Available online at https://e-journal.unair.ac.id/TIJAB

TIJAB (The International Journal of Applied Business)

e-ISSN: 2599-0705

Vol. 9 No. 1, April 2025, pp. 84-101

Incidence of Corporate Income Tax (CIT) Exemption

Stanislas T. Médard D. C. Agossadou [a] [1]

[a] *Faculty of Economics and Management, University of Abomey-Calavi, Cotonou, Benin*

APA Citation:

Agossadou, S.T.M.D.C. (2025). Incidence of Corporate Income Tax (CIT) Exemption. *TIJAB (The International Journal of Applied Business), 9*(1), 84-101.

Submission Date: 05/06/2024

Revision Date: 21/09/2024

Acceptance Date: 23/10/2024

Published Date: 07/04/2025

Abstract

Background: Most governments offer tax incentives to new and existing businesses looking to invest and grow in a national or local economic environment (OECD, 2022). However, taxpaying companies do not necessarily bear the cost (Martin & Mayneris, 2022). Also, a Government or State that grants a tax exemption may not bear the cost of that exemption. Based on this point, the main question of this research is: what is the incidence of corporate income tax (CIT) exemption?

Objective: This paper analyses the incidence of corporate income tax (CIT) exemption.

Method: The paper applies both tabular or graphical methods of analysis and fixed-effectspanel models. An initial sample of two hypothetical identical firms is used. A second sampleof 20 indebted firms with taxable earnings in France is used for the period from 2017 to 2021.It is assumed that no cost or income is free.

Results: Corporate income tax (CIT) exemption results in the firm subject to CIT being the "real" loser and the firm exempt from CIT being the "real" winner; thetax incidence cancels out at government level.

Conclusion: Any tax incentive on investment, financing or company profits is simply a diversion of profits from the company not eligible for the tax incentive to the company eligiblefor the tax incentive, the two companies being identical and belonging to the same class of financial and operating risk.

Keywords: Earnings before taxes (EBT); effective tax rate (ETR); tax shield

1. Introduction

In order to boost their economies and reinvigorate the business sector, governments are offering tax incentives on investment, finance and corporate earnings. The increasing use of tax incentives (Klemm,

[1] Corresponding author.
E-mail address: meagoss@yahoo.fr

2010) reflects the political will of many governments to boost their economies (OECD, 2022) by attracting foreign capital and preventing the flight of national or local capital (Harrison & Rodriguez-Clare, 2010). Corporate income tax incentives include corporate income tax exemptions, corporate income tax reductions, loss carry-forwards, tax credits, and more; these incentives continue to expand in many countries (UNCTAD, 2022).

Admittedly, any tax incentive, in this case exemption from corporation tax (CIT), favors the firm eligible for this form of incentive. However, those who pay tax do not necessarily bear the cost (Martin & Mayneris, 2022). Similarly, the government that grants a tax exemption does not always carry the cost of this tax exemption. This is why it is necessary to distinguish between the statutory incidence, which determines which parties pay the tax or grant the tax exemption, and the fiscal incidence, that determines which parties bear the financial burden of the tax or tax exemption. Different theories on tax incentives explain why these incentives are proposed, each presenting a different perspective on their effectiveness and implications, without analysing their fiscal impact. These include the theories of capital arbitrage, neoclassical investment, ownership location and internalization, intangible assets and new economic geography, to name but five.

Capital arbitrage theory on tax incentives focuses on the strategic use of tax planning and jurisdictional differences to improve the financial performance of companies which, by takingadvantage of these tax incentives and optimising their capital structure, aim to gain a competitive advantage and maximise shareholder value (Van Parys, 2012). Neoclassical investment theory emphasises that tax incentives play an essential role in reducing the cost of capital, and can therefore encourage both reinvestment in existing businesses and new investment, thereby promoting economic growth (Munongo et al., 2017). The neoclassical theory of ownership, location and internalisation (OLI) provides a comprehensive framework for understanding the motivations behind FDI and the strategic decisions of multinational companies which, by taking into account the advantages of OLI, can make informed decisionsabout where and how to develop their international operations (Augier & Teece, 2020). The theory surrounding intangible assets and tax incentives revolves mainly around the way in which these assets affect investment decisions and economic measures (Chen & Dauchy, 2017). New Economic Geography (NEG) theory suggests that tax incentives are an importantpolicy tool that can shape economic geography by impacting on business location decisions, and if combined with other factors such as transport costs and market potential, can promote regional development and reduce economic disparities (Chen & Dauchy, 2017).

Most companies are subject to corporate income tax (CIT). CIT is an annual tax on all profitsmade in France by companies and other legal entities. It is characterized by the application of a flat rate to profits. Companies that operate on an individual basis or as partnerships are subjectto income tax if they have not opted for CIT. The standard rate of CIT will be 25% for all companies, for financial years commencing on or after 1 January 2022 (as a reminder: it was 28% and 26.5% for financial years commencing on or after 1 January 2020 and 1 January 2021respectively). In France, exemption from income tax ("IR") or corporation tax ("IS") is grantedto a company set up or taken over before 30 June 2024 that meets the following 5 conditions: a) *Carry on an industrial, commercial, craft or self-employed activity; b) Have their head office andactivities located in a rural regeneration zone (ZRR); c) Be subject to actual taxation; d) Have fewerthan 11 employees on permanent contracts (contract for an indefinite period) or fixed-term contract (contract for a minimum of 6 months); e) Have less than 50% of its capital held by other companies*. From 1 July 2024, a new zoning system, called France Ruralités Revitalisation zones (ZFRR), will be introduced to support areas in difficulty,replacing the ZRR zoning system.

Based on this point, the key research question is as follows: what is the incidence of corporate income tax (CIT) exemption? The literature on tax incidence uses models which indicate that changes in price or quantity allow the tax burden to be transferred between the various parties. The term price or quantity in these models results from sales to customers, remuneration of labor (wages), purchases from suppliers and remuneration of equity (net profit). However, there is nothing to indicate that the competing parties are in the same position and that all prices or quantities are flexible on the markets. In addition, it must be said that, in general, the Government or State seeks to maximize CIT revenues, unlike firms that seek to minimize CIT expenses (Alkausar et al., 2021). Overall, the aim of this research is to analyse the impact of the corporate income tax (CIT) exemption. In other words, the aim is to determine who

actually benefits or not from the CIT exemption. The stakeholders in this exemption are CIT-exempt firms, CIT-liable firms and State. The research questions are as follows:

RQ1: What is the incidence of CIT exemption at level of CIT-exempt firm?

RQ2: What is the incidence of CIT exemption at level of CIT-liable firm?

RQ3: What is the incidence of CIT exemption at level of State compared with CIT-exempt firm?

