

Merle, Ronan; Al-Gamrh, Bakr; Ahsan, Tanveer

Article

Tax havens and transfer pricing intensity: Evidence from the French CAC-40 listed firms

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Merle, Ronan; Al-Gamrh, Bakr; Ahsan, Tanveer (2019) : Tax havens and transfer pricing intensity: Evidence from the French CAC-40 listed firms, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 6, pp. 1-12, <https://doi.org/10.1080/23311975.2019.1647918>

This Version is available at:

<https://hdl.handle.net/10419/206221>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>



Received: 19 May 2019
Accepted: 13 July 2019
First Published: 26 August 2019

*Corresponding author: Bakr Al-Gamrh,
Rennes School of Business, France
E-mail: bakr.ali@rennes-sb.com

Reviewing editor:
Collins G. Ntim, Accounting,
University of Southampton,
Southampton, UK

Additional information is available at
the end of the article

ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Tax havens and transfer pricing intensity: Evidence from the French CAC-40 listed firms

Ronan Merle¹, Bakr Al-Gamrh^{1*} and Tanveer Ahsan¹

Abstract: Multinational enterprises (MNEs) may use transfer pricing techniques and policies to reduce their tax base in higher-tax rate jurisdictions by shifting it to lower-tax rate countries or tax havens. These practices, enhanced by the globalization and dematerialization of the economy, have flourished and became a major issue for supranational organizations, tax authorities and even in the public opinion. This study analyses the impact of intangible assets, firm size, effective tax rate, and leverage on transfer pricing intensity. French publicly listed firms in the CAC-40 were examined during the period from 2012 to 2015. The regression results show that the firm size and leverage are positively associated while intangible assets and effective tax rate are negatively associated with transfer pricing intensity.

Subjects: Economics; Finance; Business, Management and Accounting

Keywords: transfer pricing intensity; effective tax rate; intangible assets; firm size; leverage

1. Introduction

Many tax-related scandals were made public in the past few years involving some of the major corporations such as Amazon, Google or Starbucks (Barford and Holt 2013). These corporations were accused of practicing tax avoidance on an industrial scale by shifting profits to lower-tax jurisdictions through transfer pricing techniques. According to the OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations¹, the notion of “transfer price” relates to the monetary value attached to the cross-border transactions between related parties of a consolidated group but established in different jurisdictions. The transactions may relate to any type of intragroup business such as: transfer of tangible assets (buying/selling of goods and merchandise) or intangible assets (e.g. concession of trademarks), services provision (e.g. research and development, accounting, human resources management), or financial transactions (e.g. loan granted to

ABOUT THE AUTHORS

Ronan Merle is a transfer pricing analyst at BNP Paribas, Paris, France. He holds an MSc in International Financial Markets Analysis from Rennes School of Business. His research interest includes taxation and related party transactions.

Bakr Al-Gamrh is an assistant professor at Rennes School of Business, France. His research interests include corporate governance, related party transactions and auditing

Tanveer Ahsan is an assistant professor at Rennes School of Business, France. His research interests include corporate finance, capital structure and corporate governance

PUBLIC INTEREST STATEMENT

This paper discusses the phenomena of profit shifting by corporations for the purpose of paying less taxes. It concentrates on the impact of intangible assets, firm size, effective tax rate, and leverage on the intensity of transfer pricing in French publicly listed firms in the CAC-40. The results show that firm size and leverage are positively associated to transfer pricing intensity while intangible assets and effective tax rate have a negative impact.

affiliate generating interests payments). By nature, these transactions are “out” of the market as they are operated between related firms (Publishing, 2010). Globalization strongly contributed to the development of intragroup flows, making transfer pricing strategic, both for MNEs and tax authorities around the globe. The Organization for Economic Co-operation and Development (OECD) estimates the total intragroup flows to represent more than 70% of worldwide total trade.

The determination of a transfer price and the localisation of its value directly, and potentially to a great extent, affects the net income—and its related tax—of the firms involved. Indeed, the transfer prices are considered as a deductible charge from the taxable basis for the party which pays for it, and it is added in the taxable basis of the related party receiving the payment. At the heart of the international taxation of MNEs, transfer pricing represents the central challenge both for corporations and for tax authorities worldwide. Firms can take advantage of discrepancies in national's taxation systems and rates either by:

- *Making the entities in lower tax rates charging the related entities in higher tax rates for goods or/and services to shift profits to a more friendly-tax jurisdiction;*
- *Manipulating the value of transfer prices: over-valuing payments to higher tax rates countries and under-valuing transactions to lower tax rate countries.*

