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UMA ANÁLISE EMPÍRICA DOS DETERMINANTES DO IPO NO BRASIL

AN EMPIRICAL ANALYSIS OF THE DETERMINANTS OF IPO IN BRAZIL

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UMA ANÁLISE EMPÍRICA DOS DETERMINANTES DO IPO NO BRASIL

OBJETIVO
O artigo discute quais os fatores que conduzem as empresas privadas para fazer um IPO no Brasil.

METODOLOGIA
Construímos um banco de dados original com dados confidenciais obtidos de SERASA, contendo balanço e informações financeiras de 4.729 empresas privadas no Brasil entre 1998-2007. Foi usado um modelo de resposta binária de valor extremo, uma vez que as empresas privadas que realizaram um IPO em nossa amostra são uma grande minoria, 80 de 4.729 empresas. Nossa amostra é organizada em um conjunto de cortes transversais e em painel.

RESULTADOS E CONCLUSÕES
Encontramos evidências de que a alavancagem, a rentabilidade, os investimentos e as despesas financeiras são as variáveis que são mais relevantes para explicar as decisões de negócios de IPO no Brasil. Consideramos nossos resultados intuitivos e esperados, dado que as empresas no Brasil tanto privadas quanto públicas predominantemente têm controle familiar e preferem não diluir capital após o IPO.

IMPLICAÇÕES PRÁTICAS
O trabalho é relevante para investidores do mercado acionário Brasileiro por que analisa de forma detalhada os fatores que determinam a abertura de capital no Brasil. Isto vai permitir que estes investidores consigam alocar de forma mais eficiente seus recursos.

PALAVRAS CHAVES
IPO, Fatores Determinantes, Empresas Privadas Brasileiras

AN EMPIRICAL ANALYSIS OF THE DETERMINANTS OF IPO IN BRAZIL

OBJETIVO
The article discusses about what factors determine private firms to do an IPO in Brazil.

METODOLOGIA
We build an original database of confidential data obtained at SERASA, containing balance sheet and financial information of 4.729 private firms in Brazil from 1998 to 2007. We use an extreme value binary response model, since the private firms that held an IPO in our sample are a large minority, 80 out of 4,729 firms. Our sample is organized into a pool of cross-sections as well as panel data.

RESULTADOS E CONCLUSÕES
We found evidence that leverage, profitability, CAPEX and financial expenses are the variables that are most relevant to explain business decisions of IPO in Brazil. We consider our results intuitive and expected, as firms in Brazil both private and public are most family owned and do not want to dilute capital after the IPO.

IMPLICAÇÕES PRÁTICAS
Our paper is relevant for investors in the stock Market in Brazil because it studies in a detailed manner the factors that determine IPO in Brazil. This will allow these investors to allocate their resources in more efficient ways.

PALAVRAS CHAVES
IPO, Determinant Factors, Brazilian Private Firms

1. Introduction

In recent years, we have seen an increasing number of private firms opening capital (IPO) in Brazil. Just to illustrate, from 2004 to 2007 there were 106 IPOs compared to 16 between 1995 and 2003. A question naturally arises: what are the factors that are drive firms to do an IPO in Brazil?

Our goal in this paper is to answer this question. To this end, we build an original database with confidential data obtained from SERASA and containing balance sheet and financial information of 4,729 private firms in Brazil from 1998 to 2007[1].

Our empirical evidences indicate that leverage, profitability, capital expenditure (CAPEX) and financial expenses are the variables that are most relevant to explain the decision of firms to do an IPO in Brazil.

Our paper falls into a vast international literature on IPO. It is more closely related to Pagano, Paneta and Zingales (1998). These authors analyze the reasons why companies do IPO in Italy. In their study, they use a database with financial and accounting information of more than 30,000 Italian firms, between 1982 and 1992. Among the results they found, one of the most significant was that firms with higher leverage are more likely to do an IPO in Italy.

Other papers from the international literature in line with ours are Rydqvist and Hogholm (1995) and Brau and Faucett (2006). Rydqvist and Hogholm studied the reasons for the IPO of family businesses in Sweden. The authors found that the shareholders held IPOs to finance their consumption and diversify their portfolios. Brau and Faucett study the motivations of firms in the United States to do IPO by interviewing 336 CEOs of these firms. They concluded that the most important motivation for IPOs was to make it possible future acquisitions for the firms surveyed.

