due to a specific activity. Noise hazards, environmental hazards and so forth are all of this type. Those externalities are not unique to the corporate form. Just as with the use of publicly provided goods and services, it seems that in most cases a direct Pigovian tax or regulation is a more efficient mechanism to lead investors to internalize the externality. While this type of externalities hard empirical questions, concerning the assessment of the costs[51] and the efficiency of regulation or taxation, only extreme empirical evidence can justify the use of the inaccurate mechanism of corporate taxation in order to internalize this type of externalities.

The second type of externalities is externalities caused due to the corporate form itself. In another paper I have broadly analyzed the "corporate paradox".[52] Simply put, any entity with

[51] Indeed, different countries developed different tools to assess the costs of externalities and to value the efficiency of regulation. Two known models in this field are the American Cost-Benefit Analysis (CBA) and the European Impact Assessment analysis (IA).

[52] The Corporate Paradox,, *supra* 1.

limited liability (mainly, in the international commerce, corporations) create a two layers of externalities. First, the limited liability itself reduces the exposure of the investor (either through debt or equity) to risks created by the entity. Therefore, even if the business venture has a negative utility, the investor might still engage in it, as she takes into account only the risk of losing the initial investment. In addition, the ability to distribute profits, through dividends, stock repurchase and interest payment, as well as the ability to securitize the initial investment, creates a second layer of externalities. The combination of profit distribution and the limited liability of the entity reduce even further the risk for the investor, and allocated the costs to other stakeholders – the state, contractual stakeholders and tort stakeholders. Furthermore, I have shown that if one accepts the need for limited liability in order to reduce the transaction costs of large scale business ventures, no regulatory mechanism can efficiently reduce the level of externalities. Based on this analysis, I have offered to understand the corporate tax as a Pigovian tax – an efficient mechanism which will lead to internalization of the costs by the investor, and will reduce the level of over production (inefficient investments in business venture with negative utility). I have argues there that the two layered tax system of the corporate tax is an adequate structure, as it addresses two different problems. The entity level taxation reduce production level to its efficient level (preventing investments in business ventures with negative utility), while the distribution based taxation reduce the level of profit distribution to the efficient level (and eliminate the incentive to use profit distribution in order to allocate costs to third parties). In a close market, I furthered argued, the state has an incentive to efficiently structure the two layered corporate taxation, and the only main question remains is cost of non-accurate general corporate taxation verses the costs of accurate case by case corporate taxation.

In the context of international commerce the picture changes. No country has any incentive to reduce externalities allocated to other countries. On the contrary, just as with other

types of externalities, each country has the incentive to allocate as much as possible of the costs to other countries as long as it captures the profits of the investment. This is therefore the second cross border externalities problem. Each country has the incentive to subsidize capital export as long as the return on the foreign investment will be higher than the utility of the investment (meaning the return minus the externality costs).

In this regard, one should examine the two current international tax policies.

Under the residency based taxation, both the entity and the distribution are taxed by the capital exporting country. If no source based taxation is in force, this is an ideal outcome for the capital exporting country. As a matter of national utility function, if the tax rate is set to the externality rate, and no distributional considerations are taken into account, capital export will always be preferable to domestic investment. While the return for the domestic and the foreign investment is equal, the cost of the externalities, both due to the limited liability and due to the profit distribution, are fully allocated to the foreign country. Such tax policy creates the most severe form of the second cross border externality problem. From a worldwide perspective, it will lead to over production – each country will have the interest to subsidized capital export even if the investment has negative utility. Put differently, such tax policy leads the country to take into account the same utility function of the investor, and not to internalize the externalities allocated to other countries.

One might argue that no such tax system exist, as all countries impose some source based taxation. Yet, this is true only in concern to equity investments. Debt investments are usually not subject to the "double taxation" system, and the corporation can deduct the interest paid from the entity level tax. Therefore, the interest is taxed only once, at the individual level, usually by the residency country. This dynamics, which creates inefficiencies also in a close market, is catastrophic in international commerce, as it allows the capital exporting country to capture all or most of the profit, while allocating all the costs to the capital importing country.

The second system, commonly addressed as a "source" based system, tax the entity at source, yet tax the distributed profits based on residency. Such tax policy, under the assumption that the tax rates reflect the costs for the source country, is defiantly more efficient. The capital exporting country internalizes the cost of the limited liability. Yet, obviously, externalities created due to the distribution of profits are still allocated to the source country and not internalized.