On the contrary, States pursue their objective of attracting the largest taxable base in their own jurisdiction. The challenge is not only concentrated between a taxpayer and a tax authority but rather between a multinational group and at least two different tax authorities. Therefore, transfer pricing management aims to avoid two issues at the same time. *First*, the artificial localisation of results and expenses to minimise the tax expense. *Second*, the risk of double taxation in two different countries. The transfer pricing guidelines are based upon the “arm's length principle”, ruled by the Article 9 of the Model Tax Convention² published by the OECD. Transfer prices should be determined as if they were pertaining to a transaction between two independent parties on a free market. Indeed, if a transaction has to be made between two independent entities, the intragroup exchanges would systematically be affected with the market price therefore revealing, in virtue of the classic economic theory, the “right” and fair price. When the arm's length principle is not respected, it is allowed for the State authority to reintegrate all or part of the transfer price to its profit's taxable basis.

The transfer pricing game may be harmful for public tax income, it is not without any risk for firms which may want to bet on aggressive practices. If one or several tax authorities of concerned States by the transaction reject the transfer price as it was valued *ex ante* by the firm, the non-complying firm will suffer a tax adjustment which, in case of a lack of bilateral correction measures, may result in a double taxation. To reduce this risk, the OECD's Guidelines offer two double taxation neutralization mechanisms:

- *A tax payer can, in advance, settle with tax authorities on an agreement on its transfer pricing policy, to legally secure it and potentially avoid a future adjustment;*
- *Following an adjustment, the tax authorities can decide on allocating the taxation power to the different authorities concerned and settle on an out-of-court, amicable agreement.*

The “right” determination of transfer prices is a complex step. The OECD presented different valuation methodologies of transfer prices such as Traditional Transaction Methods (CUP method, Resale price method, Cost plus method), and Transactional Profit Methods (Transactional net margin method, Transactional profit split method). Although this study does not focus on explaining the differences between the generally accepted methods to determine an arm's length price, however, the introduction of these different methods in the transfer pricing would lead us to a few research questions this paper will examine:

- *Can corporations lower its effective tax rate and increase its transfer pricing aggressiveness using hard-to-value intangible assets?*
- *Is the size of the firm plays a role in engaging in such aggressive practices as we have seen with Apple Inc. or Starbucks?*

Accordingly, the purpose of this study is to determine the impact of intangible assets, firm size, effective tax rate, and leverage on the transfer pricing intensity of French listed firms in the CAC-40 index. We collect data for the period from 2012 to 2015 and apply appropriate regression analysis controlled for time fixed-effects. The results of the study explain that intangible assets and effective tax rate negatively effects transfer pricing intensity while firm size and leverage positively effects transfer pricing intensity. This study contributes to the academic literature in this area as to the best of authors' knowledge no similar study has been conducted in the French perimeter.

The paper is structured as follows: section 2 theoretical framework for the study; section 3 presents the data and methodology; section 4 and 5, respectively, cover the findings and the conclusion of the empirical analysis.

2. Literature review and hypothesis development

MNEs' structure have constantly evolved throughout the past century to be in accordance with the need of globalization of firms to survive. In its study on decisional structures in MNEs, Eichner (1978) puts into perspective a decentralised multiproduct, multinational and multidivisional structure, described as the "M-form", opposed to the traditional "U-form" in which top management is in direct relation with functional divisions—e.g. finance, logistics, etc.,—of the group. In the traditional U-form, employees evolve "on their own" in their department and do not benefits trans-functional expertise or collaboration. This organisational structure is therefore limited in many ways: such as difficult innovation processes, limited performance assessment, strictness of production processes, possible loss of control when managing complex and/or foreign activities. The M-form meanwhile is referring to a parent firm setting the strategy guidelines in the long run and exercising control over the assets used in its affiliates firms. An "M-structured" group is comprised of business units, each one managing core functions for its operations. The purpose of such structure is to optimise the management of assets on a divisional basis and therefore on a group level.

In accordance with those evolutions, MNEs are comprised of a multitude of operational and non-operational entities, holdings and sub-holdings located in various jurisdictions—some of them being considered as tax havens. In their World Investment Report³ in 2016, the United Nations Conference on Trade and Development (hereafter "UNCTAD") examines the increasing complexification of MNEs' structures and disclose that the first hundred corporations each detain on average 500 subsidiaries located in 50 different jurisdictions. The report also reveals that each of those MNEs own more than 70 affiliates in friendly-tax jurisdictions or tax havens. Until recently, those MNEs were considered as Nation's jewels, carrier of a State's image and as a model every firm in the world should follow. But in the beginning of the twenty-firstcentury, they became public and tax authorities' targets because of several tax outrages. Today, everyone is aware that tax optimisation schemes are implemented by such corporations and many have examined and researched on the subject. While a lot of academics and researchers have tried to quantify profit shifting of MNEs or industries, or its effect on the tax base of jurisdictions, methodologies are not so diversified and often based on an indirect approach.