[1] SERASA is a privately held company that has one of the largest databases of financial and accounting information of firms and individuals in the world. The data is related to debt of firms and individuals in Brazil. The information of SERASA is provided to banks, to trade shops, small, medium and large companies, with the goal of giving support to credit decisions and thus make business more cheap, fast and reliable.

There are not many empirical papers that study the determinants of IPO in Brazil. [2]One of these papers is Oliveira e Martelanc (2014). The authors show that firms undertook their IPOs in periods when they had made significant capital expenditures, when they had the highest levels of profitability, and when they had increased their levels of indebtedness. For the authors, IPOs in Brazil were generally used by private firms as an alternative to improve their capital structures and raise funds to continue investing in their growth.

Another paper that looks empirically at the determinants of IPO in Brazil is Steffen and Zanini (2015) The study examines financial executives' perceptions of IPO. The authors surveyed 32 chief financial executives of companies that conducted an IPO between 2004 and 2008 in Brazil and tested two financial theories: the Life Cycle Theory and the Market Timing Theory. Their results show that the financial executives in Brazil make financing decisions for the firm following life cycle theory as well as market timing and static trade-off theories.

One of the problems with the empirical literature -either international or Brazilian- that studies the determinants of IPO of private firms is the fact that there is not a long history of financial or accounting data of the firms that implement the IPO. Normally, firms that want to implement an IPO have to show to investors only their latest balance sheets. Most researchers on the topic have, therefore, very limited information to work with.

Our paper contributes to the Brazilian and international literature on this topic, because it uses an original database built from financial and accounting information of private firms that spread throughout much more time in the past and, therefore, gives a better understanding of private firms decisions to do an IPO. With such information, we can have a more precise notion of the determinant factors of IPOs in Brazil.

The remainder of this paper is organized as follows. In section 2, we describe the data. In section 3, we do the empirical analysis. In section 4, we conclude.

[2] Most studies of Brazilian literature about IPO focus other aspects. For example, one can cite the following papers: Carvalho and Tolentino (2010) study the factors that explain the price stabilization after an IPO in Brazil and Freddi (2007) that describes various stylized facts regarding IPO in Brazil during the period from 1995 to 2006.

2. Data

Our data comes from SERASA. Disclosures from SERASA are confidential. The sample period is from 1998 to 2007. The database is composed of financial and accounting information of 4,729 firms. The information is annual. In SERASA database, firms are classified by sectors and by capital origin. We delete from our database those firms that belong to the financial sectors and that are foreign capital firms. We also excluded the latter, due to the fact that they have better access to resources in foreign currency, when compared to the domestic firms. Finally, we excluded firms that had net sales lower than $10 million per year in at least one of the years of the sample, and that had incomplete data on more than four years of our sample period[3][4].

To complement SERASA database, we used three other sources of data. They are: BOVESPA, Comissão de Valores Mobiliários (CVM), and prospectuses of IPOs. In BOVESPA and CVM, we identified all companies that did an IPO in our sample period. We found 122 firms.

We used the prospectuses of IPOs, which contains the data of the last audited financial statement of the private firm, so as to have an understanding of the company's history as well as the intention of appropriation of funds raised, among others relevant information related to their IPOs.

We withdrew from our database 8 firms that between 1995 and 1997 did an IPO and that had their registrations cancelled in the following years, as identified by Freddi (2007). Finally, 13 companies who performed an IPO were excluded from our sample because of the lack of data because of a merger or acquisition by other firms. Therefore, our final sample of firms that did an IPO was 80 firms from several sectors of the economy.

In Panel A of Table 1, we show the number of IPOs in each year of our sample period. As one can see, the 2 years in each there are more IPOs by far are 2006 (22) and 2007 (45). Panel B shows IPO firms and those who did not do an IPO in our sample period separated by sectors of

[3] The initial database that we received from SERASA had 20,000 firms of several sectors of the economy, such as commerce, industry, services and the financial sector. The names and other forms of identification of firms were omitted, because of the need to maintain the privacy of the firm information.

