Private Equity and Venture Capital: An Important Public Policy towards Innovation and Entrepreneurship in Brazil

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Abstract
It is well documented the positive impact of the Private Equity and Venture Capital (“PE/VC”) industry on the creation and development of highly successful innovative companies in a few countries, mainly in the United States. PE/VC firms not only provide capital to startups and SMEs (small and medium enterprises) that usually have financing gap, especially in emerging markets, but also strategic resources that enable them to commercialize innovation. As consequence, Government incentive and nurture of local PE/VC industries would be expected in emerging economies due to innovation’s importance to economic growth.

This paper aims to identify if the Brazilian Government has supported local PE/VC industry throughout the years in order to foster favorable conditions to creating and developing successful innovative businesses. It also analyzes Brazil’s main public policies towards PE/VC and if they encompass all the three stages of the PE/VC cycle – fundraising, investing and exiting.

I conducted an empirical research which collected primary data from a sample of 127 PE/VC firms (90% of the population) operating in Brazil as of June, 2008. All firms answered a web-based questionnaire that supplied quantitative data regarding investment vehicles, portfolio companies, investments and exits. I compared the data obtained from the survey with the main local Governmental PE/VC support programs.

First, I confirmed the hypothesis that the Brazilian Government has been using the PE/VC industry as a public policy towards entrepreneurship and innovation. Second, I identified that although PE/VC public policies in Brazil are mostly concentrated in fundraising phase, they have been able to positively impact the whole cycle. Third, it became clear that the Brazilian Government became more concerned about Seed and VC Early stages due to their importance to the entire PE/VC value chain. As consequence, I conclude that those public policies have been very important to build an enormously dynamic and strong local PE/VC industry, whose committed capital grew 50% per year between 2005 and 2008 to achieve US$27 billion, which invested US$ 11 billion, which employs 1,400 professionals (75% with post-graduate degrees) and maintains 482 portfolio companies, mostly SMEs. In addition, PE/VC-backed companies represented one third of the IPOs that occurred in Brazil between 2004 and 2008 (approximately US$15 billion).
1. Introduction
Throughout the years, innovation has been a key factor in world’s economic growth due to the increase in companies’ productivity (Schumpeter, 1934) and it has affected all the five forces that govern competition in any industry (Porter, 1979). In the United States, startups and SMEs (small and medium enterprises) creation has leveraged and empowered its economic development and competitiveness (Gompers 1994; Porter 1990).

The ability to combine resources (human, technology, capital, information, natural, etc) to innovate is a very important competence that is needed in order to gain competitive advantage. However, not all the companies have the appropriate resources needed to outperform the market, especially startups which usually don’t have proper access to the right resources (including capital) to commercialize innovation. According to Andreassi and Siqueira (2006), lack of financing is one of startups’ main mortality reasons in Brazil compared to developed countries.

The Private Equity and Venture Capital (“PE/VC”) industry presents a very interesting alternative to address this issue, especially to companies without historical financial statements (i.e. startups) or companies without tangibles assets that could be used as bank loans’ guarantees (Sahlman, 1990). Not to mention that PE/VC firms provide not only capital but also assist the entrepreneurs on the decision making process in order to build successful businesses (Gorman and Sahlman, 1989). According to IHS Global Insight (2009), PE/VC-backed companies generated around USD 3 trillion in revenue (21% of the GDP) and employed over 12 million people in the United States in 2008. EVCA (2002) shows the PE/VC positive economic impact of PE/VC on companies’ creation and growth.

The business environment for PE/VC in Brazil has evolved in a consistent fashion over the last few years. According to EIU and LAVCA (2008) that qualifies the PE/VC environment in the region by identifying the positive and negative aspects for generating business within the industry in each country, Brazil jumped from 59 to 75 points in the ranking out of a possible 100 in only three years (2005 to 2008). More important than the number itself it is the development and consolidation of the PE/VC business environment in Brazil over the period in question.

2. Literature Review
The main challenge of any company is to achieve and sustain competitive advantage by developing dynamic capabilities that will modify or leverage its core competences based on the right resources. The ability to combine these appropriate resources (human, technology, capital, information, natural, etc) is a very important competence to innovate and to gain competitive advantage. (Porter 1979; Barney 1986; Prahalad and Hamel 1989; Hamel and Prahalad 1993; Teece and Pisano 1994; Mahoney 1995; Teece et al 1997; Bartlett and Ghoshal 2002).