One of the pioneer research is published by Hines and Rice (1994) which further inspired most of the subsequent analyses. The methodology developed by Hines and Rice is based on the hypothesis that the observed profits equal to the sum of the "real" profits, which come out of tangible economic activities, and the shifted benefits. The regression analysis allows to measure the sensitivity of profits to the tax rates differentials between parent firms and their subsidiaries, considering factors that have a direct and material impact on an enterprise profits such as workforce, leverage, industry, level of development of the host country, etc. Therefore, these factors are used to estimate the counterfactual level of profits, i.e.

the profits which would have been observed if no shifting was possible. The initial approach by Hines and Rice (*ibid.*) used country-by-country aggregated data on U.S.-based MNEs to isolate the effect of tax rates variations between the parent firm and its subsidiary on the reported earnings of the affiliate. A few years earlier, Grubert and Mutti (1991) also performed one of the founding research on the topic. Indeed, the results of their U.S.-based cross-sectional panel data explained that U.S. multinational corporations tend to import and export more from their affiliates in low-tax jurisdictions where its investment was also greater. To continue on U.S. focused researches, we can refer to the work done by Grubert, Goodspeed, and Swenson (1993) for evidence of profit shifting by MNEs to more tax-friendly jurisdictions or known tax havens. Concerning European-based researches, we can mention the work of Huizinga and Laeven (2008) which study the spread of profits of European MNEs.

Further, the results presented by Mutti and Grubert (2009) show that the U.S. affiliates' earnings and profits increased way more than the royalties made to their U.S.-based parent entity and that R&D operations were a major determinant of settling in low-tax jurisdictions. As we mentioned in the introduction, the global economy has shifted to a dematerialized form and it raises one of the major challenges for transfer pricing. The golden rule being the arm's length principle, firms must find comparable transactions to price their own, but it is much more difficult when dealing with highly valued intangible assets rather than common goods for which transfer pricing managers can use public data or private databases which gather comparable. It is also a great challenge for tax authorities when examining transactions of such assets because of the lack of similar transactions in an active market (Gravelle, 2010). Therefore, as those valuations are subject to the corporations' own analysis, it allows management to take advantage of discrepancies in tax rates among jurisdictions by moving those assets between countries (Dyreng, Hanlon, & Maydew, 2008; Markle & Shackelford, 2011).

In its Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (2010), the OECD developed a dedicated chapter on intangibles assets and guidance for MNEs to present all the elements and methods which could be used when such transactions are undertaken between related parties to ensure the arm's length principle respect. The organization defines intangible property as the right to use industrial assets such as trademarks, patents, intellectual property, industrial and business secrets, designs and models. In an innovation-based economy, a large part of corporations' value is based on its intangible assets which often lead to competitive advantages. Some types of such valuable easily transferred assets may lead to tax planning and raise transfer pricing issues. Indeed, some multinational groups may allocate their intangible assets to lower-tax jurisdictions, generating royalties or license-fee from other entities of the group in higher-tax countries benefiting from such assets allowing profit shifting. The hypothesis is supported by a study which empirically observes a negative relationship of royalty flows on taxation (Dudar, Spengel, & Voget, 2015). Another study by Dischinger and Riedel (2011) on the geographical allocation of intangible assets in MNEs empirically demonstrates that lower a subsidiary's corporate tax rate relative to other affiliates of the multinational group the higher is its level of intangible asset investment. Accordingly, we develop our first hypothesis:

H1: *Intangible assets are positively associated with transfer pricing intensity.*

The firm size can be defined as a combination of several factors such as number of employees, amount of sales, number of subsidiaries, profitability, production capacity, capital intensity, and stock valuation. Considering that large corporations perform more operations, on a larger scale, often worldwide, and may have affiliates all over the world, they are able to take advantage of different tax rates where they perform business operations. Indeed, MNEs may take advantage of their beneficiary and loss-making subsidiaries by setting a strategy which would make the latter entities in deficit to be the ones in high-tax countries and the profit makers in lower-tax jurisdictions. According to Scholes, Wilson, and Wolfson (1992) international profit shifting is mainly used by large corporations

