FUNDAÇÃO GETULIO VARGAS
ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO

THE BRAZILIAN AND THE FRENCH PRIVATE EQUITY SECTORS FROM 2006 TO PRESENT: A COMPARATIVE ANALYSIS

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Campo de Conhecimento: Gestão e Competitividade em Empresas Globais

Orientador: Prof. Dr. Servio Tulio Prado Junior

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2014

Petit, Berengere Monique Ginette.
The Brazilian and the French Private Equity Sectors from 2006 to Present: A Comparative Analysis / Berengere Monique Ginette Petit. - 2014.
90 f.

Orientador: Servio Tulio Prado Junior
Dissertação (MPGI) - Escola de Administração de Empresas de São Paulo.

1. Private equity - França. 2. Private equity - Brasil. 3. Investimentos. 4. Condições econômicas. 5. Quadro institucional . I. Prado Junior, Servio Tulio. II. Dissertação (MPGI) - Escola de Administração de Empresas de São Paulo. III. The Brazilian and the French Private Equity Sectors from 2006 to Present: A Comparative Analysis.

CDU 658.152

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Data de Aprovação:
19/12/2014

Banca Examinadora:

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ACKNOWLEDGMENTS

First and foremost, I would like to thank my supervisor, Servio Tulio Prado Junior, who supported me throughout the entire process of this thesis. I am grateful for his availability, his dedication, and his advice and expertise. I would also like to thank Sciences Po and FGV-EAESP for giving me the opportunity to spend this amazing year in Brazil. Without that chance, I would never have met Chloé, Laura, Maxence, Mohamed, Sébastien and Sylvain, my friends and fellow double-degree partners, who truly made this experience unforgettable. My final thoughts go to Nathalie, my mom, and Anastasia, my best friend, for their distant and sometimes discrete encouragements, but whom I know I can always count on.

ABSTRACT

Private equity, or the act of funds or investors to invest in companies unquoted on public exchange, has taken an increasing importance in the financial world in the past few years. Indeed, while the emergence of a private equity (PE) sector has been a major phenomenon in emerging markets since the middle of the 2000s, the worldwide financial crisis has weakened private equity in the developed world. Thus, this research will focus on two countries with supposedly very different dynamics regarding this sector: France and Brazil. The aim will be to discern general patterns of behavior in both PE sectors throughout a period running from 2006 to 2013, and try to determine to which extent they are comparable. Using the literature as the conceptual source for the comparative framework to be developed, it will be analyzed whether the market conditions and the institutional environment evolved during the studied period in both France and Brazil, if they compare, and if they impacted the level of private equity activity – supply and demand for funds – in both countries. To identify these patterns, this research will rely on an exploratory qualitative data analysis, based on a framework of the determinants of the PE sector identified and taken from the academic literature. This research will bring its contribution to the existing academic work on private equity thanks to its comparative nature and to its conclusion on the relevancy of the aforementioned determinants on private equity activity in France and Brazil.

Keywords: Private equity, France, Brazil, Economic conditions, Institutional framework

RESUMO

Private equity, ou o ato de fundos ou investidores de investir em empresas não cotadas em bolsa pública, assumiu uma importância crescente no mundo financeiro nos últimos anos. De fato, enquanto o surgimento de um setor de private equity (PE) tem sido um grande fenômeno em mercados emergentes desde meados dos anos 2000, a crise financeira mundial enfraqueceu private equity no mundo desenvolvido. Assim, esta pesquisa vai se concentrar em dois países com dinâmicas supostamente muito diferentes em relação a este sector: França e Brasil. O objetivo será o de discernir padrões gerais de comportamento em ambos os sectores de PE durante todo o período compreendido 2006-2013, e tentar determinar em que medida eles são comparáveis. Utilizando a literatura como fonte conceitual para o quadro comparativo a ser desenvolvido, será analisado se as condições do mercado e do ambiente institucional evoluíram durante o período estudado na França e no Brasil, se comparar, e se eles impactaram o nível de atividade de private equity - oferta e demanda de fundos - em ambos os países. Para identificar esses padrões, a pesquisa contará com uma análise de dados exploratória qualitativa, com base em um quadro dos determinantes do setor de PE identificados e retirados da literatura acadêmica. Esta pesquisa trazera sua contribuição para o trabalho acadêmico existente sobre private equity, graças à sua natureza comparativa e para a sua conclusão sobre a relevância dos determinantes acima mencionados sobre a atividade de private equity na França e no Brasil.

Palavras-chave: Private Equity, França, Brasil, condições econômicas, quadro institucional

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LIST OF ABBREVIATIONS AND ACRONYMS

ABVCAP	Associação Brasileira de Private Equity & Venture Capital
ADR	American Research & Development
AFIC	Association Française des Investisseurs pour la Croissance
AMF	Autorité des Marchés Financiers
ANBIMA	Associação Brasileira das Entidades dos Mercados Financeiros e de Capitais
BO	Buyouts
BOVESPA	Bolsa de Valores de Sao Paulo
CVM	Comissao de Valores Mobiliarios
DFI	Development Finance Institutions
DIRDE	Dépenses Internes de R&D des Entreprises
DoC	Diversity of Capitalism
EDBI	Ease of Doing Business Index
ERISA	Employee Requirement Income Security Act
FCPI	Fonds Commun de Placement dans l'Innovation
FGV-EAESP	Fundaçao Getulio Vargas – Escola de Administraçao de Empresas de Sao Paulo
FIP	Fundos de Investimento em Participacoes
FMIEE	Fundos Mutuos de Investimento em Empresas Emergentes
FPCI	Fonds Professionels de Capital Investissement
FPI	Fonds de Placement dans l'Innovation
FPS	Fonds Professionnel Spécialisé
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
GP	General Partners
IBGC	Instituto Brasileiro de Governança Corporativa
IBGE	Instituto Brasileiro de Geogragia e Estatistica
INSEE	Institut National de la Statistique et des Etudes Economiques
IPO	Initial Public Offering
LAVCA	Latin American Venture Capital Association
LBO	Leveraged Buy-Out
LO	Legal Origin
LP	Limited Partnership

MMRS	Mixed Methods Research Synthesis
OECD	Organization for Economic Co-operation and Development
PE	Private Equity
PINTEC	Pesquisa de Inovaçao
R&D	Research & Development
SCR	Société de Capital Risque
SME	Small & Medium Enterprises
TEA	Total early-stage Entrepreneurship Activity
VC	Venture Capital

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1. INTRODUCTION

Originated in the United States, the private equity (PE) model of venture funding has led to very different situations throughout its adaptation all over the world. Brazil and France are no exception. The private equity sector in Brazil has beneficiated from the ongoing trend of investors directing their capital to emerging markets where investments bear a higher risk but can consequently yield higher returns (Klonowsky, 2012). In 2010, Brazil received US $4.6 billion in private equity investments, representing 69% of total Latin American private equity investments, according to the Emerging Markets Private Equity Association (EMPEA). This situation is the result of the stabilization program that was initiated by the *Plano Real* in 1994. However, the rise of the PE market only occurred more than ten years later, in 2005, and was almost immediately followed by one the greatest economic turmoil of history. At first sight, the situation of the private equity segment in France seems radically opposite to its Brazilian counterpart. Private equity investments in France have suffered from the 2009 crisis, and have worsened following the presidential election in 2012. Indeed, 2012 has been one of the darkest years for private equity investments in the country so far. With a drop of 37.7% of invested amounts in 2012 compared to 2011 according to Association Française des Investisseurs pour la Croissance (AFIC, 2013), sector professionals almost unanimously regard France as a country to avoid (Financial Times, 2013). Nevertheless, when taking a closer look at the determinants that make up for private equity activity in a given country and when following the evolution of the supply and demand for PE funds in both countries over the 2006-2013 period, the French and the Brazilian situations do not seem that far apart.
Thus, the aim of this research will be to identify the extent to which the evolution of private equity in Brazil can be compared to the situation of this same industry in France throughout 2006 to 2013, with a focus on economic conditions and on the institutional environment.

1.1. Research question and methodology

The following question will guide this research: *Are the effects over the PE activity from changes on the economic conditions and institutional environment over the 2006-2013 period for both Brazilian and French market comparable?*
More specifically, this study was conducted under a qualitative exploratory method relying on secondary data. The author built a unique framework compiling the determinants of PE

activity taken from academic sources, observed the evolution of these determinants, and tried to evaluate their relevancy in relation to the trends in PE activity in France and Brazil. The comparative nature of this research aimed at getting a better understanding of the private equity market in two very different countries, but also of the research field on private equity as a whole.

1.2. The research objective and the MORI model

In order to be relevant to future scholars and practitioners, the objective of this research had to meet the *MORI* criteria – Manageable, Original, Relevant, Interesting. Thus, in order to remain manageable, this research will limit itself to the observation of patterns and behaviors through qualitative methods. An in-depth quantitative analysis proving causalities and correlations will be out of scope. Doubtless, this research is also innovative. Indeed, France has always been in the five largest private equity markets internationally, and Brazil is becoming one of the major international markets nowadays – already the first one in Latin America. However, it was not identified any study putting the two countries into perspective. As aforementioned, the comparative nature was chosen in order to get a deeper insight and knowledge about private equity in both countries, but also as a field of research as a whole. The author believes that a comparison between a developed country with an extensive PE sector – France – and an emerging one relatively new to this phenomenon – Brazil – will broaden the scope on Private Equity research. Indeed, the parameters studied – economic conditions and the institutional framework – are likely to bring significant insights on the way both markets operate. Additionally, a previous study between the American and Brazilian PE markets confirms the relevance of the parallel between a developed and an emerging country. In order to give some additional elements to a better understanding of how PE sectors evolved outside the US/UK axis, the comparative method appeared relevant. Finally, this research is of interest as it could be considered as the first step of a mixed-method research. Indeed, as explained further down in the methodology section of this paper, an in-depth quantitative research could be built on the findings of this first study.

1.3. Main findings and conclusions

This research obviously confirms the overall relevance of the influence of the determinants taken from the literature – economic conditions and institutional framework – on the level of private equity activity – supply and demand for funds – in both France and Brazil throughout the 2006-2013 period. However, the impact of these determinants varied in magnitude and in their timing, and some of them were more relevant to explain the variations of private equity activity in either one or the other country. Overall, macroeconomic determinants seem to have had the most cyclical impact on supply and demand for PE funds in both Brazil and France, while elements from the institutional framework appear to influence the level of private equity activity in the longer run. However, this observation was made under the circumstances of the global financial crisis, and conducting the same study over a more macro-economically stable time period would probably allow for a finer observation of the impact of other determinants. Finally, the evolution of private equity should not be entirely attributed to the determinants from the framework. Indeed, other dynamics that have yet to be academically studied might also play an increasing part in explaining the level of PE activity in both countries.

1.4. Paper outline

This research will be developed according to the following structure. The second part of this study will consist in a literature review of the academic work around private equity – overall definition, differences for emerging markets, and a focus on France and Brazil – and the determinants making up for the level of PE activity in a given country. After presenting the chosen methodology in a third part, the fourth section will provide a thorough analysis of the data obtained through the developed framework. Finally, the fifth and last part of this research will conclude on its main findings and limitations, and will open up the path for further academic studies.

2. LITERATURE REVIEW

2.1. What is private equity: the American / European model

According to the European Private Equity and Venture Capital Association, private equity is "a form of equity investment into private companies not listed on the stock exchange". The capital under private equity management was estimated to approximate $3.5 trillion in 2013 (including unrealized value of portfolio assets) and the amount of capital raised by private equity firms in 2013 reached $454 billion (Preqin, 2014).

The inception of private equity, which is today considered as an asset class, can be dated back to the years following the end of the Second World War. Indeed, Gompers & Lerner (1998) date the birth of private equity to 1946 with the creation of American Research & Development (ADR). They regard it as the first modern venture capital firm. The ADR was a group formed by professors from prestigious American universities and structured as a closed-end fund investing in companies that had developed new technologies following the end of World War II. Following ADR, several other venture capital funds developed in the post-World War years, while keeping the same closed-end structure. However, the first modern form of private equity firm was encountered with the creation of Draper, Gaither, and Anderson in 1958. For the first time, the fund was structured as a limited partnership (LP), which would become the dominant organizational form of private equity funds in the next few years.

Metrick & Yasuda (2010) provide a comprehensive definition of private equity, insisting on two key characteristics of this industry: the information asymmetry between uninformed investors and informed entrepreneurs, and the illiquidity of the capital. The authors define private equity by enumerating the four main characteristics of private equity funds: "a PE fund is a financial intermediary", "a PE fund invests only in private companies", "a PE fund takes an active role in monitoring and helping the companies in its portfolio" and "a PE fund's primary goal is to maximize its financial return by exiting investments through a sale or initial public offering (IPO)" (p.623). The first characteristic allows to distinguish private equity from other types of investors, such as business angels or private investment companies. Indeed, private equity only acts as a financial intermediary between limited partners (LP) and the companies requiring funding, through the management of general partners (GP). The second characteristic is probably the most defining feature of private equity, as it sets this asset class apart from other traditional stocks and bonds investments or alternative assets such as hedge funds. Indeed, the fact that PE funds invest in private companies for which almost no public information is available generates information asymmetry, a major source of risk in the industry. Furthermore, the third characteristic directly relates to the performance of private equity funds, which is highly correlated to the way they manage the companies they invest in throughout the entire duration of their involvement. Thus, GP will most likely be awarded some seats on the board of directors of firms they fund, sometimes along with some control and veto rights. This involvement prepares for the fourth characteristic evoked by Metrick & Yasuda (2010), namely the exit strategies of private equity funds. Indeed, as financial intermediaries, they need to return money to the initial investors, also known as the LP. These exit opportunities can take many forms, from IPOs, to trade sales to another investor or sales to a larger company.

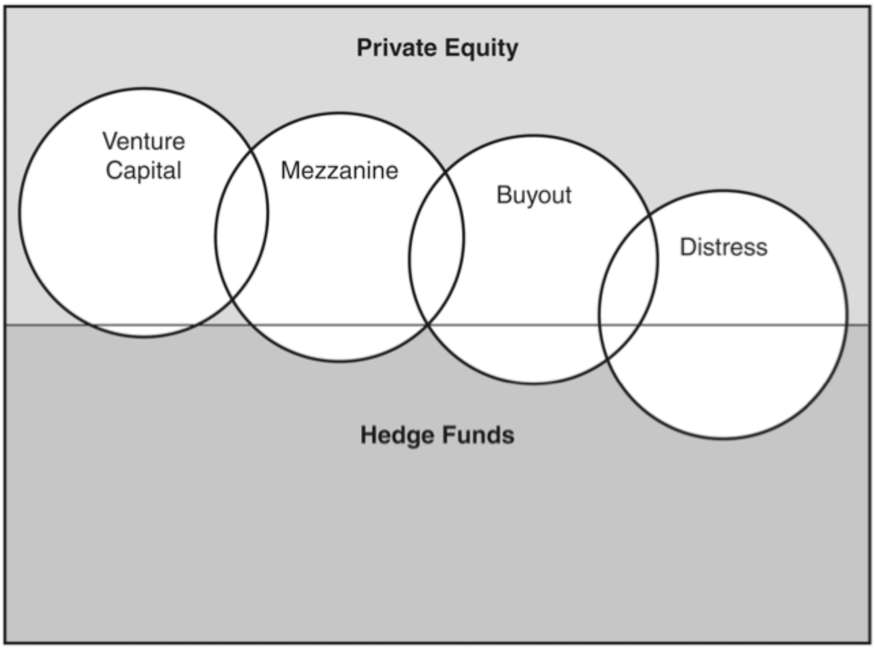


Figure 1 – Alternative Investments: Private Equity & Hedge Funds (Metrick & Yasuda, 2010)

Thus, Metrick & Yasuda (2010) clearly set private equity apart from other types of investments by the type of companies they invest in – illiquid, private and with low access to financial information – and by the focus of the investments – a closer hands-on management with the objective of profitably exiting the company by maximizing the money returned to the initial investors. However, despite these shared features, private equity as an asset class is also made of several asset classes, of which the two largest and most important are Venture Capital (VC) and Buyouts (BO). Figueiredo (2008) acknowledges that what differentiates these asset classes are characteristics such as the size of the company receiving the fund, and the structure of the transaction. Indeed, VC investments target small businesses at their inception, and most of the time imply a higher level of risk as well as a higher volatility of cash flows. On the other hand, buyouts target firms at a higher stage of maturity, mostly on a public-to-private mechanism, even though private-to-private also represents an existing option. Additionally, Metrick & Yasuda (2010) identify other subsets of the private equity asset class that overlap with VC and BO. Thus, mezzanine investments relate to both growth equity – therefore overlapping with the later stages of VC transactions – and to the subordinate debt layer relative to buyout investments. Therefore, the mezzanine category of investments interacts with both venture capital and buyouts. Distressed investments are another kind of private equity that could almost be considered as a subset of buyouts since it refers to transactions involving mature and distressed firms. All these types of private equity investments have, according to Metrick & Yasuda (2010), three main activities: pre-investment screening, monitoring and governance of the firm during the time of the investment, and exiting activities. The rationale for the distinction between these three activities according to the time of the investment is directly related to the main goal of any private equity fund, namely to maximize the financial returns for their investors, the LPs, during a limited period of time at the end of which the money should be returned to the aforementioned investors. Thus, managers of venture capital and buyout firms act as general partners for the funds they handle. These funds have a finite life, usually around 10 years, which makes private equity firms invest in new funds every 3 to 5 years.

The first step of this literature review helped differentiate venture capital, usually used to designate investments in private shares of a company at its very beginning – what is often called “seed money” – from other private equity investments, corresponding to later stages of development, often leading to the cession of the company invested in. However, throughout the rest of this literature review, the terms private equity (PE) and venture capital (VC) will be used indifferently as most of the literature on the subject often doesn’t make any difference between the two. For instance, in their introduction, Félix, Gulamhussen and Pires (2007) state that the justification to take interest in venture capital firms is the fact that they participate “in the revitalization and reorganization of the enterprise tissue, in particular in the small and medium size companies”. This obviously refers to already established companies, and not startups at their very birth. It will therefore be assumed that indicators found in the literature to play a role on venture capital decisions will be applicable to private equity as well.

2.2. How private equity differs in emerging versus developed countries

As aforementioned, private equity is an asset class that emerged in the United States at the end of the Second World War. This type of intermediary financing was then mainly used in that country, and rapidly expanded to Europe, which became the second worldwide market for private equity. The literature recognizes the existence of two main waves of private equity deals, the first one during the 1980s and the second one at the end of the 1990s and beginning of 2000s. Even though authors have yet to analyze all the differences that arose during the second wave of venture capital and buyout investments, one distinctive feature of this second wave is the apparition of emerging markets as new actors of the private equity scene. Indeed, the development of cross-border investments by private equity funds in recent years has been fuelled by a loss of easiness in achieving satisfying returns in the United States and Europe (Wright, Gilligan & Amess, 2009). This lack of favorable conditions where private equity historically and geographically prevailed generated attractive opportunities in emerging economies in which investors were willing to take on higher levels of risk. Today, Latin America, Asia and Eastern Europe have grown to play a more significant part in the private equity landscape.

However, the intervention of these new actors does not come without challenges. Indeed, Leeds & Sunderland (2003) have been the first ones to provide a comprehensive overview of private equity in emerging markets and to shed light on the impossibility of exactly replicating the model that had worked so successfully in the United States and Europe. Indeed, the mid-90s seemed to be full of promises for private equity in emerging markets. For instance, the amount of new private equity capital was growing at a 114% rate annually in Latin America (Leeds & Sunderland, 2003). Such a phenomenon was supported by the creation of bilateral development institutions and multilateral development institutions focusing on private sector development. However, despite these dynamics, private equity's performance in emerging markets turned out to be disappointing as soon as the late 1990s. Leeds & Sunderland (2003) enumerate several factors that can explain this underperformance, such as the low standard of corporate governance in emerging versus developed countries, negatively impacting the quality of information necessary when making and monitoring investments; the weakness of the legal system, especially regarding contract enforcement; and the very limited availability of IPO as an exit opportunity as a result of underdeveloped capital markets. As explained in more details below, the factors aforementioned are critical determinants of the size and performance of the private equity industry in a given country. However, this failure cannot entirely be attributed to disfunctioning emerging markets. Indeed, private equity funds have tried to replicate the model they knew and that had worked very well across Europe and the United States, without paying attention to these particularities. Thus, Leeds & Sunderland (2003) suggest several ways to improve the performance of private equity in emerging markets, with local governments and development finance institutions (DFIs) as the vehicles for change – local governments, by improving corporate governance and the protection of shareholders' rights, and by allowing more freedom to local institutional investments; DFIs by assisting in the reforms and providing training to PE fund managers.