RQ4: What is the incidence of CIT exemption at level of State compared with CIT-liable firm?

This paper aims to analyse the incidence of CIT exemption, by answering those research questions. The paper is is structured as follows: Section 2 presents the literature review. Section 3 describes the methodology. Section 4 presents the results, and t. The final section.shows the conclusion.

2. Literature Review and Hyopetheses

This section includes a theoretical and empirical review, followed by the development of hypotheses.

2.1. *Theories and empirical review*

The various theories on tax incentives have shown how these incentives can decrease the tax burden (Zee et al., 2002), attract mobile foreign capital and cut the tax rate (Klemm, 2009)and affect foreign direct investment (Munongo et al., 2017), without trying to understand whoactually bore the cost of tax incentives. There are several theories behind the use of tax incentives, four even five of which are used in this research.

2.1.1 *Theory of Capital Arbitrage*

Theory of capital arbitrage involves arbitraging on capital returns by comparing the differentearnings from tax incentives on mobile foreign capital in order to choose the highest earnings from capital (Yelpaa, 1985). Theory of capital arbitrage of tax incentives relies more on tax savings than on financial savings in corporate financing, investment and earnings decisions. But, in contrast, tax incentives based on this theory can distort the rules for finding and raisingfinancing, allocating financing to investment and creating earnings within the firm. It is therefore necessary to design tax incentives that incorporate capital market efficiency and effectiveness.

2.1.2 *Neoclassical Investment Theory*

Neoclassical investment theory is concerned with the savings in the cost of capital resultingfrom tax incentives on capital (Jorgenson, 1963). Firms will accumulate capital if tax incentivescut the cost of capital (Van Parys & James, 2010). The presence of tax incentives encourages company managers to make financial decisions for tax purposes rather than on the basis of management objectives. The neoclassical investment theory of tax incentives reduces the costof investment capital, which may lead some companies to make unforeseen investments.

2.1.3 *Neoclassical Theory of Ownership, Location and Internalisation (OLI)*

OLI theory was originally known as the "eclectic investment paradigm" (Dunning, 1988). Neoclassical theory of ownership, location and internalisation (OLI) studies the factors explaining foreign direct investment (FDI) by firms. The neoclassical OLI theory of tax incentives focuses more on tax advantages arising from the Location (L) aspect of firms' financial and operating activities. Thus, tax competition has arisen between countries that offerlow effective corporate tax rates in order to attract

FDI. Tax incentives lower the tax rate and increase FDI (Tavares-Lehmann et al., 2012) by influencing the choices of multinational companies (Devereux et al., 2007) and creating value (Hirsch, 1976).

2.1.4 *Intangible Assets Theory*

Intangible asset theory is concerned with the growth of immaterial assets that are essential to the value and functioning of modern business operations, such as intellectual property rights, goodwill, trademarks, patents, software and know-how. Intangible asset theory of tax incentives is concerned with the tax benefits that can be derived from business investment in intangible assets. Intangible investments are becoming more and more costly and remain todaythe crucial factor of business performance and social success. This is why governments offer tax incentive policies to encourage companies to invest in intangible assets. Corporate production capacity has depended more on the size of intangible assets than tangible assets in some years' time. Within large companies, the growth rate of intangible assets is evolving faster(Hall, 2001) than that of tangible assets (Zingales, 2000). Intangible assets have become the key to competitive success (Edmans, 2011) and the main determinants of company value (Dischinger & Riedel, 2011).

2.1.5 *Theory of New Economic Geography (NEG)*

Theory of new economic geography (NEG) seeks to optimise the geographical, spatial and temporal distribution of economic activities. Focused on tax incentives, NEG theory encourages companies to make the most of the tax advantages arising from locating in a particular region or area. Moreover, NEG provides a framework to analyse how these tax incentives interact with other factors such as transport costs and market size (Gaspar, 2020). These tax incentives can lead to the creation or development of economic regions or zones. This dynamic can lead to a more balanced economic development across regions, mitigating the concentration of economic activities in already developed areas (OECD, 2001). These incentives, when combined with other factors like transport costs and market potential, can promote regional development and reduce economic disparities (Gaspar, 2020). Yet,But tax incentives are limited, because in China's development zones, agglomeration rents can replace them (Xi & Ding, 2023).

2.2. *Developing research hypotheses*

On the whole, most of the theories of tax incentives reviewed have highlighted the advantages & disadvantages of these incentives without seeking to understand whether the governments that offer tax incentives actually bear the cost of this exemption. This research onthe incidence of corporate income tax exemption aims to determine the 'real' gainer or loser of this exemption, by considering the stakeholders in the said exemption. Thus, we consider twoidentical and same financing risk class firms, with the only difference that one is subject to CITand the other is exempt from CIT, not forgetting the State providing the CIT exemption, in order to develop the research hypotheses. Thus, the first two hypotheses are as follows:

H1: There is a positive relationship between the incidence of CIT exemption at level ofCIT-exempt firm and the tax-free rate due to CIT exemption.

H2: There is a positive relationship between the incidence of CIT exemption atgovernment level and the tax-free rate due to CIT exemption.

However, after attracting foreign investors to the country and preventing local investors from fleeing the country through CIT exemption, the State will be faced with a budget deficit.To reduce this deficit, the State would be obliged to transfer the entire deficit due to CIT exemption, by arbitration, to firms not eligible for CIT exemption, by overtaxing them. The other two hypotheses are as follows:

H3: There is a negative relationship between the incidence of CIT exemption at levelof CIT-liable firm and the surtax rate due to CIT exemption.

H4: There is a negative relationship between the incidence of CIT exemption atgovernment level and the surtax rate due to CIT exemption.

3. Data and Method

Any relevant and valid research must indicate its epistemological posture (Thietart, 2014). The present research adopts an objectivist epistemology and a positivist ontology, through a quantitative analysis approach and a hypothetico-deductive logic of reasoning (Belkacem, 2023). This section includes design, data, and modelling.

3.1. *Research design*

This research is based on a pair of firms (E_T; E_F) of the same industrial and commercial riskclass, identical in all respects except that one (E_T) is subject to CIT and the other (E_F) is exempt,and which have an investment project lasting one year. Table 1 presents the data (in billions of XOF).