because smaller entities do not have the same means and expertise to set-up such an international strategy. Jacob (1996) analysed the influence of firm size on profit shifting between their affiliates and demonstrated that smaller groups are less sensitive to such transfers than larger corporations. Rego (2003) observed that bigger enterprises tend to realize transfer of assets and services on a larger scale than a smaller firm and thus benefit more from tax variations in countries and economies of scale. Further, firms such as Apple, Google or Microsoft allocate their profits to low-tax countries and increase their deductible charges through royalties' payments to higher-tax jurisdictions to reduce the consolidated taxable income of the group (Duhigg & Kocieniewski, 2012; Womack & Drucker, 2011). However, an empirical study by Wijaya and Kusuma (2017) concluded that larger firms may try not to perform such optimization because of tax authorities' attention and public outrage that may hurt their business and operations. But considering their small sample of listed firms in Sri Lanka we may challenge these findings as our paper is analysing much larger corporations listed on the CAC-40. Accordingly, we develop our second hypothesis:

H2: *Firm size is positively associated with transfer pricing intensity.*

A consolidated group must consider the differences in tax rates in each jurisdiction where it performs economic activity, therefore, there are differences between global strategies that would be implemented in accordance with a local tax strategy. In other words, the optimal solution for the group may not be the optimal one for its related entities if considered as sole entities. The impact of tax can be measured by calculating the effective tax rate (ETR) which can provide information on whether the MNEs used tax avoidance techniques to minimise its tax charge. According to many authors, the effective tax rate can be used to measure and assess the efficiency of tax management in a group (Menchaoui, Jean-Luc, & Mohamed Ali, 2017; Rego, 2003; Shevlin, 1999) as the intra-group flows will greatly affect the ETR. However, there are differences in the literature on the way of calculating this ratio. Some researchers such as Gupta and Newberry (1997) do not incorporate deferred tax in the numerator ratio. Rego (2003) also justified this choice of not considering deferred tax to better represent the corresponding tax charge to the fiscal year analysed. While some other authors incorporated it in their ratio considering all taxes may relate to performed operations. In this research, deferred tax is not included in the numerator because these charges may reflect taxes due in the long-run future and therefore the tax charge will not accurately represent taxes due for operations performed in the corresponding fiscal year as reasoned by Rego (2003) and Gupta and Newberry (1997). To formally test the impact of effective tax rate on intra-group transactions intensity, we develop our third hypothesis:

H3: *Effective tax rate is negatively associated with transfer pricing intensity.*

According to Modigliani and Miller (1958), in a perfect capital markets situation, the financial structure does not affect the firm's valuation but as stated in their "Proposition 1" it is rather the value of its treasury flows from its assets which determines the total value of a firm. In the presence of taxes, this proposition is as follows: a leveraged firm's value exceeds the value of an unleveraged firm by the value of tax savings allowed by the tax deductibility of interests. However, in real and imperfect capital markets, imperfections arise such as informational asymmetry, incompleteness and the weakness of contracts' implementation. Based on agency theory, the situation is that where a principal (tax authority) wants to attract the most income possible from taxation and the agent (corporation), on the contrary, wants to lower this taxation (Fama, 1980). Therefore, leverage can be used to reduce taxes paid through increased deductible interests costs, lower profit, and lower ETR. In their research study, Richardson and Lanis (2007) stated that the more a firm will finance itself by debt, the lower will be its ETR. Taylor, Richardson, and Lanis (2015) also demonstrated empirically that debt-financing has a positive relationship with tax avoidance. Accordingly, we develop our fourth hypothesis:

Table 1. Variables, indicators, measurement proxy and predicted sign

Variables	Indicators	Measurement	Predicted sign
Transfer Pricing Intensity	TPI_{it}	Ratio of related party transaction receivables over total receivables	
Intangible Assets	$INTAN_{it}$	$\ln(\text{Intangible Assets})$	+
Firm Size	$SIZE_{it}$	$\ln(\text{Total Assets})$	+
Tax Rate	TAX_{it}	(Income tax expense—Deferred tax expense)/Profit before income tax	–
Leverage	LEV_{it}	Total debt over equity	+

H4: *Firm leverage is positively associated with transfer pricing intensity.*

Table 1 presents the variables, their measurement proxies, and the expected relationship of explanatory variables with transfer pricing intensity.

3. Data and methodology

The sample analysed in the study is the listed firms on the CAC-40 French index during the period from 2012 to 2015. Our initial sample included all the CAC-40 publicly listed firms. However, firms in the financial industry were removed from our sample because of material variations in their accounting policies and derivation of accounting estimates. Further, during the period from 2012 to 2015, a few firms were retreated or suspended from the index (e.g. STMicroelectronics which was replaced by Alcatel S.A. on the 23rd of December 2013), thus these firms were also excluded from our sample. Accordingly, our final sample comprised of 33 firms with 132 firm-year observations over the period of 4 years. The sample period was chosen represents the in-between period right after the global financial crisis and the OECD's BEPS projects and guidelines implementation. The data are hand-collected from each "Document de Référence"⁴ for each firm in our sample and for each year.