Building on this first analysis of PE in emerging markets, Cornelius (2007) studied the growing integration of developing economies into the PE sector, both as receivers but also increasingly as suppliers of private equity capital. Indeed, as capital markets become more integrated, emerging countries have grown to play a major part of private capital flows, and have become net exporters when taking into account outflows from investments in foreign exchange reserves. Indeed, the excess private capital outflows from emerging markets reached $458 billion in 2005 (Cornelius, 2007). However, similarly to Leeds & Sunderland (2003), the author sheds light on the difficulties encountered by the private equity industry in these countries. They range from corporate governance issues to poor intellectual property regulation and protection preventing innovation, and underdeveloped capital markets. Thus, these elements will require special attention when comparatively analyzing the PE sector in Brazil relatively to France. The author also highlights the substantial improvements that have enabled this growth in private capital flows in emerging markets. Indeed, economic and financial reforms have broadened the financial markets and have given birth to increasingly sophisticated financial instruments, accompanied by reforms of the pension systems, especially in Latin America. Cornelius (2007) also mentions High Net Worth Individuals, the liberalization of capital outflows and the emergence of Sovereign Wealth Funds as positively impacting the amount of private equity transactions in emerging markets.

As for Charvel (2009), the author specifically focused on Latin America while studying the matter of how the structures of the deals impacted private equity transactions between 1988 and 2007. The article analyzes the influence of underdeveloped stock markets, weak legal structures and other cultural aspects – family-owned structure of most small businesses – on the performance and specific features of private equity deals in Brazil, Argentina and

Mexico. With the help of two databases – one taken from Venture Equity Latin America and the other built by the author himself and focusing only on Mexico – Charvel (2009) was able to identify some general characteristics of private equity transactions in these three countries. For instance, the author spotted regional transactions as a common trend, accounting for 16.8% of PE investments in Latin America, and established the average private equity transaction size at $37.31 million over the 1988-2007 period (Charvel, 2009). However, the main findings of the study relate to the identification of winning strategies that will improve the performance of private equity transactions, and therefore the size of the private equity sector in those countries as a whole. Thus, Charvel found that taking a controlling stake in the investments they made have been helpful to private equity funds to hedge the risk associated with the weakness of the legal systems in Latin American countries. Additionally, PE funds appear to be performing better when investing in medium to large and more mature companies, and committing higher amounts of money. These distinctive features are likely to influence the size of the private equity sector in Brazil and should therefore be studied along with determinants mentioned below.

Finally, Figueiredo (2008) wraps up the literature detailed above and provides a comprehensive summary of the challenges faced by private equity investors in emerging markets, justifying the interest of studying these countries separately and of adapting the existing North American & European model. After recalling the two main distinguishing features of private equity investments in general – information asymmetry and the illiquid nature of the transactions – the author points to two specific characteristics of emerging markets that are likely to have the most influence on how the sector will structure itself in these markets: a higher level of macroeconomic volatility coupled with a lower maturity of institutions, leading to weaker corporate governance. Indeed, macroeconomic volatility will lead to higher exchange rate volatility and create a less stable environment, and will make IPOs almost irrelevant as an exit opportunity given the inflated cost of capital. Similarly, the low maturity of financial institutions will have a parallel influence on IPOs, and weak corporate governance will tend to lead PE investors to take a controlling stake in the firms they manage in order to make up for the lack of contract enforcement mechanisms. Given these particularities, optimal PE investments might differ from their North American and European counterparts in the amount of time dedicated to screening and monitoring market conditions, in the holding duration of the investment and in the timing of the transaction relying on macroeconomic conditions.

To conclude, this section of the literature review justifies the relevance of a comparative analysis between the French and the Brazilian private equity sectors. First, the rise of emerging markets as new actors of a global and integrated private equity industry has made their study essential. Second, the proven impossibility of exactly replicating the models of investments that had previously been successful in Europe and the United States raises the question of the determinants that influence the private equity sector in a given country. The following section will review these indicators, taken from the literature.

2.3. Determinants of a private equity sector in a given country

Although the determinants of private equity and venture capital have been the subject of substantive academic effort at the eve of the 21st century, the study of these indicators is actually very recent.

Indeed, it is only in the end of the 1980s that Poterba (1989) started to take a closer look at the influence of capital tax gains on venture capital activity. During his research, he found out that venture capital tax gains actually determine venture capital activity throughout two different complementary channels: supply of venture funds from venture firms, and demand for venture funds from entrepreneurs. On the supply side, he finds out that less than half of venture investors are actually liable for capital tax gains, and that funds who were operated by untaxed investors have grown more rapidly following 1978. On the demand side, capital tax gains play an important role on entrepreneurial incentives. Indeed, individual tax burden can greatly influence these individuals who have chosen to give up wage and salary income in exchange of corporate stocks to start up their own company.

Gompers & Lerner (1998) were then the first ones to build on this first research and extend it, almost ten years later. They also adopted a binary approach to the venture capital sector in the United States from 1972 to 1994 – supply as well as demand for venture funds – and studied the influence of capital tax gains while identifying several other determinants. They found out that most of the determinants actually played a prominent role on the demand side rather than on the supply one. The main determinants positively influencing the demand for venture funds are the following: the level of GDP and its growth rate, increases in R&D spending, lower capital tax gains, and the clarification of the Employee Requirement Income Security Act (ERISA) “prudent man” rule, allowing pension funds to act as venture capital investors. On the supply side, the performance of the fund – past deals – and its reputation – age and size – influence its ability to raise funds to finance young companies. In the end, the authors highlight that measures promoting demand for venture funds are more efficient than the ones targeting at supply. Indeed, the implementation of policies increasing entrepreneurial attractiveness and promoting technology innovation will lead to a greater number of young good firms looking for venture funding.

Following Gompers & Lerner, Jeng & Wells (2000) conducted a research on 21 countries from several continents, between 1986 and 1995, and analyzed venture capital determinants. Unlike the previously cited authors, they did not find any significant influence of GDP nor market capitalization on the availability of funds for venture capital investments. However, they agree on the importance that the exit modes for past deals – and specifically IPO divestments – play on the ability of funds to raise money. Contrary to what was stated in the introduction of this literature review, these authors are actually the only ones who made a difference between the stages of private equity funding, and found that while labor market rigidities would influence early stage investments, they wouldn't have any impact on later stage ones, whereas the opposite phenomenon can be observed for IPO divestments.

Romain & La Potterie (2004) strongly built on the research by Jeng & Wells, and provided a framework of the determinants of venture capital investments revolving around three main dimensions: macroeconomic conditions, technological opportunity, and the entrepreneurial environment. Their research relied on the study of 16 OECD countries from 1990 to 2000. Along with the previously identified determinants, Romain & La Potterie (2004) provided new explanatory ones, such as the level of entrepreneurship or the cost of capital. They were also the first ones to highlight the important role played by interest rates: while both short-term and long-term interest rates will positively influence the level of VC by stimulating demand for funds, the difference between them, however, will negatively impact the supply side. Furthermore, they introduced the pro-cyclicality of VC, as it follows the evolution of GDP growth rate, but which is however reduced by labor market rigidities. They conclude by proving the importance of technological opportunity indicators such as R&D investment, number of patents and available stock of knowledge and their positive influence on VC, especially through the demand channel. The authors reach the same conclusion as Gompers & Lerner (1998), namely that stimulating the demand side is what mainly impacts the level of VC in a given country.

Finally, Félix, Gulamhussen and Pires (2007) extend all the previously reviewed literature on the determinants of venture and capital and private equity, and applied them specifically to 23 European venture capital markets, from 1992 to 2003. They tested 3 new variables to see if they had an actual influence on the PE market: trade sale divestment, the unemployment rate, and the price/book ratio. While they couldn’t find any significant effect of the price/book ratio, they however concluded on the relevance of the unemployment rate and trade sale divestment on European VC markets. Unemployment rate displays a very negative influence on the level of VC investments, whereas, similarly to IPO divestments, trade sale divestments had a positive impact on the VC markets. This form of divestment is actually more relevant than IPO for European VC markets, as it is the most common form of exit employed.

To sum up, despite a late start, a lot of academic researches have already been written about the determinants of private equity and venture capital markets. These determinants can be used in this research in order to seize the dimension and evolution of the French and Brazilian private equity sectors.

2.4. Previous literature on private equity in France and Brazil

2.4.1. Private equity sector in France

France has long been the first market for private equity in continental Europe. However, the financial crisis in 2008 and the recent election of François Hollande, and the tax changes implied, have damaged the PE/VC sector in the country.

Bedu & Montalban (2014) developed a study examining the role of the institutional environment on the uneven deployment of the private equity sector in 18 European countries, based on the legal origin (LO) and diversity of capitalism (DoC) literature. They concluded that in Europe, the level of development of the stock market, the ability of insurance companies to make venture investments, and employment protection were the main determinants of a PE market. They pointed out to persisting differences in the repartition of PE investments between European countries. Indeed, France offers fiscal incentives for R&D expenditures as well as for PE investments, and insurance companies and pension funds are allowed to make PE investments. The French PE market also displays a fair level of LBOs and VC financing, despite the LO theory stating that the French legal origin is associated with weak protection of property rights and of investors, and poor contract enforcement. Furthermore, France has been increasing investors’ legal protection since 2003, which goes against the LO theory, and can explain the development of the PE sector in the country prior to the crisis in 2008. However, the authors highlight that France has recently introduced some measures related to interest deductibility for LBO made by foreign investors, therefore hampering private equity investments. The authors conclude by stating that PE markets in Europe are increasingly converging, in spite of their initial different legal origins. They emphasize the influence on the day-to-day institutions and the efforts they make to favor the development of PE markets through the improvement of legal and fiscal policies.

Furthermore, Groh, von Liechtenstein and Lieser (2010) provide a classification of the attractiveness of the different European markets for private equity and venture capital investments, based on the analysis of 27 European countries from 2000-2005. They base their study on 6 key determinants of the PE/VC market: economic activity, depth of capital market, taxation, investor protection and corporate governance, human and social environment, and entrepreneurial culture. These indicators reflect the ones already detailed in the previous literature. However, France doesn't fare well among these indicators, and is ranked 15th out of 27 countries in terms of attractiveness for PE and VC investments. However, the French PE market is, with the exception of the UK, bigger than the top ranked countries of this index – Ireland, Denmark, Sweden & Norway. Therefore, when this research will focus on a more in-depth analysis of the drivers of the French PE market and its evolution, some particular attention might be needed to identify some underlying determinants of its attractiveness.

Ollivier (2008) finally focuses on the challenges ahead for the French PE sector. This research is of particular interest to the present proposal, as it was written in 2008. Ollivier (2008) first highlights the recent successes of the French PE market: higher number of new firms created due to simplification measures instituted by the government, increasing access to microcredit, incentives for R&D spending, better structure for startups. Consequently, it is the entire private equity sector that has been growing, including venture capital, keeping France at the top of the Euro zone in size of PE markets. However, some technological hurdles are still preventing France from growing more, and new firms are still relying too much on the United States. Therefore, the author identifies some major axes of improvement. For VC investment, efforts from the institutions are needed to improve the simplicity and the speed of these investments, as well as their continuity. He also advocates for less VC operations and a better selection of the finance firms. Regarding the financing of private equity, he advocates for a better use and activity of pension funds and insurance companies.

Thus, the review on the literature about the French private equity sector, its evolution and challenges up to 2008 proviedes an insight on what can be built upon for the first country of this research. The following section will focus on Brazil and the determinants of its market that have already been identified in previous studies.

2.4.2. Private equity sector in Brazil

The emergence of the Brazilian private equity market is the result of the stabilization plan initiated by the *Plano Real* in 1994. However, it is only in 2005 that the sector really started to boom. Since then, several authors have been studying how the American private equity model of venture funding has been applied to Brazil and how the country adapted it to its market conditions and institutional specificities.

In their research, Ribeiro, Carvalho & Furtado (2008) study the adaptation of the American model of private equity and venture capital (PE/VC) in an emerging market, namely Brazil. They suggest that the Brazilian institutional environment heavily limits the development of the PE/VC market. However, in the meantime, this environment helps foster these types of investments, for instance through the lack of infrastructures or security. They highlight the increasing support that the Brazilian PE/VC sector is getting from both the economic and institutional environment, shown by the figure that "90% of organizations operating in Brazil have encountered the necessary conditions to operate and intend to continue or resume investing in the country" (Ribeiro, Carvalho & Furtado, 2008). They identify several determinants from the literature displayed above that are playing a positive role on the Brazilian PE/VC industry: the increasing number of IPOs, the ability for pension funds to invest in new private ventures, interest rates, new regulation to protect investors, new bankruptcy laws, reduction in capital gains tax and innovation laws promoting entrepreneurship.

In a later article, Carvalho, Netto & Sampaio (2012) study the main evolutions that transformed the Brazilian PE/VC industry between 2004 and 2009, with a focus on the macroeconomic environment. They identify several indicators that can be accounted for while analyzing the steep rise of the PE/VC market in Brazil during the first years of the 21st century. Among these determinants, the ones described further up can be found once again: macroeconomic stability, GDP growth, larger stock market – therefore increasing the different modes of exit opportunities, especially IPOs – the development of the pension fund industry, and a better income distribution, coupled with the reduction of poverty. Although the last determinant appears to be very specific to the Brazilian situation, the other ones can be related to what previous authors had already come up to.

On another stance, and with a focus more oriented towards institutions rather than macroeconomic conditions, Ribeiro (2007) examines the ease with which Brazilian PE/VC firms can enter into complex contractual arrangements with the companies they would like to finance. In order to do so, the author reviews the Brazilian legislation relative to securities and corporate control, control rights, and cash flow, and compare it to the contracting choices available in other countries. She finds out that although the Brazilian legal system, inspired by French civil law, is one of the worst kind for the development of private equity, Brazil is nonetheless flexible and allows the use of contracts with structures similar to those in the United States, such as convertible securities. However, the fact that some investors still require full control or common stock underlines the weakness of the Brazilian court system in terms of contract enforcement. Thus, contract enforcement remains the major drawback of the Brazilian legal system, and has led to the emergence of arbitration as the preferred method to solve financial contract disputes. Nevertheless, the author acknowledges that the PE/VC sector in Brazil is still growing despite these institutional hurdles, thanks to a balance of the improving macroeconomic environment.

Thus, one can observe that previous studies on the evolution of the private equity sector in Brazil have already been conducting, relying on determinants identified in the previous literature. However, these studies tend to stop around 2008-2009, so the innovation this research will bring to the table will be to extend them after the 2008 financial crisis.

2.5. Brazil compared to the United States: a path for France?

As mentioned extensively before, the United States were the cradle of private equity in the middle of the 20th century. Thus, it comes as no surprise that the Brazilian private equity sector has already been compared to its American counterpart, a reference in the industry and probably its more mature market. Mariz & Savoia (2005) were the ones to conduct this comparative analysis. After reviewing the elements that allowed the United States to become the mature private equity market that it is today, the authors get into a deeper analysis of the features of the Brazilian market, and the challenges still waiting ahead. Thus, they establish the size of the Brazilian PE sector and the different historical phases it went through, and they identify the main characteristics of PE transactions in Brazil – who invests, in what sector, the regional distribution of the investments, and their form. Similarly to what other authors analyzed in the literature review have previously found, Mariz & Savoia (2005) established that international investors are still the main actors in PE transactions, followed by private equity houses. The investments target mainly high-technology and energy firms, mostly at later stages of maturity, and with a 70% concentration in the southeastern part of the country. As Megginson (2004) first highlighted, Mariz & Savoia (2005) then reaffirm the importance of the institutional framework on the development of a performing private equity sector in Brazil. The authors then tackle the main challenges faced by PE investors and find out that macroeconomic volatility and the weakness of capital markets come as the most pregnant hurdles, as argued before by Figueiredo (2008). Mariz & Savoia (2005) conclude by stating that a comparative analysis between the Brazilian and American model of private equity allows forecasting for the future of the former, as they define it as a market that is still in the process of maturing.

Therefore, this study can clearly serve as a framework for the following research. Mariz & Savoia (2005) indeed used many of the determinants previously identified in the literature, such as macroeconomic and legal variables – GDP growth, interest rates, tax and bankruptcy laws – as well as variables only related to the PE sector – the importance of family-owned business or the opportunity to exit through an IPO. Thus, this academic research both confirms the interest of comparing Brazil to a mature PE market – in this case the United States, and followed by France here – and the relevance of the indicators chosen and displayed above.

3. METHODOLOGY

3.1. Research design: explanation & justification of the methodology

This research was conducted under a qualitative exploratory approach. Vaivio (as cited by Humphrey, 2014) defines qualitative research as being “a bold leap into the unknown” (p.51). This definition means that this type of research design is suited to address matters on which little has been written about before. Thus, even though private equity is a topic that has received much attention throughout the academic literature; the determinants identified in the previous section of this paper have never been combined into a framework and applied to a compared evolution of two countries. Therefore, a qualitative exploratory approach was perceived as the best way to first tackle this vast challenge.

Furthermore, exploratory research has come to be increasingly recognized by scholars as a variant of what the academic body now calls mixed-methods research. Johnson et al. (2007) have defined mixed-methods research as a type of research combining both qualitative and quantitative approaches in order to enhance the depth and breadth of each other’s findings. Even though this type of research design had been most largely used in the healthcare and medical sector, it has recently gained a wider role in economic and business research (Starr, 2014; Harrison, 2013). More specifically, Harrison (2013) established a typology of mixed-methods research according to the timing of use of qualitative and quantitative methods (sequential or concurrent), the weight given to each method, and the way the two types of data obtained were mixed. According to this typology, the author considers exploratory research as a subset of mixed-methods research, with the following characteristics: a sequential use of qualitative research followed by a quantitative approach; a usually stronger weight on qualitative data; and a connection of the data between the two phases. Thus, in the context of this definition, the following work could be considered as the first qualitative part of a broader exploratory research that would be followed by a quantitative analysis.

Indeed, several rationales exist to justify the pursuit of an exploratory research design, such as the one that Harrison (2013) entitled “Confirm and Discover” (p.2154). This supposes that the qualitative research is conducted in such a way that it will help generate hypotheses, which will later on be tested by a quantitative approach. In this paper, a first attempt was made at identifying if the determinants of the activity of a PE sector encountered in the literature could be applied to explain variations in two given countries, through the comparative analysis of the cases of France and Brazil. However, as the analysis remained qualitative, it only allowed to make assumptions that could eventually be tested in a further research. What's more, Harrison (2013) acknowledged that qualitative research was more suited to answer questions starting by "why" and "how", which corresponds to the research question leading this paper.

The qualitative method used here was the one of case studies. Starr (2014) established the common characteristics of case studies as a subset of qualitative research design: a focus on a small number of cases (individuals, companies, communities or countries); a detailed collection of information from multiple sources; and of which one of the potential outcomes is to evaluate the extent to which some prevailing theoretical understandings are consistent with the evidence provided by the analysis of the cases. Here, the focus of the research consisted in establishing a framework regrouping indicators extracted from the literature about PE activity determinants, and looking at how they evolved over the 2006-2013 period – in order to integrate the financial crisis – in France and Brazil. We then observed how the PE activity evolved in both countries during the same period. Finally, we tried to put in parallel the different observed phenomena and see if some patterns could be identified for each country, and if they were comparable.

To sum up, the methodology employed in this paper consisted in a qualitative research design – in the form of case studies – with the aim to be considered as the first part of an exploratory research, in the broader context of a mixed-methods approach.

3.2. Sample & selection criteria

As aforementioned, France and Brazil were the two countries selected to conduct this qualitative research. Two countries were addressed instead of one given the importance that comparison holds in the context of a qualitative research. Rudnick (2012) defined comparison as a mandatory component of a qualitative research since it allows to address differences and similarities across, within and between the data obtained from the different groups and cases studied. Thus, the author considers comparison as a possible, and even a necessary component of a qualitative research.

