Foreign Capital Participation and Tax Aggressiveness in Brazilian Companies

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ABSTRACT

This study explores the relationship between tax aggressiveness and foreign capital participation in Brazilian companies listed on the BM&F BOVESPA from 2010 to 2015, using the concept of tax aggressiveness as a reduction of taxable income through tax management and planning (Chen et al., 2010). Observing that previous studies show a significant relationship between tax aggressiveness and ownership structures, this research seeks to understand whether this relationship is significant if there is foreign capital participation in the company. The sample was composed of Brazilian companies listed on the BM&F BOVESPA. Two metrics of tax aggressiveness were used to investigate this relationship: effective tax rate (ETR) and book-tax difference (BTD). The use of these metrics was inspired in a review on tax research by Hanlon and Heitzman (2010), who concluded that ETR and BTD could capture the reduction of taxable income through tax planning. The results showed no significant relationship between foreign capital participation and tax aggressiveness, demonstrating that the origin of equity capital is not a factor of tax aggressiveness.

Keywords: *Foreign Capital Participation, Tax aggressiveness, Tax Planning*

Introduction

Studies addressing tax planning always seek tax savings. According to Oliveira (2003), these studies suggest measures to guarantee savings on tax payments within the legal framework, offering options for managers to obtain a lower tax burden. Oliveira (2003) also states that tax planning is a business activity that projects future administrative actions and facts by identifying the tax burdens among the available legal options. Tax aggressiveness, according to Chen et al. (2010), is the managerial reduction of taxable income through tax planning, encompassing both legal and illegal measures.

This research observes the relationship between tax aggressiveness and specific characteristics of companies' ownership, inspired by previous studies such as the work by Chen et al. (2010). They investigated tax aggressiveness in American family businesses. Other examples are Martinez and Ramalho (2014), who studied family businesses in Brazil; the analysis of tax aggressiveness between parent companies and subsidiaries conducted by Martinez and Dalfior (2016); and Martinez and Motta (2020) who researched the issue in mixed-economy companies.

Following previous studies' recommendations for expanding the research by including other specific relationships that may influence tax aggressiveness, this work seeks to answer the research question: Does foreign capital participation in Brazilian companies influence their tax aggressiveness? The methodological hypothesis assumes that the greater the foreign capital participation, the more tax aggressive the company is. The assumption is inspired by Martinez and Dalfior (2016), who concluded that the parent companies influence the tax behaviour of their subsidiaries.

The study also assumes that foreign shareholders may consider they have less responsibility toward a Brazilian organization because of their physical and cultural distance, particularly the fact that companies and shareholders are in different countries. This detachment would lead shareholders to be more aggressive in profit-seeking, regardless of the consequences.

Therefore, this study aims to explore the relationship between foreign capital participation and tax aggressiveness in companies listed in the São Paulo Stock Exchange - BOVESPA. The research responds to the demand presented by previous studies, contributing to increasing the knowledge about the companies' ownership structure, demonstrating their impact on the organization's tax aggressiveness. The study also provides subsidies for investors interested in tax aggressiveness, tax authorities planning inspection activities, and other stakeholders willing to comprehend fiscal impacts (Martinez, 2017).

Literature review
The literature addressing the concepts supporting the present study includes the works by Rego and Wilson (2012), Chen et al. (2010), Martinez and Ramalho (2014), and Martinez and Motta (2020). These efforts researched tax aggressiveness through tax planning and associated risks and benefits. Studies on tax aggressiveness are recent in the literature. Frischmann et al. (2008), define such practice as engaging in risky fiscal positions, based on relatively weak arguments, as if looking for loopholes in tax law, eventually trespassing legal boundaries. Chen et al. (2010) define tax aggressiveness as a managerial reduction of taxable income through tax planning, which may be considered tax avoidance or evasion. A third definition was proposed by Lisowsky et al. (2010). For the author, tax aggressiveness is a set of actions near the end of a continuum of tax evasion activities that range from legitimate tax planning to investments in abusive tax havens. Finally, Lietz (2013) says that tax aggressiveness is related to actions that cross the legal structure and bring with them high risks of penalties from law enforcement agents.

Tax aggressiveness and agency conflict
The characteristics of tax aggressiveness have been investigated by empirical studies and associated with agency conflicts. Jensen and Meckling (1976) define agency issues using a concept in which the function that maximizes manager utility is not necessarily the same

function that maximizes the shareholder-owners' wealth. This discrepancy causes conflicts and affects aggressiveness. Studies by Chen and Chu (2005), Crocker and Slemrod (2005), and Desai and Dharmapala (2006), also show that tax aggressiveness is related to agency issues. The authors argue that the organization's managers use their privileged information to act reducing or increasing – legally or illegally – taxable income. The way managers' will act regarding tax aggressiveness depends on the nature and form of their compensation.