Christensen and Overdorf (2000) identify three factors that affect companies’ innovation: resources, processes and values. Hardagon and Sutton (2000) states that innovative companies hire people with complementary skills and backgrounds, and that innovation is easily fostered if the right incentives and rewards are given to people. Through PE/VC it is possible to boost companies’ growth compared to their peers (Hellman and Puri 2000; Engel 2002) which allow them to become more profitable (Sahlman 1990) throughout innovations.
According to Gompers (1994), Gompers and Lerner (2002) and Metrick (2007), PE/VC can provide capital to finance innovation, especially high-risk, potentially high-reward projects. Bygrave and Timmons (1992) show new revolutionary and innovative industries in the Human History that were backed by PE/VC. As consequence, PE/VC investments can benefit startups and SMEs that normally have difficulty accessing financing, especially in emerging markets (Premus 1985; Gompers and Lerner 2001a; Gompers and Lerner 2001b; Hall 2002; Smith and Smith 2002; Leeds 2003).

Notwithstanding the importance of the money provided by the PE/VC firms to foster the blossom of high innovative startups, the invested companies also benefit from a whole package of strategic resources that help build successful enterprises (Gorman and Sahlman 1989; Dotzler 2001; Gompers and Lerner 2002).

Premus (1985) demonstrates venture capital and technological innovation growths are correlated and Kortum and Lerner (2001) show that venture capital-backed companies are involved in important innovations based on patent amounts in the US, while Bowonder and Mani (2002) show the impact of venture capital on financing innovation in India, and Tykova (2000) demonstrates a positive relation between venture capital investments and patents creation in Germany. On the other hand, Hirukawa and Ueda (2008) establish that the causality relation between venture capital investments and innovation are far more complicated that showed by several studies, and Lerner (2002) also states that the venture capital impact in innovation is far from being uniform.

Nevertheless, according to Keuschnigg (2003), the policy makers have been fostering favorable conditions throughout venture capital to creating business. For example, Hirukawa and Ueda (2008) highlight the Yozma program in Israel and the SBIC (Small Business Investment Company) in the US, and Lerner (2002) agrees that Government is highly interested on fostering innovation and support the PE/VC activity is a natural way to accomplish that goal. Gompers (1994) concludes that “promoting an efficient venture capital sector should be the goal of any administration”.

3. Methodology

I conducted an empirical research which collected primary data from a sample of 127 PE/VC firms (90% of the population) operating in Brazil as of June, 2008, independently of whether they have a local presence (office) and/or an investment vehicle already formed and operating. In other words, all PE/VC firms already defined and structured as such, even if they are still in the process of fundraising, were considered members of the Brazilian PE/VC industry. In addition, those PE/VC organizations that informed us that they are no longer operating in the industry, those that are still not actively looking for business in Brazil and/or that don’t consider themselves managers of PE/VC investment vehicles were not considered in the population.

With these conditions and exclusions, the sample was composed of 127 PE/VC firms (90% of the population) that fulfilled all the prerequisites required to be included in the survey. Each one of the 127 PE/VC firms filled out a questionnaire on the web which consisted of questions in five categories:
• General registration data for the PE/VC organizations (ex. name, profile, category, telephone, address, number of professionals, contacts);
• Investment vehicles (ex. name, legal structure, creation date, sector focus, stage and type of investments, size of investment, investor profiles);
• Portfolio companies;
• Investments and exits;
• Fundraising prospects.

All firms answered a questionnaire that supplied quantitative data regarding investment vehicles, portfolio companies, investments and exits. I compared the data obtained from the survey with the main local Government PE/VC support programs, based on the three stages of the PE/VC cycle – fundraising; investing; and exiting – described by Gompers and Lerner (2002).

4. Main Findings

Over the last few years, driven by global liquidity and the strong growth of domestic economic indicators, the Brazilian PE/VC industry has gone through a very significant evolution. The growth of total committed capital has been impressive averaging 53.4% per year since 2004 to reach USD26.65 billion by June 2008, although it still represents only 1.7% of GDP compared to the world average of 3.7% (NEF, 2008).

Figure 1: Evolution of Committed Capital Allocated in Brazil (USD billion)

* Estimated. Reviews the previous number for the Brazilian PE/VC market.
** Estimated. Considers the PE/VC firms that have left the market.
OBS: The committed capital totals exclude those investment vehicles that are fully divested.

Even though the Brazilian public sector’s role structured as a PE/VC firm is not quantitative significant, its participation as investor and creator of industry policy has been very important for the promotion and development of the Brazilian PE/VC industry.

