Corporate Social Responsibility, Firm Value and Financial Performance in Brazil

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Abstract

The purpose of the paper is to examine the relationship between Corporate Social Responsibility (CSR) and firm performance, taking into account firm value and financial performance, in an emerging market - Brazil. Content analysis was conducted to extract data from two different sources, one relative to CSR data (IBase) and another that provided financial data (Economática). CSR indexes and financial performance measures were calculated to allow the estimation of regression analysis conducted to examine the relationship between CSR and performance. The results indicate that CSR is value destroying in Brazil since a negative correlation between CSR and firm value was found. Additionally, a neutral relationship characterizes the mutual effect between CSR and financial performance. The study has examined the relationship between CSR and firm performance in a country where, as in most other non-developed markets, such relationship has not been object of research. Besides, we also see the use of a three dimensional measure of CSR, mainly considering a research undertaken in an emerging market, as a valuable contribution.

Keywords: Corporate social responsibility, Firm value, Financial performance, Emerging markets

1 Introduction

Research on corporate strategy proposes that, in modern times, corporations are subject to enormous pressures exercised from other agents in addition to the traditional stakeholders directly involved with firm management and capital providing. Such new pressures are related to

social aspects and not to the main firm strategic decisions, since corporations may have to be assessed not only via the traditional performance indicators but also by means of the way which they interact with a broad set of social demands (Aguilera et al., 2007, Prahalad and Hamel, 1994, Cochran, 2007, McWilliams et al., 2006, McWilliams and Siegel, 2001).

The issue of Corporate Social Responsibility (CSR) is associated to an ample spectrum of relations among the corporation and its various stakeholders, as well as to the environment. Firm relations with several stakeholders, clients and with the society in general, and even with shareholders, are part of the CSR scope. Some important aspects of CSR have been object of research, such as its conceptualization, disclosure and the possible link between CSR, performance and firm value.

CSR is considered as a response of social pressures, relative to stakeholders' demands and expectations, environmental concerns, and social demands which characterize the dimensions of CSR (Wood, 1991, Prahalad and Hamel, 1994, Cochran, 2007, Dahlsrud, 2008, Crowther and Aras, 2008). These are the most common CSR dimensions explicitly cited in CSR definitions. The stakeholder dimension relates to how the firm interacts with its employees, suppliers and customers, for example. The environmental dimension refers to how business operations worries about natural environment. And the social dimension of CSR that is related to how the enterprise contributes to a better society by integrating its business with social concerns. According to Dahlsrud (2008), the most used definition of CSR is the one proposed in 2001 by the Commission of the European Communities which states that CSR is "A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis".

Disclosure of CSR has also been the topic of a vast number of works, in different markets. Such studies have evaluated the reasons for social disclosure, the lack of uniformity, the need for audit and even the use of social disclosure as a measure to CSR (Lerner and Fryxell, 1988; Ullman, 1985; Archel et al., 2009; Said et al., 2009; Sutantoputra, 2009).

Another line of investigation has been devoted to the relation between CSR and Corporate Financial Performance (CFP), using both accounting and market measures (Griffin and Mahon, 1997; Margolis and Walsh, 2001; Margolis and Walsh, 2003). Nevertheless, results obtained so far are mainly concentrated in well-developed economies contrasted to scarce research

undertaken in not developed countries where CSR is probably more required considering the lower social provision in such contexts (Dobers and Halme, 2009, Baughn et al., 2007). Specific characteristics of each country may have a role on the intensity of CSR as can be seen from the international evidence found by Baughn et al. (2007) and Gjølberg (2009). Besides that, results about the possible CSR-CFP link are still inconclusive considering that there is no definite relation among CSR and CFP (Waddock and Graves, 1997, Margolis and Walsh, 2003). These two aspects motivate additional work such as the present one accomplished in Brazil about which – as in many other developing markets – there are very few, if any, available results on the theme.

Using a three-dimensional measure of CSR, this work seeks for the relationship between CSR and CFP, taking into account value creation and accounting measures, trying to answer two questions in Brazil. First, whether CSR is able to affect firm value creation. Second, may CSR influence CFP, or vice-versa, using accounting measures of CFP?