Table 1. Project for investment by E_T and E_F

Elements	Firm ET	Firm EF
Equity S	50	50
Debt D	50	50
Investment I	100	100
Operating revenue (DR1)	326	326
Operating expenses (DD1)	210	210
Minimum cash flow required or EBITDA[1] (DR1-DD1)	116	116
Reenactment of		
* Equity capital S (to be recovered)	50	50
* Debt capital D (to be repaid)	50	50
Depreciation allowance (DA) at rate t = 100%)	100	100
EBIT (earnings before interest and taxes)	16	16
* Interest (of debt D at rate r = 8%)	4	4
EBT (earnings before taxes)	12	12
* Corporation income tax (CIT) at rate □ = 50%	6	0

Source: Cobbaut (1997)

According to Table 1, the two identical firms (**E_T**; **E_F**) have the same investment equal to 100 currency units (CU) and the same financing structure which is 50 CU of equity and 50 CUof debt. The two identical firms ((**E_T**; **E_F**) have the same Earnings Before Taxes (EBT) equal to 12 CU and pay different corporate income taxes (CIT), i.e. 6 CU for **E_T** firm and 0 CU for **E_F** firm.

3.2. *Sampling and data*

In the domestic economy, exemption from corporate income tax (CIT) is granted by the public authorities (central or local) to firms that meet the required conditions. The parent population for this research includes not only the Government or State and CIT-exempt firms,but also firms subject to CIT.

[1] EBITDA stands for 'Earnings Before Interest, Taxes, Depreciation and Amortization'.

We have accessed and downloaded the social accounts of the companies on the *Pappers*[2] website. Companies in the gas industry with between 20 and 500 employees are included in the study period, which runs from 2013 to 2022. Excluded from thesample are industries for which information is missing and years for which information is not available. Also excluded from the sample are industrial companies with negative or zero "Earnings Before Tax" (EBT). For convenience, non-indebted firms are excluded from the sample and indebted firms are included because it is more convenient to determine the identicalness of an indebted firm than to determine that of a non-indebted firm. The research period is 2017 to 2021, and the sample consists of 20 pairs of identical firms for a total of 100 firm-year observations.

3.3. *Modelling*

The variable to be explained is the incidence of CIT exemption and named by INCID. This dependent variable, though, was analysed at three levels. The first level is that of firms subject to CIT, where the variable is designated INCIDT. The second level is that of firms exempt from CIT, where the variable is designated by INCIDF. The last level is that of the Government or State, where the variable is designated by INCIDG. This research investigates the relationshipbetween earnings before tax, denoted by EBT and the incidence of CIT exemption, denoted by INCID. More specifically, the model assumes that INCID is a function of EBT. Control variables for the three levels of analysis are also included in the model.

At the first level of analysis, the control variables are corporate income tax for the firm subject to tax and denoted by CITT and the surtax rate denoted by SURTR. The model 1 for ataxable firm (i) at time (t) is as follows:

$$INCIDT_{i,t} = \alpha_0 + \alpha_1 EBT_{i,t} + \alpha_2 CITT_{i,t} + \alpha_3 SURTR_{i,t} + \varepsilon_{it} \quad (1)$$

At the second level of analysis, the control variables are corporate income tax for the tax- exempt firm denoted by CITF and the tax exemption rate denoted by SUBTR. The model 2 fora tax-exempt firm i at time t is as follows:

$$INCIDF_{i,t} = \beta_0 + \beta_1 EBT_{i,t} + \beta_2 CITF_{i,t} + \beta_3 SUBTR_{i,t} + \varepsilon_{it} \quad (2)$$

At the third level of analysis, the control variables are on the Government's or State's side towards the taxed firm, the neutral tax on corporate income, denoted by CITG and the surtax rate, denoted by SURTR; and on the Government's or State's side towards the tax-exempt firm,the neutral tax on corporate income, denoted by CITG and the tax exemption rate, denoted bySUBTR.

The model 3 at Government or State level for a taxed firm (i) at time (t) is as follows:

$$INCIDG_{i,t} = \gamma_0 + \gamma_1 EBT_{i,t} + \gamma_2 CITG_{i,t} + \gamma_3 SURTR_{i,t} + \varepsilon_{it} \quad (3)$$

The model 4 at Government or State level for a tax-exempt firm i at time t is as follows:

$$INCIDG_{i,t} = \theta_0 + \theta_1 EBT_{i,t} + \theta_2 CITG_{i,t} + \theta_3 SUBTR_{i,t} + \varepsilon_{it} \quad (4)$$

In all, we have four models with 9 variables, including 3 dependent variables and 6 independent variables.

3.3.1 *Measuring variables*

We have chosen the effective tax rate (ETR) as the measure of the incidence of corporate income tax exemption. Thus, the effective tax rate of the firm subject to tax is referred to as ETRT, that of the tax-

[2] *Papers* is a French website providing legal and financial information on firms, from statutes to annual accounts: https://www.pappers.fr/

exempt firm is referred to as ETRF and that of the Government or State,also known as the effective legal tax rate, is referred to as ELTR.

3.3.2 *Main effects*

Debt interest forms the last point to obtain corporate income tax (CIT) from Earnings BeforeTax (EBT). From this point onwards, the CIT differential is equal to the sum in absolute valueof the zero-rating and the surtax due to CIT exemption. Consequently, the tax exemption rate (SUBTR) has a negative effect on effective tax rate (ETR) or on effective legal tax rate (ELTR)and the surtax rate (SURTR) has a positive effect on effective tax rate (ETR) or on effective legal tax rate (ELTR). The surtax rate (SURTR) characterizes the ***tax rise*** due to CIT exemptionand the tax exemption rate (SUBTR) characterizes the ***tax shield*** due to CIT exemption.

3.3.3 *Control variables*

The control variables are, for the first level of analysis: corporate income tax for tax liable firms (CITT) and the surtax rate (SURTR), for the second level of analysis: corporate incometax for tax exempt firms (CITF) and the tax exemption rate (SUBTR) and for the third level ofanalysis: neutral corporate income tax (CITG).

4. **Results**

There are theoretical and empirical results.

4.1 *Theoretical results*

Table 2 shows the results of computing CIT not only at the level of the two identical firms, but also at State level.

Table 2. Computing CIT at all three levels of analysis

Elements	Firm E_T	Firm E_F	State
TLTR	50%	50%	50%
EBITDA	116	116	
DA	100	100	
EBIT	16	16	
INTEREST	4	4	
EBT	12	12	
CIT	6	-	6
CIT Differential	±6		
CIT Differential Rate	±25,00%		
ETR	50,00%	0,00%	25,00%

Source*:* Personal computing 2024.

According to Table 2, the theoretical legal tax rate (**TLTR**) is **50%** compared with the effective legal tax rate (**ELTR**) of **25%**, if we take the common tax base EBT. In these conditions, the effective tax rate for the CIT-liable firm (**ETRT**) is **50%** compared with an effective tax rate of **0%** for the CIT-exempt firm (**ETRF**) and the CIT differential rate is **±25%**. CIT paid by the CIT-liable firm amounted to **XOF 6 billion** compared with XOF 0 for the CIT-exempt firm, i.e. a total of **XOF 6 billion** in revenue from CIT on the State's behalf.