3.1. Econometric model

The aim of the study is to examine the impact of intangible assets, firm size, effective tax rate, and leverage on the transfer pricing intensity of listed firms in French-based index CAC-40. Therefore, we develop the following regression model:

$$TPI_{it} = \alpha_0 + \beta_1 INTANG_{it} + \beta_2 SIZE_{it} + \beta_3 TAX_{it} + \beta_4 LEV_{it} + \alpha_t + \varepsilon_{it} \quad (1)$$

where

Indicator	Definition
α_0	= Constant
TPI_{it}	= Transfer Pricing Intensity
$INTANG_{it}$	= Intangible Assets
$SIZE_{it}$	= Firm Size
TAX_{it}	= Effective Tax Rate
LEV_{it}	= Leverage
α_t	= Time fixed effect
ε_{it}	= Error term
i	= Firms 1–33
t	= Years 2012 – 2015

Table 2. Correlation matrix

	TPI _{it}	INTAN _{it}	SIZE _{it}	TAX _{it}	LEV _{it}	VIF
TPI _{it}	1.000					
INTAN _{it}	-0.221	1.000				1.53
SIZE _{it}	-0.045	0.587	1.000			1.57
TAX _{it}	-0.085	0.023	-0.029	1.000		1.01
LEV _{it}	0.077	0.067	0.163	0.044	1.000	1.03

3.2. Estimation methods

We apply simple OLS and time fixed effects regression techniques to estimate Equation(1). We also test our models against multicollinearity and find variation inflation factor no greater than 10 (see Table 2 for reference)(Ott & Longnecker, 2015). Finally, we run Pesaran CD test and found cross-sectional dependence. Therefore, we correct the standard error using Driscoll and Kraay's standard errors which is robust to panel dependence (Al-Gamrh, Ku Ismail, & Al-Dhamari, 2018; Hoechle, 2007).

4. Empirical results

4.1. Descriptive statistics

Table 3 presents descriptive statistics for the variables used in this study. Descriptive statistics show that the mean of our dependent variable TPI is 0.081 with a standard deviation of 0.177. Intangible assets have a mean value of 3.830 with a minimum and maximum values ranging from 2.199 to 4.695 and a standard deviation of 0.592. Concerning the independent variable "firm size" it shows that the minimum and maximum range goes from 3.828 to 5.361 with a standard deviation of 0.371. The effective tax rate of French CAC-40 listed firms have a mean of 23.90% which is lesser than the official corporate income tax rate of 33 $\frac{1}{3}$ %. The minimum tax rate in our sample is -267% for Veolia due to depreciation of untaxed assets and the non-recognition of deferred tax in some countries⁵. The maximum ETR in our sample amounts to 67.90%. The median is of 28.50%, quite close to the 33 $\frac{1}{3}$ % rate. For the leverage, we observe that the debt to equity ratio greatly vary from 0.382 to 7.841.

4.2. Regression results

To investigate the impact of the independent variables on transfer pricing intensity (Equation-1), we apply regression techniques. The following Table 4 shows the results of variations in transfer pricing intensity as a result of variations in the explanatory variables. Our regression models explain 7.2% to 7.6% variations in transfer pricing intensity due to Intangibility, firm size, effective tax rate, and leverage. Model 1 includes four explanatory variables while model 2 includes four explanatory variables along-with time fixed effects.

Table 4 shows that intangible assets have a significant negative association with transfer pricing intensity, i.e. against our hypothesis-1. These results do not support our hypothesis, and indicates that CAC-40 listed firms may not perform additional or more intra-group transactions based on their level of intangible assets. However, the results are supported by an empirical study conducted by Kodongo, Mokoaleli-Mokoteli, and Maina (2015), but inconsistent with the results of studies conducted by Taylor et al. (2015). We can contrast this as there were no studies in French context. Another plausible reason which may explain this result is that considering the high level of corporate income tax in France of 33 $\frac{1}{3}$ %, firms may be tempted to shift their intangible properties to more tax-friendly jurisdictions through complex schemes and therefore reducing the reported intangible assets in their financial statements. Another possible explanation could be that the examined firms under-value their intangible properties such as intellectual property. As firms tend to reallocate their intangible assets in low-tax jurisdictions due to the difficulties of valuation and finding comparable to price transactions at arm's length, such an amount would be diluted into