The remainder of the paper is organized as follows. Section 2 presents a review of the literature and proposes the hypotheses of the present study. Sample and research strategy are described in Section 3, which is followed, in Section 4, by consolidated results. In the final part of the paper, section 5, we offer the conclusions and the perspectives for the continuity of the research work on the subject.

2 CSR, CFP and hypotheses

2.1 CSR and CFP

The relation between CSR and CFP presents some controversial arguments that, along with inconclusive empirical evidence, leads to the present situation of the study on the subject and motivates the continuous search for answers.

Donaldson and Preston (1995) consider that the traditional “managers serving shareowners” theory is untenable and consider the Stakeholder Theory as a prominent alternative to that. Under the perspective of the Stakeholder Theory, firm management must take into account a set of stakeholders that exceeds only the group shareholders-managing-creditors operated in depth by the Agency Theory (Jensen and Meckling, 1976).

In the Stakeholder Theory framework, argument is given that attention to the interests of the various stakeholders of the corporation may improve firm image and reputation, and that firm's concerns about such interests are able to affect positively firm's productivity, financial performance and value creation (Hillman and Keim, 2001, Donaldson and Preston, 1995, Bowman and Haire, 1975, Wood, 1991). On the other hand, Friedman (1970), despite recognizing the importance of clients and employees as legitimate and important stakeholders of corporations, argues that CSR is not able to increase firm value. With the same argumentation other authors also argue that investments, or expenditures, in activities not associated to the main objective of the corporation represent diversions of resources from shareholders and from the main purpose of the firm. Besides, it requires the firm to maintain some structure to manage such activities that are strange to its purpose. Thus, such additional expenditure may contribute to economic disadvantages of the firm (Vance, 1975, Ullman, 1985). Under the Agency Theory framework a negative effect of CSR on value creation can also be expected considering that the effort to fulfill the demands of an expanded group of stakeholders may bring additional agency conflicts.

Griffin and Mahon (1997) and Margolis and Walsh (2001 and 2003) show the controversial results about CSR-CFP relation which testifies for the need of further research. Margolis and Walsh (2001) have examined a group of studies, which utilized 27 distinct data sources. While considering CSR as an independent variable, a series of works try to verify whether CSR has the capacity to positively affect financial performance. Another group of studies tries to verify whether financial performance precedes CSR, which, in such instances, is taken as the dependent variable. A point highlighted by Margolis and Walsh (2001) is the variation in the forms of measuring CSR as well as CFP, making use of both accounting and market measures. Among the works revised by Margolis and Walsh (2001), 53% of those searching a positive effect of the CSR on CFP had confirmed that relationship. Further, 68% of the studies trying to verify if CFP has an effect on the CSR had confirmed that relationship. However, before generalizing the such findings stating that CSR influences positively CFP, or vice-versa, these authors, point out the above mentioned variety in methodologies, in timeframe and in variables utilized in the samples examined in several works. This same necessary care, as well as the recommendation for new work to be produced about the subject is quite a consensus (Ullman, 1985, Orlitzky et al., 2003, Griffin and Mahon, 1997, Scholtens, 2008, Waddock and Graves, 1997, Baron et al., 2009). By

analyzing 131 papers, Margolis and Walsh (2003) find similar non conclusive results. Although approximately 53% are in the direction of a positive relationship between CSR and CFP, the remaining works show negative, mixed or non significant relations. Most papers (83%) treat CSR as able to influence CFP, meanwhile the other 17% consider CSR as the dependent variable. What is worth mentioning is the diversity of CSR measures used, being external evaluations the most common ones, like Fortune and KLD. In another meta-analysis, Orlitzky et al. (2003) find that the measures of CSR and CFP are capable of moderating the CSR-CFP relationship. Such problem of CSR measurement is constant in the literature (Bowman and Haire, 1975, Waddock and Graves, 1997, Orlitzky et al., 2003).