Once the need for a comparison was established, the countries that would constitute the sample were easily selected. Indeed, the comparison of the PE sectors in a developed and an emerging country appeared interesting with regards to the literature review previously drafted. As aforementioned, private equity was developed in the United States in the middle of the 20th century, but soon spread to Europe where the same characteristics were more or less replicated, at a smaller scale. However, in emerging countries, and specifically in Latin America, private equity is a much more recent phenomenon that only started to become significant in the second half of the 1990s. Furthermore, different conditions are said to drive the PE sectors in both groups of countries. Thus, the interest in comparing a developed country to an emerging one with regards to private equity was to observe if these different contexts would actually create differences in the determinants identified in the literature, and if they could apply to emerging countries – the sample countries for the academic articles analyzed only focused on developed ones. Considering the elements provided before – and given the status of the author as a Double Degree student from Sciences Po and FGV-EAESP – France and Brazil appeared as the two countries best suited for this research.

The timeframe selected to conduct this analysis covered the period from 2006 to 2013 (sometimes starting a year after, or ending a year before for the determinants for which the data for the full period was not available). The aim was to cover the financial crisis (2008-2009), a period that had not been previously studied in the literature on private equity. The financial crisis represents a major macroeconomic phenomenon, easy to observe, and with a potentially significant impact on the macroeconomic environment and institutional framework in both countries.

3.3. Sources & data collection

The data collected during this research was twofold. First, it was necessary to gather all the data relative to the determinants identified in the literature and constituting the framework. For the economic and numerical variables, most of them came from recognized databases used by authors themselves during their researches: World Bank Indicators, Ease of Doing Business Index (World Bank), OECD Stats, Corruption Perception Index by Transparency International. As a side note, while manipulating data from the Ease of Doing Business Index, the study will mostly focus on the data relative to each indicator (Ease of starting a business, Paying Taxes, Resolving Bankruptcy…) rather than on the relative ranking between countries. This will be done as such in order to avoid the controversy surrounding the index and its biases towards developed countries supposedly making the data speak in their favor. The level of entrepreneurship was measured by the Total Early-Age Entrepreneurship

Activity, an indicator expressed in percentage and developed by Global Entrepreneurship Monitor (GEM). For other indicators such as SMC growth rate or Business R&D growth, national websites providing statistics (INSEE, IBGE) or specialized reports on the topics (KPMG, Deloitte) served as references. Regarding the institutional framework, the data researched was mainly qualitative, and most of it was retrieved from Practical Law, a website constructed by Thomson-Reuters and relying on the expertise of specialized lawyers from around the globe. As the indicators relative to institutions were taken from the framework established by the Latin American Venture Capital Association (LAVCA) in its 2013 Scorecard, the information that it contained was also used to complete some of the Brazilian determinants. The Global Competitiveness Index established by the World Economic Forum for the year 2013 was also used to provide insights on some of the institutional determinants, such as the strength of the judicial system, the protection of intellectual property, or the quality of accounting standards. Information obtained from both countries' financial institutions (BOVESPA, AMF, CAC 40) was also used when necessary.

The second step of this data gathering consisted in obtaining information about the level of private equity activity in both France and Brazil. Before going further, some considerations must be addressed. Indeed, when the determinants were identified in the literature, they were always said to have an impact on the level of private equity activity in a given market. Therefore, by level of activity, one should understand both the demand for and supply of PE funds in a given market, which were measured by several variables detailed below. Thus, only the level of activity was taken into account in the following analysis, and other dimensions, such as the performance of the PE market, were disregarded. The Association Française des Investisseurs pour la Croissance (AFIC), LAVCA, and the Brazilian Private Equity and Venture Capital Association (ABVCAP) were the main sources from which data about PE activity in France and Brazil over the 2006-2013 period were retrieved. Funds raised were the variable retained to measure the supply for PE/VC funds, as they represent the amounts raised by GP and vehicles from investors. The number of PE funds and vehicles raising capital per year, as well as their legal nature and their geographical origin, were also considered to help seize the supply of funds for PE investments. Investments were used to measure the demand for PE funds and can be considered as the variable where supply and demand for PE funds meet. As will be observed later on in this paper, funds raised can be either superior or inferior to investments. The latter case translates into an excess of demand for PE funding and suggests that PE funds must have relied on other sources to fill in the gap. One critic that can be made to the use of PE investments as a measure of the demand for private equity funds in a given country is that it fails to take into account unsuccessful demands for PE funds. However, since no other indicator was available to measure these unmet funding needs, it was assumed that investments were the best reflector of the level of the demand for PE funds in a given market. Divestments were observed as an indicator that could help measure the healthiness and maturity of a PE market based on the assumption that the fact that PE funds were willing to divest their investments could mean that they were assured to make a benefit / that there was going to be buyers willing to take on the investment or opportunities for IPOs.

Finally, some modifications were needed to make some of these data comparable. Indeed, the data obtained by AFIC on the French PE market and by ABVCAP and LAVCA about the Brazilian market were respectively in Euro (€) and in Real (R$). Thus, they were all converted in Dollar ($), according to the following exchange rates:

- 1,3512 Dollar/Euro ER as of 18/07/2014 at 10h46 on Bloomberg
- 0,447 Dollar/Real ER as of 18/07/2014 at 10h46 on Bloomberg

3.4. Data analysis

The qualitative method used to analyze the data collected through the sources aforementioned consists in a bi-dimensional framework. This framework was built according to what Heyvaert et al. (2011) call Mixed Methods Research Synthesis (MMRS). As perceived in its name, conducting a MMRS consists in applying the principles of mixed methods – namely combining qualitative and quantitative research designs – at the synthesis level through a systematic review. According to the author, systematic reviews have become increasingly valued as they review an extensive amount of available data that had previously been searched for, studied, assessed and summarized. MMRS bring together this primary data coming from qualitative, quantitative and mixed methods researches; and integrate them using a mixed methods approach.

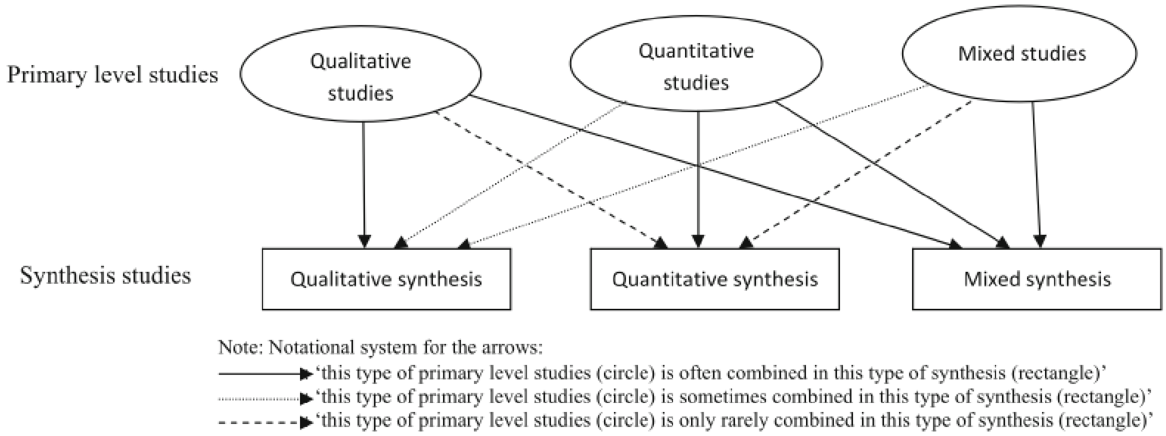


Figure 2 – Qualitative, quantitative and mixed methods research synthesis (Heyvaert et al., 2011)

Heyvaert et al. (2011) describe the several stages that one should follow to implement a MMRS: "(1) the problem identification and question formulation stage, (2) the development of a review protocol and the literature search, (3) the selection of an appropriate design and method, (4) the data extraction and evaluation stage, (5) the data analysis and interpretation stage, and (6) the reporting and discussing of research findings" (p.667). In this paper, a research question was first developed and the related literature researched, which led to the selection of a bi-dimensional framework as an appropriate research design. The next three steps of the MMRS will be addressed in the remaining of this paper.

Thus, as cited in the literature review above, Gompers & Lerner (1998) were the first ones to have systematically studied the economic factors that impact the PE sector in a given country. They introduced an innovative approach, distinguishing between the variables that impacts either the demand or the supply side of the private equity market. Thus, they identified proxies such as GDP and its growth, the level of interest rates, or R&D growth by businesses as important factors. Many authors then built upon this analysis and came up with other indicators. Jeng & Wells (2000) introduced labor market rigidities and SMC growth rate as determinant, while Romain & La Potterie (2004)'s contribution raised attention on the level of entrepreneurship and the number of patents registered each year. Institutions also play a major role in qualifying a PE market. Institutions have been defined as the formal and informal rules of the game (North, 1990). Megginson (2002) was the first to focus on the role of the institutional framework on private equity. Indeed, while the author contemplated the eventuality of the emergence of a global private equity market, he concluded on the impossibility of such an event because of too different national institutional frameworks. To evaluate the institutional frameworks in both countries, the indicators employed by the Latin American Venture Capital Association (LAVCA) in the elaboration of its 2013 Scorecard were used.

In one first effort to compare both realities in France and Brazil using a comprehensive conceptual framework, the identification of any sort of quantitative correlation or causality relationship was not part of the scope of this paper. Once all the data relative to the determinants had been collected and aggregated, they were compared to the main trends identified in the PE market both in France and Brazil over the 2006-2013 period, and tried to see if they aligned. We then tried to evaluate if the French and Brazilian PE markets were comparable.

Category	Sub-category	Determinant	Source from the literature	Influence on the demand for PE/VC funds	Influence on the supply of PE/VC funds	Overall effect on size of PE sector
Economic conditions	Macroeconomic conditions	GDP	Gompers & Lerner (1998) Jeng & Wells (1998/2000) Romain & La Poterie (2004)	Positive	Positive	Positive
		GDP growth rate	Gompers & Lerner (1998) Jeng & Wells (1998/2000) Marti & Balboa (2001)	Positive	Positive	Positive
		Level of interest rate (1year)	Gompers & Lerner (1998) Romain & La Poterie (2004)	Positive	Negative	Positive
		Private pension funds (ability to engage in PE/VC financing)	Gompers & Lerner (1998) Jeng & Wells (1998/2000)	Positive	Positive	Positive
		Capital gains tax rate	Gompers & Lerner (1998) Jeng & Wells (1998/2000) Romain & La Poterie (2004)	Negative	Negative	Negative
		Unemployment rate / Labor market rigidities	Jeng & Wells (1998/2000) Romain & La Poterie (2004)	Positive	Negative	Depends on which dominates
	Entrepreneurial variables	Exit opportunities (IPO & trade sales)	Gompers & Lerner (1998) Jeng & Wells (1998/2000)	Positive	Positive	Positive
		SMC growth rate	Jeng & Wells (1998/2000)	Positive	Positive	Positive
		Level of entrepreneurship	Romain & La Poterie (2004)	Positive	Positive	Positive
		Number of patents (applications/resident)	Romain & La Poterie (2004)	Positive	Positive	Positive
		Ease of starting a new business	Romain & La Poterie (2004)			
	Technological opportunities	Business R&D growth	Gompers & Lerner (1998) Romain & La Poterie (2004)	Positive	Positive	Positive
		% enrollment in higher education	Gompers & Lerner (1998) Romain & La Poterie (2004)	Positive	Positive	Positive
Institutional framework		Laws on PE funds formation				
		Tax treatment of PE funds and investors		Positive	Positive	Positive
		Protection of minority shareholder rights		Positive	Positive	Positive
		Protection of intellectual property		Positive	Positive	Positive
		Bankruptcy regulation		Positive	Positive	Positive
		Corporate governance requirements (use of external auditors, publish financial reports)	Megginson (2004) LAVCA Scorecard (2013)	Positive	Positive	Positive
		Strength of judicial system		Positive	Positive	Positive
		Perceived corruption		Negative	Negative	Negative
		Quality of Accounting standards		Positive	Positive	Positive

Table 1 – Bi-dimensional framework obtained through MMRS for data analysis (Prepared by the author)

4. DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.1. The private equity market in France, its evolution, and its determinants (2006-2013)

The first phase of this data analysis will consist in a detailed overview of the trends and evolution of the private equity segment in France, during the studied period of 2006-2013, with the objective to evaluate the impact of the financial crisis and of the other determinants identified in the literature.

4.1.1. Movements and trends on the private equity market in France

From 2006 to 2008, the French private equity market was following an upward trend. 2007 and 2008 were even peak years for all of the variables that will be studied in the following section and that define the level of activity on a PE market – funds raised, the number of PE funds and vehicles raising capital, investments, and divestments.

Funds raised for the French PE market, 2006-2013

Funds raised and destined to the French PE market were relatively stable at the beginning of the studied period (2006-2007), but skyrocketed to the amount of $17.2 bn in 2008. Immediately after, the financial crisis hit Europe and the level of capital raised in France by PE funds and vehicles hit a record low of $5 bn in 2009. Since then, the supply of PE funds has slowly been growing back, reaching a level of $11 bn in 2011. However, 2012 noticed another downward slope, coinciding with the election of François Hollande as the President of the French Republic ad its campaign promises of new prohibitive tax measures.

Regarding the number of funds and vehicles raising capital for the PE market, these variables were less subject to variation. Even though a drop can be noticed in the number of funds and vehicles raising capital in 2009 – respectively from 90 to 77 and from 203 to 194 – the decrease is not nearly as clear as for the amount of funds raised. Indeed, the lowest number of funds and vehicles raising capital can be found in 2013, with respectively only 75 and 146. Supposedly, during the immediate post-crisis years, a similar number of funds and vehicles continued to raise capital at however lower levels that may have driven some of them to stop their activities. At the end of the period,

fewer vehicles are therefore individually raising higher amounts of capital.

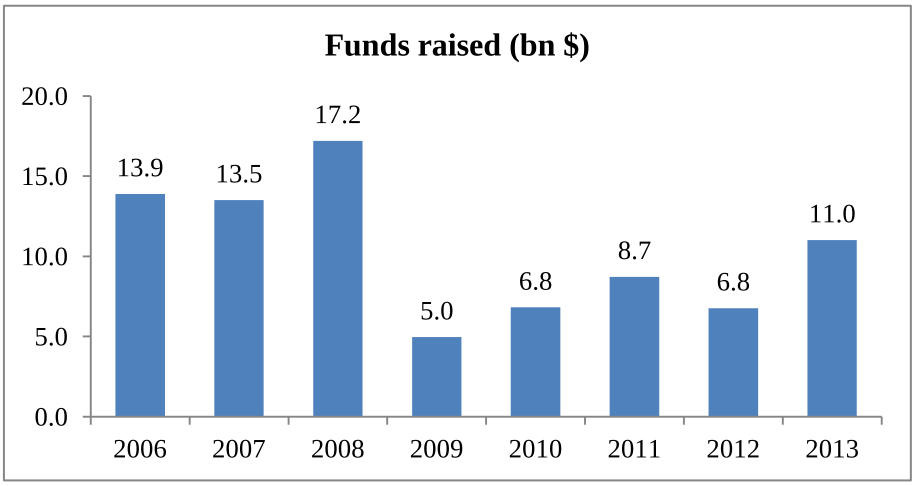


Figure 3 – Funds raised in France for the PE sector, 2006-2013 (AFIC, 2014)

Since the aftermath of the crisis, Fonds Professionels de Capital Investissement (FPCIs) represent the majority of vehicles raising funds and have especially dominated in 2013, both in terms of number of vehicles and amount of funds raised. Retail funds, in the form of FPI (Fonds de Placement dans l'Innovation) & FCPI (Fonds Commun de Placement dans l'Innovation), come second but at much lower levels, and have lost ground in 2012-13. SCRs (Société de Capital Risque) are only the third type of vehicles used to raise funds for the French PE market, whereas they were the original vehicles used for PE fundraising at the inception of the market in France.

Investments made in the French PE market, 2006-2013

Contrary to funds raised that reached their peak in 2008, investments were at their highest in 2007 with $17 bn invested in PE in France. They however decreased similarly in 2009, to a $5.5 bn low, before rising back up to $13.2 bn in 2011 and falling back again in 2012. Thus, investments followed a very similar trend to funds raised throughout the 2006-2013 period. However, from 2009 to 2012, the amount of money invested in PE was higher than the level of capital raised, which means that PE funds had to turn to other sources of financing or dig into previous reserves in order to meet the demand for PE funds. We can therefore suppose that the negative determinants generated by the financial crisis and that impacted the PE market had a stronger influence on the supply for PE funds than on the demand for these same funds. Nevertheless, in 2013, the level of capital raised was higher than the level of investments for the first time in 5 years.

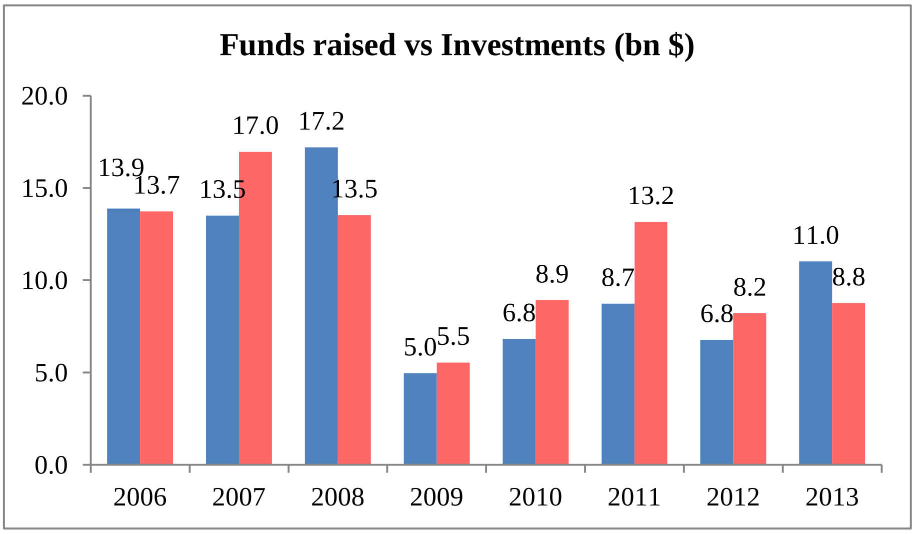


Figure 4 – PE funds raised vs investments in France, 2006-2013 (AFIC, 2014)

Divestments in the French PE market, 2006-2013

Divestments underwent a significant growth during the pre-crisis years, and grew from $5.1 bn in 2006 to $7.6 bn in 2007. However, this amount decreased as soon as 2008, and hit a record low of $3.8 bn in 2009. Divestments then rose back to a level of $8.5 bn in 2011, but strongly fell down to $4.7 bn in 2012, and rose again in 2013 to $7.7 bn. Throughout the 2006-2013 period, divestments have thus been very volatile and it appears to be harder to establish a pattern and to link them to the determinants identified in the literature.

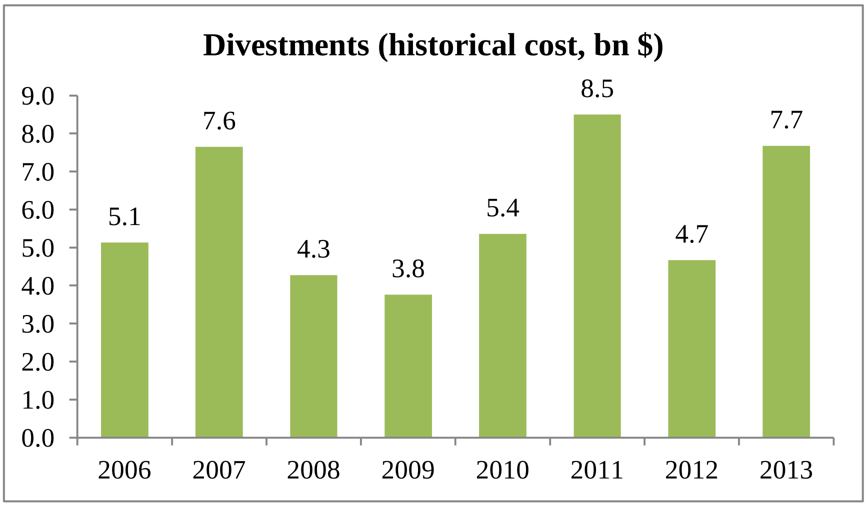


Figure 5 – PE divestments in France, 2006-2013 (AFIC, 2014)

During the 2006-2013 period, the supply – capital raised – and the demand – investments – for PE funds have evolved in the same direction, however not in the same proportion. Thus, if determinants identified in the literature can indeed explain the level of supply and demand for

PE funds, they most likely have a similar influence on both sides of PE activity, although not with the same magnitude.