It should be noted, our discussion so far does not introduce yet the desirable policy concerning the treatment of foreign taxes by the capital exporting country. All it indicates is that both systems, the residency based taxation and the source based taxation suffer from the second cross border externalities problem. This is because in both cases the tax systems enable one country to capture the profit while allocating costs to another country.

Before continuing the analysis I wish to address the outcome of the second cross border analysis in the real world. If all countries had the same capital available, the outcome of either tax policy will lead to over production. The worldwide efficiency would decrease, as well as the efficiency of all countries. Such situation would be equivalent to a situation in which the each country subsidizes domestic investments with negative utility. Such lose-lose dynamics are a fertile grounds for cooperation in changing the tax policy.

Yet, in the real world capital is not equally distributed. High capitalized countries, which are usually also strong international forces, have the ability to allocate much more costs to low capitalized countries. Imagine, for example, country A with 100M available capital and country B with 10M available capital. Each can invest in the other, for return of 10 per each dollar and imposing externalities costs of 11 per each dollar. From a global perspective, we would not what this investment to take place. Yet, both countries will fully export their available capital. Country A will have return of 1000M, and bear costs of 110M, having a total positive balance of 890M. Country B on the other hand will have return of 100M, and bear

costs of 1100M, coming to a negative balance of -1000M. As one can see, this is a great deal for country A, yet it is destructive for country B.

While it is clear why high capitalized countries will support such tax policy, the question why do low capitalized countries agree to such policies requires positive analyses that exceed the scope of this paper. Yet, some general observations can be made, as a partial explanation. First, the high capitalized countries have, generally, more power in international institution and international politics, power that can be used in order to preserve preferable policies. Second, the academic tax and corporation discourse, by assuming no costs of limited liability and ignoring the corporate paradox, gives a theoretical support to the current tax policies, and generally promote the argument in favor of taxing distributed profits based on the residency of the capital owner. Third, usually the cost of externalities are laid on the general population of the low capitalized country, while the beneficiaries of the residency tax based policy and the state subsidy for capital export are a small but powerful part of the population.

Part IX - Back to source

As an efficient alternative, from a worldwide perspective, the tax system should be structured as a "pure source" based tax system. A pure source tax system means taxing both the entity and the distributed profits at source. In this regard, designing the taxation of cross border investment requires addressing two separate questions – what is the efficient taxation by the capital importing country (the source country) including the proper definition of source, and what should be the tax policy of the capital exporting country. I will address the two questions separately. At this point, one might already understand that no cooperation is required in order to achieve the efficient policy, as long as no international pressure is posed on the low capitalized countries to avoid unilateral tax law modifications.

Before further investigating into the desirable international tax policy, it should be noted that the general concept of the corporate taxation used in this paper is somewhat different than the traditional one. I do not perceive the corporate tax as an indirect income taxation of the capital owners, but rather as a Pigovian tax, leading investors to internalize the externalities caused due to the limited liability of the corporation. In a different paper I argued that the outcome is that investors should pay additional and separate income tax (or more technically, that the profits derived from the investment should not be excluded from the gross income subject to individual income taxation). Yet, as a matter of positive law profits derived from corporation are usually excluded from the individual's gross income and many times the total taxation imposed on corporate based profits is lower than the individual tax bracket. Clearly, if the corporate tax was a reflection of both Pigovian taxation and income taxation one would expect the opposite phenomenon, and the corporate tax rate should have been higher than the individual tax rate. The meaning is that even in concern to domestic corporations, the portion of the tax which reflects a real income tax is significant lower than the general income tax and the country is incentivizing investments through the corporate form. As we will soon see, in additional to the general incentive for investment through the corporate form, countries offer additional incentives for capital export in the form of FTC or exemption.

Three fundamental principles should guide to pure source based taxation.

First, as was previously explained, the pure source based taxation means structuring the corporate tax as a two layered tax, both on the entity's profits and on the distribution of the profits. The two layered taxation should apply to all investments in the corporation, either debt or equity (including derivatives). Both layers of the corporate tax should be imposed by the capital importing country and should not be depended on the residency of the investors (the residency country can impose additional income tax).