By examining the literature, there is argument and empirical evidence in three directions in relation to the connection between CSR and corporate performance. Recent investigation undertaken by Baron et al. (2009) demonstrates that these questions remain unanswered. These authors examine the connection between CSR and CFP combining the variable "Social Pressure" as a moderating factor of this relation. The inclusion of this factor to the study leads to a neutral relation between CSR and CFP. However, when excluding the activity of the variable "Social Pressure" from the model the authors find that the relation is associated to sector, producing a negative relation to industrial corporations, while producing an opposite result for the commerce and service sectors. Additional to this recent evidence, ample surveys like (Margolis and Walsh, 2001), (Margolis and Walsh, 2003), (Orlitzky et al., 2003) and (Griffin and Mahon, 1997) demonstrate opposite results, a situation that testifies for the need to further research.

As commented by Dowell et al. (2000) the majority of empirical works about the theme has been completed using samples of corporations from U.S.A. and Europe. We consider the concentration of the research in well-developed markets as an additional factor in the determination of caution against generalizations of the findings and also as a motivator to new research in other markets. Besides economic development, the institutional framework may also interfere in CSR (Dobers and Halme, 2009).

By examining studies about CSR undertaken in not well-developed markets we can see that the disclosure of CSR has been treated in a number of papers in different countries, e.g. in Bangladesh (Khan et al., 2009), in Indonesia (Gunawan, 2007, Mirfazli, 2008), in Egypt (Rizk et al., 2008), in Turkey (Altintas et al., 2007) and also in Brazil (Murcia et al., 2008, Milani Filho,

2008). Other aspects of CSR, like its conceptualization, its importance, CSR practices, and how the specific economic system deals with CSR, have also been the focus of works in different countries (Sobhani et al., 2009, Janggu et al., 2007, Koladkiewicz, 2009, Naeem and Welford, 2009). Scarce are studies that examine the CSR-CFP relationship in not well-developed or emerging markets. Two examples of such works are recent, one in Dubai (Rettab et al., 2009), and another in Taiwan (Lin et al., 2009). In Dubai, Rettab et al. (2009) find that CSR affect positively organizational performance meanwhile the results in Taiwan are in the direction of a positive effect in reducing risk of damage to brand evaluations in the long run and in long-term fiscal advantage instead of influence short-term financial performance.

2.2 Hypotheses rationale

The literature has presented arguments and evidence in three directions, a positive, a negative or a neutral relation between CSR and CFP. A firm's financial performance also suggests the possibility of specific factors related to market characteristics. The analysis of the works examining this relation reveals that the research is concentrated in well-developed markets. In these markets, the stakeholders' activism is more mature than in developing and emerging markets such as Brazil. In any market context, on the one hand there are shareholders, managers, and creditors that are very interested in a firm's financial performance and, on the other hand, several other stakeholders exist that are interested in a possible social action on the part of the corporation. The situation in well-developed markets has shown that, in fact, CSR has turned out to be a reality. In those markets it is already observed a certain activism on the part of all groups of stakeholders (Donaldson and Preston, 1995). Even market investors start to take CSR into account as can be observed by the growing existence of investment funds that direct investments to social responsible firms[1]. Nevertheless, this pressure is not yet the same in non-developed markets. The developments of the Brazilian capital market, in the 1990s, as commented by Studart (2000), have faced the growth of investors, both in number and diversity, as well as in the volume of investments. In Brazil, there is a strong motion to strengthen capital markets and companies, e.g. by means of the motivation for the adoption of corporate governance practices (Silveira and Barros, 2008). In this context, it is worth mentioning the favoring of ample disclosure of corporate information, social actions included. The new Corporate Sustainability Index (ISE), designed by *Bovespa* (*São Paulo Stock Exchange*), incorporates corporate

governance and social action variables which is a signal that the market is starting to pay attention to that (Murcia et al., 2008). However, we go back to the fact that corporate social action, in financial terms, ultimately, is the use of cash flow that would otherwise be allocated to profitable activities. It is worth observing that the Brazilian corporation endures financial constraints for investment, as detected by Terra (2003) and Crisóstomo (2009), as well as problems related to under investment (López Iturriaga and Crisóstomo, 2010). These two financial problems incisively signal the increased need for the use of internal resources to finance investments. That may be an additional difficulty for the allocation of firm's funds to social actions. In face of such arguments, it is expected that a possible positive effect on firm value corporation arising from CSR-related expenses will only occur as long as the market become sensitive enough to take them into consideration when it comes to its investment decisions or even customers' decisions, for example. That doesn't seem to be the case in a market characterized by high ownership concentration and that has been receiving an increasing number of new investors, foreign and domestic, who are extremely focused in the good perspectives of capital gains. This set of financial factors along with the Brazilian economic reality prompt us to formulate for this market some hypotheses about the relationship between CSR, corporate value and financial performance in Brazil. First, we do not expect that CSR is able to increase firm value in the Brazilian market (hypothesis 1).