I found a clear evidence of Government support to the Brazilian PE/VC industry which spreads, directly and indirectly, through all the uses and sources’ dimensions: investors,
PE/VC firms, investment vehicles and invested companies. However, the public policies to support PE/VC in Brazil are mostly concentrated in the beginning of the cycle (fundraising). In addition, nowadays the Government is focusing on the industry’s Seed and VC Early stages.

Despite the impressive amount of money of approximately USD15 billion available to invest in the economy, only a small part of the PE/VC capital is supposed to be directed to startups in Brazil due to the higher risk of this segment. To tackle this issue, the Brazilian Government has been increasingly supporting the Seed and VC Early capital stages throughout FINEP and BNDES in addition to other programs that support the rest of the PE/VC value chain.

4.1. Government Agencies’ Role

BNDES – Banco Nacional de Desenvolvimento Econômico e Social (The Brazilian Development Bank) was created in 1952 and its investments in PE/VC are reminiscent of the 1980s when direct investments were prevalent. In the 1990s, it took the first step toward outsourcing investment portfolios. Since then, BNDES has invested in 33 different vehicles, including Private Equity, Venture Capital, PIPE and Mezzanine investments, totaling BRL 1.5 billion in capital commitments (on average 20% of all vehicles), of which approximately BRL 0.6 billion has already been invested.

Recently, BNDES launched a program to support seed capital called CRIATEC, which chose a PE/VC organization to strengthen the industry’s value chain. CRIATEC fund amounts BRL 100 million of committed capital of which 80% from BNDES and 20% from BNB – Banco do Nordeste do Brasil (The Bank of the Brazilian Northeast Region), another State-owned institution, to invest in over 50 startups and small enterprises in the next 4-5 years. As of December 2008, the CRIATEC program has promoted investments in over than 10 startups and small highly innovative companies.

FINEP, created in 1967, is a public company with ties to the MCT – Ministério da Ciência e Tecnologia (Ministry of Science and Technology) whose objective is to promote and finance technological development and innovation in the country. The perception that small and medium sized companies based on innovative technology couldn’t find adequate mechanisms to finance their growth in the traditional credit system, lead FINEP to create Projeto Inovar in March 2000. In this way, FINEP’s support together with help from entities such as BID/FUMIN, CNPq, SEBRAE, PETROS, ANPROTEC, SOFTEX and IEL, filled the gap in financing for technology based companies.

Based on its diagnosis of the PE/VC industry and the national entrepreneurial environment, FINEP launched the program Inovar Semente. It was created in the mold of Programa Inovar but was focused on the beginning of the value chain through entrepreneurial investments in the pre-operational stage, many times while they were still in company incubators and universities. From 2001 to June 2008, FINEP invested in 16 investment vehicles, of which 12 are currently running, 3 are raising funds, and 1 has divested, giving a total of BRL 219.3 million in capital commitments. On total, FINEP has received 137 proposals of which 81 were approved for the due diligence phase and resulted in the selection of 16 investment vehicles (13 under Programa Inovar and 3 under Inovar Semente). FINEP seeks to commit on average 40% of the resources approved for vehicles under Inovar Semente, 20% under Programa Inovar, and 10% under private equity. According to Ramalho and Furtado (2008),
these vehicles have invested in more than 40 companies during this period, 60% with total revenue under BRL 10.5 million per year.

As a further support to the development of the PE/VC industry, FINEP launched Forums FINEP (Venture Forum, Seed Forum, and the FBAC - Fórum Brasil Abertura de Capital) with great success, with the objective of building the innovative entrepreneurial spirit through fund raising for small and medium sized companies, preparing them for the PE/VC organization investment process.

FBAC was aimed at innovative companies with the potential to be listed on the stock market. In four years, five FBACs were held that prepared 21 companies, of which 11 received PE/VC investments, were acquired and/or launched IPOs that totaled BRL 2.6 billion. However, to the degree that the industry reached an adequate level of maturity, it was redirected toward the more initial stages of the value chain by the Seed Forum, created in December 2007 where only companies with at most BRL 2.4 million total revenue were included.

Since their creation, the FINEP Forums have supported a total of 243 innovative high impact companies: 162 in Venture Forum, 21 in the FBAC, and 60 in the Seed Forum. Without a doubt, FINEP’s efforts with Programa Inovar/Inovar Semente together with the FINEP Forums have helped develop an entrepreneurial culture in the Brazilian PE/VC industry over the past few years and nurture a deal flow to the PE/VC industry.