4.1.2. Evolution of the determinants identified in the literature throughout the 2006-2013 period, and their potential impact on the PE market

As aforementioned in the literature review and methodology section of this paper, the determinants identified by the literature as affecting the level of PE activity in a given country can be divided into two main categories: economic conditions and institutional framework.

4.1.2.1. Economic conditions in France, 2006-2013

As a determinant, economic conditions can themselves be divided into three main categories of sub-determinants to be analyzed – macroeconomic conditions, entrepreneurial variables, and technological opportunities.

4.1.2.1.1. Macroeconomic conditions in France, 2006-2013

GDP and GDP growth rate have been identified by numerous authors in the literature as one of the main macroeconomic determinants – Gompers & Lerner (1998), Jeng & Wells (1998/2000), Romain & La Poterie (2004). Their impact is supposed to be positive on both supply and demand for PE funds, and therefore on the global activity of the PE market as a whole. Thus, the highest the GDP and GDP growth rate, the highest the level of PE activity in a given country; and vice versa. In France, until 2006-07, GDP was growing at a steady pace of around 2.5% a year and reached $2,832 bn in 2008. However, France's growth stopped in 2009 due to the global financial crisis, and GDP growth rate turned strongly negative to -3.1%. GDP rose back as soon as 2010 but at a slower pace of 1.7%, and 2% in 2011. In 2012, growth halted again, and was only of +0.2% in 2013, thus showing that France had yet to get out of the financial crisis. Consequently, and without getting too much ahead, it seems that the evolution of GDP in France over the 2006-2013 period coincided well with the observations made with regards to the supply and demand for PE funds.

The *level of 1-year interest rate* is another macroeconomic determinant that has been identified by the literature, and impacting positively the overall activity of a given PE sector, with however a negative influence on the supply of funds. In France, this level is determined by the European Union through Euribor and was rising until 2008 to almost 5%. Interest rates then dramatically dropped in 2009 to 1.61%, and decreased again in 2010 to 1.31%. 2011 saw this level increasing, but it went back down immediately in 2012. Thus, the level of 1-year interest appears to be a direct consequence of the financial crisis, as its fluctuations followed closely GDP's, and was used to stimulate investments and ease the return to regular macroeconomic activity levels.

As cited in the literature review, Gompers & Lerner (1998) and Jeng & Wells (1998,2000) identified the *ability of private pension funds to engage in PE/VC financing* as a key determinant positively influencing the level of private equity activity in a given country. In France, private pension funds are allowed to invest in PE activity. However, following the financial crisis, new regulatory changes tended to drive pension funds out of this asset class, similarly to insurance companies and banks. Such regulations are called Basel III and Solvency II and address equity requirements, making PE investments more difficult for private pension funds. As a consequence, more than half of the capital raised for PE investments in France in 2011 has come from outside the country – from American or British pension funds for instance – in places where these funds do not have to comply with these new regulations. Thus, although allowing private pension funds to participate in the national PE activity, their intervention got more difficult in France in the past few years.

Several authors identified *capital gains tax rate* as an important macroeconomic determinant for the level of PE activity in a given country. However, unlike many other determinants, it influences both the supply and the demand for PE funds negatively. As a result, the higher the capital gains tax rate, the lower the PE activity. In France, the capital gain tax system is differentiated and multi-layered when it comes to the sale of a portfolio company. Indeed, French firms may be exempt of as much as 88% of capital gains tax as long as they've hold the shares in the company for a minimum of two years. As for individual French investors, they are subject to progressive income tax rate but could benefit from 20% to 40% discount depending on the holding period. Finally, non-French sellers are totally exempt from taxes unless the proportion of shares they hold exceeds 25%. However, when capital gains are realized outside of these conditions for French nationals, the applicable rate is 33.3%, which is the highest in the European Union, and twice the Brazilian rate, as we'll mention later on. Additionally, no evolution or modification was noticed during the period of our study in the French policy regarding capital gains tax rate.

Finally, *unemployment rate* is the last of the macroeconomic determinants supposed to impact the level of PE activity. Similarly to the 1-year level of interest rate, unemployment rate influences the supply – negatively – and the demand – positively – for PE funds in opposite ways, and its overall impact on PE activity depends on whichever of the trends dominates. Unemployment was high in France in 2006 at 8.8% but went on a downward trend until 2008, reaching a low point of 7.4%. However, following the crisis, unemployment rose sharply to 9.1% in 2009, and kept on growing up to 9.9% in 2012. These variations in the unemployment rate are a clear consequence of the financial crisis, rather than a phenomenon on its own.

Thus, macroeconomic determinants of PE activity have been globally negative over the 2006-2013 period – decreasing GDP and even negative GDP growth rate, stricter regulations regarding private pension funds providers, higher levels of unemployment. Capital gains tax rate policies remained however stable, and consequently became more favorable to international investors. Given these determinants, the global level of PE activity on the French market is expected to be lower, but nevertheless rising at the end of the period with a return to higher levels of economic growth. Tax incentives and new regulations could foster investments from international actors.

4.1.2.1.2 Entrepreneurial variables in France, 2006-2013

Entrepreneurial variables represent the second category of economic determinants influencing private equity activity.

Exit opportunities through IPOs, and eventually through trade sales, are an important determinant, as they reflect the level of maturity of the capital market of a given country. IPOs and trade sales often are the two exit strategies that offer the highest gains to GPs and LPs. Similarly, the opportunity of going public is a goal driving many entrepreneurs launching their start-ups. Thus, this variable positively influences both the supply and the demand for PE funds. Divestments as a whole have been pretty irregular in France since 2006, although a clear downturn could be noticed in 2008 and 2009. The return of divestments through the stock exchange only happened clearly in 2013, with 6 IPOs generating \$ 554M, versus only 2 IPOs in 2012 for a total of \$ 2.7M. Indeed, in May 2013, Nyse Euronext created Enternext Paris, a new financial platform dedicated to SMEs and intermediate size companies whose valuation doesn't exceed €1 bn (\$1.35 bn). It allows these firms to go public on the stock exchange – in the B and C segments of Euronext – and on the organized market – Alternext. At the end of May 2013, Enternext covered 748 companies valued at €70.1 bn (\$94.7 bn). Valued at €1,371 bn (\$1,852 bn) at the end of 2012, Euronext

Paris is one of the largest financial places in the world, and some improvements have been made following the crisis favoring the introduction of smaller companies into this system.
Indeed, *SMEs and their growth* rate are another variable that authors believe to be determinant for the level of PE activity. In France, they represent 99.8% of all firms and 60% of employees. This wide network of SMEs seems to reflect a favorable environment. Thus, they resisted well to the financial crisis, but disparities increased, and their low level of investment – despite some of the most favorable credit conditions in Europe – negatively impacts their growth rate, their international opportunities, as well as their productivity.
The *Total early-stage Entrepreneurship Activity (TEA)* has been identified in the literature as a tool to express the level of entrepreneurship in a given country. Indeed, TEA assesses the percentage of working age population both about to start an entrepreneurial activity, or having started one in the past three years and a half. Conducted by Global Entrepreneurship Monitor since 1999, it relies on two surveys: the Adult Population Survey that measures entrepreneurial activity, attitude and aspirations; and the National Experts Survey measuring institutional factors that impact national entrepreneurial activity. In France, the level of this determinant varied during the studied period, although remaining relatively low – not exceeding a maximum of 5.8% in 2010. A drop in the TEA happened between 2008 and 2009, going down from 5.6% to 4.3%, from which we can assume an impact of the financial crisis. At first glance, no coherent link can be made between TEA and the evolution of supply and demand for PE funds in France, neither with the global macroeconomic trends affecting the market at the time.
On the other hand, the *number of patent applications per resident* appears as a much more accurate and relevant determinant to evaluate the level of entrepreneurship in a country. Indeed, before the crisis, this number was set at a relatively high level, between 14,500 and 14,800 patents applications/residents each year, and it went back to these levels in 2010, while a significant drop in the number of patent applications can be noticed in 2009, with a low peak of 14,100.
Finally, the *ease of doing business* index (EDBI), established by the World Bank, was used to identify entrepreneurial opportunities. The EDBI is established on the base of 189 countries, and items are evaluated on a scale of 1 to 10. The main indicators of this index that will be looked at in this part are "Starting a Business" and "Paying taxes", as the others will be analyzed when studying the institutional framework. These determinants were found to be positively related to the level of supply and demand for PE funds, and especially to the demand as they impact mostly entrepreneurs. Overall, France ranked 35th and 38th on the

EDBI, respectively in 2013 and 2014, which situates the country amongst the most favorable to businesses. Additionally, the country ranks pretty well on the two other sub-variables over the period. “Starting a business” remained pretty stable and favorable with no significant change before and after the crisis – 5 procedures, taking 6.5-7 days, and costing 1% of income per capita. However, “Paying taxes” was facilitated with a decrease in the number of payments per year from 19 to 7 following the crisis, although the time allocated (132h/years) remained at an elevated level. The fact that the tax-related indicator was the one that improved following the crisis can lead to think that it’s the one that impacts entrepreneurs the most, and could therefore greatly influence the level of demand for PE funds. Indeed, the crisis led to a drop in GDP, which itself impacted negatively the demand for PE funds, and easing the tax system might have been viewed as a solution to help entrepreneurs and get the demand for PE funds to go back to higher levels.

Entrepreneurial variables seem to have followed the macroeconomic trend, especially regarding IPOs and the number of patent applications per resident, while the TEA does not appear as such a relevant indicator. Following the crisis, some improvements have been made to foster entrepreneurship – new listing category on Euronext and ease of dealing with taxes – that can have had a positive influence on the recovery of the PE activity.

4.1.2.1.3 Technological opportunities in France, 2006-2013

Technological opportunities represent the third and last of the economic determinants influencing supply and demand for PE funds. Gompers & Lerner and Romain & La Poterie have especially addressed them.

Business R&D growth is a determinant that can be measured in France by the DIRDE (Dépenses Internes de R&D des Entreprises), an indicator established by INSEE, the French national institute for statistics. DIRDE, expressed as a proportion of GDP, has been growing from 2007 to 2011 and has not experienced any significant downturn. This number settled around 2.25% of GDP since 2009. The same trend can be observed when looking at gross R&D spending by firms, which has grown constantly since 2007. Thus, it seems that firms in France didn’t stop their research activities in spite of the crisis. This phenomenon could have generated more opportunities that helped the supply and demand for PE funds to go back to regular activity levels following the 2009 downturn.

The second and last sub-determinant identified to evaluate technological opportunities in a country is the proportion of *enrollment in higher education*, measured by the gross percentage of enrollment in tertiary education established by the World Bank. Indeed, the percentage of educated people in a country creates opportunities related to the demand for PE funds – the majority of entrepreneurs in France has a secondary education background – but also for the supply of funds – educated fund managers are better able to identify promising opportunities in new or distressed firms and to provide them some capital. In France, the gross tertiary education enrollment rate remained high and stable throughout the period, and even started increasing in 2009 to finally reach 57% in 2012.

Thus, macroeconomic variables seem to dominate over the other dimensions of the economic determinants. However, even less observable, entrepreneurial variables and technological activities might also have influenced the level of supply and demand for PE funds, especially during the post-crisis years.

4.1.2.2. The institutional framework in France, 2006-2013

The institutional framework is the second set of determinants that has been identified as influencing the level of PE activity in a market. Megginson (2004) was the first author to study institutions in relation to private equity, and was followed by many more. The indicators analyzed here were taken from the model of the LAVCA Scorecard and applied to France. Every year, it evaluates the institutional environment for the development of private equity in South American countries, and establishes a ranking.

Laws on private equity funds formation

Laws on PE funds formation are the first variable that will be looked at to evaluate the institutional framework in France throughout the 2006-2013 period. In France, a management company that has been licensed by the Autorité des Marchés Financiers (AMF) must manage private equity funds. Additionally, this management company must appoint a custodian formerly authorized by the Autorité de Contrôle Prudentiel in order to provide custody and safe-keeping of assets for investment funds. This procedure appears relatively simple and has not undergone any change throughout the crisis years.

As aforementioned, three main types of private equity funds exist in France. Retail funds consist in FCPI (Fonds Commun de Placement dans l'Innovation) and FPI (Fonds de Placement dans l'Innovation). Institutional investors can as well opt for two fund structures, namely FPCI (Fonds Professionnel de Capital Investissement, previously FCPR) or FPS (Fonds Professionnel Spécialisé). Finally, for other types of investments, Holding ISF – for special wealth tax purposes – and SCR (Société de Capital Risque) – for private and professional investors forming a club deal of investors in an evergreen fund – are available. Other regulations apply to some of these types of funds, such as a minimum of 50% of assets invested in equity, equity-related securities, or securities that provide access to capital issued by unlisted firms. However, the European Directive 2011/61/EU transposed into French law in 2013, and directed at alternative investment fund managers, made the formation of unregulated PE funds more bureaucratic as they must now register as alternative investment funds.

Tax treatment of private equity funds and their investors

France has developed throughout the years a relatively favorable tax system to foster PE fund raising and investments in France. Thus, FCPIs, FIPs, FPCIs and FPS themselves are not subject to tax on their income and gains, but French tax is levied on their investors. As for SCRs, they are totally exempt from corporate income tax. Corporate vehicles (such as holdings ISF), although subject to corporate income tax at the standard rate tax, are likely to benefit from exemption on dividends and capital gains. Regarding LPs providing capital to PE funds, several tax incentives have been implemented when they invest in private companies. Individual investors can as well benefit from tax exemption on capital gain tax and income when investments are made through SCRs, FCPIs and FIPs under certain circumstances – minimum of 5 years holding period of no more than 25% of the financial rights. Other measures also apply to European VC companies, and wealth tax reduction. Overall, the tax system appears very favorable to PE funds in France, and to investors in these funds. Even though the system is multi-layered and differentiated policies and requirements apply, it remains relatively simple and understandable and is therefore likely to stimulate the supply and demand for PE funds.

Protection of minority shareholders' rights in invested companies, and of investors in private equity funds

The protection of LPs differs between retail and other types of PE funds. Indeed, retail funds, in order to be approved by the AMF, are subject to strict requirements that do not allow much flexibility for investors to benefit from additional protection other than what is already accounted for in the law. The regulation allows more flexibility for other types of funds, and protection can be negotiated case-by-case. Representation and warranties in the acquisition documentation are the two main forms of protection sought by investors. Regarding the protection of minority shareholders' interests, France ranked 46th with a score of 4.5 on the Global Competitiveness Index (GCI) established by the World Economic Forum. The GCI is based on the study of 148 economies. For each of them, 12 pillars making up for their competitiveness are evaluated, and variables are rated on a scale of 1 to 7. However, when looking at the Ease of Doing Business Index, France fares much worse as it arrives only in the 80th position when looking at the protection of investors. It represents France's worst ranking on all the EDBI indicators. Indeed, if disclosure doesn't seem to be an issue, directors appear to be very little liable (1 on a scale of 1-10) and it appears relatively difficult for shareholders to bring-up law suits (5 on scale of one to 10). There has been no reform regarding this indicator during the 2006-2013, and it is therefore likely to have accentuated the negative downturn in PE supply and demand caused by the crisis.

Protection of intellectual property

When looking at the Global Competitiveness Index, France arrived 12th with a score of 5.7. Thus, one can conclude that this will play a very favorable role on the level of PE activity in the country. Indeed, the higher the protection of intellectual property, the likelier entrepreneurs will be to develop new products and services, and register patents – which can be correlated to the globally high number of patent applications per resident aforementioned.

Bankruptcy regulation

The bankruptcy process in France is usually quite long and the results often uncertain, which is why investors are likely to look for alternative options before filing for bankruptcy. When looking at the "Resolving Insolvency" in the EDBI, France's overall ranking was 44th in 2013, and the length of the bankruptcy procedure remained at 1.9 years throughout the period. However, several support policies have been implemented before and after the crisis, to help SMEs avoid engaging in the bankruptcy process. Prior to the crisis, support policies consisted in a governmental assistance at the domestic and European level, whereas it was an entire stimulus package that was provided for the years 2009-2010. In addition, insolvency reforms were also implemented: in 2010, France encouraged pre-insolvency work-outs in order to enhance the bankruptcy process and in 2009, the country passed a law enabling debtors to implement a restructuring plan with financial creditors only, without affecting trade creditors. Thus, the implementation of such reforms, as a reaction to the crisis, might have had a positive influence on both the supply and demand for PE funds, helping PE activity to go back to regular levels. Indeed, with an improved insolvency resolution system, firms will be less afraid of failure and investors less scared to lose all of the invested money.

Corporate governance requirements

The quality of corporate governance among listed companies in France has improved and even accelerated in recent years. French standards meet or exceed those of the OECD. Guidelines are compiled by private organizations involved in corporate governance. Large listed companies must comply with the Afep-Medef Code, the Middlenext Code regulates medium size corporations listed on the secondary market, and the French Management Institute establishes recommendations. Private companies targeted by PE investments will have to comply with some of these regulations in the eventuality of going public through an IPO. Therefore, this determinant should positively influence the global PE activity in France, especially through the supply channel, as strong corporate governance requirements will provide a sense of security to investors.

Strength of the judicial system

The strength of the judicial system can be evaluated through the lens of the GCI and the EDBI. On the GCI, France's judicial independence and the efficiency of the legal framework in challenging regulations ranked 31st with a score of respectively 5.1 and 4.3. With regards to the efficiency of the legal framework in settling disputes, France did not fare as well and arrived only 48th, scoring 4.1. Furthermore, on the EDBI, France's ranking was much better (7th in 2013) although none of the variables improved during our studied period – the number of days and of procedures, as well as the cost of enforcing a contract remained the same. Thus, the French judicial system appears quite strong with regards to international standards, which could explain a high structural level of PE activity.

Perceived corruption

The recognized indicator to evaluate the level of corruption in a given country is the Corruption Perception Index established by Transparency International. France oscillated around 70 for the 2006-2013, with 0 reflecting a country perceived as very corrupt, and 100 for a country regarded as very clean. This score allowed France to remain ranked within the 20th to 25th least corrupt countries in the world, on a total of 175 surveyed. Similarly to the strength of the judicial system, this relatively low level of corruption may account for the high overall level of PE activity in France, both through supply and demand.

Quality of the accounting standards

France ranked 33rd on the GCI regarding the strength of the auditing and reporting standards, and the country arrived 18th in terms of efficacy of corporate boards. As aforementioned, Directive 2011/61/EU on alternative investment fund managers (AIFM Directive) implemented additional reporting requirements to regulators, investors and employees when certain vehicles, considered as alternative investment funds, are involved in any kind of controlling acquisition. No other major reform was spotted during the period. Thus, the quality of accounting standards in France appears favorable to the development of the supply and the demand for PE funds in the country.

Given the complex nature of the data on the French institutional framework – both qualitative and quantitative, with an available or unavailable observable evolution for the different variables – it is hard to draw clear conclusions. It seems that the quality of the institutional framework in France could have contributed to the development of a high structural level of PE activity in the country. However, no clear change can be noticed during our studied period, and the improvements made following the crisis might become visible only in a longer term.

4.1.3. Applying the determinants to the evolution of the private equity sector in France

According to these observations, the economic – and especially the macroeconomic – variables are the ones that seem to have the most impact on the yearly conjuncture on the French private equity market, while the institutional frameworks seems to have a stronger impact on the structural level of PE activity. Indeed, both the supply and demand for PE funds appear to have closely followed the variations of GDP and GDP growth rate during the 2006-2013 period (insert graph). On the other hand, the institutional framework remained stable. Some reforms were implemented, mostly post-crisis, and can have helped the private equity market to go back to higher levels, although not being the main drivers – increased support to avoid bankruptcy and ease the process when necessary, stricter accounting standards for alternative funds.

Furthermore, it appears that PE determinants that impacted negatively the PE market during the period had a stronger influence on the supply of PE funds than on the demand for funds, and vice versa. Thus, when the level of GDP strongly decreased, the supply for PE funds appeared to have suffered more than investments. However, when GDP started to slowly increase again after the crisis, investments grew back more strongly than the funds raised. As a consequence, the supply of PE funds was lower than the demand for these same funds throughout the crisis years.