Table 3. Summary statistics

	Observations	Mean	STD.	Median	Minimum	Maximum
TPI_{it}	132	0.081	0.177	0.008	0.000	0.933
$INTAN_{it}$	132	3.830	0.592	3.951	2.199	4.695
$SIZE_{it}$	132	4.540	0.371	4.543	3.828	5.361
TAX_{it}	132	0.239	0.329	0.285	-2.670	0.679
LEV_{it}	132	2.098	1.457	1.585	0.382	7.841

Table 4. Regression results

	(1)	(2)
	Transfer Pricing Intensity	Transfer Pricing Intensity
INTANGIBILITY	−0.086*** (0.010)	−0.086*** (0.010)
FIRM SIZE	0.052*** (0.006)	0.053*** (0.006)
TAX RATE	−0.042* (0.015)	−0.045** (0.014)
LEVERAGE	0.010*** (0.001)	0.010*** (0.001)
Constant	0.165* (0.056)	0.180* (0.063)
Observations	132	132
No. of Firms	33	33
R-squared	0.072	0.076
Time Effect	No	Yes
F-Statistics	224.91***	

Transfer Pricing Intensity is the ratio of related party transaction receivables over total receivables; INTANGIBILITY is the natural logarithm of intangible assets; Firm SIZE is the natural logarithm of total assets; TAX is the income tax expense (minus the deferred tax) scaled by profit before income tax; LEVERAGE is the total debt scaled by the shareholder's equity.

*Standard errors are in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

the consolidated financial statements and the individual entities' statements located in tax-friendly country then should be analysed and compared to other group's entities to assess the actual proportion of such practices. By doing this, firms can also benefit from the opportunity to shift profits offshore while paying royalties to their affiliate owning such as a patent right.

Further, we observe that firm size is significantly positively associated with transfer pricing intensity of the French firms suggesting that as a firm grows and develops internationally, it automatically increases the number and amounts of intra-group transactions to and from various locations (hypothesis-2). According to Rego (2003) MNEs having a large number of entities have a lower effective tax rate than those with less entities. This result is supported by a number of empirical previous studies (Cecchini, Leitch, & Strobel, 2013; Richardson, Taylor, & Lanis, 2013). A common conclusion of these studies is that the large MNEs may secure more long-run incoming cash flows than a smaller group. Therefore, creating higher profits with larger number of entities around the globe and providing them the opportunity to perform tax optimisation or even tax evasion.

We hypothesized effective tax rate to have a negative impact on transfer pricing intensity, meaning the lower the ETR, the higher MNEs are engaged in transfer pricing transactions. The results of the regression analysis show a coefficient of −0.042* (model 1), and −0.045** (model 2) supporting the hypothesis-3, and stating that MNEs with a lower effective tax rate have a greater tendency to perform transfer pricing transactions. The literature also supports this result (Richardson et al., 2013). Previous studies demonstrated that the goal of a firm is to maximise its profits and lower its tax charges. Therefore, the lower a firm's ETR, the greater the chance that it is engaging in transfer pricing mechanisms to shift profits offshore and/or minimise its reported earnings in high-tax jurisdictions through the payment of royalties, for example (Richardson et al., 2013). Another way of looking at this is that MNEs may also tend to lower its reported profits in higher-taxed countries because of the fear of the political costs which would be incurred in case of a public scandal in which the firm may be involved. Meaning that the firms reporting low profits

and keeping a low profile not to get under the tax authorities' radar and may practice aggressive transfer pricing policies. Further, we find a significant positive association between leverage and transfer pricing intensity (hypothesis-4) explaining that French firms listed on CAC-40 use leverage to reduce their taxes paid through increased deductible interests costs, lower profit, and lower ETR.

5. Conclusion

The transfer pricing intensity of MNEs is one of the major interests when analysing the economic significance and the stakes of profit-maximizing firms for governments. Therefore, the identification of the practices is particularly important and the analysis of the variables effecting the transfer pricing intensity of MNEs is of academic and public usefulness. The study applied an innovative approach, as it is based on a large and tedious hand-collected data of French CAC-40 index, to investigate the determinants of transfer pricing intensity. The study reviews the relevant literature thoroughly and develops four hypotheses based on literature and previous empirical studies. The study tests these four hypotheses using linear regression controlled for time-fixed effects. The results of the study explain that the increase in intangibility and effective tax rate decrease the intensity of transfer pricing in French firm while increase in firm size and leverage increase transfer pricing intensity. The study explains supports the results in the light of previous empirical evidence.