The economic benefits for managers or companies lead to earnings management. According to Martinez and Dalfior (2016), earnings management are practices that drive results towards the interests of either the organization or its managers, most often reflecting on corporate taxes. Finally, Shackelford and Shevlin (2001) make an important association between the problem of agency and the organizations' ownership structure, in addition to discussing tax aggressiveness.

Tax aggressiveness and ownership structure
Several empirical studies examine the relationship between ownership structure and corporate tax evasion. Rego and Wilson (2012) and Chen et al. (2010), for example, found evidence that American family businesses are less aggressive than non-family businesses. Interestingly, Martinez and Ramalho (2014), found the opposite result when observing Brazilian family companies. In another study in Brazil, Martinez and Motta (2020) found that, on average, mixed-capital companies have a more conservative stance on taxes. Finally, when comparing tax aggressiveness between parent companies and subsidiaries, Martinez and Dalfior (2016) found that parent companies direct the tax aggressiveness of their subsidiaries based on the assessment of each of them.

In addition, Rego's (2003) research indicates that tax aggressiveness is subject to the influence of other factors such as the company's operation in different political, cultural, and economic environments, as well as different tax jurisdictions. A study by Desai et al. (2007b) concludes that local tax policy plays an essential role in what a company's ownership structure will look like, and Desai and Dharmapala (2008) reinforce that ownership structure may substantially affect the organizations' tax aggressiveness.

The literature review suggests the existence of relations between tax aggressiveness and aspects such as the company's operating context, and the company's ownership structure – whether family businesses, mixed-capital companies, and parent and subsidiary companies. This evidence encourages a closer look at the relationship between the origin of the equity capital and the business' practices of determining taxable income.

Tax aggressiveness metrics
According to the review on tax research by Hanlon and Heitzman (2010), effective tax rate (ETR) and book-tax difference (BTD) stand out as metrics to assess tax aggressiveness. As presented by Martinez and Ramalho (2014), ETR reflects the effective rate of tax paid concerning the profit before tax (PBT), while BTD shows the differences between the accounting profit and the taxable profit.

Martinez and Motta (2020) argues that BTD may be interpreted as the opposite of ETR. While the former shows greater aggressiveness, the greater its value, the latter indicates that a company is more aggressive as the rate decreases. For Hanlon and Heitzman (2010), ETR

captures the tax rate levied on the companies' income, calculated by dividing the income tax expense by the PBT.

Martinez and Dalfior (2016) argues that the legal tax rate in Brazil reaches a maximum of 34%. Therefore, when finding results above or below this level, the analyzed organization can be considered as less or more tax aggressive, respectively. Table 1 illustrates this relationship.

Table 1. Relation between result, ETR, and aggressiveness

Accounting result	Taxes (Income Tax and Social Contributions)	Level of ETR	Value	Aggressiveness
100	(40)	0.40	≥ 0.34	Less Aggressive
100	(30)	0.30	< 0.34	More Aggressive

Source: Martinez and Dalfior (2016)

Mills et al. (1998) present the book-tax difference (BTD) – calculated by subtracting the taxable profit from the PBT, dividing the result by the total asset – as another metric to assess tax aggressiveness. According to the authors, a higher BTD indicates more tax aggressiveness. In this case, an estimate taxable profit is calculated, observing that this information is not included in the financial statements. The estimation is obtained by dividing the amount of payable income tax and social contribution on profit, by the rate of 34%.
Table 2 illustrates BTD and the relation between accounting profit and taxable profit.

Table 2. The relation between Accounting Profit (AP), Taxable Profit (TP), BTD, and Aggressiveness

The relation between AP and TP	BTD	Aggressiveness
AP > TP	+	More Aggressive
AP < TP	-	Less Aggressive

Source: Martinez and Dalfior (2016)

These metrics were also used by Chen et al. (2010), Martinez and Ramalho (2014), and Martinez and Motta (2020).

Methodology
Research method and data collection
The methodology used to test the hypothesis was adapted from the works by Chen et al. (2010), Martinez and Ramalho (2014), and Martinez and Motta (2020), who carried out similar studies. Data collection and analysis was based on a sample of Brazilian companies listed on the São Paulo Stock Exchange – BOVESPA, gathering information from the firms and data on the percentage of foreign capital participation, during the period 2010 to 2015, which is the period available in the database monitoring the percentage of foreign capital participation in these companies. Their financial statements were collected using the Software *Economática*.