The level of 1-year interest rate is another interesting indicator to comment, as it is one of the few determinants that are supposed to have an opposite influence on the level of supply – negative – and demand – positive – for PE funds. During the 2006-2013 period, the evolution of interest rates in France followed the GDP trend, reflecting a decision from the European Central Bank to decrease interest rates in order to stimulate investments and help the

Eurozone recover. However, as stated above, supply and demand for PE funds have evolved in the exact same direction, whereas it would have been expected to see them adopt opposite trends in order to observe the impact of the 1-year interest rate. What's more, the supply of funds suffered the most during the crisis, but in order to see the effect of interest rate, a reverse scenario would have been expected, with investments being more impacted. Thus, one can conclude from the literature that interest rates are probably a relevant indicator to evaluate the size of a PE market in a given country. However, when other macroeconomic variables also undergo major changes, the level of interest rate doesn't dominate as a determinant – i.e. GDP and GDP growth rate have a higher influence.

Regarding entrepreneurial variables, they remained relatively stable throughout the period, with even favorable credit conditions for SMEs and improvement in the tax payment procedures. However, the crisis and the crash of the stock market made IPOs more rare and a risky divestment option. This phenomenon can have reinforced the slowdown in the PE activity during the crisis years. As for the TEA and the number of patent applications per resident, one could conclude that entrepreneurship in France was affected by the crisis, but that it was able to go back to pre-crisis levels pretty quickly afterwards. However, patent applications per resident appear to be a much more accurate determinant than TEA, for which no real trend can be established.

Technological opportunities have been present in France throughout the entire period from 2006 to 2013. They do not seem to have been that much affected by the crisis – French firms have continued to invest in innovation, and enrollment in secondary education has not suffered. Thus, these determinants cannot really be linked to the evolution of supply and demand for PE funds on a short-term view. Their impact is not as strong as macroeconomic variables' – when there is a very strong negative macroeconomic choc, the positive trends in technological opportunities do not counterbalance. However, they can probably accentuate the rebound when macroeconomic variables become positive again.

Finally, as for the institutional framework, its influence on PE activity is less visible on a short-term view. However, it impacts the type of vehicles and funds used to raise capital. Indeed, FPCIs, FCPIs and FIPs have dominated the PE landscape, both in terms of number of vehicles and in amount of capital raised, and they present the most favorable tax incentives and flexible legal structure. Indeed, these types of vehicles are exempt from income and capital gains taxes. However, although SCRs were the historical type of vehicle used for PE investments in France, their influence has decreased as they are only subject to income tax exemption, and not to capital gains tax. These tax incentives appear to target mainly international investors, in order to stimulate the supply of PE funds coming from abroad. However, from 2011 to 2013, capital raised still came in majority from France and represented an increasingly larger part of the total capital raised.

To conclude, over the 2006-2013 period in France, the level of GDP appears to be the main determinant influencing the evolution of supply and demand for PE funds in France. All the other variables seem less relevant, although their influence might just be masked by the dominating trend in GDP.

	Determinant	Facts and Figures	Conclusions
Economic conditions	Ability of private pension funds to engage in PE/VC financing	• France allows private pension funds to invest in PE activity • But stricter regulation since the financial crisis (Basel III, Solvency II)	• Private pension funds intervention became more difficult • Proportion of capital raised outside France increased
	Capital gains tax rate	• Differentiated and multi-layered system • Exemptions apply depending on the type, duration,…of the investment • No modification regarding this policy throughout our period	• Positive influence on the level of PE activity • Conditions to benefit from these tax exemptions remain clear
	Exit opportunities through IPOs	• Irregularity in the divestments over the period, with however a return to IPOs in 2013 • New financial platform dedicated to SMEs and intermediate size companies - Externext Paris	• Well developed financial markets, nonetheless hurt by the crisis • Improving SME's access to IPOs creating opportunities for PE activity
	SMEs' growth rate	• 99.8% of all firms in France are SMEs • Good resistance to the financial crisis but increased disparities	
	EDBI ranking	• France fares well, ranked 35th and 38th overall in 2013 and 2014 respectively • Starting a business remained relatively easy, and the process of paying taxes improved during the 2006-2013 period	• Favorable evolutions to favor the demand for PE funds - ease of starting and maintaining a business • Importance of taxes as a determinant
Institutional framework	Laws on PE funds formation	• Funds must be approved by the AMF • 5-6 different types of structures available for PE fund raising and investment • Increased bureaucracy	• Easy procedure but new regulations might make opening a PE fund more difficult
	Tax treatment of PE funds and their investors	• Favorable tax system - tax not levied on PE vehicles but on their investors • Under specific circumstances, investors themselves benefit from tax exemptions	• Favorable tax system relative to PE funds in France • Remains simple despite differentiated and multi-layered policies
	Protection of minority shareholders' rights in invested companies, and of investors in private equity funds	• Differs depending on the type of PE fund - retail or other type • France ranks 46th in terms of minority shareholders' protection on the GCI, and 80th on the EDBI	• Some protection exists for minority shareholders, but can be considered as one of France's weaknesses as no reform was implemented during the studied period

	Protection of intellectual property	• Ranked 12th on the GCI	• France stands very well on the protection of intellectual property, enhancing PE activity
	Bankruptcy regulation	• Long process and uncertain results - 44th in terms of "Resolving Insolvency" on the EDBI • However, support policies implemented to help SMEs avoid engaging in the bankruptcy process & insolvency reform in 2011	• One of France's weak spots, but improvements are likely to play a favorable role on PE activity
	Corporate governance requirements	• Improvements, meet OECD requirements • Large listed companies must comply with the Afep-Medef Code, the Middlenext Code regulates medium size corporations listed on the secondary market, and the French Management Institute establishes recommendations	
	Strength of the judicial system	• Judicial independence ranked 31st, efficiency of legal framework in settling disputes ranked 48th, and efficiency of legal framework in challenging regulations ranked 31st in GCI	• French judicial system appears quite strong with regards to international standards > high structural level of PE activity
	Quality of the accounting standards	• France ranked 33rd on the GCI regarding the strength of the auditing and reporting standards, and arrived 18th in terms of efficacy of corporate boards • New directive imposed additional reporting	• Accounting standards quality favorable to the development of PE activity

Table 2 – Summary of qualitative determinants for the French PE sector (Prepared by the author)

4.2. The private equity market in Brazil, its evolution, and its determinants (2006-2013)

The second part of the analysis of our framework consists in giving a comprehensive overview of the evolution of the Brazilian private equity market during the 2006-2013, studying in depth the determinants identified by the literature and determine if they apply to the Brazilian context.

4.2.1. Movements and trends on the private equity market in Brazil

As aforementioned while analyzing France, and to make the two countries comparable, the variables analyzed to evaluate the size of the PE sector in Brazil and its evolution will be: funds raised – supply of PE funds – and the number of PE funds and vehicles raising capital, investments – demand for PE funds – and divestments.

Funds raised for the Brazilian PE market, 2006-2013

The private equity market in Brazil was growing since the beginning of the 2000s, which marked a 2nd wave of PE investment in the country, characterized by a real dynamism of the sector. Between 2006 and 2007, funds raised increased significantly by 27%, from $5.3 bn to $7.2 bn. However, this number dropped as soon as 2008 and down to $4.6 bn. This decrease, direct consequence of the financial crisis, however happened a year earlier than in France, where the repercussion was only felt in 2009. This phenomenon could be explained by the fact that the Brazilian PE market still largely relies on international investors, and especially Americans, to raise capital for PE investments in the country. Thus, the crisis having started in the United States, American capital providers might have cut investments a year sooner than European ones. In the aftermath of the crisis, and as early as 2009, the Brazilian PE market was raising funds again, up to $6.1 bn that year and exceeding pre-crisis levels as soon as 2011. Contrary to France, capital raised was less impacted by macroeconomic fluctuations and recovered much faster – in France, the level of funds raised in 2013 was still lower than in 2006. However, in 2013, funds decreased in Brazil as the country started to struggle once more with its macroeconomic environment.

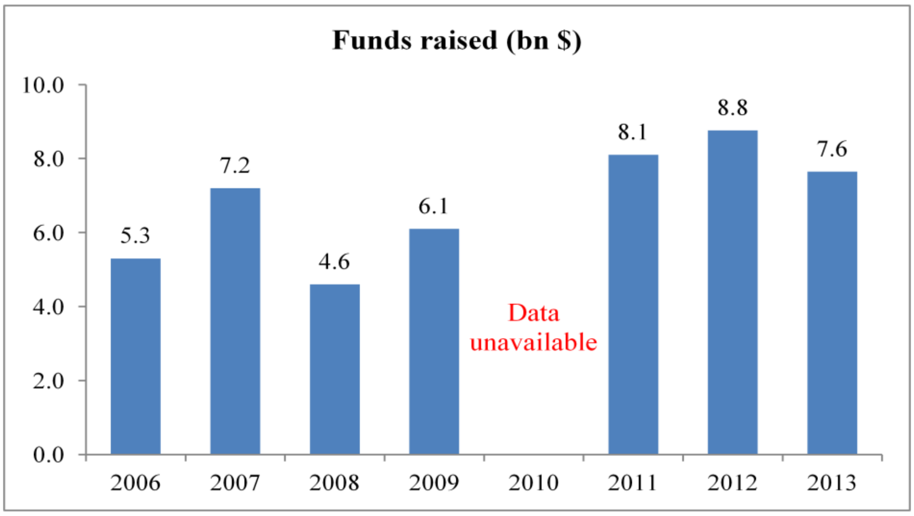


Figure 6 – Funds raised in Brazil for the PE sector, 2006-2013 (ABVCAP, 2014)

In 2008 and 2009, limited partnerships and holdings were still the structures representing the most vehicles on the PE market. However, FIPs and FMIEEs started to gain influence, both in terms of amount of capital raised and regarding the number of vehicles. Indeed, the number of FMIEEs grew from 26 to 34, while the number of FIPs vehicles increased almost twofold from 37 to 67 between 2008 and 2009. This trend could be linked to the tax incentives that come along with these structures, and that will be studied later on.

Investments made in the Brazilian PE market, 2006-2013

The demand for PE funds was growing prior to the crisis, with a 75% increase between 2006 and 2007, from $1.3 bn to $5.3 bn. Similarly to funds raised, PE investments suffered from a drop in 2008. However, the decline continued until 2009 when the demand for PE funds reached a record-low of $1 bn. But as soon as 2010, investments increased back fourth fold, and reached their pre-crisis level in 2011, similarly to capital raised. The demand for PE funds has been steadily rising since then.

Over the 2006-2012 period, capital raised was always higher than investments in PE – and especially much higher in 2009 at the heart of the crisis – reflecting the attractiveness and the dynamism of Brazil for PE investors, in spite of the financial crisis. However, a small inflexion in this trend happened in 2013 when for the first time PE investments exceeded funds raised ($7.9 bn vs $7.6 bn). This phenomenon is at the exact opposite of the one observed in France, where investments in PE had been much higher than the levels of capital raised during the entire 2006-2012 period (excluding 2007), forcing investors to rely on other types of financing. However, this phenomenon reversed in 2013, when funds raised exceeded investments for the first time in 6 years in France. Thus, both supply and demand for PE funds were affected by the crisis, however the largest drop was noticed in PE investments, contrary to France where funds raised suffered more.

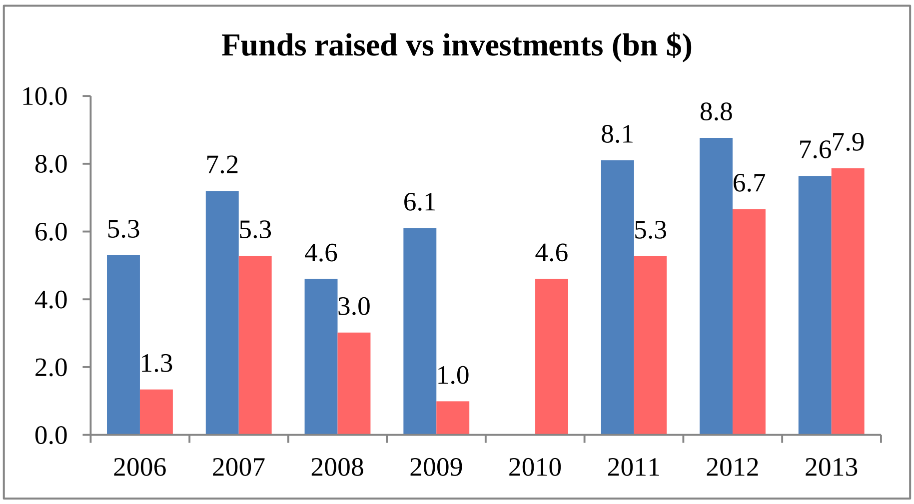


Figure 7 - PE funds raised vs investments in Brazil, 2006-2013 (multiple sources)

Divestments in the Brazilian PE market, 2006-2013

According to the 2° Censo of PE/VC in Brazil realized by GV Cepe from FGV-EAESP, divestments were relatively stable from 2006-2008, although slightly decreasing – from $0.9 bn in 2006 to $0.7 bn in 2008. However, 2009 noticed a surge in divestments, reaching a record-high over the period of $3 bn. Since 2012, a stabilization occurred in divestments at lower levels, around $2.5 bn. Similarly to what was previously mentioned about France, divestments are much more volatile than capital raised and investments, and are a less reliable measure to study the evolution of PE activity in a given country.

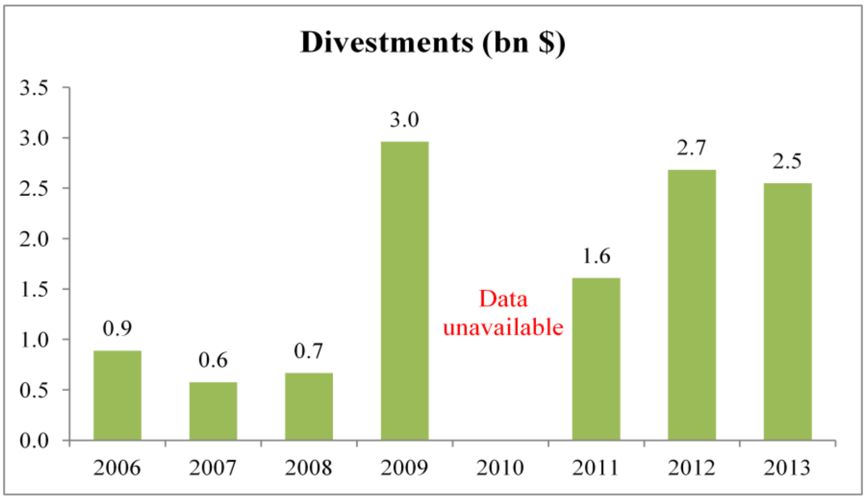


Figure 8 - PE divestments in Brazil, 2006-2013 (multiple sources)

Both the supply and demand for PE funds fluctuated a lot throughout the 2006-2013, but however followed a similar trend in slightly different proportions. Divestments appear much more volatile and lacking a clear pattern. The following section will try to identify the possible causes of these variations.

4.2.2. Evolution of the determinants identified in the literature throughout the 2006-2013 period, and their potential impact on the PE market

The determinants studied in this section will be analyzed and displayed in the same order as for France, to provide a comprehensive overview and allow for comparison.

4.2.2.1. Economic conditions in Brazil, 2006-2013

The first set of determinants consists in the economic variables affecting the Brazilian context throughout the 2006-2013, and divided into macroeconomic variables, entrepreneurial activity, and technological opportunities.

4.2.2.1.1. Macroeconomic conditions in Brazil, 2006-2013

First and foremost, as explained previously while analyzing the same determinants in the case of France, *GDP & GDP growth rate* should play a positive role on the size of a given PE sector. Thus, a rise in these indicators should be translated into an increase in both the supply and demand for PE funds, and vice versa. Brazilian GDP was growing at a fast pace up until 2008, with growth rates of 4% in 2006, 6.1% in 2007, and 5.2% in 2008, reaching $1,654 bn. In 2009, a huge drop in GDP occurred and its growth rate even became negative at -0.3%. However, GDP rose back quickly and reached a higher than pre-crisis level with a growth rate of 7.5% in 2010, to $2,143 bn. Nevertheless, this dynamism did not last long, and GDP grew much less in 2011, at the pace of only 2.7%. This slow growth has been the trend since then, even with only 1% growth in 2012. The overall evolution of GDP was similar to the one of supply and demand for PE funds, especially to the demand, with a first decrease in GDP growth in 2008, and then a sharp drop in 2009. The highest GDP growth rate over the period (7.5% in 2010) could explain that capital raised and investments went back to their pre-crisis levels and higher as soon as 2011.

The level of *1-year interest rate* was set very high in 2006 at around 15%, and was followed by a period of fluctuation in 2007 and 2008. However, a clear downturn occurred in 2009 at 9.7%. Interest rates were then rising until 2011 when they reached a level similar to the 2007 one (11.7%) but then decreased again to reach a record-low of 8.3% in 2013.

Brazilian legislation has allowed *private pension funds to engage in PE/VC financing* for over a decade, and funds considered as “open” can invest up to 60% of their assets under management in variable income instruments. During the studied period, the Brazilian PE market has become even more open to pension funds by allowing “closed” funds to invest 10% of reserves in PE/VC funds and 10% in offshore funds since 2009. As for insurance companies, up to 50% of their reserves may be invested in variable income instruments. Thus, the Brazilian legislation appears flexible with regards to the use of pension funds as PE investors. The situation even improved in 2009, and can be perceived as a consequence of the macroeconomic choc and to have contributed to the fast recovery of the PE market activity. This trend contrasts with the French one, where the crisis has rendered the involvement of pension funds in the PE market more difficult.

Capital gains tax rate was set at 15% in Brazil during the studied period. However, as will be seen in the institutional part of this analysis, Brazil has implemented tax incentives for foreign investors, exempting them from capital gains taxes when investments are made through FIPs and FMIEEs, and under certain other conditions. Additionally, a capital gain tax of 15% is quite low, at least compared to 33.3% in France. However, France as well implemented tax incentives for PE investments which render this number less relevant, and the country also appears more favorable to its residents who also benefit from some level of capital gains tax exemption. This could explain why the majority of capital raised still comes from international investors in Brazil – they represented respectively 54%, 49% and 55% of funds raised in 2011, 2012 & 2013.

Finally, the *unemployment rate* comes as the last of the macroeconomic determinants. This indicator was steadily decreasing from 8.4% in 2006 to 7.1% in 2008. In 2009, it increased back to 8.3%, and has been lowering since then, down to 6.2% in 2013. Overall, the unemployment rate in Brazil was lower than in France. However, it cannot really be correlated to the variation in the demand and the supply for PE funds. Indeed, they both evolved in the same way, but the unemployment rate is supposed to play opposite dynamics on the demand – positive – and supply – negative – for PE funds. As stated before in France’s analysis, this determinant is more a consequence of other macroeconomic events, such as the movements in GDP & GDP growth rate caused by the financial crisis.

The macroeconomic determinants have been dominated by the negative trend in GDP and GDP growth rate during the crisis. However, this trend was only temporary, as growth resumed in Brazil as soon as 2010, and was accompanied by an improvement in the ability of private pension funds to invest in PE activity and a decline in the unemployment rate.

4.2.2.1.2 Entrepreneurial variables in Brazil, 2006-2013

Since 2004, along with growing capital market activity, *exits through IPOs or trade sales* have increasingly been seen as a divestment opportunity for PE investments in Brazil. From 1999 to 2003, and according to the 2° Censo, there were no IPOs in Brazil. The first surge in IPOs happened in 2004, with a number of 7, and this number increased over the years until its peak of 64 IPOs in 2007. However, as a consequence of the credit crisis, IPOs were reduced to a number of 4 on the Brazilian market in 2008. Afterwards, the number of IPOs oscillated until the end of the period: 5 IPOs in 2009, 11 in 2010, 11 in 2011, 3 in 2012 and 11 in 2013. Out of these 109 IPOs in Brazil from 2005 to 2008, only 34 were backed by private equity investments. Thus, private equity backed IPOs are still a minority. Indeed, the main form of exit used in the period from 2005 to 2008 was the secondary private sale, representing 32% of private equity divestments. From 2009 on, trade sales increased and became the main form of divestment in the Brazilian PE sector. Therefore, even though the Brazilian stock exchange is the largest in Latin America, and one of the largest in the world, its local currency and derivative markets remain underdeveloped.