In addition to BNDES and FINEP programs, SEBRAE – Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (Brazilian Micro and Small Business Support Service), since the 90s, and Banco do Brasil, the largest Brazilian and State-owned bank, more recently, have been investing in PE/VC.

4.2. Regulation

The CVM rules were created to deal with the absence of the concept of a limited partnership in the Brazilian legislation. The most important of the CVM rules was number 209 which created FMIEEs – Fundos Mútuos de Investimentos em Empresas Emergentes (Mutual Investment Funds for Emerging Companies) in 1994 and CVM rule 391 which created the FIPs – Fundos de Investimentos em Participações (Investment Funds for Partnerships) in 2003.

The investment vehicles created under the CVM regulation went from 23% in 2004 to 39% of capital commitments by June 30, 2008 and represented 40% of all vehicles. This legal structure currently predominates in the industry, which shows the success of the institutional model created by the CVM in 2003 (CVM 391 – FIPs).

Due to this regulation, the relative participation of pension funds in new fundraising reached 50%, close to the level of 58% reached during the privatization era. With this, pension fund participation corresponds to 27% of the total stock of committed capital as of June 30, 2008, with the domestic pension funds corresponding to the largest portion (24%) at this point.

The volume of capital commitments in Private Equity and Venture Capital by pension funds amounts USD 7.2 billion in Brazil. As of June 2008, there were a total of 396 pension funds operating in Brazil with a total of BRL 451 billion in investments (ABRAPP, 2008), with the
ten largest entities representing 62% of this total. It is estimated that 20 to 30 pension funds possess capital commitments in PE/VC that total BRL 10.6 billion (USD 6.4 billion), the equivalent of an average of 3.0% of their entire investment portfolios and 0.4% of GDP. Approximately 80% of the pension funds that invest in Brazilian PE/VC are domestic in origin and use the CVM legal structure for their investments in PE/VC. In this way, the increase in the relative participation of CVM vehicles in proportion to the total of capital commitments can be, in part, explained by Brazilian pension fund investments, mostly which related to State-owned companies such as PREVI (related to Banco do Brasil), PETROS (Petrobras) and FUNCEF (Caixa Econômica Federal).

4.3. Companies

The great diversity of economic sectors constitutes an important aspect of the business model of the PE/VC industry. The 481 portfolio companies cover 26 industries and more than 40 sub-industries.

Table 1: Portfolio Companies

<table>
<thead>
<tr>
<th>Industries</th>
<th>2004</th>
<th>2008</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Units</td>
<td>%</td>
</tr>
<tr>
<td>IT</td>
<td>92</td>
<td>30%</td>
</tr>
<tr>
<td>Industrial Products and Services</td>
<td>41</td>
<td>13%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>9</td>
<td>3%</td>
</tr>
<tr>
<td>Communication</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Energy</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Agribusiness</td>
<td>9</td>
<td>3%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>10</td>
<td>3%</td>
</tr>
<tr>
<td>Biotech</td>
<td>10</td>
<td>3%</td>
</tr>
<tr>
<td>Retail</td>
<td>21</td>
<td>7%</td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>12</td>
<td>4%</td>
</tr>
<tr>
<td>Medicine</td>
<td>8</td>
<td>3%</td>
</tr>
<tr>
<td>Telecom</td>
<td>28</td>
<td>9%</td>
</tr>
<tr>
<td>Transportation</td>
<td>11</td>
<td>4%</td>
</tr>
<tr>
<td>Logistics</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>1%</td>
</tr>
<tr>
<td>Others</td>
<td>31</td>
<td>10%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>306</td>
<td>100%</td>
</tr>
</tbody>
</table>

The IT and Electronics industry continues to constitute the largest portion of the companies in the PE/VC organizations’ portfolios (22% of the total), though in the last four years it has decreased in terms of its relative participation (it represented 33% in 2004), along with the considerable number of divestitures in this sector from 2005 to June 30, 2008.

A total of 51% of the industry’s portfolio companies are more mature companies, 43% are Private Equity – Expansion and 8% are Private – Later Stage, but there also is a considerable volume of business in Venture Capital (34%) with the greatest emphasis on the Early Stage (17%). This denotes an important concentration on the initial and intermediate stages of entrepreneurial development guaranteeing the consolidation of the links that permit sustained industry growth over the long term.
Figure 2: Portfolio Company Stages (as of June 30, 2008)

OBS: Considers the sample of 462 companies that reported their current stage of development (out of a total of 481 companies).