> Hypothesis 1. CSR is not taken into account by the capital market what makes CSR not able to increase firm value. This leads to the expectation of a negative or absence of significant correlation between CSR and firm value.

The study follows the financial line of thought that considers that the expenditure with CSR are, all in all, a misapplication of resources considering firm's main activities and that the group of Brazilian social stakeholders is not yet capable of considering firm's CSR as a decision criterion with regards to their alternatives for investment and consumption (Vance, 1975, Ullman, 1985, Friedman, 1970).

In Brazil, there isn't yet a full-fledged research on external stakeholders' behavior, like consumers, so as to understand their sensitivity to corporate CSR. Maignan (2001) is an example of an international social study, which found evidence of a higher sensitivity to CSR of German

and French consumers as compared to the American ones. We consider that in the present reality of the Brazilian market customers are more in line with the behavior of the American consumers and then CSR is not yet apt to positively contribute for corporate financial performance, and it may even be the case that the contrary occurs. That leads us to formulate another hypothesis that Brazilian firm has its financial performance negatively affected by CSR.

> Hypothesis 2. CSR is fund consuming and customers do not still take into account CSR in their decisions. This way, CSR negatively affects firm's financial accounting performance.

The possible effect of the financial performance on the CSR is also the focus of the present study, since there is not yet conclusive answer about the direction of the causality in the relationship between CSR and CFP. Is it the CSR that drives the CFP or is the CSR a consequence of better CFP? As regards the possible effect of the CFP on CSR, we consider that CSR can be motivated by a non-compromised cash flow as a result of excess profitability, since only in this situation it would be possible for a corporation to justify CSR expenses to its shareholders and creditors. As previously commented we can observe again the reality of strong pressure of these stakeholders for results. Shareholders are mainly focused in capital gains as well as dividend payout while creditors worry about the return of their funds with interests. It is expected that management will only decide for the expenditure in social action as long as there is a strong demand for this type of activity and perspective of returns to the firm. Moreover, it is reasonable to expect that pressure for social action will only be successful if corporations can foresee some benefits arising from that allocation of resources which would facilitate shareholders accordance for CSR activities.

Considering such social pressure as still not very relevant in Brazil and bearing in mind the powerful demand for results from shareholders and creditors, we believe that, in principle, the social action of the Brazilian corporation would only occur in case of excess cash flows in accordance with the slack resources theory (McGuirre et al., 1988, McGuirre et al., 1990, Waddock and Graves, 1997). This reasoning makes us expect a positive or neutral relationship between a company's CFP and CSR in Brazil what leads us to propose another hypothesis.

Hypothesis 3. CSR may result from excess cash flow. So, there is a positive effect of firm's financial performance on CSR.