This research project also has its limitations. Indeed, the rather small sample size cannot allow to extrapolate our results to all the French firms and some tax adjustments inflicted to some of the MNEs in our sample might have biased some of the corresponding effective tax rates. Further, the variables used in this study are for the most part extracted from Anglo-Saxon literature and it can be argued that those variables and techniques may not be applied and interpreted in the same way as in an American or Australian context. U.S.-based empirical studies on the drivers of transfer pricing aggressiveness, especially the ones from Taylor and Richardson, used a lot more details to construct their methodology and model because the Internal Revenue Service, the taxation authority in the U.S., requires more specific and precise information from their taxpayers. That is why it was not possible to mimic their study in the French context. But the regulatory environment is moving quickly, and it may be possible to access such level of data in the near future to perform empirical studies of greater robustness.

Future studies should examine multinationality and tax havens utilisation as it was empirically demonstrated that those factors are positively associated with transfer pricing intensity by Taylor and Richardson (2012, Taylor et al., 2015) if the access to such data is possible. In the U.S. and Australia and made public by the IRS and the Australian Taxation Office, it is not yet publicly available for French corporations. Future researches may also concentrate on analysing such questions in developing countries.

Funding

The authors received no direct funding for this research.

Author details

Ronan Merle¹
E-mail: merle.ronan@gmail.com
Bakr Al-Gamrh¹
E-mail: bakr.ali@rennes-sb.com
Tanveer Ahsan¹
E-mail: tanveer.ahsan@rennes-sb.com

¹ Department of finance and accounting, Rennes School of Business, Rennes, France.

Citation information

Cite this article as: Tax havens and transfer pricing intensity: Evidence from the French CAC-40 listed firms, Ronan Merle, Bakr Al-Gamrh & Tanveer Ahsan, *Cogent Business & Management* (2019), 6: 1647918.

Notes

1. First implemented in 1979 and continually revised and supplemented until the latest version dated 19 May 2017.
2. OECD (2003), "Article 9", in Model Tax Convention on Income and on Capital: Condensed Version 2003, OECD Publishing, Paris, <https://www.oecd.org/tax/treaties/1914467.pdf>.
3. UNCTAD, World Investment Report, 2016, Investor Nationality: Policy Challenges.
4. Definition by the « *Autorité des Marchés Financiers* » (27 May 2013): "Any company with securities admitted to trading on a regulated market or an organised multi-lateral trading facility may prepare an annual registration document describing the company's organisation, business, financial position, earnings and prospects. The registration document provides information and acts as a communication tool by supplying financial analysts, institutional investors and individual shareholders with

the information that they need to make informed judgements about the company's business, financial position, earnings and prospects. It contains complete legal, business, financial and accounting information, which combine to provide an exhaustive description of the company for a given financial period."

5. Reference Document of Veolia in 2013 on the reason behind its effective tax rate: "Le taux d'impôt apparent s'élève à - 269% compte tenu notamment des dépréciations d'actifs non fiscalisées et de la non-reconnaissance d'impôt différé actif dans certains pays et groupes fiscaux compte tenu de leurs plans d'affaires respectifs."