In this regard, as a matter of positive law, many countries impose pure source taxation as a unilateral policy, as long as no treaty is in force. The US for example tax both domestic and foreign entities engaged in trade or business in the US, and additionally impose withholding tax of profits distributed to foreign investors and dividend tax on profits distributed to domestic investors. Yet, most international commerce is done between treaty countries, and most treaties, such as the US model treaty, the UN model treaty and the OECD model treaty eliminates or dramatically reduces any form source based taxation on profit distribution. The only major economy which refuses to accept the elimination of the taxation on profit distribution in tax treaties is the Brazilian one. Art. 10 of the Brazil-Canada tax treaty for example determine that the source country will be capable to tax dividends at the domestic dividend tax rate, unless the recipient holds more than 10% of the corporation and then the tax rate will be 15%. The Brazilian tax treaty, and the persistence of Brazil in requiring source based taxation of distributed profits, has been widely criticized. The criticism is based on the general assumption that the business venture is costless, and therefore Brazil is just being "greedy" when trying to capture a bigger portion of the profits. Not only this criticism is weak by its own terms, as it does not explain why the common profit split is proper and any deviation from it is inefficient, but it fully collapse once the externalities caused by profit distribution are taken into account. One can then argue if the tax rates required by Brazil are adequate or they exceed beyond the cost of the externalities, but the fundamental concept of taxing the profit distribution at source is more efficient both from worldwide perspective and from the Brazilian national perspective, as the inbound capital flow to Brazil exceed the outbound capital flow.

Second, the pure source based taxation requires redefining the sourcing rules. The current sourcing rules create a complicated mechanism based on several different normative frameworks. Some assume that "real" sourcing can be identifying, for example based on the place of the asset (and in the case of intangibles, but finding the "real" allocation of the asset).

The challenges concerning sourcing arise usually when the tax payer tries to game the system, but the fundamental foundation is that there is a "right" sourcing rule, based on the "real" place of production. Therefore, policy makers should design the law in a way that will allocate profits most efficiently to their real source. In a short while I will address the issue of tax and regulation gaming and the influence of such behavior of the tax policy. At this point I wish to reject the fundamental perception that source should be connected to some concept of "real" place of production (which is, put simply, a fairness or consensus argument). As explained, the corporate taxation aims to lead investors to internalize the externalities caused due to limited liability. In the international framework, any mechanism which allows one country to capture the profits of the investment while not bearing the cost of the investment, or not compensating the country that does bear the cost, creates the second cross border externality problem. Put differently, the sourcing rule should be designed according to the allocation of externalities. The question should be – in case of bankruptcy – in which state the non-investor stakeholders reside. It is true that to some extent such sourcing rule might look like the traditional sourcing rule, because many creditors, as employees and tort creditors are located in the place of actual production. Yet, in other cases such sourcing rule will look nothing like the current sourcing rules. Take for example the place to which the intangibles are allocated. Under the current law, a complex set of rules aim to define the "real" location of intangible. The pure source tax system will not suffer from the need to try and capture the real location of the intangible. The place on an asset, decision making, title passage and so forth has no significance to the sourcing process. The question is only where the externalities of the production laying are. Generally put, the sourcing rule should not focus on the location of asset, management or production, and requirement such as Permanent Establishment (PE) are useless. The sourcing rule should be a

hypothetical bankruptcy scenario – if the business venture will go bad, where does the uncompensated non-investor stakeholders reside.[53]

Third, the pure source based taxation requires deciding who will define the tax rates and measure the costs of externalities. In this regard, each country has the best knowledge of the cost allocated to it due to the foreign investment, and has the best incentive to set the tax rate not lower than the cost of externalities. The investment competition dynamics are assumed to limit the ability of a country to set the tax rate beyond the cost of externalities. The additional question is should the tax rate be the same for all types of corporations, industry based on case by case defined. This tradeoff between accuracy and administrative costs is true to all corporate taxation and not unique to international taxation (in a previous paper I argues that industry based taxation is the most efficient of the three, but such decision is not necessary for the current analysis).