SMEs and their growth rate is another variable that makes up for entrepreneurial activity. According to a study conducted by Deloitte, the 250 SMEs that were growing at the fastest pace in 2008-2009 averaged a growth rate of 36%, and an average employees growth rate of 21%. However, PE financing was only used by 4% of these fastest growing SMEs in Brazil, reflecting a tremendous opportunity for the PE sector in Brazil. Indeed, they were still growing at a fast pace at the heart of the crisis, and might have helped the fast recovery of the Brazilian GDP, and thus of the activity on the PE sector.

As for the *Total early-stage Entrepreneurship Activity (TEA)*, the indicator fluctuated significantly during the period – from 12% to 15-17% - and does not really seem to be correlated neither to the macroeconomic trends nor to the evolution of the supply and the demand for PE funds. However, this variable remained as a level twice as high as what it is in France, and could therefore explain the dynamism of the PE sector in Brazil and the rising demand for PE funds quickly in the aftermath of the crisis. Nevertheless, some characteristics of the Brazilian market regarding entrepreneurship should be taken into account. Indeed, Brazil is still dominated by a number of family businesses and very small enterprises that might be taken into account in the TEA even though they might never reach the size to be in need of PE investments. Thus, the TEA is not exempt from flaws and can only reflect to some extent the actual opportunities for PE activity.

However, as aforementioned regarding France, the *number of patent applications per resident* might be a more accurate determinant of the entrepreneurial activity in a given country. This indicator was growing steadily throughout the studied period, undergoing a small drop in 2009-2010. However, it remained relatively low compared to the levels experienced in France – around 4,000 patent applications / residents in Brazil versus around 14,000 in France. Contrary to the latter, this determinant can however not clearly be correlated to the evolution of the macroeconomic and private equity environment in Brazil. However, it can be linked to the EDBI analyzed afterwards. Indeed, the act of registering patents is still developing in Brazil, and cannot yet be regarded as influencing the evolution of the supply and demand for PE funds.

Finally, similarly to France, the analysis of the *Ease of Doing Business Indicator* will focus on “Starting a business” and “Paying taxes”. In 2013, Brazil ranked 121st on the ease of starting a business and 160th on the ease of paying taxes, which places the country at the bottom of the ranking. However, even though Brazil remains a country where it is very costly and time-consuming for an entrepreneur to start a new business, many improvements have been made – the number of procedures was reduced from 17 to13 (progressively through the years of crisis), the number of days from 149 to 119 (the drop occurred in 2010, and can be related to the recovery of supply and demand for PE funds), and the cost has been reduced from around 10% of income per capita before the crisis to less than 5% in 2013. Regarding paying taxes, improvements were made but it remained more stable – the number of payments per year decreased from 10 to 9 in 2010, but the time dedicated to taxes remained the same at 2.6 hours per year and the tax rate, even though it slightly decreased during crisis years, went back to its regular level (69%).

The entrepreneurial context in Brazil seems to have resisted quite well to the financial crisis and could be viewed as one of the main drivers helping the fast recovery of the PE activity in the country. Indeed, capital markets have been constantly developing since 2005 – although PE-backed IPOs remain at a relatively low level – SMEs continued to grow, and the procedure to start a new business was enhanced.

4.2.2.1.3 Technological opportunities in Brazil, 2006-2013

In order to evaluate the *business R&D growth* indicator in Brazil, the two PINTEC (Pesquisa de Inovaçao) surveys realized by IBGE for the 2006-2008 and 2009-2011 periods were analyzed. Indeed, with no other indicator available – such as the DIRDE for France – the data found in PINTEC were the closest measure to business R&D growth, even though they do not cover the end of our time period (2012 and 2013) and the evolution is not detailed on a yearly basis. Thus, we looked at the proportion of firms engaged in innovation, and observed a decrease from 39% of the firms surveyed in 2006-2008 to slightly less than 36% over the 2009-2011. On the other hand, when looking at the firms with high/medium level of internal R&D, the proportion of firms involved in research activities increased from around 12% to around 18% in between the two studies. A similar trend can be observed for high/medium level of external R&D acquisition, growing up from 4% to 7% of the surveyed firms. Thus, in spite of the crisis, the proportion of Brazilian firms dedicating time and money to R&D activities has increased and is expected to play a positive role on the supply and demand for PE funds. The fact that investments in R&D do not necessarily lead to innovation right away might explain the opposite trend regarding this variable.

Finally, the *proportion of enrollment in higher education* is the last economic determinant reflecting technological opportunities. As aforementioned, educated people create opportunities both for the supply and the demand for PE funds. In the absence of a chronological evolution of this variable, we can only comment on its 2013 level of 25.6% gross enrollment in tertiary education according to the GCI, ranking Brazil at the 85th place. Thus, this number is still more than twice as little as in France, and education has been a major concern in Brazilian public policies over the years. This lack of educated nationals could be correlated to the lower levels of entrepreneurship, such as the number of patent applications per resident.

Thus, macroeconomic determinants are the ones that seem to have driven the overall decrease in PE activity during the crisis years. However, as soon as 2010, both supply and demand for PE funds resumed to pre-crisis levels, which could be viewed as a more harmonious combination of all the economic determinants. The following section will focus on analyzing the impact of the institutional framework.

4.2.2.2. The institutional framework in Brazil, 2006-2013

The Brazilian institutional framework will be analyzed following the same order implemented for France, and will rely on the same determinants taken from the model of the LAVCA Scorecard.

Laws on private equity funds formation

The formation of private equity funds in Brazil is regulated by the Comissao de Valores Mobiliarios (CVM) – the equivalent of the French AMF – in charge of issuing rules and controlling investment funds in the country. Two main structures exist for PE funds, in the form of Fundos Mutuos de Investimento em Empresas Emergentes (FMIEEs), created for VC activity, and Fundos de Investimento em Participacoes (FIPs), for other types of PE financing. These types of funds are subject to specific regulations and only institutional or qualified investors are authorized to invest in such funds. The CVM controls the information on the financial statements disclosed by the funds on a regular basis. Regarding holding companies, the procedure is much simpler, as they are not subject to a CVM registration and authorization. Thus, even though the amount of funds raised through holding vehicles remains insignificant (around 2%), they represented respectively 17% and 13% of the total of vehicles raising PE capital in Brazil in 2008 and 2009.

The new "self-regulation" code established by ABVCAP and the Brazilian Financial and Capital Markets Association (ANBIMA) also aims at improving the formation and governance of PE funds. The compliance with the code is mandatory for the members of both associations but the results of this newly implemented regulation haven't been released yet. However, these attempts at clarifying and simplifying the formation of PE funds in Brazil should have a positive impact on the supply for PE funds.

Tax treatment of private equity funds and their investors

The tax system in Brazil is multi-layered and complex, and the effective corporate tax rate is set at 34%. However, since December 2011, foreign exchange transactions for portfolio investments of over four years have become exempt from financial operations tax, and FIPs are considered as pass-through. In addition, and since the Law 11,312/06 of 2006, foreign investors in regulated PE funds are exempt from income and capital gains taxes when the shares are sold on the Brazilian stock exchange through FIPs and FMIEEs. Thus, even though these types of funds are not the most flexible regarding their formation, the cumulated number of FIPs and FMIEEs rose from 63 in 2008 to 101 in 2009, and could be a consequence of these tax incentives. Nevertheless, investors must comply with numerous other conditions – regarding quotas, debt securities or tax heavens – in order to benefit from these tax incentives. When investments are not made through FIPs and FMIEEs, foreign investors are subject to the same withholding income tax rates as Brazilian nationals, which can vary from 15% to 25%. Regarding the funds themselves, FIPs and FMIEEs are qualified as tax transparent, meaning they are not subject to taxation but are however liable of withholding income tax to their investors.

Protection of minority shareholders' rights in invested companies, and of investors in private equity funds

In Brazil, the relationship between private equity funds and their investors is generally governed by the fund's regulations, called "regulamento". It provides the rules funds must comply with while performing its daily activities, such as its term and its investment policiy, or the accounting methodology. Regarding the protection of PE funds in the invested companies, they can usually negotiate the right to appoint some members of the board of directors, as well as the chief financial officer. It is common for PE funds to take preferred shares along with veto and voting rights concerning certain matters. The CVM Guidelines and the IBCG Code protect these preferred shares.

When looking at international rankings, Brazil arrives 26th on the GCI regarding the protection of minority shareholders' interest with a score of 4.9. However, the country is only ranked 80th on investor protection in the EDBI, which puts it exactly in the same position as France. Brazil even fares better than its European counterpart on the extent of director liability. Even though these rankings do not really converge, it seems that Brazil benefits from a relatively protective system for minority shareholders that should not impede the development of supply and demand for PE funds.

Protection of intellectual property

The protection of intellectual property is one of Brazil's weak spots. Indeed, it was ranked 80th with a score on 3.5 on the GCI in 2013, far behind France's 12th ranking. Although Brazil has improved its protection of intellectual property in the past few years, piracy remains common and the process for registering trademarks and patents is still unclear. The low level of number of patent applications per resident can clearly be seen as a consequence of this institutional weakness, and is likely to negatively influence the level of PE activity, especially the demand side.

Bankruptcy regulations

In 2005, Brazil undertook a major reform in it bankruptcy law with the Law 11,101/05 replacing the old legislation dating back to 1945. This old legislation was very ineffective and slow – the recovery rate was only of 0.2% compared to 26% in Latin American countries and

72% in OECD – and highly punitive to creditors. Thus, according to EDBI, the new reform contributed to shortening the bankruptcy procedure from 10 to 4 years. However, in 2013, Brazil was still ranked 136th in the EDBI ranking in terms of resolving insolvency, contrasting with France's 44th place. Indeed, even though the bankruptcy procedure got faster, its cost increased from 9% to 12% of the estate, and no other reform was implemented following the crisis years. Thus, one could conclude that the Brazilian legislation regarding bankruptcy, although improving recently, is still likely to impede PE activity.

Corporate governance requirements

Corporate governance requirements underwent a series of major improvements in Brazil at the eve of the 21st century. Indeed, the Sao Paulo Stock Exchange created new special listings – Nível 1, Nível 2, Novo Mercado and BOVESPA Mais – that raised the standards of corporate governance for the firms issuing shares in these categories. Among these new listings, Novo Mercado, created in 2000, has been the most popular. In addition to what is already requested by the CVM and the Brazilian legislation, firms listed on Novo Mercado must comply with more rigid corporate governance practices and transparency requirements regarding shareholders' rights and information disclosure. The first corporate governance requirements were implemented by the Brazilian Institute of Corporate Governance (IBGC), which has issued a Code of Best Practices, followed by the CVM Guidelines, which has greatly contributed to improving corporate governance standards in the country while gaining autonomy as a market regulator. Furthermore, companies with highly concentrated capital – family-managed and lacking an independent managing board – have been the main targets of the recent reforms. These companies still represent a large amount of SMEs in Brazil and are likely to become a target for PE investments. Thus, a focus on these types of firms might have increased the supply for PE funds, and these improvements in corporate governance might have helped the surge in exits through IPOs at the beginning of the studied period.

Strength of the judicial system

The strength of the Brazilian judicial system is still a matter of concern for the country. Indeed, when looking at the GCI ranking, Brazil fares mildly to badly over the various variables used to seize the strength and reliability of its judicial system. Indeed, judicial independence was ranked 65th with score of 3.9, the efficiency of the legal framework in settling disputes ranked 101st (score 3.3), and the efficiency of the legal framework in challenging regulations ranked 68th (score 3.5). The gap between Brazil and France appears even wider when looking at the "Enforcing contracts" indicator in the EDBI, where Brazil arrives 121st compared to 7th for France. Indeed, it still takes 45 procedures requiring up to

731 days to enforce contracts in Brazil, almost twice as much as in France. However, contracts are generally upheld in Brazil, but when they are not, cases move at a very slow pace. In order to remedy to this insufficiency, disputes can be settled through alternative mechanisms, such as private arbitration, and function well. Nevertheless, the judicial system in Brazil is still likely to play a negative influence on the supply and demand for PE funds in the country.

Perceived corruption

Brazil's ranking on the Corruption Perception Index gradually improved through the 2006-2013 period, from a score of 33 up to 43 in 2012 (down to 42 in 2013). As aforementioned about France, a score of 0 reflects a country perceived as very corrupt, and a score of 100 a country regarded as very clean. This trend reflects continued efforts to try to reduce the level of corruption, which nevertheless remains high. However, a recent law regarding corrupt practices was issued in 2013 and has been implemented since January 2014. It tackles the issue of civil and administrative punishment of a company and its executive in the event of bribery or corruption practices. However, this legislation only addresses one aspect of the problem – the penalties and the punishment of the legal entity – but does not act on its root. Thus, the high level of corruption could explain a lower structural level of PE activity on the Brazilian market, but the fact that it has constantly been improving throughout the period can have helped supply and demand for PE funds to reach a level similar to France at the end of the period.

Quality of the accounting standards

Brazil ranked 31st in the GCI regarding the strength of the auditing and reporting standards, and arrived 44th in terms of the efficacy of corporate boards, which puts the country in the first third of the ranking. Indeed, in the past years, Brazil has implemented a global movement towards the use of International Accounting Standards, especially since the creation of the Novo Mercado in 2000, as mentioned above. Indeed, the firms listed in this category must comply with US GAAP and, since 2010, all listed corporations are required to use IFRS. International auditors are also present in the country.

Overall, Brazil ranks poorly in international rankings regarding the quality of its institutional framework. This phenomenon is likely to account for the structurally lower level of PE activity in the country at the beginning of the period. However, many reforms have been implemented during the studied period and are likely to have had a positive influence on the recovery of the PE market, allowing it to reach levels similar to the ones observed in France.

4.2.3. Applying the determinants to the evolution of the private equity sector in Brazil

As a consequence of our observations, and similarly to France, the evolution of the supply and the demand for PE funds appears closely linked to the variation of GDP over the 2006-2013, and specifically PE investments. Thus, macroeconomic variables, and especially the level of GDP and its growth rate, seem to be the main determinant for the short-term evolution of private equity activity in Brazil. Investments have been more negatively impacted by the macroeconomic trends than the level of capital raised. That can lead us to state that when macroeconomic determinant are playing negatively on PE activity, investments will be more affected, but while these same determinants play a positive role, they will impact capital raised more strongly. Therefore, throughout the period, investments were lower than the funds raised, which might have allowed funds to make reserves for future investments. However, a shift operated in 2013 when the annual investments turned higher than the funds raised for the first time.

Regarding other macroeconomic determinants, the ability of private pension funds to engage in PE investments has evolved positively in 2009, at the turning point of the crisis, to allow for more flexibility. This phenomenon may have helped the demand for PE funds to recover quickly. Similarly, on the supply side, incentives have focused on capital gains tax, especially for international investors. The PE industry in Brazil has for a while been dependent on funds coming from international investors, especially from the United States, and international funds still represent more than 50% of total funds raised from 2011 to 2013. Thus, this geographical repartition of the capital raised for the Brazilian PE industry could account for the focus of tax incentives on international investors. As opposed to France, one could also conclude that the level of 1-year interest rate played its regular role in Brazil. Indeed, this determinant with a supposed positive impact on investments, and negative on funds raised, more or less followed the trend in GDP. Therefore, the demand for PE funds is expected to have suffered more than the supply during down turns, and vice versa. As aforementioned, investments underwent greater variations than supply throughout the period, which could be the consequence of the combined influence of GDP and 1-year interest rate levels.

Furthermore, Brazil is still a country relatively unfavorable to entrepreneurship – low levels of patent applications per resident, cost & time of starting a business and paying taxes are still elevated, and only few of the country’s SMEs have resolved to turn to PE/VC as a source of financing. However, improvements have been made regarding the development of capital markets and the number of IPOs, facilitation to start a business, or to pay for taxes. Thus, the development of the capital market and the surge in IPOs right before the crisis (64 in 2007) can explain the general higher level of activity on the PE market and the ease to go back to pre-crisis levels more quickly. Similarly, the ease of starting a business significantly improved since 2010 and could account for the surge in PE investments from 2009 to 2010 and their steady growth afterwards.

Technological opportunities, as viewed through the spectrum of business R&D, remained present in spite of the crisis. Indeed, the proportion of firms dedicating time and money to R&D increased during the crisis years, and we expect this phenomenon to have played a positive role on both the supply and the demand for PE funds, easing the return to regular pre-crisis levels. However, the proportion of enrollment in higher education is still limiting PE activity to establish itself at higher structural levels.

The institutional framework, similarly to France, seems to play a more important role on the structural dimensions of the PE market in Brazil, rather than on its yearly evolution. As aforementioned, tax incentives have been implemented for investments made through both FIPs and FMIEEs. From 2008 to 2009, we noticed a net increase in the use of these types of fund structures, especially FIPs that went from representing 35% of the total of vehicles used to invest in PE to over 42%. Meanwhile, the amount of capital committed through these types of funds decreased. However, given the lack of data prior to 2008 and following 2009, no real trend can emerge in relation to the use of tax incentive types of funds.

Additionally, Brazil is still a lot behind on resolving insolvency, despite the improvements introduced by the 2005 reform. It could however explain part of the surge in PE investments between 2006 and 2007, which tripled over one year. Perceived corruption as well as the quality of the accounting standards have improved over the 2006-2013 period, which could help sustain the higher structural level of PE activity attained at the end of the period.

	Determinant	Facts and Figures	Conclusions
Economic conditions	Ability of private pension funds to engage in PE/VC financing	• Private pension funds can invest up to 60% of their assets under management in variable income instruments • Further opening of the market by allowing closed funds to invest up to 10% reserves in PE funds	• Flexible legislation regarding private pension funds intervention in the PE market • Improvements can be responsible for higher dynamism
	Capital gains tax rate	• Set at 15% during studied period • Some exemptions for certain types of vehicles	• Relatively low level • Exemptions mostly for international investors > capital raised internationally
	Exit opportunities through IPOs	• Inexistent until 2004 • Trade sales still represent 32% of all divestments • Still underdeveloped financial market	• IPOs increasingly represent an exit opportunities for PE investments in Brazil • Can explain structurally lower level of PE activity
	SMEs' growth rate	• 250 fastest growing SMEs were growing at a 36% pace • PE only used by 4% of these SMEs	
	EDBI ranking	• Brazil ranked 121st on the ease of starting a business and 160th on the ease of paying taxes in 2013 • Improvements made on both dimensions of the indicator	• Still very costly and time-consuming to start a business • Many improvements stimulating demand for PE funds
Institutional framework	Laws on PE funds formation	• Funds must be approved and regulated by the CVM • 2 main types of structures available for PE fund raising and investment, subject to specific regulation • New self-regulation code	• Historically bureaucratic procedure • Reforms aiming at increasing the supply for PE capital through funds formation
	Tax treatment of PE funds and their investors	• Complex and mutli-layered corporate tax rate • Progressive implementation of tax exemptions	• Less flexible tax treatment of PE funds compared to France, but easing phenomenon
	Protection of minority shareholders' rights in invested companies, and of investors in private equity funds	• Relationship between private equity funds and their investors is generally governed by the fund's regulations, called "regulamento" • Brazil ranks 26th in terms of minority shareholders' protection on the GCI, and 80th on the EDBI	• Brazil appears to fare better than France on the GCI and equivalent on the EDBI • Relatively protective system for minority shareholders that should not impede the development of supply and demand for PE funds
	Protection of intellectual property	• Ranked 80th on the GCI	• Very poor standards regarding protection of intellectual property, most likely negatively impacting the level of PE activity

	Bankruptcy regulation	• Major bankruptcy reform in 2005 • However, in 2013, Brazil was still ranked 136th in the EDBI ranking in terms of resolving insolvency	• Brazil is still lagging behind in terms of bankruptcy regulation, negatively impacting both the supply and demand for PE funds
	Corporate governance requirements	• New special listings on BOVESPA, with Novo Mercado being the most significant one • Code of Best Practices and CVM Guidelines	
	Strength of the judicial system	• Judicial independence ranked 65th, efficiency of legal framework in settling disputes ranked 101sh, and efficiency of legal framework in challenging regulations ranked 68th in GCI	• Contracts are usually upheld, but cases move very slowly when they are not • Very dissuasive to engage into judicial procedures impeding the supply for PE funds
	Quality of the accounting standards	• France ranked 31st on the GCI regarding the strength of the auditing and reporting standards, and arrived 44th in terms of efficacy of corporate boards • Dynamic generated by the creation of Novo Mercado	• Accounting standards quality favorable to the development of PE activity

Table 3 – Summary of qualitative determinants for the Brazilian PE sector (Prepared by the author)

4.3. Are France and Brazil comparable?

The last part of our analysis will revolve around an attempt to evaluate the extent to which France and Brazil compare while looking at the evolution of the private equity sector in both countries throughout the 2006-2013 period. Have the supply and the demand for PE funds followed the same trends in both countries? Do the same determinants appear relevant / irrelevant to explain these evolutions? Would some other variables, not present yet in the literature, be better suited to explain some of the differences in dynamics between the two countries? These are some of the questions this analysis will try to answer.