Given that there are no free costs or revenues, the total revenues generated by CIT on behalf of the State are the same, both before and after the CIT exemption; since these are internal operations for all the stakeholders, direct and indirect in this CIT exemption. An in-depth analysis of the CIT exemption in computing CIT has highlighted the tax incidence.

4.1.1 *Situation before CIT exemption*

For reasons of tax fairness, identical firms pay the same amount of CIT, to ensure tax neutrality. Table 3 shows the analysis of CIT exemption in computing CIT.

According to table 3, there is a "***Before CIT Exemption***" situation in which the legal tax rate (**LTR**) is **25%** compared with **50%** in table 2, CIT paid by each identical firm from the EBT tax base is **XOF 6 billion** and CIT revenue on behalf of the State remains unchanged at **XOF 12 billion**. This situation has effectively distinguished the theoretical legal tax rate (**TLTR**), which is **50%**, from the effective legal tax rate (**ELTR**), which is **25%**.

This CIT exemption is analyzed in two phases: one phase for the effective tax shield and one phase for the effective tax rise.

4.1.2 *Analysis of effective tax shield*

According to Table 3, analysis of the first phase of the CIT exemption in computing CIT reveals that, for the E_F firm exempt from CIT, the effective legal tax rate (**ELTR**) is **25%**, its effective tax rate (**ETRF**) is **0%**, its effective tax shield (**SUBTAX**) amounts to **XOF -3 billion** for a rate (**SUBTR**) of **-25%** and its corporate income tax (**CITF**) amounts to **XOF 0**.

Table 3. Analysis of CIT exemption in computing CIT

			Firm E_T	Firm E_F	State
Before CIT	Exemption	ELTR	25,00%	25,00%	25,00%
		EBT	12	12	24
		CITG	3,00	3,00	6
CIT Exemption	Phase ½	SUBTR		-25,00%	-25,00%
		SUBTAX		-3,00	-3,00
		ETRF		0,00%	
		CITF/CITG		-	3,00
		Tax Shield Effect		Positive	Negative
	Phase2/2	SURTR	25,00%		25,00%
		SURTAX	3,00		3,00
		ETRT	50,00%		
		CITT/CITG	6		6
		Tax Rise Effect	Negative		Positive
After CIT	Exemption	ETR	50,00%	0,00%	25,00%
		CIT	6	-	6
Analysis of		Tax Gap	3,00	- 3,00	-
		Effect	Negative	Positive	Nil
		Tax Differential		±6	
		Rate Spread	25,00%	-25,00%	
		Effect	Negative	Positive	
		Rate Differential		±50,00%	

Source: Personal computing (2024)

As part of its policy of stimulating economic growth and encouraging firms to develop their activities, the State decided to exempt firms from corporation tax (CIT). This CIT exemption reduces

the CIT charge by providing a tax shield at the level of the eligible firm, i.e. the firm exempt from CIT. This CIT exemption also creates a tax loss at the level of the State, which finds itself in a temporary budgetary imbalance; the tax effect remains unchanged at the level of the firm subject to CIT for the time being.

In short, the CIT exemption provides a tax gain for the firm exempt from CIT, and a tax loss for the State. Here, a first prediction can be written as follows:

Prediction 1: "CIT exemption initially arbitrarily creates an effective tax shield (SUBTAX) to benefit CIT-exempt firm and to the detriment of the State".

This tax shield is equal to the product of the effective legal tax rate (ELTR) and the earnings before tax (EBT), i.e. **SUBTAX** = **ELTR** × **EBT**.

4.1.3 *Analysis of effective tax rise*

According to Table 3, analysis of the first phase of the CIT exemption in computing CIT reveals that, for the ET firm subject to CIT, the effective legal tax rate (**ELTR**) is **25%**, its effective tax rate (**ETRT**) is 50%, its tax rise (**SURTAX**) amounts to **XOF 3 billion** for a rate (SURTR) of **25%** and its corporate income tax (**CITT**) amounts to **XOF 6 billion**.

The government's public investment policy was hit by a lack of financial resources due to a temporary budgetary imbalance caused by the granting of CIT exemption to the firm EF exempt from CIT. In order to restore the budget balance, the State had to unintentionally overtax the firm ET subject to CIT, by transferring the entire cost resulting from the initial CIT exemption to the said firm. The result is therefore a tax gain for the State, which has just balanced its budget, and a tax loss for the CIT-liable firm; the effect of the surtax remains unchanged for the EF firm exempt from CIT. In short, the CIT exemption offers a tax loss to the firm ET subject to CIT and a tax gain to the State. Here, a second prediction can be stated as follows:

Prediction 2: "*CIT exemption arbitrarily creates, in a second phase, an effective tax rise (SURTAX) to the detriment of the CIT-liable firm by transferring in full the capital loss on tax receipts previously recognized at State level as a result of this CIT exemption*".

The effective tax rise (SURTAX) and the effective tax shield (SUBTAX) are the same absolute value.

4.1.4 *Tax differential analysis*

According to Table 3, analysis of the CIT exemption reveals a **tax differential** (**TAXDIF**)resulting from the tax shield (SUBTAX) enjoyed by the CIT-exempt firm and the tax rise (SURTAX) suffered to the CIT-liable firm, amounting to **XOF ±6 billion** for a rate of **±25%** on the EBT tax base; the effect remains zero at the level of the State. In sum, the CIT exemptiongenerates a tax shield at the level of the $\mathbf{E_F}$ firm exempt from CIT and a tax rise at the level of the $\mathbf{E_T}$ firm subject to CIT; the tax effect is cancelled out at the level of the State. Here, a thirdprediction can be given as follows:

Prediction 3: *"CIT exemption initially arbitrarily creates a tax differential (TAXDIF) between CIT-exempt firm and CIT-liable firm".*

This tax differential is either double the tax shield or double the tax rise.

4.1.5 *The "real" losing or winning analysis*

By analyzing the incidence of CIT exemption, we can consider three cases where both firmsare subject to or exempt from CIT.

4.1.5.1 *Case 1 where one firm is subject to CIT and the other is exempt from CIT*

For tax policy reasons aimed at supporting organizations that prioritize the public benefit over generating profits, the State decides to exempt the **E_F** firm from CIT. The CIT exemptionprocess takes place in two phases. In the first phase, the State offers a tax shield to the **E_F** firmexempt from CIT, amounting to **XOF 3 billion**, by reducing its tax revenue from **XOF 6 billion** to **XOF 3 billion**, thereby creating a temporary budgetary imbalance. In a second phase, as a result of its public investment policy (PIP), the State was faced with a shortage of financial resources and was involuntarily forced to transfer the entire burden of thisCIT exemption to the firm **E_T** subject to CIT, after arbitration between this firm and the State,until it reached equilibrium for the same amount of **XOF 3 billion**. The tax differential betweenthe **E_T** firm subject to CIT and the **E_F** firm exempt from CIT amounts to **XOF 6 billion**.