3 Sample and method

3.1 Sample

The difficulties in measuring CSR, as frequently reported in the international literature, are yet more severe in markets in which the question is still incipient, as it is the case with emerging markets. Brazilian firms are not compelled to disclose information about their social action. So, firms that decide to do it will act freely with no standard of format or data disclosed. Voluntarily some firms have started doing it. Nevertheless, such absence of uniformity on format and specific data to be disclosed adds difficulty to this kind of research. To have this study feasible we needed to collect data from two different sources. The Brazilian Institute of Social and Economic Analysis (IBase) has, among a group of social purposes, encourage firms to undertake social action. In this context they have proposed a model for Corporate Social Responsibility disclosure and also served voluntarily as a data repository of firm social information for the firms interested. As previously mentioned, the adoption of IBase model, as well as the sending and storage of firm information at IBase, were voluntary. This way, there has been a slow adherence of firms since the first year, 1996, with only 9 firms, until a maximum of 234 firms in 2003 that was followed by a decline since then, with 200 in 2005, and only 126 in 2006. Recently IBase has published that had reached its purpose of promoting CSR with its disclosure model and will not file firm data anymore. This has probably been a reason for the reduction in number of firms. However, during this period, IBase, although the limitations, has created the only available database on CSR in Brazil. This way, we have collected social information for the period with highest number of firms at IBase, making a merge with financial data collected from Economática database. The sample is restricted to listed companies since we needed market value. So, the sample is composed of data disclosed by corporations and gathered by IBase and relates to the period from 2001 to 2006, resulting in 296 firm year observations of 78 corporations, with 1 to 6 observations during the period. The sample represents around 37% of all the nonfinancial companies listed in the Brazilian stock market in the period of study. Besides, firm size (in terms of total assets) is quite heterogeneous and highly dispersed around the mean value, so the results are not biased by

size issues. See Table 1 for some descriptive statistics. Finally, the distribution of firms in nine most important sectors of the economy is also relevant to the study.

3.2 Variables and models

As highlighted by (Waddock and Graves, 1997) among other authors, CSR measurement is a constant problem in CSR research. This has probably been the reason for the lack of uniformity and great variety of measures used in the literature (Margolis and Walsh, 2003). Such difficulty in measuring CSR may be due to the deficiency in obtaining data as is the case in Brazil. This study uses a CSR index based on relative amounts spent on social action. The CSR index adopted in this study is based on IBase's information, which contains information regarding the three corporate social action segments: relationship with employees, external social action and environmental action. The data, which has the virtue of being quantitative in nature, indicates the ratio between the amount of funds spent by the company in each social action segment and its net sales. The CSR index (Corporate Social Responsibility Index – CSR_I) used in this study takes into account the aforesaid three segments. In our work the CSR_I refers to the mean of all social expenses over the company's net sales. Likewise, for each social action segment of the company (relationship with employees, external social action and environmental action) a specific index was created in order to check the possible relation between each social action factor and the company's performance. Each index is the calculated by the mean of the amounts of each expense related to each corporative social action area: index of social action related to internal stakeholders, named employees (ER_I), index of external social action (ESA_I), and index of environmental action (ENV_I). These three dimensions of CSR have been used as proxies for CSR in a number of distinct previous works, in different manners, as has been depicted by Orlitzky et al. (2003) and Margolis and Walsh (2003).

As is common in the financial literature, Tobin's Q is used to proxy for firm value, which is defined as the ratio between the company's market value and its accounting value. As usually adopted in the finance literature, company's market value corresponds to the sum of market value and debt (Dowell et al., 2000, Maury and Pajuste, 2005, Villalonga and Amit, 2006).

In face of the lack of a consensus and following the current tendency on the CSR literature, this work adopts return on assets (ROA) and the return on equity (ROE) as financial accounting

performance measures which has been vastly used previously (Griffin and Mahon, 1997, Waddock and Graves, 1997, Baron et al., 2009).

Control variables are added to the model so that the results can be moderate for a vaster number of factors. Literature frequently controls also for firm size, risk and sector (Husted and Allen, 2007, Ullman, 1985, Griffin and Mahon, 1997, Waddock and Graves, 1997). Firm size is an important control variable since size may influence firm capacity to undertake CSR actions. Smaller companies may face lower capacity of sustaining a more active behavior regarding social action comparatively to bigger ones which usually have more infra structure as well as higher cash flow levels. At the same time, as a firm grows it becomes more visible and more responsible with different stakeholders' demands. This study adopts the log of the total assets as an approximation of the company's size (SIZE). The company's risk is another factor that may influence company's social activities. As social actions are not strictly connected to the main business of the company firm direction's risk tolerance might affect its attitude toward CSR once they use funds that would otherwise be used in the main activities of the company. Company's leverage (LEV), measured by the ratio of total liabilities over total assets, is used as an approximation for risk. Other studies take the industry factor into account, considering that some sectors usually may have more intense social activity. To control for sector effect on social performance, sector dummies (SD) have been incorporated into the models. Table 2 shows that, indeed, there are some differences among the average values of the CSR indexes of the sectors of this study's sample. Many studies have already been made regarding CSR in specific sectors in USA like (Griffin and Mahon, 1997) which consists in a complex study of the chemical industry. In this paper, we use dummy control variables for sectors, whose classification follows the terminology adopted by Bovespa (*São Paulo Stock Exchange*). Some sectors were grouped based on their similarities so as to keep a minimum of observations in each. This set of variables was used in the econometric models in order to test the ability of the social indicators to explain the creation of value within a company and its financial performance. Due to lack of enough data for the production of a panel data, models were estimated in cross-section.