4.3.1. Comparing the evolution of both private equity sectors during the 2006-2013 period

When looking at the overall evolution of both the supply and demand for PE funds in the two countries, the global trend is similar in France and in Brazil. Indeed, whether for France in Europe, or for Brazil in Latin America, the worldwide financial crisis impacted private equity activity. Thus, both the supply and demand for PE funds decreased in France and Brazil during the crisis years – the largest drops being concentrated in 2008 and 2009 – and rose back again until the end of the period. In the two countries, a slight downturn was however noticed in 2013.

Despite this overall similar trend, the private equity sectors in both countries didn’t react in the exact same manner. As aforementioned in the previous individual country analysis, the Brazilian private equity market recovered much faster than the French one, and went back to pre-crisis activity levels much sooner. Similarly, from 2007 to 2012, the level of capital raised for the French PE market was inferior to the amount of investments made, whereas Brazil was experiencing the exact opposite dynamic. However, the trend reversed in both countries in 2013 – capital raised exceeded the level of investments, and vice versa on the Brazilian PE market. As for divestments, they were very volatile and fluctuated a lot in both countries, with no clear trend, and remained at a higher level in France throughout the analyzed period.

At the beginning of our period, the global level of private equity activity in Brazil was at a significantly inferior level than in France, with $5.3 bn in funds raised (compared to $13.9 bn in France) and only $1.3 bn in investments (versus $13.7 bn in France). However, by the end of the period, both the supply and demand for PE funds in Brazil approximated the levels of their French counterparts: $11 bn of capital raised in France and $7.6 bn in Brazil, and $8.8 bn in PE investments in France versus $7.9 bn in Brazil. Thus, in just a few years, and despite the economic turmoil, Brazil managed to bridge a sizeable gap separating the size of the French PE sector from its own. Consequently, the private equity market in France appeared to have suffered from the financial crisis in a larger extent than in Brazil.

4.3.2. Comparing the relevancy of the determinants taken from the literature when applied to both France and Brazil

While pooling the evolution of the PE sector in both countries, as well as the analysis of the potential influence of the determinants that had been identified in the literature, it appears that in Brazil, as well as in France, macroeconomic determinants are the ones that seem to have the greatest influence on the supply and demand for PE funds in both countries. More specifically, GDP and GDP growth seem to account for most of the variations. In both countries, it is confirmed that they positively influence private equity, in the sense that if this determinant increases, both the supply and demand for PE funds increase as well, and vice versa. However, it seems that GDP impacted funds raised and investments in the two countries in different magnitude. Indeed, the variations were greater regarding the supply for PE funds in France, whereas in Brazil, investments were more volatile. Thus, that can lead to think that other of the analyzed determinants might have mitigated the impact of GDP differently in both countries, and in various ways.

For instance, the level of 1-year interest rate might not be a stranger to this phenomenon. Indeed, it is an interesting determinant to study, as it is one of the rare ones that supposedly have an opposite impact on the supply – negative – and demand –positive – for PE funds. In both Brazil and France, the evolution of the level of 1-year interest rate more or less closely followed the trend in GDP. Therefore, the 1-year interest rate should have accentuated the downward and upward trends caused by GDP on the demand for PE – as they both influence investments in the same direction – and should have mitigated these same trends in the case of the supply of PE funds. If this phenomenon can be observed in Brazil, where PE investments were the most volatile during the studied period, it is however not the case in France. Thus, one can conclude that the level of 1-year interest is a macroeconomic determinant that will be more relevant to explain the level of PE activity in Brazil than in France.

On the other hand, in France, tax matters might be of a greater importance than in Brazil. Indeed, it is the only EDBI variable that underwent subsequent improvements in France following the crisis, with a reduced number of payments per year from 19 to 7. Such a change did not happen in Brazil. However, the country engaged in more significant improvements of its entrepreneurial variables, greatly easing the procedure for firms to start a business at the heart of the crisis – which can account for the higher dynamism in investments following the crisis years – and developing its capital market allowing for more exits through IPOs. Technological opportunities have evolved positively throughout the crisis in Brazil while they remained stable in France. Thus, they could account for the faster recovery of the market in Brazil, although they are still present at a much higher level in France and could explain the higher structural level of PE activity.

For both countries, it can also be perceived that the short-term evolution of the supply and the demand for PE funds is mostly affected by economic determinants rather than by the institutional framework, which plays a more significant role on PE activity in the longer run. Indeed, France seems to benefit from more consolidated institutions than in Brazil, which can account for the much higher level of private equity in the country at the beginning of the period in comparison to its Brazilian counterpart. However, Brazil implemented a good amount of reforms to improve its institutional framework. The country totally reshaped its bankruptcy law in 2005, which can have partly accounted for the surge in pre-crisis PE investments in 2006 and 2007, as well as for a quicker return to normal post-crisis levels of PE activity. Intellectual property protection and perceived corruption, although remaining Brazil's weak spots, have also steadily improved throughout the period. France enhanced its bankruptcy process, as well as the quality of its accounting standards but to a lesser extent than the changes made in Brazil. Therefore, these clear improvements in the Brazilian institutional framework, even though still weaker than the French one, and the lack of reforms implemented in France can in part explain that, despite a slowing GDP growth in Brazil, the level of private equity in the country almost caught up with the one in France.

Thus, all of the other identified determinants seem to play the role expected from them on the supply and demand for PE funds in both countries. Depending on the country, they will be more or less relevant to account for variations in PE supply and demand with regards to other determinants dominating. In France as well as in Brazil, the economic determinants seem to impact the short-term level of PE activity, while the institutional framework's impact can be felt more in the longer run.

4.3.2. Broadening the analysis: the potential influence of elements external to the literature

Even though the available literature on the determinants of private equity activity allowed us to build a comprehensive and extensive framework in order to conduct our comparative analysis of France and Brazil, this list of determinants might not be exhaustive. Indeed, many reports have analyzed the private equity sectors in both countries, and have come up with elements whose influence – although not academically proven yet – might have impacted the level of supply and demand for PE funds in Brazil and in France. This section will provide an overview of some of the dynamics that might also explained part of the fluctuations on both PE sectors during the 2006-2013 period.

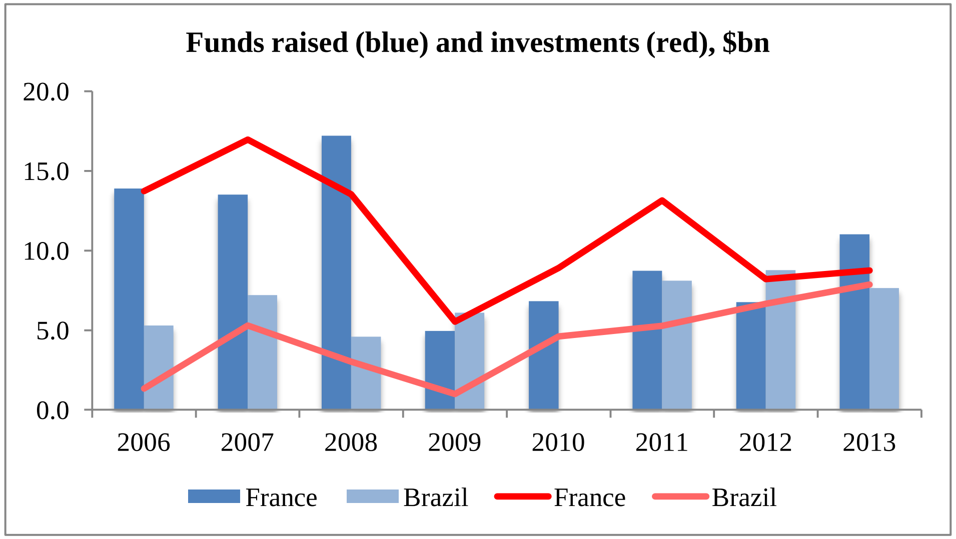
One of the elements that could explain the differences in the levels of private equity activity between France and Brazil is the penetration rate of PE activity in the country, namely the ratio of the amount of PE investments compared to GDP. Indeed, in 2007, the penetration rate of PE investments in France already represented 0.64% of GDP, a relatively high amount to which France has not managed to resume to following the crisis. This elevated penetration rate reflects an already mature market, which could explain why France's PE market suffered from the financial crisis in a greater magnitude than Brazil. In 2009, the penetration rate in France dropped to 0.17% but was still way higher than Brazil's 0.06% GDP. After 2009, the penetration rate grew back in both countries, to reach 0.31% in France in 2013 (with a peak at 0.48% in 2011) and only 0.18% in Brazil. The fact that the penetration rate for PE investments in Brazil remained relatively low suggests that the market as yet to reach a certain level of maturity and still holds a large potential for growth before it becomes crowded and investments lose their profitability. Thus, in addition to our framework's determinants, this phenomenon might explain the greater dynamism of the PE market in Brazil throughout the studied period.

In addition to this observation, the nature of the sectors on which investments focused might also have played a part. Indeed, in 2013, PE investments in Brazil were still concentrated on Oil & Gas (38% of the total amount invested), Logistics & Transportation (12%) and Energy (9%). Thus, only 3 sectors of the economy made up for almost 60% of all PE investments in the country. Furthermore, these sectors are the ones at the origin of Brazil's comparative advantage and have reached a high level of concentration. However, to reach a higher level of maturity, Brazil's PE market has started tapping into its potential sources of competitive advantage, where the market is still fragmented, such as retail (22% of investments in 2011), education, health (13% of investments in 2011) and infrastructure (12% of total investments in 2011). This phenomenon might have influenced the dynamism of the Brazilian market and still allows for additional growth opportunities. On the other hand, French PE investors focused on Industry & Chemistry, Consumer Goods, and Services and Transports in 2013. These sectors are already part of the country's competitive advantage, and Medical & Biotechnologies as well as Construction were other sectors highly invested in the same year. Thus, this situation reflects a more mature market where growth opportunities have become more rare and might have accounted for the French PE market's slow recovery following the financial crisis.

Finally, the emergence of a powerful and growing middle-class is one of the main phenomena that have affected the Brazilian macroeconomic and demographic environments in the past few years. Indeed, according to the Brazilian Ministry of Finance, the proportion of Brazilian nationals considered as middle-class represented 38% of the total population in 2003, while 55% of the population was still considered as low-income. In spite of the financial crisis, 29 million of low-income people climbed the social ladder between 2003 and 2009, and inflated the middle-class up to 51% of the total population. In 2014, the middle-class was forecasted to reach 57%, while the high-income population would also grow to represent 16% of Brazilians, only leaving 28% of their compatriots at the bottom of the pyramid. This evolution represents an untapped potential of future consumers likely to foster the creation of new businesses, representing tremendous opportunities for the PE market in the country through various channels. Indeed, a higher-income population is likely to get a chance to attain higher levels of education, creating technological opportunities and influencing the level of entrepreneurship, playing a positive role on both the supply and demand for PE funds. On the contrary, the concept of the middle class emerged in France during the 1960s and is today considered by many specialists as in decline. However, contrary to Brazil where social classes are clearly delimitated, there is no official definition of the middle-class in France. According to the Observatoire des Inégalités, the middle-class would regroup the 50% of the French population whose revenues are in between the wealthiest 20% and the poorest 30%. But unlike Brazil, the potential of this middle-class has already been exploited and is less able to instill a real dynamic for the supply and demand for private equity funds.

Thus, it appears relevant to contemplate the implementation of an academic research that would status on the adequacy of the elements exposed above to be considered as determinants of the supply and the demand for PE funds in a given country, and more specifically in emerging markets.

	France	Brazil
Overall trend in supply and demand for PE funds	• Decreasing throughout the period • Largest drop in 2008-2009 • Level of capital raised was inferior to the level of investments at the beginning of the period, and reversed by the end	• Decreasing throughout the period • Largest drop in 2008-2009 • Level of investments was inferior to the level of funds raised at the beginning of the period, and reversed by the end • Faster recovery of the global level of PE, catching up with the French level
Most influential determinants of PE activity	• Mostly influenced by macroeconomic determinants, and specifically GDP and its growth rate • Particular relevance of tax matters • Longer term influence of elements from the institutional environment	• Mostly influenced by macroeconomic determinants, and specifically GDP and its growth rate • Particular relevance of the level of interest rate • Longer term influence of elements from the institutional environment
Other potential determinants	• Higher PE activity penetration relative to GDP • Investments in higher technology and more mature sectors • Potential of the middle-class already exploited	• Potential for increased PE activity penetration • Investments still concentrated in specific sectors linked to Brazil's comparative advantage • Emergence of a new middle-class



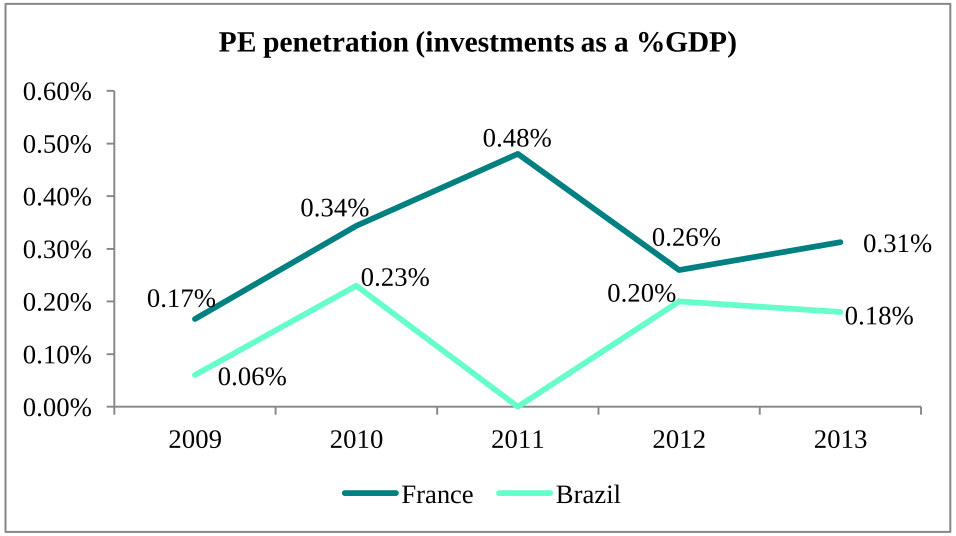


Table 4 – Conclusive Summary (Prepared by the author)

5. CONCLUSION

5.1. General conclusions

The aim of this research was to rule on whether the determinants identified in the literature as influencing the level of private equity in a given country were relevant when applying them to France and Brazil during the 2006-2013 period. Through the use of a qualitative framework, the goal was also to observe if these determinants were equally accurate for the two countries, and if the evolution of the French and Brazilian private equity sectors were therefore comparable. We conclude that over the studied period, the macroeconomic determinants are the ones that appeared to have the most cyclical influence on the supply and demand for PE funds in both countries – especially GDP and its growth rate – while the impact of the institutional framework can be perceived in the longer run.

One first observation is that the determinants taken from our framework appear to have the expected influence on the supply and demand for PE funds, and this applies to both countries. Indeed, when a determinant was supposed to have a positive or negative influence on the supply and / or the demand for PE funds, this phenomenon could be observed for both countries. The only noticeable exception concerned the level of 1-year interest rate. Contrary to Brazil, it did not appear to play its expected role on the demand and supply of PE funds in France or at least, its influence was so negligible compared to others that it could not be adequately perceived. This phenomenon could be explained by the fact that France is no longer dependent on interest rate fluctuations while Brazil is still a country where interest rates remain at a high level and are an essential tool in the battle against inflation. On the other hand, tax matters seem to have a greater importance in France, as the country implemented a major reform following the crisis years in order to, we suppose, ease the launching of start-ups and the return to higher levels of investments.

Furthermore, France appeared to have a stronger institutional framework than Brazil, but the latter benefited from more favorable economic conditions. This weaker institutional environment in Brazil could explain the lower level of PE activity in the country at the beginning of our studied period. Indeed, as aforementioned, institutional determinants seem to play a stronger role in driving the structural level of PE activity in a given country. However, from 2006 to 2013, the fact that Brazil resisted economically better than France to the financial crisis helped the country reach a level of supply and demand for PE funds closer to the level of its French counterpart. Thus, this observation concurs with the idea that economic determinants of PE activity would have more influence on its short-term level, and institutional determinants on its long-term one. Indeed, France might have maintained a higher level of both supply and demand for PE funds throughout the period thanks to its stronger institutional framework, but it lost ground to Brazil given its weaker economic resistance to the financial crisis. Furthermore, Brazil implemented greater institutional reforms throughout the 2006-2013 period. This could suggest that the structural level of funds raised and investments made in PE in the country could soon average the French structural level.

The author also judged useful to broaden the field of study to potential factors influencing the level of supply and demand for PE funds and that have yet to be analyzed in an academic research. Indeed, many economic and specialized reports on private equity suggest that Brazil benefits from specific conditions favoring the development of PE activity in the country due to its status as an emerging economy. Thus, it appears that the level of private equity penetration in the country is still twice inferior as the one in France, making space for a stronger growth potential. Similarly, the country still mainly focuses its investments on a few number of sectors of the economy – mostly the ones making up for its comparative advantage – and still has an untapped potential of fragmented sectors with a diversity of firms eligible to PE investments. What’s more, the emergence of a strong middle class with an increasing level of purchasing power inflates the consumer base and generates tremendous opportunities for private equity investments. Thus, these elements would deserve a more in-depth analysis and could be incorporated in our framework if believed relevant.

Finally, one of the main contributions made by this thesis to the academic body of literature is due to its comparative nature. Indeed, as aforementioned in the introduction of this paper, the use of a comparative structure not only allows us to gain more knowledge on the private equity sector in Brazil and in France, but also on private equity as a whole. Most of the time, what makes the observation of certain data relevant is their relativity. Interpreting data series only makes sense when a landmark to compare them to is available, while they remain very dry when looked at unilaterally.

5.2. Challenges and limitations of the study

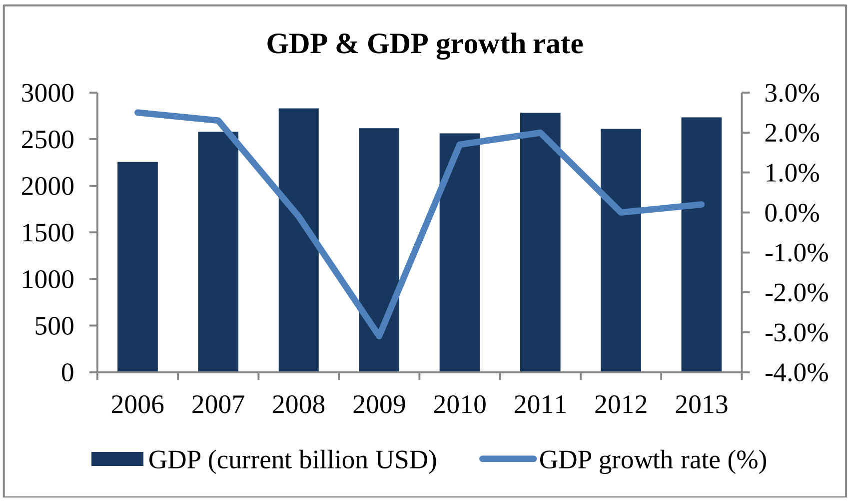
The analysis and the results of this study need however to be considered with caution and a critical eye given the challenges faced through its realization. Indeed, one of the first hurdles that were faced by the author was the sometimes low availability of data, especially concerning Brazil. Thus, some data series are made up from the different sources that were available from free online documents from international organizations, and could therefore differ in the way they were constructed and calculated. The author tried to gather the most relevant and accurate data available in order to fully conduct the research, but the reader should remember this when looking at the results. Additionally, the choice of a qualitative method to run the analysis only allows for observations of patterns, trends and evolutions. It is in no way conclusive on correlations nor on causalities. Therefore, even though the analysis of the data collected enables certain suppositions, it does not allow for clear and settled affirmations. The lack of any kind of quantitative method of analysis thus prevents from clearly differentiating which ones of the determinants have the largest impact on the level of supply and demand for private equity funds. This research can only provides first intuitions that would need to be confirmed by further analysis through a different methodology. Finally, the fact that this study was conducted over the 2006-2013 period allows to analyze the impact of the crisis on the private equity sector in both France and Brazil. However, the magnitude of this macroeconomic choc might prevent the observation of other phenomena related to other determinants and that might have been more visible at a different time.