In conclusion, the tax incidence is zero for the State in relation to its policy of exempting firms from CIT. The "**real**" **loser** of this CIT exemption is "***the E_T firm subject to CIT***" and the "**real**" **winner** is "***the E_F firm exempt from CIT***".

4.1.5.2 *Case 2 where two firms are subject to CIT*

If the two firms are subject to CIT, the first leg of CIT exemption process will not take placeuntil further notice. However, the second leg of this process is proceeding normally and each CIT-liable firm will be faced with a tax rise (SURTAX) in terms of CIT for the benefit of the State. In conclusion, the "**real**" **loser** of this CIT exemption is "***the E_T firm subject to CIT***" andthe "**real**" **winner** is the ***State***. This result does not exist or is very rare in reality because, in agiven national economy, there are always both CIT-liable firms and CIT-exempt firms.

4.1.5.3 *Case 3 where two firms are exempt from CIT*

In the case of two firms are exempt from CIT, the first leg of CIT exemption process proceeds normally and each firm benefits from a tax shield (SUBTAX) in terms of CIT to thedetriment of the State. But the second leg of this process will not take place until further notice.In conclusion, the "**real**" **loser** of this CIT exemption is the ***State*** and the "**real**" **winner** is "***theE_F firm exempt from CIT***". It should also be said that this case does not exist or is very rare inreality because, in a given national economy, there are always both CIT-liable firms and CIT-exempt firms. Table 4 provides a summary of the three cases examined.

Table 4. Summary of incidence of CIT exemption

Case	« Real » Loser	« Real » Winner	Observation
1	the E_T firm	the E_F firm	Close to reality
2	the E_T firm	State	Far from reality
3	State	the E_F firm	Far from reality

Source: Personal analysis 2024

4.1.6 *Situation after CIT exemption*

According to Table 3, there is an "***After CIT Exemption***" situation in which the rate of **50%**is the theoretical legal tax rate (**TLTR**) or the effective tax rate of the firm subject to CIT (**ETRT**) and constitutes the maximum tax rate (**MAXTR**). The rate of **0%** is the effective taxrate of the firm exempt from CIT (**ETRF**) and is the zero corporate income tax rate (**ZCITR**).The rate of **25%** is the effective legal tax rate (**ELTR**) and represents the average effective taxrate (**AETR**). CIT amounts to **XOF 6 billion** for the **E_T** firm subject to CIT and **XOF 0** for the**E_F** firm exempt from CIT; CIT revenue on behalf of the State remains unchanged at **XOF 6 billion**. Now, a fourth prediction can be put as follows:

Prediction 4*: "CIT exemption arbitrarily modifies tax rates by setting an effective tax rate for the CIT-liable firm, an effective tax rate for the CIT-exempt firm, and a legal tax rate that is the average of the two effective tax rates".*

4.2 *Empirical results*

We use Fisher and Hausman tests, model estimation results and descriptive analysis.

4.2.1 *Fisher Test*

The hypotheses of the test are as follows:

H0: No fixed effects

H1: Presence of fixed effects

Under hypothesis H0, the calculated Fischer statistic follows a Fischer distribution. The hypothesis of the presence of fixed effects will not be rejected when the calculated statistic is greater than the critical value read from the Fisher table. The test results are as follows.

Table 5. Summary of Fisher test results

Equation of ETRT		
	Statistic	Prob.
Fisher test	5.838915	0.0000
No test because ETRF=0% for CIT-exempt firm		
Equation of ELTR for CIT-liable firms		
	Statistic	Prob.
Fisher test	5.838915	0.0000
Equation of ELTR for CIT-exempt firms		
	Statistic	Prob.
Fisher test	5.838915	0.0000

Source: Test Fisher Eviews 13.

For three endogenous variables, the effective tax rate for CIT-liable (ETRT), the effective tax rate for CIT-exempt firms (ETRF) and the effective legal tax rate (ELTR), the p-values ofthe Fisher significance test are less than 1%. So the *H0* hypothesis is rejected and the fixed-effects model is more fitting.

4.2.2 *Hausman Test*

The Hausman test is used to test whether or not there is a correlation between the specific effects and the explanatory variables in the model. This makes it possible to choose between the fixed-effects model and the random-effects model, (Kpodar, 2007). The Hausman test is based on the following hypotheses:

H0: There is no systematic difference in coefficients

H1: There is a difference between the coefficients

The results of the post estimation Hausman test are as follows.

Table 6. Summary of Hausman test results

Equation of ETRT			
ETRT	Coefficients		
	Fixed effects (b)	Random effects (B)	Difference (b-B)
EBT	0,000000	0,000000	0,000000
CITT	0,000000	0,000000	0,000000
SURTR	2,000000	2,000000	0,000000
	Chi-Sq. Statistic	Prob.	
	372.280711	0.0000	
No test because ETRF=0% for CIT-exempt firm			
Equation of ELTR for CIT-liable firms			
ELTR	Coefficients		
	Fixed effects (b)	Random effects (B)	Difference (b-B)
EBT	0,000000	0,000000	0,000000
CITG	0,000000	0,000000	0,000000
SURTR	1,000000	1,000000	0,000000
	Chi-Sq. Statistic	Prob.	
	372.280711	0.0000	
Equation of ELTR for CIT-exempt firms			
ELTR	Coefficients		
	Fixed effects (b)	Random effects (B)	Difference (b-B)
EBT	0,000000	0,000000	0,000000
CITG	0,000000	0,000000	0,000000
SUBTR	-1,000000	-1,000000	0,000000
	Chi-Sq. Statistic	Prob.	
	372.280711	0.0000	

Source: Test Hausman Eviews 13

The probability of the test is less than 1%. The fixed-effects model is therefore preferable to the random-effects model.

4.2.3 *ETRT estimation results and interpretation*

Estimation of the factors determining ETRT in model 1 gives the results in Table 7. The R^2 *value* below in table 7 indicates that 100 per cent of the total variability in the effective taxrate of CIT-liable firms (ETRT) in France was explained respectively by the variables in model 1.

Table 7. Regression result - ETRT Model 1.

Dependent Variable: ETRT		
Variable	Coefficient	Prob.
EBT	-6.60E-23	0.0000***
CITT	2.00E-22	0.0000***
SURTR	2.000000	0.0000***
C	2.55E-15	0.0000***
F-statistic	1.14E+29	
Prob(F-statistic)	0.000000***	
R-squared	1.000000	
Observations	100	

Source: Computed from Eviews 13 statistics.
Note: *** , ** and * indicate that significant at 1 , 5 and 10 per cent.