[4] The value of $10 million in sales was chosen because it matched a sample decile containing the sales of companies that did an IPO in our sample period.

the economy. Panel C of Table 1 contains financial and accounting information on firms that did an IPO and of the 4,649 companies that did not in our sample period not considering the sectors. Table 1 Panel D displays tests of differences of averages between IPO and non-IPO firms. As one can observe, most firms that did an IPO came from the Construction Industries and had more leverage, profitability (measured by EBITDA), more financial expenses and more CAPEX than their counterparts that did not perform an IPO. Finally, Table 1 Panel E shows correlations between some of the financial and accounting characteristics that we used in our empirical work for all firms in our sample.

Table 1 Descriptive Statistics of SERASA Sample Classified by the Occurrence of an IPO

Our main source of data comes from SERASA. Disclosures from SERASA are confidential. The sample period is from 1998 to 2007. The database is composed of financial and accounting information of 4,729 firms. The information reported in this Table is annual. In SERASA database, firms are classified by sectors and by capital origin. We deleted from our database those firms that belong to the financial sectors and that are foreign capital firms. We also excluded the latter due to the fact that they have better access to resources in foreign currency, when compared to the domestic firms. Finally, we excluded firms that had net sales lower than $10 million per year in at least one of the years of the sample, and that had incomplete data on more than four years of our sample period. We withdrew from our database 8 firms that between 1995 and 1997 did an IPO and that had their registrations cancelled in the following years. Finally, 13 companies who performed an IPO were excluded from our sample because of the lack of data as a result of a merger or acquisition by other firms. Our final sample of firms that did an IPO was 80 firms. In Panel A, we present the number of IPOs every year. In Panel B, we present the number of firms that did and did not an IPO for each sector of the economy and some of their accounting and financial information. In Panel C, we present some descriptive statistics of firms that did and did not an IPO. In Panel D, we present average tests of financial and accounting characteristics between firms that did and did not an IPO and finally Panel E reports correlations among the financial and accounting characteristics of firms in our final sample.

Panel A IPOS in Each Year of Sample Period

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
# Firms IPOs	0	0	1	0	1	0	5	6	22	45

Panel B IPO and non IPO Firms by Sectors of the Economy (millions of dollars)

Sectors		**IPO**				**Non IPO**		
	N	**Equity**	**Financial Expenses**	**EBITDA**	**N**	**Equity**	**Financial penses**	**Ex-EBITDA Financ**
Department Stores	1	35.0	63.1	67.9	5	77.0	38.2	16.7
Chemical Products	1	79.9	30.1	50.3	327	7.9	1.4	1.9
Mechanical Industries	3	117.1	38.2	45.3	95	19.6	1.4	5.4
Textile Industries	1	1,752.6	151.1	111.6	74	17.9	4.8	2.8
Construction Industries	20	577.7	19.8	133.4	46	62.0	4.7	6.6
Wood Industries	1	247.5	43.9	73.2	47	27.1	2.1	4.3
Beverage and Food Industries	2	68.6	29.7	62.8	86	25.0	4.9	13.9
Meat Industries	3	198.1	369.0	299.2	46	98.9	7.8	17.9
Electrical and Electronic Industries	1	128.1	13.8	39.6	91	46.2	2.1	8.1
Petrochemical Industries	6	507.8	31.3	115.9	267	58.7	11.7	14.9
Agriculture	2	96.3	16.3	7.5	27	38.1	3.3	3.1
Mineral Extraction	1	14.0	0	-2.1	30	142.1	10.3	88.1
Transportation Services	2	206.1	72.3	308.8	266	7.1	2.8	4.2
Public Utilities	7	733.3	116.8	208.6	84	1,490	164.6	183.1
Education	4	64.3	2.0	36.7	103	41.3	3.3	3.6
Other Sectors	27				3055	63.1	2.8	4.5

Panel C Financial Characteristics of IPO and non IPO Firms (millions of dollars)