References

- Al-Gamrh, B., Ku Ismail, K. N. I., & Al-Dhamari, R. (2018). The role of corporate governance strength in crisis and non-crisis times. *Applied Economics*, 50(58), 6263–6284.
- Barford, V., & Holt, G. (2013). Google, Amazon, Starbucks: The rise of 'tax shaming'. *BBC News Magazine* 21.
- Cecchini, M., Leitch, R., & Strobel, C. (2013). Multinational transfer pricing: A transaction cost and resource based view. *Journal of Accounting Literature*, 31(1), 31–48. doi:10.1016/j.acclit.2013.06.001
- Dischinger, M., & Riedel, N. (2011). Corporate taxes and the location of intangible assets within multinational firms. *Journal of Public Economics*, 95(7–8), 691–707. doi:10.1016/j.jpubeco.2010.12.002
- Dudar, O., Spengel, C., & Voget, J. (2015). *The impact of taxes on bilateral royalty flows*. ZEW-Centre for European Economic Research Discussion Paper(15-052).
- Duhigg, C., & Kocieniewski, D. (2012). How Apple sidesteps billions in taxes. *The New York Times*, 28, 1–5.
- Dyregang, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-run corporate tax avoidance. *The Accounting Review*, 83(1), 61–82. doi:10.2308/accr.2008.83.1.61
- Eichner, A. S. (1978). The visible hand. The managerial revolution in American Business. *Business History Review*, 52(1), 98–101. By Alfred D. Chandler Jr., Cambridge, Mass., Harvard University Press, 1977. Pp. xvi+ 608. \$18.50. doi:10.2307/3113231
- Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288–307. doi:10.1086/260866
- Gravelle, J. (2010). *Tax havens: International tax avoidance and evasion*. Collingdale: DIANE Publishing.
- Grubert, H., Goodspeed, T., & Swenson, D. L. (1993). Explaining the low taxable income of foreign-controlled companies in the United States. In *Studies in international taxation* (pp. 237–276). University of Chicago Press.
- Grubert, H., & Mutti, J. (1991). Taxes, tariffs and transfer pricing in multinational corporate decision making. *The Review of Economics and Statistics*, 73(2), 285–293. doi:10.2307/2109519
- Gupta, S., & Newberry, K. (1997). Determinants of the variability in corporate effective tax rates: Evidence from longitudinal data. *Journal of Accounting and Public Policy*, 16(1), 1–34. doi:10.1016/S0278-4254(96)00055-5
- Hines, J. R., Jr, & Rice, E. M. (1994). Fiscal paradise: Foreign tax havens and American business. *The Quarterly Journal of Economics*, 109(1), 149–182. doi:10.2307/2118431
- Hoehle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *Stata Journal*, 7(3), 281. doi:10.1177/1536867X0700700301
- Huizinga, H., & Laeven, L. (2008). International profit shifting within multinationals: A multi-country perspective. *Journal of Public Economics*, 92(5–6), 1164–1182. doi:10.1016/j.jpubeco.2007.11.002
- Jacob, J. (1996). Taxes and transfer pricing: Income shifting and the volume of intrafirm transfers. *Journal of Accounting Research*, 34(2), 301–312. doi:10.2307/2491504
- Kodongo, O., Mokoaleli-Mokoteli, T., & Maina, L. N. (2015). Capital structure, profitability and firm value: Panel evidence of listed firms in Kenya. *African Finance Journal*, 17(1), 1–20.
- Kusuma, H., & Wijaya, B. (2017). Drivers of the Intensity of Transfer Pricing: An Indonesian Evidence. In *Proceedings of the Faculty of Commerce Conference*, Cairo University.
- Markle, K. S., & Shackelford, D. A. (2011). *Cross-country comparisons of corporate income taxes*. Cambridge, MA: National Bureau of Economic Research.
- Menchaoui, I., Jean-Luc, R., & Mohamed Ali, O. (2017). Fiscal management practices and their impact on corporate groups' Fiscal performance. *Revista Internacional Administracion y Finanzas*, 9(1), 73–86.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261–297.
- Mutti, J., & Grubert, H. (2009). The effect of taxes on royalties and the migration of intangible assets abroad. In *International trade in services and intangibles in the era of globalization* (pp. 111–137). University of Chicago Press.
- OECD (2003). Article 9 in model tax convention on income and on capital: Condensed version 2003. Paris: OECD Publishing.
- Ott, L. R., & Longnecker, M. T. (2015). An introduction to statistical methods and data analysis. In *Cengage Learning* (7th ed., pp. 1–1296).
- OECD. (2010). *OECD transfer pricing guidelines for multinational enterprises and tax administrations*. Paris.
- Rego, S. O. (2003). Tax-avoidance activities of US multinational corporations. *Contemporary Accounting Research*, 20(4), 805–833. doi:10.1506/VANN-B7UB-GMFA-9E6W
- Richardson, G., & Lanis, R. (2007). Determinants of the variability in corporate effective tax rates and tax reform: Evidence from Australia. *Journal of Accounting and Public Policy*, 26(6), 689–704. doi:10.1016/j.jaccpubpol.2007.10.003
- Richardson, G., Taylor, G., & Lanis, R. (2013). Determinants of transfer pricing aggressiveness: Empirical evidence from Australian firms. *Journal of Contemporary Accounting & Economics*, 9(2), 136–150. doi:10.1016/j.jcae.2013.06.002
- Scholes, M. S., Wilson, G. P., & Wolfson, M. A. (1992). *Firms' responses to anticipated reductions in tax rates: The Tax Reform Act of 1986*. Cambridge, MA: National Bureau of Economic Research.
- Shevlin, T. J. (1999). *A Critique of Plesko's 'An Evaluation of Alternative Measures of Corporate Tax Rates'*. Available at SSRN 190436.
- Taylor, G., & Richardson, G. (2012). International corporate tax avoidance practices: Evidence from Australian firms. *The International Journal of Accounting*, 47(4), 469–496.
- Taylor, G., Richardson, G., & Lanis, R. (2015). Multinationality, tax havens, intangible assets, and transfer pricing aggressiveness: An empirical analysis. *Journal of International Accounting Research*, 14(1), 25–57. doi:10.2308/jiar-51019
- Womack, B., & Drucker, J. (2011). Google questioned by SEC over earnings in low-tax countries. *Bloomberg News*.



© 2019 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



***Cogent Business & Management* (ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.**

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