Equation for variable **ETRT** is:

ETRT = -6.59829788653e-23*EBT + 2.00434218104e-22*CITT + 2*SURTR + 2.55403886952e-15 + [CX=F]

The results of the estimations indicate that the most attractive factors for ETRT in France are corporate income tax of CIT-liable firms and the surtax rate linked to CIT exemption. Thesurtax rate is positively associated with the effective tax rate of firms subject to tax, with a coefficient equal to 2.

There is therefore a positive relationship between the surtax rate and theeffective tax rate (ETRT). This means that, holding the other explanatory variables constant, a1 per cent increase in the surtax rate (which is symmetrical to the exemption tax rate) leads toa 2 per cent increase in the effective tax rate (ETRT).

4.2.4 *ETRF for CIT-exempt firms*

CIT-exempt firms have an effective tax rate of zero (**ETRF= 0%**). It is not a matter of estimating and interpreting a zero rate. There is therefore no estimate of ETRF for CIT-exemptfirms in Model 2.

4.2.5 *ELTR estimation results and interpretation for CIT-liable firms*

Estimation of the factors determining ELTR in model 3 gives the results in Table 8. The R^2 *value* below in table 8 indicates that 100 per cent of the total variability in the effective legal tax rate (ELTR) of CIT-liable firms at Government or State level in France was explainedrespectively by the variables in model 3.

Table 8. Regression result – ELTR Model 3

Dependent Variable: ELTR		
Variable	Coefficient	Prob.
EBT	-3.30E-23	0.0000***
CITG	2.00E-22	0.0000***
SURTR	1.000000	0.0000***
C	1.28E-15	0.0000***
F-statistic	1.14E+29	
Prob(F-statistic)	0.000000***	
R-squared	1.000000	
Observations	100	

Source: Computed from Eviews 13 statistics.
Note: *** , ** and * indicate that significant at 1 , 5 and 10 per cent.

Equation of variable **ELTR** of CIT-liable firms at Government or State level is:

ELTR = -3.29914894327e-23*EBT + 2.00434218104e-22*CITG + 1*SURTR + 1.27701943476e-15 + [CX=F]

The results of the estimations indicate that the most attractive factors for ELTR of CIT-liablefirms at Government or State level in France, are the neutral corporate income tax and the surtax rate linked to CIT exemption. The surtax rate is positively associated with the effectivelegal tax rate of Government or State, with a coefficient equal to 1. There is therefore a positiverelationship between the surtax rate and the effective legal tax rate (ELTR). This means that, holding the other explanatory variables constant, a 1 per cent increase in the surtax rate (whichis symmetrical to the exemption tax rate) leads to a 1 per cent increase in the effective legal taxrate (ELTR).

4.2.6 *ELTR estimation results and interpretation for CIT-exempt firms*

Estimation of the factors determining ELTR in model 4 gives the results in Table 9. The R^2 *value* below in table 9 indicates that 100 per cent of the total variability in the effective legal tax rate (ELTR) of CIT-exempt firms at Government or State level in France, was explained respectively by the variables in model 4.

Table 9. Regression result - ELTR Model 4

Dependent Variable: ELTR		
Variable	Coefficient	Prob.
EBT	-3.30E-23	0.0000***
CITG	2.00E-22	0.0000***
SUBTR	-1.000000	0.0000***
C	1.28E-15	0.0000***
F-statistic	1.14E+29	
Prob(F-statistic)	0.000000***	
R-squared	1.000000	
Observations	100	

Source: Computed from Eviews 13 statistics.
Note: *** , ** and * indicate that significant at 1 , 5 and 10 per cent.

Equation of variable **ELTR** of CIT-exempt firms at Government or State level is:

ELTR = -3.29914894327e-23*EBT + 2.00434218104e-22*CITG - 1*SUBTR +1.27701943476e-15 + [CX=F]

The results of the estimations indicate that the most attractive factor for ELTR of CIT-exempt firms at Government or State level in France, is the neutral corporate income tax.The sub tax rate is negatively associated with the effective legal tax rate of Government or State,with a coefficient equal to minus 1. There is therefore a negative relationship between the sub tax rate and the effective legal tax rate (ELTR). This means that, holding the other explanatory variables constant, a 1 per cent increase in the sub tax rate (which is the exemptiontax rate) leads to a 1 per cent decrease in the effective legal tax rate (ELTR).

4.2.7 *Other statistical analyses*

Descriptive statistics for the variables ETRT(TLTR), ELTR, ETRF, SURTR and SUBTRare presented in Table 10.

Table 10. Descriptive statistics for variables ETRT, ELTR, ETRF, SURTR and SUBTR.

	ETRT(TLTR)	ELTR	ETRF	SURTR	SUBTR
Mean	0.284497	0.142249	0.000000	0.142249	-0.142249
Median	0.277777	0.138889	0.000000	0.138889	-0.138889
Maximum	0.476526	0.238263	0.000000	0.238263	-0.065414
Minimum	0.130828	0.065414	0.000000	0.065414	-0.238263
Std. Dev.	0.054708	0.027354	0.000000	0.027354	0.027354
Observations	100	100	100	100	100

Source: Eviews 13 Statistical results report.

According to Table 10, the results testify that, for CIT-liable firms in France, the mean **ETRT** or **TLTR** is at **28.45%**, while the mean **ELTR** is **14.22%**. Moreover, the average **ETRF** is found to be **0%**. Furthermore, the average **SURTR** is that of **14.22%** and the mean **SUBTR** is minus **14.22%**. It should be noted that **TLTR** of **28.45%** is close to reality for corporate income taxation in France, since the mean theoretical legal tax rates (**TLTR**) for theperiod from 2017 to 2021 in this country are respectively 31%, 31%, 28%, 28% and 26.5%, i.e. an average of **28.77%**.

Descriptive statistics for the variables CITT, CITG and CITF are presented in Table 11.

Table 11. Descriptive statistics for variables CITT, CITG and CITF

	CITT	CITG	CITF
Mean	3586925.	1793462.	0.000000
Median	417413.0	208706.5	0.000000
Maximum	48306468	24153234	0.000000
Minimum	11251.00	5625.500	0.000000
Std. Dev.	8260171.	4130085.	0.000000
Observations	100	100	100

Source: Eviews 13 Statistical results report.

As per Table 11, the results testify that, for CIT-liable in France, the mean **CITT** is **€ 3 586 925**, while the mean neutral tax **CITG** is **€ 1 793 462**. Moreover, the average **CITF** is found to be **€ 0** for CIT-exempt firms in France.

The curves for ETRT, ELTR, ETRF, SURTR and SUBTR are shown in Figure 1.