5.3. Implications for further research

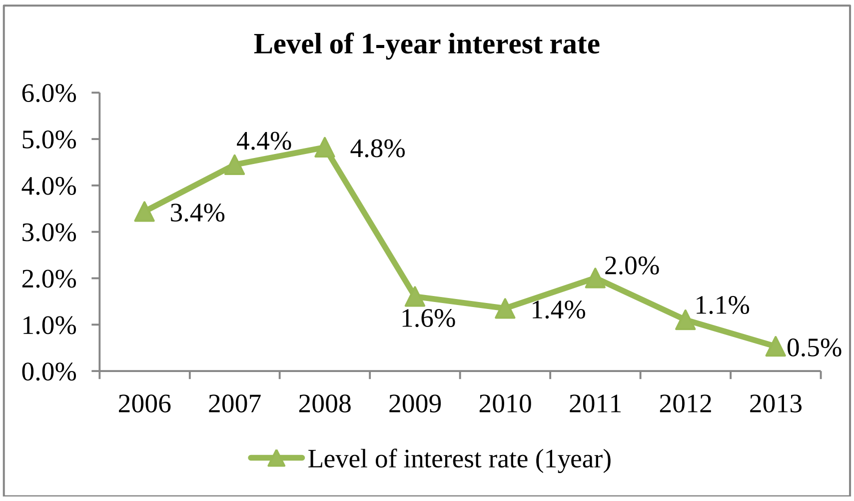
The flaws and weaknesses inherent to this thesis lead the way for further academic research. As stated in the methodology section, this qualitative analysis could only be considered as the first part of a mixed-method research, which would logically be followed by a quantitative study that would require more technical skills. This would add a conclusive dimension to our first observations and intuitions. In a few years, the same research could as well be conducted over a period starting after 2013 in order to get rid of the impact of the financial crisis and obtain a finer observation of the impact of non-macroeconomic determinants on the level of private equity activity in both France and Brazil. Additionally, the framework would need to be reviewed to incorporate new elements. Indeed, these determinants are not set in stone – some could become irrelevant as time passes by, while new ones could appear and would need to be considered in a further research. Finally, the study could be used by actors of the private equity sectors in the two researched countries, as well as by the institutions of those countries, to help them make more educated decisions and implement the necessary reforms to make private equity flourish even further.

6. APPENDICES

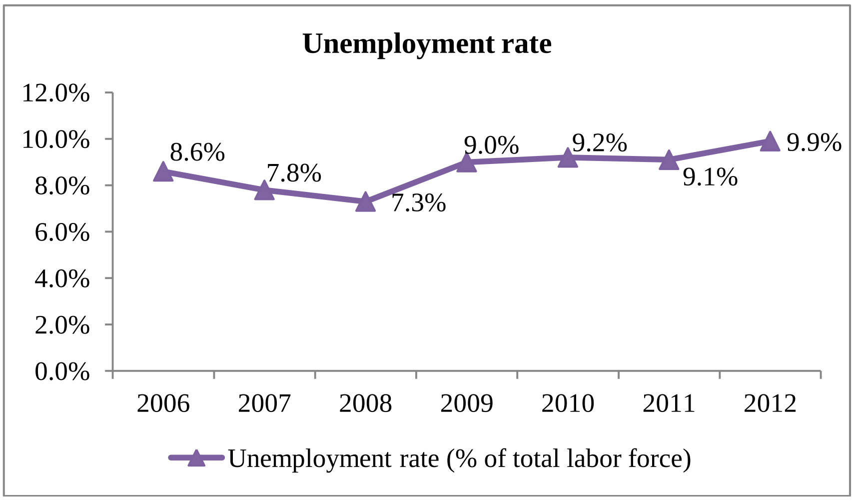
Appendix 1 – Quantitative indicators of economic conditions and institutional framework, from 2006 to 2013, France (Prepared by the author)



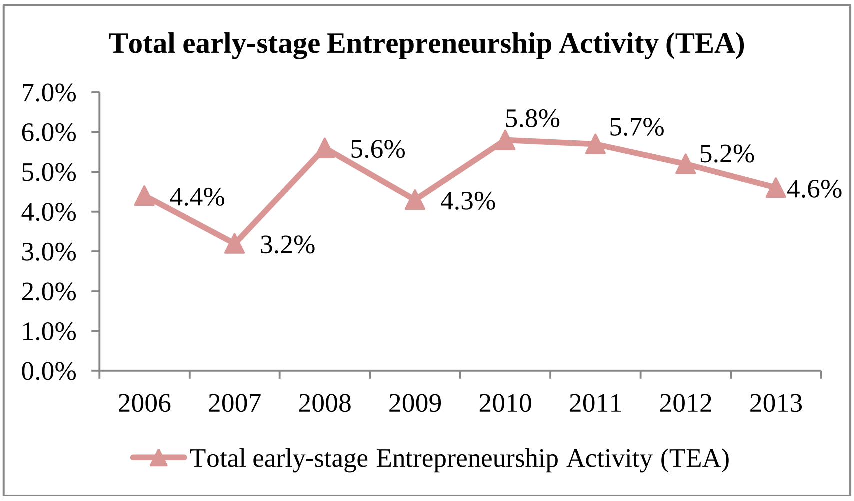
GDP and GDP growth rate in France, from 2006-2013 (The World Bank)



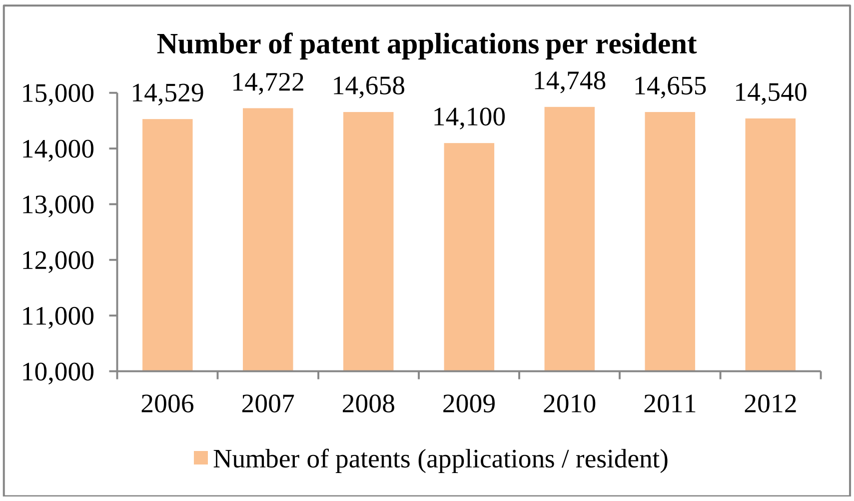
Level of 1-year interest rate in France, from 2006-2013 (Euribor)



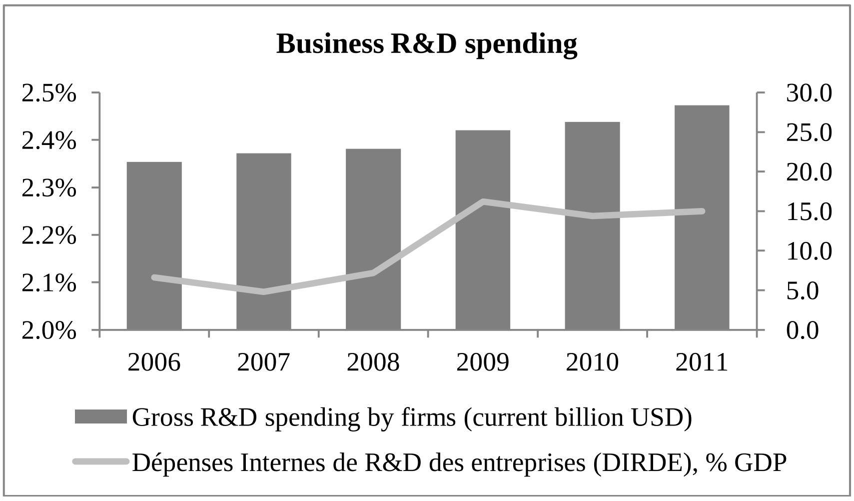
Unemployment rate in France, from 2006-2012 (The World Bank)



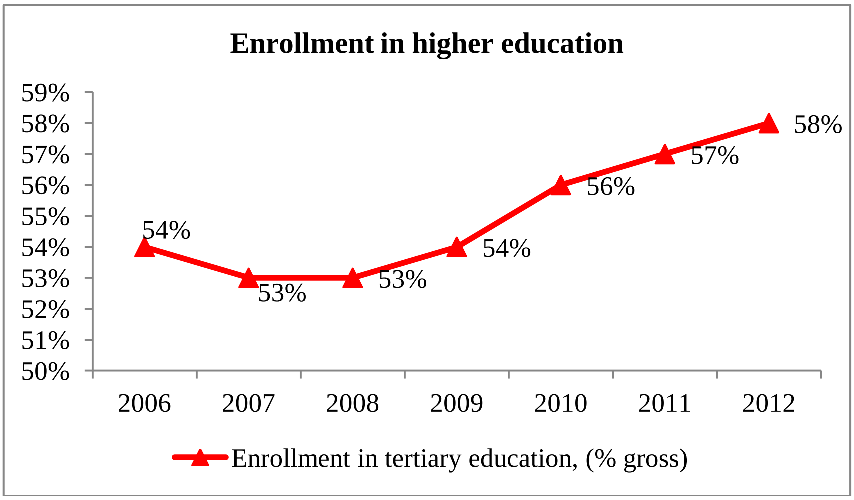
Total early-stage Entrepreneurship Activity in France, from 2006-2013 (Global Entrepreneurship Monitor)



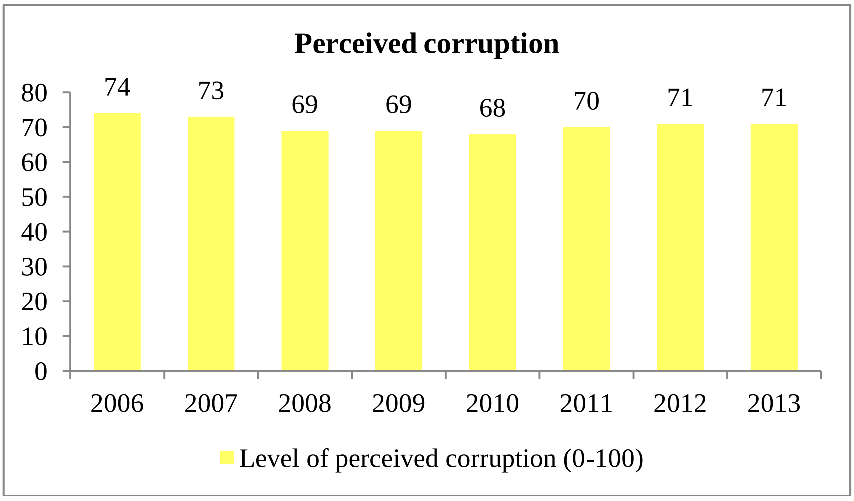
Number of patent applications per resident in France, 2006-2012 (The World Bank)



Business R&D spending by French firms, 2006-2011 (INSEE)

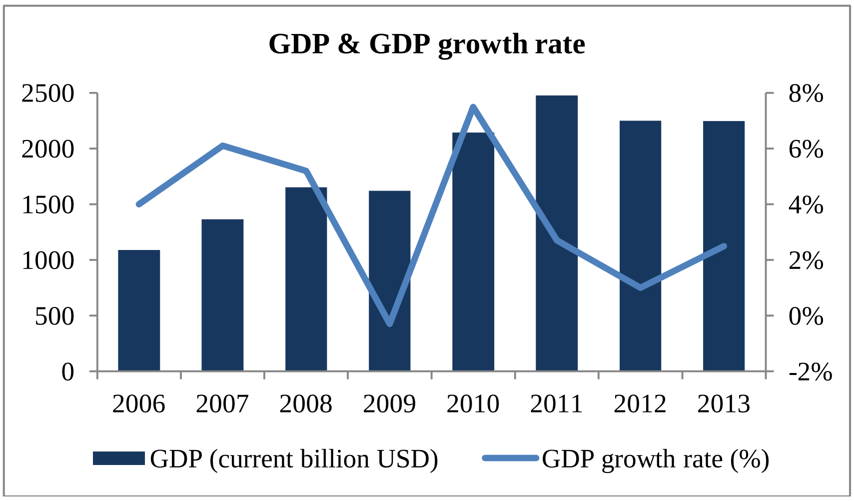


Gross enrollment in tertiary education in France, 2006-2012 (The World Bank)

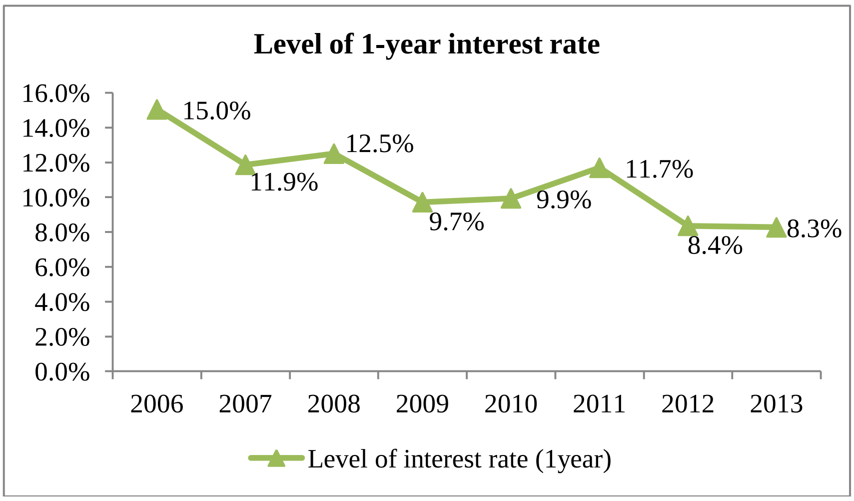


Level of perceived corruption in France, 2006-2013 (Transparency International)

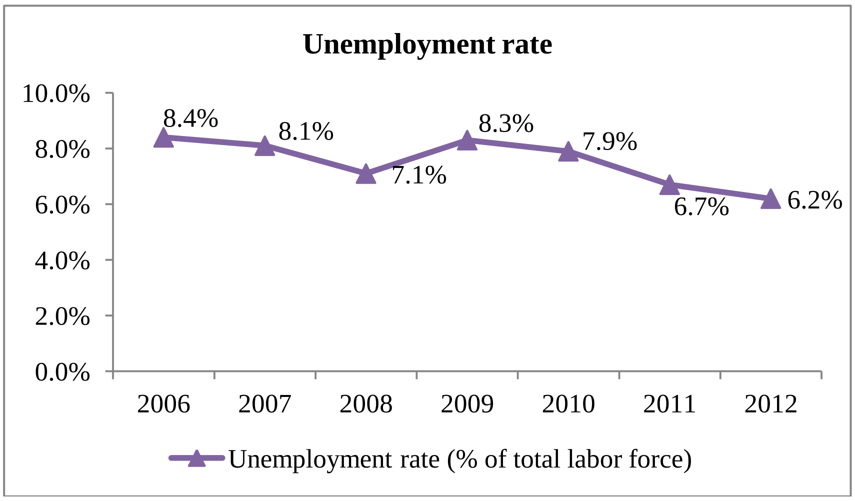
Appendix 2 – Quantitative indicators of economic conditions and institutional framework, from 2006 to 2013, Brazil (Prepared by the author)



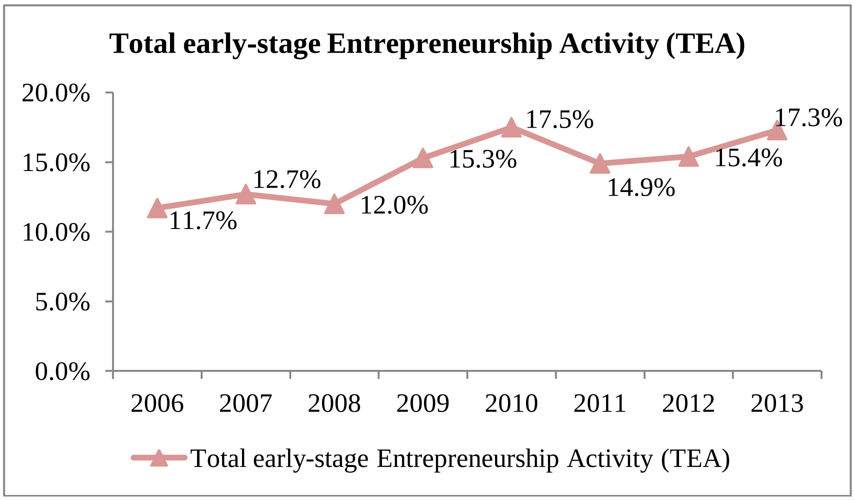
GDP and GDP growth rate in Brazil, from 2006-2013 (The World Bank)



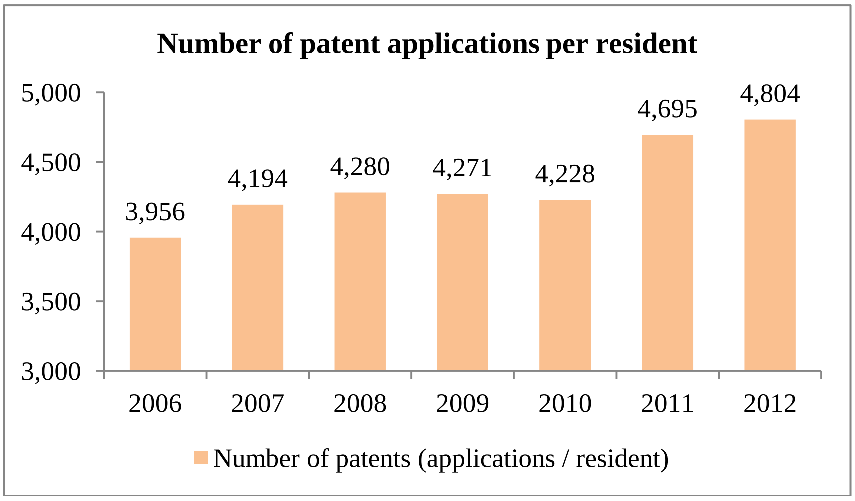
Level of 1-year interest rate in Brazil, from 2006-2013 (Banco Central do Brasil)



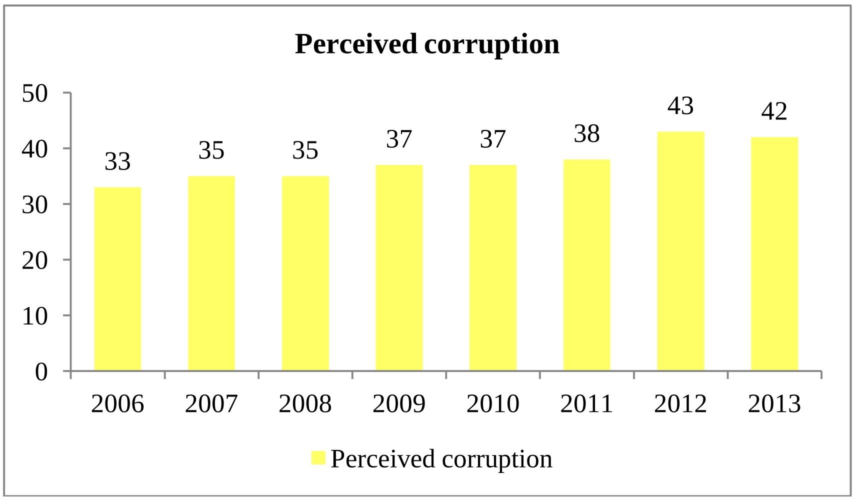
Unemployment rate in Brazil, from 2006-2012 (OECD Stats)



Total early-stage Entrepreneurship Activity in Brazil, from 2006-2013 (Global Entrepreneurship Monitor)



Number of patent applications per resident in Brazil, 2006-2012 (The World Bank)



Level of perceived corruption in Brazil, 2006-2013 (Transparency International)

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