The data with the percentage of foreign capital participation in Brazilian companies were collected from Base Datastream Thomson Reuters, available on the University of Coimbra's website. The data allows analyzing the composition of strategic participation, by classes of interest, with details of the observations where more than 5% of the company's shares were held by investors based in a country other than the one of the stocks' issuer. From the first sample of 341 companies, after the exclusion of firms in the financial sector – which are subject to different tax rules and accounting records – and companies without sufficient information, 285 companies were analyzed.

Also, the negative ETR were excluded from the observations, which were then divided into two data sets, one for ETR analysis (n = 1220) and another for BTD analysis (n = 1532).

Table 3 shows the research variables. Tax aggressiveness was measured based on the ETR and BTD, as suggested by Hanlon and Heitzman (2010), where the ETR reflects the effective rate of tax paid concerning the profit before taxes and the BTD shows the differences between the accounting profit and the taxable profit (Martinez & Ramalho, 2014). The study followed the calculations and assumptions for these metrics as suggested in the literature described in the previous section.

Table 3. Classification of variables

Type of variable	Code	Description	Metrics/meaning
Dependent	ETR	Effective Tax Rate	Tax aggressiveness measure. According to Martinez and Dalfior (2016), above 34%, less aggressiveness
	BTD	Book Tax Difference	Tax aggressiveness measure. According to Martinez and Dalfior (2016), higher BTD, more aggressiveness
Independent	FCP	% of foreign capital participation	Values equal to or above 5% of total shares, held by investors based in a country other than the one of the stocks' issuer
	FCPG1	Dichotomous classification	0 - FCP < 5% and 1 - FCP ≥ 5%
	FCPG2	Dichotomous classification	0 - FCP < 50% and 1 - FCP ≥ 50%
	ROA	Return on Assets	Company's operating profit divided by the previous year's assets
	LEV	Leverage	Company leverage, measured as long-term debt divided by the previous year's assets
	SIZE	Size	Natural logarithm of assets

Source: Elaborated by the authors

As control variables, company value measures were used, such as return on assets, leverage, and size. According to Hanlon and Heitzman (2010), there may be a change in behaviour related to aggressiveness depending on operational performance, degree of indebtedness, and company's size.

The classification of the FCP proxy assumes quantitative and categorical values. According to Table 3, the categorical classification focuses on two stages: in the first, the sample is divided into a group of companies with foreign capital participation below 5% or zero, and the other, with participation greater than or equal to 5%. In the second stage, the same as of the first is performed, assuming a cutoff point of 50%, since from this percentage, as a general rule, the shareholder controls the organization, which can influence tax aggressiveness according to a study by Martinez and Dalfior (2016) mentioned before in this work. The percentage of foreign capital participation represents the quantitative value.

In the following subsection, the econometric model associated with the objectives of this study is exposed. In total, six models are estimated: i) three for the aggressiveness based on ETR (one with the proxy assuming quantitative values, percentage of foreign capital participation; and the other two formatted by group dummies); ii) and three for the aggressiveness based on BTD (using the same segmentation established for ETR).

Econometric model
The econometric model is presented together with the main characteristics to be recorded. These characteristics tend to corroborate the effectiveness of the method and how they will explain the relationship between foreign capital participation and the metrics of tax aggressiveness.

Regression

According to Hair et al. (2005), the regression model is the most widely used and versatile dependency method, applicable to each stage of the corporate decision-making process. For the authors, the regression model is decisive for the construction of business forecasting methods, from econometric models for forecasting the domestic economy based on certain information to models for evaluating marketing strategies adopted in a specific market.

This study develops a multiple regression method, seeking statistical inputs to understand the relationship between foreign capital participation and corporate tax aggressiveness. The multiple regression is a statistical technique used to analyze the relationship between a single dependent variable and several independent/predictor variables (Hair et al., 2005). The method was adapted from similar works developed by Chen et al. (2010), Martinez and Ramalho (2014), and Martinez and Motta (2020), and allowed to test the hypothesis proposed in this study.