	IPO				Non IPO			
	N	**Average**	**Median**	**Standard Deviation**	**N**	**Average**	**Median**	**Standard Deviation**
Equity	80	530.6	449.4	293.5	4.649	62.8	3.4	1.178.4
Total Debt	80	630.0	186.7	1.282.7	4.649	66.6	4.7	973.2
Financial Expenses	80	56.9	8.5	159.6	4.649	6.3	0.4	96.5
CAPEX	80	73.5	12.9	160.0	4.649	16.3	0.8	148.9
EBITDA	80	118.2	42.5	229.7	4.649	8.8	1.0	116.6

Panel D Tests of Average Differences between IPO and non IPO Firms (millions of dollars)

	Differences	**t statistic**	**p-value**
Equity	467.80	5.09	0.00
Total Debt	563.40	7.61	0.00
CAPEX	50.30	6.56	0.00
EBITDA	602.00	9.23	0.00
Leverage	0.20	4.30	0.00

Panel E – Matrix of Correlations between Financial and Accounting Characteristics of all Firms

	Equity	Total Debt	Financial Ex-penses	CAPEX	EBITDA	Sales	Sales Growth
Equity	1						
Total Debt	0,0145	1					
Financial Ex-penses	-0,0254	0,0352	1				
CAPEX	0,0442	0,0486	0,0624	1			
EBITDA	0,0115	-0,0397	-0,0262	0,272	1		
Sales	0,2214	-0,0311	-0,0672	0,1831	0,1834	1	
Sales Growth	0,0318	-0,0214	-0,0310	0,1421	0,0831	0,3119	1

3 Empirical Analyses of the Determinant Factors for IPOs in Brazil

In this section, we analyze the variables that are the determinant factors for IPOs in Brazil. To answer this question, we use an extreme value binary response model, since the private firms that held an IPO in our sample are a large minority, 80 out of 4,729 firms. The specification is described in equation (1) below. [5]

Our sample is organized into a pool of cross-sections. [6]The dependent variable is equal to 1 if the firm did IPO in a certain year and 0 otherwise. We drop from the sample, firms that undertook the IPO beginning in the year following the IPO year.

$$Pr(IPO_{it} =1) = F(\alpha_1 sales_{it} + \alpha_2 capex_{it} + \alpha_3 finanexp_{it} + \alpha_4 EBITDA_{it} + \alpha_5 growthsales_{it} + \alpha_6 leverage_{it} + controls\ ),\ i = 1 \text{ to } 4729 \text{ and } t= 1998 \text{ to } 2007 \quad (1)$$

F() is the extreme values distribution function; sales is the total net sales of the firm; growthsales is the growth of net sales; capex are investment expenditures; expfin are financial expenses; profitability is measured by the EBITDA; leverage is measured by the ratio of total debt to total assets; the controls are year dummies and sector dummies. Below, we will discuss the reasons given by the literature for inclusion in our model of these explanatory variables.

Pagano, Paneta and Zingales (1998) show that adverse selection costs are important obstacles of IPOs of small and young firms. Therefore, in the presence of large agency costs, the likelihood of the IPO is positively correlated with age or size. To control for this, we use the total net sales of the firms.

There are direct costs relevant for an IPO, as Ritter (2002) points out. These costs are subscription, registration, certification and dissemination of financial information among the market. They are less important for bigger firms. We use once again size, measured by the total net sales for controlling for these factors. The Hypothesis is that size is positively correlated with the probability of an IPO.

[5] We follow Pagano, Paneta and Zingales (1998).

[6] We control for Heterocedasticity with Huber-White.

One of the advantages of becoming public is to increase the chances of financing, as shown by Ritter (1998). Firms with a higher probability of doing an IPO are those, therefore, with the greatest current and future investment opportunities, higher financial expenses and with high leverage. We measure the current investment by CAPEX, the future investment opportunities by sales growth and leverage as the ratio of total debt over total assets.

Another possible reason for the IPO is a rational decision of shareholders to dilute capital as Zingales (1995a) shows. To control for this we use the total equity of firms.

Column 1 of Table 2 Panel A presents the results of our estimates for the entire sample. Column 2 of Table 2 presents the results of the estimation of equation (1) with only a sample of firms that came from the services sector, as 72.5% of the sample of firms that have opened capital are classified in the service sector. Column 3 of Table 3 shows the estimation of equation, excluding from our database holding firms.