Before continuing to the capital export policy I wish to address the relationship between the pure source tax policy and gamming. The international tax debate, in the last decay at least, is focusing on the question of international tax planning, addressing several mechanism which were describe at chapter IV. Different scholars offer different mechanism aiming the locate profits to their "real" source, thus create some imaginary "tax justice". Usually, those who see themselves as the victims of tax planning are the capital export country, and it is unsurprising that those are the countries involved in the BEBS project and other similar policy

[53] In this regard, the formula apportionment approach, though still based on some unexplained notion of "real" location of production, takes into account many times some of the non-investor stakeholders such as employees, therefore reducing, to some extent, the second cross border externality problem. For the formula apportionment approach see for example Reuven S. Avi-Yonah, *The Rise and Fall of Arm's Length: A Study in the Evolution of U.S. International Taxation*, 15 **Virginia Tax Review** (1995); Quinn T. Ryan, *Beyond BATSA: Getting Serious about State Corporate Tax Reform*, 67 **Wash. & Lee L. Rev.** 275 (2010).

modification.[54] While tax and regulation planning should be of great concern, the current analysis sets almost the opposite framework for any policy debate concerning tax and regulation planning. The systematic victims of the tax planning and the regulation planning are the countries to which the externalities are allocated, usually capital importing countries (the "global south"). Any policy that allows one country to profit, and allocates the cost to another is an inefficient and abusing policy. To illustrate, imagine the following. A patent owner corporation from the US produces the patent in India through an Indian sub-corporation (and in case of a bankruptcy, the Indian minimum wage employees will be the uncompensated creditors). India capture a small portion of the profit, and most of the profit is reallocated to the US through the license agreement concerning the use of the patent. The current popular analysis will not see this phenomenon as a tax planning policy. Yet, once the American portion is captured by another third country, or fully remains in the hands of the capital owner (which park the money in a tax haven) it immediately triggers an academic and public rage. What is the difference between the two situations? In both cases, those profits are profits created by allocating costs to the Indian employees. Both justice and efficiency would allocate them back to India. Treating only the distributive justice between the capital owner and the residency country, while ignoring those who bears the cost of the investment in the first place seems a poor inefficient and unjustified policy.

The project of offering an alternative approach for the treatment of tax and regulation planning exceed the scope of this paper and will be left to a different one. Yet, the building blocks are already presented. The basic goal of a cooperative agreement should be allocating

[54] See for example Gravelle, *Supra* 9, 346-348, arguing that "No one knows for sure the scope of profit shifting, but concerns have been raised that if profit shifting occurs with the current U.S. tax and deferral, it will be a larger, perhaps significantly larger, problem with a territorial tax". The hidden assumption of this analysis is that shifting profits harm the residency country. On the contrary, in the current analysis, the problem of profit shifting is the harm caused to the source country.

the profits to the location of externalities. The bankruptcy test is an easy and efficient mechanism to start such a policy (though is require some modification, for example in order to address tort creditor, information asymmetry and so forth). The structure of the investment or other concepts of "real" place of production is irrelevant to the allocation of profits for tax purposes. Though each country can set its own rules concerning the way to measure externalities, it is true that cooperation, either unilateral or multilateral might still be in need, to increase the information sharing and the enforcement. Furthermore, many times one investment can allocate costs to several countries (for example in the case of global production chains) which will require cooperation in splitting the revenue. Saying this, I will leave at this point the desirable tax planning prevention policy for future investigation.

The additional policy decision concerns the subsidy policy of the capital exporting country. Two sub questions arise – to what rate should a state subsidize to capital export and what is the efficient mechanism to do so.

As pointed out previously, foreign tax paid are a subsidy mechanism, rather than as an income measurement instrument. When no costs of business ventures are taken into account, the subsidy policy depended only on the return from the foreign investment minus the foreign taxes versus the return on the domestic investment. Once the cost of business ventures, and the cross border externality problem, is taken into account one can further explore the desirability of the subsidy. If the tax competition leads all countries to set their tax rates to reflect the cost of externalities, the outcome will be, from a national perspective, that investments will be allocated efficiently only under exemption tax policy. If the same investment will create higher externality costs if invested in the domestic market than if invested in the foreign market the investment will be drown to the foreign market and the return for the capital exporting country will be maximized. For example, assume investment in country A by Y which is a resident of A can lead to return of 100 by create costs of 50, and the same capital can be used for investment

in B, in which the return will be 100 but the cost will be 20. A will set its tax rate to 50%, and B to 20%. In this situation, if Y decides to invest in A, the utility for a will be 50 if the capital will be exported and invested in B, the utility for A will be 80. The 20 which will be captured by B is not out of the profit of the investment, but is merely a compensation for the cost of the investment.

Simply put, The exemption system creates an efficient incentive for capital export when the externalities are lower in the foreign country, and keeps investments in the domestic market when the externalities in the foreign country are higher (and therefore the tax rates are higher). The FTC system, on the other hand, creates an undesirable incentive mechanism from a national perspective. The investor will be indifferent in such situation between domestic and foreign investment, and will invest in the domestic market even if the return minus the cost of such investment is lower than capital export. Using the numbers of our previous example, the investor might choose (for example due to home bios) to invest in the domestic market, and the utility of the investment will be for A only 50. The revenue will be the same, but 30 of the potential return for the capital owner will be lost.