The ETR and BTD represent the dependent variables. The independent variables, as a proxy, the percentage of foreign capital participation in Brazilian companies listed on the BM&F BOVESPA or the division of groups according to the percentage of participation. The control variables are listed in Table 3. The regression equation is:

$$ETR_{it}\,(BTD_{it})$$
$$= \beta_0 + \beta_1 FCP_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_{it} + \beta_t DummyYear_t + \varepsilon_{it}$$

where,

ETR_{it} (BTD_{it})– tax aggressiveness of company *i* in year *t*;

FCP_{it}– the percentage of foreign capital in the company *i* in year *t*;

ROA_{it} – Return on assets of a company *i* in year *t*;

LEV_{it} – financial leverage for a company *i* in year *t*;

$SIZE_{it}$ – Natural logarithm of company assents *i*in year *t*;

$Dummyyear_t$– a dichotomous variable representing year *t*;

ε_{it}– random error

The most important parameter associated with the suggested mathematical equation is the coefficient β_1. When it has a certain level of significance, there is statistical evidence that foreign capital participation in companies influences their level of tax aggressiveness. The dummy year variable was included in the model to control variability over time. Before estimating the regression models, the data set was subjected to a descriptive analysis in order to synthesize the sample distribution of the variables, using measures of central tendency, dispersion, and position. Then, the mean difference test was applied to the index of aggressiveness, per group of companies, segmented according to the percentage of foreign capital participation.

Data analysis and results

The next sections present the results of the descriptive statistics and regression models adopted to test whether foreign capital participation influences tax aggressiveness of companies listed on the BOVESPA.

Characterization of the sample

Tables 4 and 5 show the descriptive statistics of the companies of the sample between 2010 and 2015. The results are presented according to the division of groups observed in Table 3. It is important to reinforce that the analyzes come from two sets of data, as explained above.

When synthesizing the data of the dependent variable ETR, the main results show that in general, the average foreign capital participation registered 6.9% (0.069), average ETR 23.7% and return on the asset an average of 6.4%.

Group with 5% participation – ETR

In the group with 5% or more participation, the FCP was an average of 25.2% and a median of 15%. As for the ETR, the average was 24.8%, and 50% of this group had an ETR below 25.5%. Regarding the control variables, there is a higher average in the group with 5% or more participation, only for ROA and SIZE, the average LEV stands out in the group with participation below 5%.

When the means of the indicators by the group were compared statistically at a 5% significance level, the difference in the means was significant only for the SIZE variable.

Table 4. Descriptive statistics per group with 5% and 50% participation – ETR

	Group with 5% participation						Total [n = 1220]			Average test (p-value)
	Less than 5% [n=886]			More or equal to 5% [n=334]						
	Average	DP	Median	Average	DP	Median	Average	DP	Median	
FCP	0.000	0.000	0.000	0.252	0.227	0.150	0.069	0.163	0.000	-
ETR	0.232	0.176	0.240	0.248	0.151	0.255	0.237	0.170	0.245	0.127
ROA	0.058	0.325	0.067	0.077	0.153	0.085	0.064	0.288	0.072	0.174
LEV	1.689	19.197	0.358	0.455	0.546	0.367	1.351	16.369	0.360	0.056
SIZE[a]	6.071	0.968	6.135	6.393	0.784	6.526	6.159	0.932	6.273	0.000**

	Group with 50% participation						Total [n = 1220]			Average test (p-value)
	Less than 50% [n=1153]			More or equal to 50% [n=67]						
	Average	DP	Median	Average	DP	Median	Average	DP	Median	
FCA	0.036	0.086	0.000	0.639	0.125	0.610	0.069	0.163	0.000	-
ETR	0.235	0.173	0.242	0.260	0.096	0.281	0.237	0.170	0.245	0.054
ROA	0.060	0.295	0.071	0.122	0.082	0.125	0.064	0.288	0.072	0.000**
LEV	1.409	16.837	0.360	0.366	0.192	0.357	1.351	16.369	0.360	0.036**
SIZE[a]	6.134	0.933	6.225	6.588	0.796	6.744	6.159	0.932	6.273	0.000**

Note: ** Significance value of 5%;[a] – transformation of logarithm; n – sample size*Source: Elaborated by the authors*

Group with 50% participation – ETR

In the group with 50% or more participation, the FCP registered 63.9% on average, with a median of 61%. For ETR, the average was 26%, with 50% of this group having an ETR below 28.1%. Of the control variables, there was a higher average in the group with 50% or more for ROA and SIZE. In the hypothesis test that compares the averages, at the 5% significance level, there was a difference in the average per group for ROA, LEV, and SIZE.

Table 5 shows the results for the data set associated with aggressiveness based on BTD. The results show a negative BTD of 6.3% and a median of 0.5%, that is, 50% of the sample presented a BTD greater than or equal to 0.5%.