The model that deals with the effect of CSR on firm value is expressed by the following equation (1):

$$Q_t = CSR\_I_t + CSR\_I_{t-1} + LEV_t + SIZE_t + SD_t + \varepsilon_t \quad (1).$$

In the model, Q is the above mentioned Tobin's Q ratio that proxies for firm size. CSR_I represents the Corporate Social Responsibility Index that captures the three segments of CSR, relationship with employees, external social action and environmental action. Considering the possible lagged effects of CSR on firm value, CSR_I_{t-1} represents CSR_I of the previous year and was incorporated in the model in order to capture possible delayed effects. This is plausible since the social action of today may be not be noticed by stakeholders immediately and, in fact, there is a possibility that the positive effect of such actions on firm value will happen with a lag. LEV is the firm's indebtedness and SIZE represents firm size. Industry dummy variables (SD) were also included as explanatory variables to control also for sector effect. **ε** is the random error term that accounts for model specification errors.

Another model has been proposed to assess the effect of CSR on financial accounting performance. Such model is expressed by the following equation (2):

$$ROA_t = CSR\_I_t + CSR\_I_{t-1} + LEV_t + SIZE_t + SD_t + \varepsilon_t \quad (2).$$

ROA (return on assets) is the measure of a firm's financial performance. As in model (1), CSR_I is the Corporate Social Responsibility Index that captures the three segments of CSR. The possibility of delayed influence of CSR on financial performance is taken into account with the inclusion of the lagged variable CSR_I_{t-1}. This chance is due to the rationale that CSR may cause better financial return as society sees more favorably the firm taking such actions into account in its decisions. Positive effects of it in financial terms may happen with some delay. LEV stands for the firm's leverage and SIZE proxies for firm size. SD represents sector dummy variables, and, **ε** is the random error term that accounts for model specification errors.

Then, the model associated with equation (3) assesses possible effects of CFP on CSR and has the following format:

$$CSR\_I_t = ROA_t + ROA_{t-1} + LEV_t + SIZE_t + \varepsilon_t \quad (3).$$

Similarly to previous models, CSR_I stands for firm social action that captures the three segments of CSR. ROA is the measure for firm's financial performance. In a similar fashion, to take into account the possibility that the decision to undertake social actions in function of financial results may be associated to current and past results, a lagged financial performance variable (ROA_{t-1}) has been introduced in the model. Equivalently, LEV stands for firm's debt and SIZE proxies for firm size. Sector dummy variables (SD) measure industry effects on CSR. Finally, **ε**, the random error term, accounts for model specification errors.

The three models (equations 1, 2 and 3) were also estimated for each of the three specific CSR indexes, each one associated with each of the three different dimensions of CSR, namely, ER_I (relationship with employees), ESA_I (external social action) and ENV_I (environmental action) so as to search for possible effects that are specific to each CSR dimension on the performance and value of the firm (equations 1 and 2), as well as possible effects of performance on corporate social action (equation 3). As mentioned when explained each model's variables, current and previous performance indicators were used in the models so as to capture possible delayed effects of the performance on CSR and vice-versa.

Additionally, for sensitivity analysis reasons, the models of equations (2) and (3) were also estimated using ROE as a proxy for CFP.