The fact that this analysis deviated from the common analysis is not surprising. The common analysis assumes no costs due to the limited liability of the corporation. Therefore, any investment which is relocated to a foreign country creates a loss, from a domestic perspective, and is efficient only if the growth in the return is higher than the loss. The current analysis adds into the mixture the externality cost. By exporting the capital the residency country lose the taxes but at the same time save the costs. The more efficient the investment competition between countries is, the tax rates will become closer and closer to the costs of the investment. In such situation, the residency country should only take into account the return from the investment, and not the tax portion of the income. in other words, the tax exemption is a subsidy, but the subsidy is granted in order to reduce domestic costs.

One should note that the first cross border externality problem does not influence the subsidy policy. If both countries already supply the public good or service, it will set the fees or taxes to the rate of the marginal cost of additional user, and the investor will anyhow be drown to the country in which the after tax return is maximized – the efficient outcome both from a national and worldwide perspective. In one country does not supply the public good, the investor will be drown to the other country, and will pay only the marginal cost. This is the efficient outcome for the capital exporting country (the residency country) and this is the source of the sup-optimal level of investment in public goods and services, but no subsidy is required to maximize the national welfare.

In this regard, even if a country has the incentive to subsidize capital export, there is no good reason to do so through the entity level taxation. In a separate paper I have broadly analyzed the structure of subsidy given by countries to capital export and capital import.[55] There are argued that even if a country has the incentive to subsidies capital export or import, for example due to a residency based tax system, or split tax system (in which the entity is taxed by the source country and the capital owner by the residency country) or for any other reason (such as positive spillovers) there is no good reason to do so through the entity level taxation. First, subsidizing the entity means that the country is also subsidizing foreign investors in the entity. Second, subsidizing the entity based on the entity's residency expose the country to extreme tax planning potential. A more efficient subsidy policy, I argued, will be structuring the subsidy in concern to the individual taxation (either at the level of the taxation of the profit distribution to the final individual capital owner or through the general individual income tax system). As a matter of positive law, countries indeed use many industry based subsidies policies to encourage industries with social importance (for example due to spillovers). Furthermore, tax agreements with specific foreign investors are a common

[55] **Restructuring Foreign Tax Credits**, *supra* 38.

instrument countries use to attract specific industries. Yet, if one comes to the conclusion that a general tax subsidy is the only efficient way to encourage capital import (though, as previously noted, such conclusion requires extreme and unrealistic assumptions concerning the costs of other subsidy mechanisms) it will require some modification to the desirable tax policy. Is such circumstances, a country who wish to attract capital should be willing to decrease the domestic tax rates on foreigners, as long as the foreign country is not imposing a worldwide taxation (if the foreign country tax all the foreign source income and allows FTC the capital importing country cannot attract capital by reducing the tax rates, and will have to do so by spending of regulation).

Before concluding, I wish to address one last concern. Much of the outrage toward the exemption system, as well as toward tax planning, concerns distribution justice inside to capital exporting country. My analysis, which gives no place to distributive justice in the corporate tax designing, and furthermore does not allow the capital exporting tax authorities any portion of the profit (including taxation of profit distribution) might be seen as "pro-capital owners" or just insensitive to distributional justice. This will be a wrong understanding of the analysis offered in this paper. I have shown that the corporate tax is not an income tax but rather a Pigovian tax, compensating for the externalities of limited liability, and reducing production the its efficient level. The immediate outcome is that the distributed profits, after the taxation in the source country, should be still subject to the individual taxation and seen as part of the individual's general income. put differently, countries can still enhance distributive justice, even in concern to profits from foreign investment, through the individual tax rate. The current use of the corporate taxation in order the create distribution justice in the capital exporting country, is just taking from the poor of the capital importing country and giving it to the poor of the capital exporting country. This, in my opinion, is not justice at all.

Conclusion and final remarks

The journey of this paper can be divided to three main parts.