Group with 5% participation – BTD

In the group with 5% or more participation, the FCP registered an average of 25.5% with a median of 15%. For BTD, the average was 5.9% (negative), and 50% of this group had a BTD higher than 0.8%. Regarding the control variables, there was a higher average in the group with 5% or more for ROA and SIZE, only the average LEV stands out in the group with participation below 5%. When comparing the means by group, there is a significant difference in the control variables LEV and SIZE.

Table 5. Descriptive statistics per group with 5% and 50% – BTD

	Group with 5% participation						Total [n = 1532]			Average test (p-value)
	Less than 5% [n=1122]			More or equal to 5% [n=410]						
	Average	DP	Median	Average	DP	Median	Average	DP	Median	
FCP	0.000	0.000	0.000	0.255	0.226	0.150	0.068	0.162	0.000	-
BTD	-0.065	0.567	0.003	-0.059	0.535	0.008	-0.063	0.559	0.005	0.837
ROA	0.047	0.299	0.054	0.058	0.158	0.072	0.050	0.269	0.061	0.348
LEV	1.461	17.074	0.365	0.441	0.503	0.363	1.188	14.619	0.364	0.046**
SIZE[a]	6.063	0.935	6.102	6.416	0.770	6.532	6.158	0.907	6.234	0.000**

	Group with 50% participation						Total [n = 1532]			Average test (p-value)
	Less than 50% [n=1448]			More or equal to 50% [n=84]						
	Average	*DP*	*Median*	*Average*	*DP*	*Median*	*Average*	*DP*	*Median*	
FCP	0.035	0.087	0.000	0.633	0.120	0.610	0.068	0.162	0.000	-
BTD	-0.064	0.567	0.004	-0.047	0.383	0.013	-0.063	0.559	0.005	0.696
ROA	0.049	0.273	0.059	0.076	0.164	0.097	0.050	0.269	0.061	0.159
LEV	1.235	15.036	0.366	0.365	0.191	0.358	1.188	14.619	0.364	0.028**
SIZE[a]	6.131	0.907	6.194	6.609	0.787	6.779	6.158	0.907	6.234	0.000**

Note ** Significance level of 5%; [a] – the transformation of logarithm; n – sample size *source: Elaborated by the authors.*

1.4 Group with 50% participation – BTD

In the group with 50% or more, the FCP was 63.3% in the average and median was 61%. For BTD, the average was 4.7% negative, with 50% of this group having a BTD higher than 1.3%. Of the control variables, there was a small superiority in the average for the group with 50% or more in ROA and SIZE. When comparing the means by group, there are significant differences in the means for control variables LEV and SIZE. In the general context, after evaluating the result of the descriptive statistics of the data sets for the metrics on tax aggressiveness (ETR and BTD), there were no differences between groups (5% and 50%), which was statistically proven in the average test.

Results

Table 6 shows that the relationship between the ETR and foreign capital participation was not significant for any of the estimated models. It is important to note that, in the FCPG1 and FCPG2 models, the proxy is represented by a dummy as shown in Table 3, that is, the inclusion of this variable assesses whether there is a significant difference in the expected value of the ETR between groups, and the results, as mentioned, pointed to a non-significance. Regarding the control variables, the models showed a significance level of 5% and a positive relationship between ETR and SIZE, that is, the larger the company, the less tax aggressive.

Table 6. Model estimates for the dependent variable ETR

Explanatory variable	Dependent variable ETR					
	FCP		FCPG1		FCPG2	
	Beta	p-value	Beta	p-value	Beta	p-value
Proxy FCP	-0.013	0.534	0.000	1.000	0.002	0.892
ROA	0.061	0.054*	0.061	0.054*	0.061	0.055*
LEV	0.000	0.842	0.000	0.843	0.000	0.844
SIZE	0.044	0.000**	0.044	0.000**	0.044	0.000**
Dummy_2011	-0.013	0.375	-0.013	0.368	-0.013	0.366
Dummy_2012	0.021	0.206	0.021	0.210	0.021	0.211
Dummy_2013	-0.002	0.874	-0.002	0.874	-0.003	0.872
Dummy_2014	-0.011	0.485	-0.011	0.481	-0.011	0.476
Dummy_2015	0.011	0.524	0.010	0.534	0.010	0.536
Constant	-0.038	-0.038	-0.037	-0.037	-0.037	-0.037
Number of obs	1220		1220		1220	
Statistic F	12.810		12.790		12.860	
Prob> F	0.000**		0.000**		0.000**	
R-adjusted	0.081		0.080		0.080	

Note: * e ** - significance value of 10% and 5% respectively; **FCP** – *Proxy* FCP assumes continuous values; **FCPG1** – *Proxy* FCP defined as a *dummy* - one (1) companies with foreign capital participation more or equal to 5% and zero (0) if opposite; and **FCPG2** - *Proxy* FCP defined *dummy one* (1) companies with foreign capital participation more or equal to 50% and zero (0) if opposite;
Source: Elaborated by the authors.