All coefficient of explanatory variables are significant with the exception of stockholders equity, sales growth, asset turnover, fixed asset turnover and liquidity (the last three shown in Panel C Table 3). Overall, our results align with those of Pagano, Panetta and Zingales (1998).

We did several robustness tests. In the first approach, we repeated the initial estimation (equation (1)) for the years were we registered more frequency of IPOs, 2006 and 2007; in second approach, we included in our model other explanatory variables such as asset turnover, fixed assets turnover and liquidity (measured by working capital). As one can see in the panels B and C of Table 2 our previous results are not changed fundamentally.[7]

Finally, we estimated equation (1) using panel extreme value with random effects. We repeated all the estimations above and the results are shown in Table 3 Panels A to C. As one can observe, the results are very similar to the ones we presented before. Once again, all coefficients

[7] We estimated several other different specifications from equation (1) and from our robustness tests reported in the text. We added several other indicators of financial and accounting characteristics of firms. In general, these other indicators showed high correlation with the explanatory variables used in equation (1). We control for Heterocedasticity with Huber-White in all our regressions. All explanatory variables with exception of leverage were measured in million of dolllars. Due to space restrictions, we do not report the results. Overall, they were similar to the results we reported in the text. We believe, therefore, that the specification in (1) is the most suitable according to the literature and the one least subject to multicollinearity problems.

of explanatory variables are significant and have the expected sign, with the exception of stockholders equity, sales growth, asset turnover, fixed asset turnover and liquidity.

Table 4 Determinant Factors of IPOs in Brazil: Extreme Value of Pooled of Cross-Section

Our main source of data comes from SERASA. Disclosures from SERASA are confidential. The sample period is from 1998 to 2007. The database is composed of financial and accounting information of 4,729 firms. The information reported in this Table is annual. In SERASA database, firms are classified by sectors and by capital origin. We deleted from our database those firms that belong to the financial sectors and that are foreign capital firms. We also excluded the latter due to the fact that they have better access to resources in foreign currency, when compared to the domestic firms. Finally, we excluded firms that had net sales lower than $10 million per year in at least one of the years of the sample, and that had incomplete data on more than four years of our sample period. We withdrew from our database 8 firms that between 1995 and 1997 did an IPO and that had their registrations cancelled in the following years. Finally, 13 companies who performed an IPO were excluded from our sample because of the lack of data as a result of a merger or acquisition by other firms. Our final sample of firms that did an IPO was 80 firms. In Panel A, we estimated the model (equation (1) in the text) using pool of cross sections in three situations: for all firms, for a database of firms from the services sector and for a database that excludes holding firms. In Panel B, we estimated for the years where we observed more frequency of IPOs, 2006 and 2007. In Panel C, we included in the model other explanatory variables such as asset turnover, fixed assets turnover and liquidity (working capital).The estimation method is binary response extreme values for all models. We control for Heterocedasticity with Huber-White in all estimations. The p-values are in parentheses.

Panel A: Pooled of Cross Sections Sample Period 1998 a 2008

	Pr(IPO=1)		
	Complete Sample	Services	Holdings
Leverage	0.421	0.723	0.812
	(0.000)	(0.08)	(0.01)
Financial Expenses	0.231	0.418	0.134
	(0.01)	(0.04)	(0.10)
EBITDA	0.721	0.631	0.587
	(0.02)	(0.01)	(0.00)
CAPEX	0.182	0.701	0.179
	(0.012)	(0.09)	(0.03)
Equity	-0.429	-0.314	-0.512
	(0.679)	(0.421)	(0.652)
Sales	0.261	-0.412	-0.325
	(0.032)	(0.04)	(0.01)
Growth of Sales	0.623	0.231	0.342
	(0.52)	(0.34)	(0.41)
Year Dummies			
Sector Dummies			
MacFadden R2	0.16	0.18	0.25
LR	55.23	50.19	47.34
(p-valor)	(0.00)	(0.00)	(0.00)