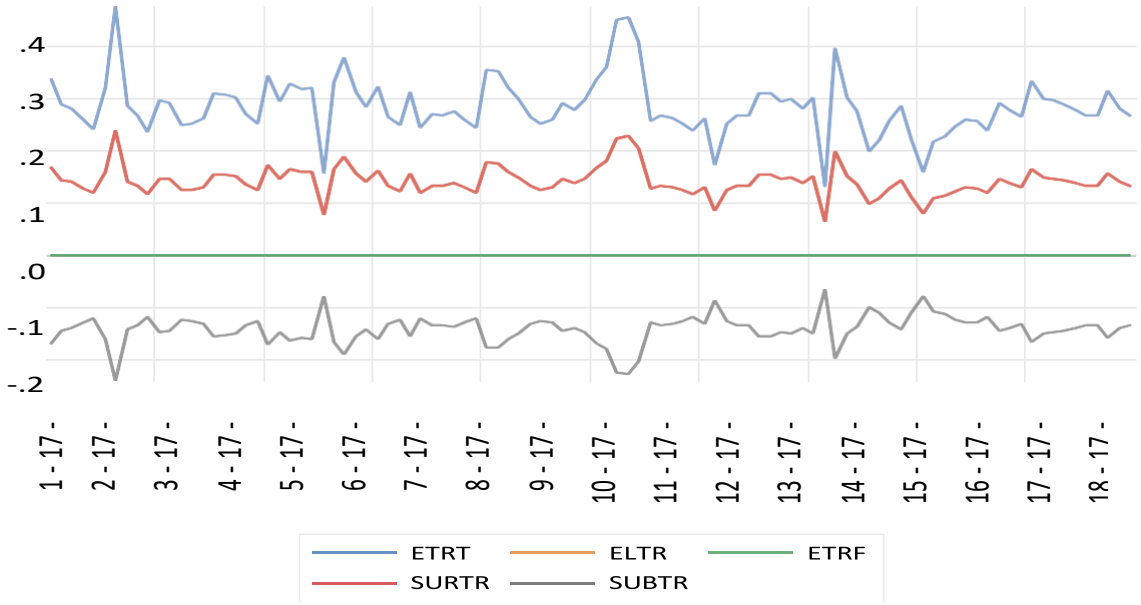

Figure 1: Effective Tax Rate Graphs
Source: Personal computing 2024.

The curves for variables CITT, CITG and CITF are shown in Figure 2.

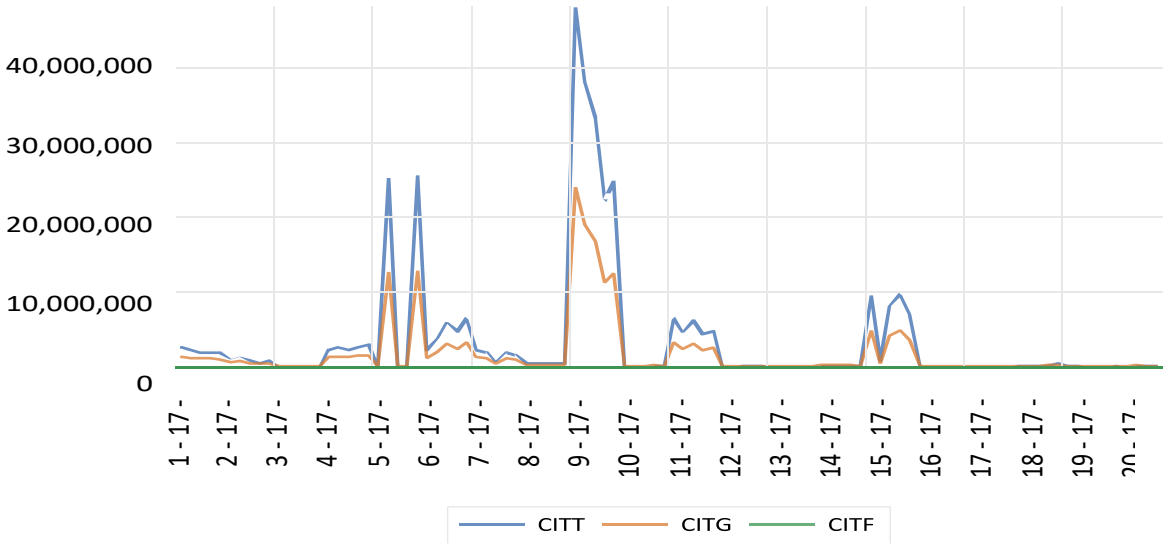

Figure 2: Effective Tax Graphs

Source: Personal computing 2024.

The results reinforce the irrelevance theory of the CIT exemption (Faisol & Hakim, 2021) and contradict some previous research findings that the CIT exemption increases customer consumption (Liu, 2023) and tax exemption, which is a form of tax reduction, increases tax revenue (Tumanyants, 2018). In fact, as a result of the CIT exemption, the consumption of customers of CIT-exempt firms increases, while that of customers of CIT-liable firms decreasesin the same proportion, so that total consumption remains unchanged.

5. Conclusions

All research hypotheses are confirmed, subject to inflation being taken into account. CIT exemption has no tax incidence at the level of the Government or State granting it, but has a negative incidence on a CIT-liable firm and a positive incidence on a CIT-exempt firm. An analysis of the progressivity or regressivity of African common and incentive tax systems, reveals that many countries still use a mechanism that has been abandoned by most developedcountries: the corporate income tax exemption (Dama et al., 2024). This benefits the most profitable companies, sacrifices significant tax revenue and does not allow governments to target the investments they want. Yet, this previously lost tax revenueis recovered from firms that are not eligible for tax incentives. It is therefore clear that any tax incentive on investment, financing or corporate earnings issimply a diversion of earnings from the firm not eligible for the tax incentive to the firm eligiblefor the tax incentive, the two firms being identical and belonging to the same financing risk class. Governments that have fallen victim to the tax illusion must disabuse themselves of the illusion and carry out tax reforms in order to do justice and repair the damage.

References

Alkausar, B., Soemarsono, N., & Pangesti, G. (2021). A Bibliometric Analysis of Tax Aggressiveness Through Tax Evasion Issues in Last Decade. *The International Journal of Applied Business*, 5(2), 193–202.

Augier, M., & Teece, D. J. (2020). *The Palgrave Encyclopedia of Strategic Management*. Palgrave Macmillan UK.