There is a considerable volume of business in Venture Capital (34%) with the greatest emphasis on the Early Stage (17%), in addition to 43% of Private Equity Expansion, mostly medium size companies. This denotes an important concentration on the initial and intermediate stages of entrepreneurial development guaranteeing the consolidation of the links that permit sustained industry growth over the long term.

4.4. The Impact on the Stock Market

I obtained a sample of 111 exits (85 total and 26 partial) over the period of 2005 to June 2008. Half of these exits were from Private Equity and 31% from Venture Capital. Of the 111 exits (total and partial), values were reported for 104 investments totaling USD2 billion over the period from 2005 and June 2008, of which 1.3% were in Venture Capital, 76.3% in Private Equity, 0.4% Mezzanine and 22% PIPE investments.

Trade sales represented around 1/3 of the total number of exits in the industry over this period, while sales in the stock market represented 50% of the total quantity (whether they were through IPOs and divestitures due to them or sales of PIPEs).

Figure 3: Number of Exits by Type (January 2005 to June 2008)

* Includes IPOs and secondary sales between funds.
OBS: Considers total and partial exits.
IPOs are one of the natural exits for PE/VC investments worldwide; however it didn’t constitute a viable alternative in Brazil during the 1980s and 1990s because of the volatile macroeconomic environment and high interest rates that prevailed in the country during this period. This is why few companies looked to the stock market for long term financing in Brazil, and consequently, the IPO market passed through a “nuclear winter” period.

Nevertheless, with the improvement in the macroeconomic scenario and the increase in global liquidity, along with the reduction of interest rates, the stock market stood out again as an alternative long term investment. In fact, in the beginning of 2004 the Brazilian stock market took on a new momentum with the wave of IPOs set off by the exits from PE/VC organizations. From 2004 to June 2008, 110 IPOs were taken to market raising BRL 88.5 billion, of which 39 companies had received PE/VC investments prior to their public offering.

**Figure 4: Number of IPOs**

![Number of IPOs](image)

*Source: Bovespa / Author’s analysis*

**Figure 5: Money Raised through IPOs (BRL million)**

![Money Raised through IPOs](image)

*Source: Bovespa / Author’s analysis*

The total amount of money raised by companies that received PE/VC investments reached BRL 27.2 billion from primary and secondary offerings, equivalent to 31% of the total volume of IPOs made during this period. Between May 2004 and June 2008, companies that
received PE/VC investments had an average return of 17.3% as opposed to 1.5% for the companies that did not receive PE/VC investments, with 67% of the returns being positive for those that had received PE/VC investments and 40% being positive for those that had not.

5. Conclusions

It is well documented the impact of the PE/VC industry in the creation and development of high successful innovative companies like Google, Microsoft, Netscape, eBay, Amazon, Yahoo, Intel, amongst others. The PE/VC firms not only provide capital to the enterprises but also additional strategic resources that allow the invested companies to differentiate and pursue a competitive advantage against its peers showing an impressive level of not only technological but also process, management and product innovations.

It is notorious the remarkable positive effect of the Brazilian public policies toward PE/VC like specific regulations which attracted local pension funds investments to the industry and strong public support to local PE/VC firms fundraising which nurtured first-time fund managers in addition to follow-on funds. As consequence, some innovative enterprises have arise in the country in the past few years like Submarino, DHC Outsourcing, Akwan, Allelyx, Buscapé, Lupatech, Bematech, Mandic BBS, GOL and DASA, just to mention a few, in connection with the growth of the Brazilian economy, and there are almost 500 portfolio companies, of which over a third from high innovative and technological industries, that have a strong potential to produce disruptive innovation.

In addition, the capital markets also benefited from the PE/VC public polices. From 2004 and June of 2008, around one third of the IPO – Initial Public Offerings in Brazil were PE/VC-backed companies (BRL 27.2 billion). In also indicates that the public policy direct to the first stage of the PE/VC cycle (fundraising) also produced positive effect on its last stage (exit) in Brazil.

Notwithstanding the progress presented until now, the Brazilian Government still needs to support the beginning of the value chain of the PE/VC industry through the expansion of angel investor networks and seed capital investment vehicles (the market is now claiming for a new regulation to address seed funds). In fact, strengthen the beginning of value chain is one of the bottlenecks of the sustainable development of the Brazilian PE/VC industry in the near future.
References