Panel B: Pooled of Cross Sections Sample Period from 2006 a 2007

	Pr(IPO=1)		
	Complete sample	Services	Holdings
Leverage	0.213	0.784	0.831
	(0.01)	(0.04)	(0.07)
Financial Expenses	0.174	0.421	0.512
	(0.05)	(0.01)	(0.02)
EBITDA	0.542	0.823	0.541
	(0.03)	(0.01)	(0.04)
CAPEX	0.213	0.72	0.134
	(0.03)	(0.05)	(0.04)
Equity	-0.721	-0.421	-0.512
	(0.63)	(0.35)	(0.58)
Sales	0.34	0.48	0.89
	(0.01)	(0.06)	(0.02)
Growth of Sales	0.43	0.18	0.61
	(0.85)	(0.90)	(0.48)
Year Dummies			
Sector Dummies			
MacFadden R2	0.16	0.18	0.25
LR	50.12	48.14	53.15
(p-valor)	(0.00)	(0.00)	(0.00)

Panel C: Pooled of Cross-Sections Including other Regressors and Sample Period from 1998 a 2007

	Pr(IPO=1)		
	Complete sample	Services	Holdings
Leverage	0.184	0.743	0.821
	(0.02)	(0.04)	(0.01)
Financial Expenses	0.132	0.415	0.187
	(0.09)	(0.02)	(0.06)
EBITDA	0.421	0.532	0.612
	(0.03)	(0.04)	(0.02)
CAPEX	0.19	0.732	0.184
	(0.03)	(0.05)	(0.01)
Equity	-0.501	-0.421	-0.315
	(0.92)	(0.72)	(0.56)
Sales	0.512	0.31	0.423
	(0.01)	(0.03)	(0.00)
Growth of Sales	0.51	0.24	0.61
	(0.75)	(0.42)	(0.42)
Asset Turnover	0.21	0.84	0.32
	(0.02)	(0.23)	(0.42)
Turnover Fixed assets	-0.523	-0.521	-0.487
	(0.82)	(0.42)	(0.61)
Liquidity	0.42	0.35	0.21
	(0.14)	(0.18)	(0.82)
Year Dummies			
Sector Dummies			
Macfadden R2	0.18	0.25	0.23
LR	56.89	62.89	71.43
(p-valor)	(0.00)	(0.00)	(0.00)

Table 5 Determinant Factors of IPOs in Brazil: Extreme Value of Panel Data with Random Effects

Our main source of data comes from SERASA. Disclosures from SERASA are confidential. The sample period is from 1998 to 2007. The database is composed of financial and accounting information of 4,729 firms. The information reported in this Table is annual. In SERASA database, firms are classified by sectors and by capital origin. We deleted from our database those firms that belong to the financial sectors and that are foreign capital firms. We also excluded the latter due to the fact that they have better access to resources in foreign currency, when compared to the domestic firms. Finally, we excluded firms that had net sales lower than $10 million per year in at least one of the years of the sample, and that had incomplete data on more than four years of our sample period. We withdrew from our database 8 firms that between 1995 and 1997 did an IPO and that had their registrations cancelled in the following years. Finally, 13 companies who performed an IPO were excluded from our sample because of the lack of data as a result of a merger or acquisition by other firms. Our final sample of firms that did an IPO was 80 firms. In Panel A, we estimated the model (equation (1) in the text) using extreme value with panel data and random effects in three situations: for all firms, for a database of firms from the services sector and for a database that excludes holding firms. In Panel B, we estimated for the years where we observed more frequency of IPOs, 2006 and 2007. In Panel C, we included in the model other explanatory variables such as asset turnover, fixed assets turnover and liquidity (working capital).The estimation method is binary response extreme values for all models. We control for Heterocedasticity with Huber-White in all estimations. The p-values are in parentheses.