Belkacem, M. (2023). Writing and publishing a business research paper in good international journals ? *Indian Journal of Economics and Business*, 22(2), 11–23. http://www.ashwinanokha.com/IJEB.php

Chen, S., & Dauchy, E. P. (2017). Tax-Adjusted q Model with Intangible Assets: Theory and Evidence from Temporary Investment Tax Incentives. Southern Economic Journal, 83(4), 972–992. https://doi.org/10.1002/soej.12203

Cobbaut, R. (1997). Théorie financière (4è). Économica. Paris. https://bibliotheque.tbs-education.fr/Default/doc/SYRACUSE/18058/theorie-financiere-robert-cobbaut

Dama, A. A., Rota-Graziosi, G., & Sawadogo, F. (2024). The regressivity of CIT exemptions in Africa. International Tax and Public Finance, 1–26. https://doi.org/10.1007/s10797- 023-09825-6

Devereux, M. P., Griffith, R., & Simpson, H. (2007). Firm location decisions, regional grants and agglomeration externalities. Journal of Public Economics, 91(3), 413–435. https://doi.org/10.1016/j.jpubeco.2006.12.002

Dischinger, M., & Riedel, N. (2011). Corporate taxes and the location of intangible assets within multinational firms. Journal of Public Economics, 95(7), 691–707. https://doi.org/10.1016/j.jpubeco.2010.12.002

Dunning, J. H. (1988). The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions. J Int Bus Stud, 19(1), 1–31. https://doi.org/10.1057/palgrave.jibs.8490372

Edmans, A. (2011). Does the stock market fully value intangibles? Employee satisfaction and equity prices. Journal of Financial Economics, 101(3), 621–640. https://doi.org/10.1016/j.jfineco.2011.03.021

Faisol, I. A., & Hakim, T. I. R. (2021). Analysis of the Participation of Micro, Small, and Medium Enterprises (MSMEs) Taxpayers in Utilizing Tax Incentives Affected by the COVID-19 Pandemic. TIJAB (The International Journal of Applied Business), 5(1), 71. https://doi.org/10.20473/tijab.v5.i1.2021.71-80

Gaspar, J. M. (2020). New Economic Geography: Economic Integration and Spatial Imbalances. In S. Colombo (Ed.), Spatial Economics Volume I: Theory (pp. 79–110). Springer International Publishing. https://doi.org/10.1007/978-3-030-40098-9_4

Hall, R. E. (2001). The Stock Market and Capital Accumulation. American Economic Review, 91(5), 1185–1202. https://doi.org/10.1257/aer.91.5.1185

Harrison, A., & Rodriguez-Clare, A. (2010). Trade, Foreign Investment, and Industrial Policy for Developing Countries. https://econpapers.repec.org/bookchap/eeedevchp/v_3a5_3ay_3a2010_3ai_3ac_3ap_3a4 039-4214.htm

Hirsch, S. (1976). An International Trade and Investment Theory of the Firm. Oxford Economic Papers, 28(2), 258–270. https://ideas.repec.org//a/oup/oxecpp/v28y1976i2p258-70.html

Jorgenson, D. W. (1963). Capital Theory and Investment Behavior. The American Economic Review, 53(2), 247–259. https://www.jstor.org/stable/1823868

Klemm, A. (2009). Causes, Benefits, and Risks of Business Tax Incentives. In IMF Working Papers (21; Vol. 09). https://doi.org/10.5089/9781451871685.001

Klemm, A. (2010). Causes, benefits, and risks of business tax incentives. Int Tax Public Finance, 17(3), 315–336. https://doi.org/10.1007/s10797-010-9135-y

Kpodar, K. (2007). Manuel d'initiation à Stata (Version 8). In Centre d'Etudes et de Recherches sur le Développement International (CERDI) (Vol. 01).

Liu, Z. (2023). Impact of vehicle purchase tax exemption on electric vehicle sales: Evidence from China's automotive industry. Energy Strategy Reviews, 49(July), 101148. https://doi.org/10.1016/j.esr.2023.101148

Martin, J., & Mayneris, F. (2022). Revue de littérature sur l'incidence fiscale des taxes sur les entreprises. In CIRANO Project Reports. https://doi.org/https://doi.org/10.54932/FXQQ9060

Munongo, S., Akanbi, O., & Robinson, Z. (2017). Do tax incentives matter for investment? A literature review. Business and Economic Horizons, 13(2), 152–168. https://doi.org/10.15208/beh.2017.12

OECD. (2001). Corporate Tax Incentives for Foreign Direct Investment. Organisation for Economic Co-operation and Development. https://www.oecd- ilibrary.org/taxation/corporate-tax-incentives-for-foreign-direct- investment_9789264188402-en

OECD. (2022). Tax Incentives and the Global Minimum Corporate Tax. OECD Publishing. https://doi.org/10.1787/25d30b96-en

Tavares-Lehmann, A. T., Coelho, Â., & Lehmann, F. (2012). Taxes and Foreign Direct Investment Attraction: A Literature Review. In R. Van Tulder, A. Verbeke, & L. Voinea (Eds.), New Policy Challenges for European Multinationals (Vol. 7, pp. 89–117).

Emerald Group Publishing Limited. https://doi.org/10.1108/S1745- 8862(2012)0000007007

Thietart, R.-A. (2014). Méthodes de recherche en management - 4ème édition - Labellisation FNEGE - 2015 (4e édition). Dunod.

Tumanyants, K. (2018). Economic impact of the change in tax rate on small enterprises of manufacturing and construction sectors: Evidence from Russia 2006-2014. Business and Economic Horizons, 14(3), 642–658. https://doi.org/10.15208/beh.2018.45

UNCTAD. (2022). Corporate income taxes and investment incentives: A global review (Issue 8). https://investmentpolicy.unctad.org/publications/1265/corporate-income-taxes-and- investment-incentives-a-global-review

Van Parys, S. (2012). The Effectiveness of Tax Incentives in Attracting Investment: Evidence from developing countries. Reflets et Perspectives de La Vie Economique, 3(LI), 129–

141. https://www.cairn-int.info/article-E_RPVE_513_0129--the-effectiveness-of-tax- incentives-in.htm

Van Parys, S., & James, S. (2010). The effectiveness of tax incentives in attracting investment: panel data evidence from the CFA Franc zone. Int Tax Public Finance, 17(4), 400–429. https://doi.org/10.1007/s10797-010-9140-1

Xi, Q., & Ding, S. (2023). The Trade-Off between Tax Incentives and Agglomeration Rents in Development Zones: Evidence from China (p. 34). https://doi.org/10.2139/ssrn.4503628

Yelpaa, K. (1985). In search of effective policies for foreign direct investment: alternative to tax incentive policies. Northwestern Journal of International Law & Business, 7(2), 208–266.

Zee, H. H., Stotsky, J. G., & Ley, E. (2002). Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries. World Development, 30(9), 1497–1516. www.elsevier.com/locate/worlddev

Zingales, L. (2000). In Search of New Foundations. *The Journal of Finance*, *55*(4), 1623–1653. https://doi.org/10.1111/0022-1082.00262