The first part has challenged the common tax neutrality discourse. As presented, some have already challenged the neutrality theories, based on the unrealistic assumptions that countries should aim for worldwide efficiency, or that such efficiency can be achieved without worldwide cooperation. While those challenges are true, at least to some extent, they can be answered in several ways. One can argue that the neutrality theory is not aimed at all as a base for national policy making but is a pure academic analysis. Other can argue that the treaty system, which governs most of the international commerce, reduce those problem. Furthermore, it is clear that though countries take into account their own best interest most of the time, some conditions, such as moral reasoning or participation in international institutions can lead countries to take into account also the worldwide welfare (and indeed, there are fields, such as the struggle against global warming, in which countries some time are willing to adopt policies which are not in their best interest). In this framework, I wished to reveal a dipper flew of the neutrality theories. I argued that all the neutrality theories are base on the same assumption – the assumption of no cost. In other words, all the neutrality tax theories assume that the international market, if no tax incentives are in power, is efficient. This assumption is obviously wrong. Every market, including the international market, is efficient or inefficient in dependence of its ability to prevent market failures. Two main mechanisms are adopted in national markets to prevent market failures – spending policy, in cases of publicly provided goods and services, and regulation and tax incentives to prevent externalities. The outcome, I argued, is that there is no reason to assume that tax neutrality is efficient either from worldwide or national perspective. Furthermore, based on a previous research, I have argued that the corporate tax should not be analyzed as a redistribution mechanism, but rather as a solution to market failure (the externalities caused by limited liability). Therefore, there is no real

capability to decide what the desrible tax policy is without analyzing its relationship with other mechanisms to solve market failures. As an alternative to the neutrality theories, I offered to examine the desirability of international commerce policy based on the total outcome of the tax, regulation and public spending. From a worldwide perspective, an efficient policy would be one which reduced the cost of market failures while creating the lowest dead weight loss. Deciding what in the efficient mechanism to solve each market failure is depended on the administrative cost and dead weight cost of the mechanisms. If both regulation and tax can achieve the same outcome, choosing between them should only depend on their costs. Therefore, it is clear that one cannot describe any desirable tax policy without considering the regulation and spending policy.

On this foundation I have moved to the examination of the unique features of the international market. It is clear that all market failures of the domestic market exists in the international market (and therefore if anti-trust law for example is required in the domestic market to fix market failures it will be needed in international market). Yet, I have argues that the international market suffers from two unique markets failures, which I addressed as the first cross border externalities problem and the second cross border externalities problem.

In order to fully introduce the cross border externality problem, I have expended the tradition tax competition discourse to the broader scope of investment competition. I have shown in regard to all three mechanisms – tax, regulation and spending, the different ways countries can compete. I have further shown that the international investment competition creates, in regard to each of the three, gamming possibilities – the ability of investors to enjoy the benefits provided by a country (direct or indirect) without allocating the income to the country providing the benefit. Those building blocks led to the path for an efficient investment competition. The policy required for an efficient investment competition is one that allocates the income and the costs to the same place. Any dynamic of free riding, either of countries of

investors, which allows allocating cost to another country while capturing the profits, is bound to create an inefficient investment market. Any policy that sets the costs for the investor to the same rate as the costs of the investment will lead to an efficient international market, and attract investments to the place in which the profit is maximized and the cost are minimized.

This framework enabled to identify the cross border externality problems, which do not exist in domestic markets.

The first cross border externality problem concerned pure of partial public goods. We have seen that due to the investment competition countries can only collect, through any form of fees or taxes, the marginal cost of the public good. Therefore, all countries will have the incentive to under invest in publicly provided goods and services. In a domestic market, this well known problem of funding public goods is solved by central collection and due to the lack of ability of the tax payer to avoid the payment. Once no central government exists, no country has the invective to voluntarily fund the initial investment in the public good, if it will be compensated on for the marginal cost of it. We have seen that this problem, of sub-optimal funding of public goods and services, is unavoidable unless international cooperation is created. No country will have a unilateral incentive to provide public goods when other countries are not obliged to participate in the initial investment or to provide public goods themselves. Our additional concern was rather the tax, and specifically the corporate tax, are the suitable mechanisms to collect the marginal costs, or, through agreement on minimal tax rates, the initial costs. We have seen that generally, the answer is no. even if one assumes that the corporate tax is a good proxy for all the users of the public good, the only scenario in which the corporate tax is preferable to a direct fee based on use is if the administrative costs of the fee are extremely high. At the same time, such taxation would create significant dead weight loss, as probably many corporations do not use the public good. Those corporations will be drown away, even if otherwise it will be the most efficient investment. In addition, we have