Panel A: Panel Data Period 1998 a 2008

	Pr(IPO=1)		
	Complete Sample	Services	Holdings
Leverage	0.512	0.342	0.36
	(0.01)	(0.01)	(0.01)
Financial Expenses	0.201	0.432	0.14
	(0.10)	(0.2)	(0.04)
EBITDA	0.712	0.732	0.41
	(0.000)	(0.01)	(0.02)
CAPEX	0.231	0.823	0.23
	(0.02)	(0.03)	(0.01)
Equity	-0.482	-0.342	-0.481
	(0.43)	(0.24)	(0.52)
Sales	0.26	-0.23	-0.38
	(0.01)	(0.02)	(0.06)
Growth of Sales	0.623	0.42	0.41
	(0.52)	(0.12)	(0.42)
Dummies of Sectors			
MacFadden R2	0.43	0.21	0.62
LR	161.01	168.05	190.06
(p-valor)	(0.00)	(0.00)	(0.00)

Panel B: Pane Data Period 2006 a 2007

	Pr(IPO=1)		
	Complete sample	Services	Holdings
Leverage	0.23	0.812	0.72
	(0.01)	(0.03)	(0.02)
Financial Expenses	0.12	0.323	0.325
	(0.03)	(0.00)	(0.00)
EBITDA	0.51	0.412	0.423
	(0.03)	(0.01)	(0.01)
CAPEX	0.24	0.621	0.19
	(0.03)	(0.02)	(0.013)
Equity	-0.54	-0.321	-0.34
	(0.81)	(0.41)	(0.67)
Sales	0.324	0.52	0.83
	(0.01)	(0.01)	(0.11)
Growth of Sales	0.521	0.28	0.72
	(0.62)	(0.71)	(0.32)
Dummies of Sectors			
Mcffaden R2	0.58	0.46	0.51
LR	268.69	265.73	253.06
(p-valor)	(0,00)	(0.00)	(0.00)

Panel C: Panel Data Including other Regressors and Sample Period from 1998 a 2007

	Pr(IPO=1)		
	Complete sample	Services	Holdings
Leverage	0.18	0.72	0.72
	(0.01)	(0.01)	(0.02)
Financial Expenses	-0.156	0.34	0.172
	(0.01)	(0.02)	(0.03)
EBITDA	0.523	0.64	0.53
	(0.02)	(0.00)	(0.01)
CAPEX	0.21	0.23	0.21
	(0.03)	(0.02)	(0.01)
Equity	-0.621	0.34	-0.423
	(0.98)	(0.43)	(0.62)
Sales	0.43	-0.36	0.48
	(0.01)	(0.15)	(0.09)
Growth of Sales	0.52	0.42	0.72
	(0.75)	(0.23)	(0.63)
Asset Turnover	0.24	0.76	0.31
	(0.32)	(0.45)	(0.73)
Turnover Fixed assets	-0.521	0.42	-0.40
	(0.42)	(0.32)	(0.423)
Liquidity	0.53	0.44	0.32
	(0.11)	(0.18)	(0.81)
Dummies of Sectors			
Mcffaden R2	0.61	0.53	0.42
LR	268.69	265.73	253.51
(p-valor)	(0.00)	(0.00)	(0.00)

We ponder that our results are not unexpected. Family groups own the majority of firms that did an IPO capital in our database. Families are looking for external investors, so they can reduce the risk for their private wealth, while at the same time being able to fulfil the potential of their businesses. Listing does not mean, however, that family has lost control of the business. Many of them are going to the market in search for partners that will help to fund the expansion of their businesses.

Our results indicate that the process of IPO in Brazil is not driven by the owner's intentions to dilute capital. The main idea is to maintain the ownership structure (family ownership) while taking advantage of a window of opportunity in the financial market to deleverage, increase capital expenditures, increase sales and seize growth opportunities.

5 Conclusion

Our goal in this paper was to identify the motivations that lead shareholders to do an IPO in Brazil. To this end, we build an original database, built on confidential data of 4,729 private firms from 1998 to 2007. The data was provided by SERASA.

We found evidence that leverage, profitability, CAPEX and financial expenses are the variables that are most relevant to explain business decisions of IPO in Brazil. We consider our results intuitive and expected, as firms in Brazil both private and public are most family owned and do not wish to dilute capital after the IPO. The main reasons for the IPO are exploring windows of opportunity either to decrease leverage, increase sales or capex.

One limitation of our work is the fact that the sample period of our database stops in 2007. After 2007, and mostly because of the subprime crisis in 2008, the number of IPOs started to decline relative to the peak years of 2006 and 2007. It would be interesting to look further from 2007 and see if the motives for the IPOs after 2007 were different from the ones we observed in our data. We believe that further work can extend ours, including new primary emissions that occurred after 2007.

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