Table 7 shows how the estimates of the models are associated with the BTD variable. Similar to the results for ETR, the proxy FCP in the case of tax aggressiveness based on BTD resulted as non-significant in all estimated models.

Table 7. Model estimates for the dependent variable BRD

Explanatory variable	Dependent Variable BTD					
	FCP		FCPG1		FCPG2	
	Beta	p-valor	Beta	p-valor	Beta	p-valor
Proxy FCP	-0.150	0.114	-0.026	0.308	-0.035	0.302
ROA	0.675	0.011**	0.676	0.011**	0.676	0.011**
LEV	0.000	0.935	0.000	0.934	0.000	0.932
SIZE	0.080	0.006**	0.078	0.006**	0.077	0.007**
Dummy_2011	-0.024	0.384	-0.025	0.370	-0.025	0.363
Dummy_2012	-0.047	0.185	-0.048	0.184	-0.048	0.171
Dummy_2013	-0.058	0.116	-0.058	0.118	-0.058	0.114
Dummy_2014	0.022	0.734	0.022	0.739	0.020	0.756
Dummy_2015	-0.088	0.027	-0.089	0.026	-0.091	0.024
Constant	-0.545	-0.545	-0.540	-0.540	-0.537	-0.537
Number of obs	1532		1532		1532	
Statistic F	4.230		4.330		4.020	
Prob> F	0.000**		0.000**		0.000**	
R-adjusted	0.137		0.136		0.135	

Note: * e ** - significance level of 10% and 5% respectively; FCP – *Proxy* FCP assumes continuous values; FCPG1 – *Proxy* FCP is a *dummy* classified as one (1) companies with foreign capital participation more or equal to 5% and zero (0) if not; and FCPG2 - *Proxy* FCP is a *dummy* classified as one (1) companies with foreign capital participation more or equal to 50% and zero (0) if not;
Source: Elaborated by the authors

The control variables, SIZE and ROA, were significant at the level of 5% in the estimated models, indicating that the increase in size and return on assets tend to make the company more tax aggressive. For the regression coefficients estimated for both ETR and BTD, the proxy FCP was not significant for either estimated model, i.e., the suggested method did not present statistical evidence that foreign capital participation makes the company more or less tax aggressive. All tests performed were replicated in a balanced database and presented similar

results. The model was replicated with the panel data showing results very close to those discussed above. Although not documented in the tables, additional tests were carried out to ensure the robustness of the statistics. Among them, it worth citing the Jarque-Bera (JB) normality test, indicating that the residues have a normal distribution; the Variance Inflation Factor test (VIF), which showed high values close to 4,000, however below the limits that would lead to characterize a serious multicollinearity problem; and the Breusch-Godfrey test (BG), verifying that there is no autocorrelation between the residues.

Conclusion

This research explored the relationship between tax aggressiveness and foreign capital participation in Brazilian companies listed on the BM&F BOVESPA from 2010 to 2015. Regression analysis was used to verify this relationship, as well as the metrics of tax aggressiveness ETR (which verifies the effective rate of taxes paid related to profit before tax) and BTD (which captures differences between the companies' accounting and taxable profit). The Mean difference test was also performed. The classification of the proxy FCP (Foreign Capital Participation) at first assumed continuous quantitative values. It was then divided into one group of companies with less than 5% or zero foreign capital participation, and another group with participation greater than or equal to 5%. Then the same division was made assuming 50% as the cutoff point. The tests verify that the variable FCP did not present significant relations with the dependent variables ETR and BTD, demonstrating that the origin of the capital does not influence the companies' tax aggressiveness in the studied sample. The results suggest that the behaviour of Brazilian and foreigner shareholders when it comes to tax aggressiveness does not present significant differences.

A suggestion for future research is to carry out this investigation in different tax jurisdictions, adding other control variables or new tax aggressiveness metrics. Also, concerning control, it is worth highlighting the appreciation of the effect of institutional investors or how the risk profile of investors influences corporate tax aggressiveness.

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