seen that agreed minimal corporate tax is a partial solution to the problem, as it still does not create an efficient incentive for countries to invest in the public good – countries would prefer to attract the business ventures that do not have the need for the public good, and capture the profit from the minimal tax. A more efficient solution will be creating a bilateral, multilateral or international agreement concerning the spending of public goods, and concerning industrial taxation of the use of those public goods. Though the analysis do not come to the conclusion that in any case the most efficient mechanism to compensate for the initial investment or marginal cost of public goods is not through the tax system, it does portray the general picture. Generally speaking, the first cross border externality problem should be addressed though the international commerce agreements, and even if it is addressed through the tax system, it should not be done through the corporate tax system. Only in the rare cases where both condition (that the cost of direct fee is too high and the cost of commerce agreement is too high) it might be desirable to design to corporate tax to address this problem.

The second cross border externality problem concerned the indirect cost of conducting business. The indirect costs of conducting business include any cost that is created by the investor (through equity or debt) but are allocate to other stakeholders. In a domestic market, the country has the incentive to structure the regulation and to set the Pigovian taxes rates to reduce the ability of investors to allocate costs to third parties. The regulation and the Pigovian taxes are two mechanisms to achieve the same end goal, and to lead the investor to internalize the externalities created by her. In the international market the picture change. Once the costs are allocated to a third country, no country has the incentive to take into account those costs in the national utility function. The question therefore, from a national perspective, is only how profit can be captured from the foreign investment, versus how much profit can be captured from the domestic investment minus the cost. Put simply, each country has the incentive to

support externalities created by its domestic investors as long as they are allocated to a third country.

Just as with public goods, we have identified that if the externalities are depended on some activity of the business (such as pollution), the king's road to deal with it is by direct Pigovian taxes or regulation. Only in rare cases the corporate tax would be a better way to address the problem, when the administrative costs of the direct regulation of Pigovian tax are too high.

Yet, when we turned to view the corporate form as a mechanism of investment, we have seen that the corporate form inherently creates costs which are allocated to third parties. The limited liability of the corporation reduce the exposure of investors to risk, and allocate it to third parties, thus encouraging them to engage in higher risk level then the efficient level, including, in some cases, business ventures with negative utility. In a previous paper I have argued that this phenomenon cannot be solved by regulation, and the efficient way to address it is through the corporate tax, which should be seen as a Pigovian tax. In the context of international market, the question is who has the incentive to efficiently tax foreign investment. I have argued that both the residency based tax system, and what we usually address as the territorial (or source) based tax system are extremely inefficient. The first creates the most extreme cross border externality problem – it allocates all the cost to the foreign source country, while allowing the residency country to capture all the profit (either through the tax authorities or the investor). In such situation, countries will have powerful incentive to encourage capital export, even if the business venture has negative utility, because they do not take into account any of the costs. The territorial system, allowing taxation of the entity at source yet taxing the distributed profit at residency, suffers from the same problem. The combination of limited liability and profit distribution create by itself additional set of externalities, as it reduce the exposure of the investor and increase the allocation of risk to third parties. Though lower than

in the case of residency based taxation, this structure of international corporate taxation still creates an incentive for capital export, even if the utility of the foreign investment is lower than the domestic alternatives or even negative.

As an alternative, I offered to adopt the pure source based taxation, under which both the entity and the distributed profits would be taxed by the source country. I have shown that such a tax system will lead, from worldwide perspective, to a more efficient international market, as it will eliminate the cross border externality problem. I have further argued that the pure source tax system can help us redefine the concept of source. Source is the place to which the costs are allocated. In other words, source is the country in which the non-investor stakeholders that will not be compensated in case of bankruptcy reside. This understanding of sourcing rule has also significant contribution to the relationship between international tax policy and tax planning. The ability of a country to allocate costs to another country is no different than the ability of the investor, and just as in the case of the cross border externalities created by countries, the anti tax planning rules should be defined based of the place to which the costs are allocated.

The ending point of this paper is, to much extent, only the beginning. It offers a different and new theoretical framework to discuss international tax policy and investment competition. It challenges the current debate and wish to broaden its limits. By doing so, it also undermine the current policies and doctrine. Yet, much work is to be done before the concept of pure source based taxation can be translated to real policy. Many practical question that bother international tax scholars for many years are should be re-examined. The great task of designing a pure source based unilateral tax policy, as well as designing efficient tax model treaty, is to be addressed in future papers.