4 Results

The descriptive values of CSR in Table 1 represent the relation between the expenses in each one of the social action segments and the net sales. The examination of these numbers reveals that the segments that receive the most attention from the Brazilian companies are relationship with employees (ER_I) and environmental actions (ENV_I). We consider that the values of all variables are within acceptable limits for each one of them since there is no standard value related to such CSR indicators and the other variables. Despite that, so as to have more reliability in the

estimation process, all models were estimated with robustness to heteroscedasticity (Tables 4 to 6).

Table 1 goes about here

The data in Table 2 suggests that there appears to be sectors that, in fact, are more inclined to social action, as it is the case of the financial sector. As earlier commented, the scope of this study doesn't comprise the industry research of CSR. We see this as a natural and profitable line of study.

Table 2 goes about here

Information provided in Table 3 shows that, in reality, there is a significant negative correlation between corporate value and CSR_I as well as with two specific indexes of CSR, employee relation (ER_I) and external social action (ESA_I). This correlation is also negative but not significant for environmental action (ENV_I). No significant correlation was detected between the variables indicating financial performance (ROA and ROE) and any of the social action indicators. However, regression analysis of the model is necessary so as to acquire a better understanding of such possible relationships.

Table 3 goes about here

Tables 4 to 6 show the results of all models in which ordinary least squares were used. For each model proposed in section 3.2, more detailed ones were estimated. Column (iii) of each panel table presents estimations that correspond exactly to the model proposed while columns (i) and (ii) of each contains estimations of models that incorporate the present independent variable (i) and the previous one (ii), respectively, in order to account for possible lagged effects. The coefficients of the industry dummy variables were omitted in virtue of space priority.

The results of table 4 allow us to verify the existence of a negative effect of CSR_I on firm value, which confirms hypothesis 1. Current CSR (CSR_I_t) presents this negative influence in two models of Panel A (columns i and iii) showing the strong negative effect of current social expenses on firm value. Assessing the models that were estimated separately for each social

action segment, it is shown that this effect is influenced by the relationship with employees (ER_I) (Panel B) and the environmental action (ENV_I) (Panel D). Both of these social actions dimensions have also revealed a significant negative impact on firm value. Note that these two are the strongest Brazilian corporations' social action indicators (Table 1). Hence, their individual negative effects corroborate the negative effect of CSR on firm value in Brazil.

Table 4 goes about here

The results exhibited in table 5 demonstrate the inexistence of the explanatory capacity of the social action variable (CSR_I) over the corporate financial performance measured by ROA (Panel A), which does not confirm hypothesis 2 that predicted a negative effect of CSR_I over CFP. Looking each dimension of CSR separately, one can see that the internal social action relative to employees (ER_I) (Panel B) has a negative impact on financial performance which is in the direction of the hypothesis proposed. Nevertheless, the neutrality in the CSR-CFP relation is verified in relation to the external social action (ESA_I) and environmental action (ENV_I) dimensions (Panels C and D). These findings emphasize the neutral effect of CSR on CFP in the Brazilian firm. Additionally, leverage (LEV), used as proxy for firm risk, as predicted, has confirmed its negative impact on CSR. That may also signal external control from creditors in monitoring managers.

Table 5 goes about here

The results exhibited in table 6 stand for the possible effect of CFP on CSR. Such results do not allow us to confirm hypothesis 3, which formulation predicted a positive effect of CFP on CSR considering that excess cash flow could be directed to CSR. The results are also in the direction of a neutral impact of CFP on CSR. Except for the internal social action (ER_I) (column i of panel B), no significant explanatory capacity of CFP over CSR has been observed. In the only exception aforesaid a negative effect was detected in the opposite direction of the hypothesis proposed. That could be an indication of a really low concern of companies to expend cash in social action.

Table 6 goes about here

The models exhibited in tables 5 and 6 were also estimated using ROE as the proxy for financial performance so as to achieve enhanced robustness in the results, which were qualitatively the same[2].

5 Conclusions

Growing research about Corporate Social Responsibility has found in the study of the relationship between CSR and business performance an important field since, in modern times, a broader set of stakeholders seems to be able to influence firm strategic management. However, no conclusive answers have yet been found so as to clarify if CSR affects business performance or vice-versa, and, research on the topic has been concentrated in developed economies.

This work has analyzed the CSR-CFP relationship in Brazil using financial and CSR data of 78 non financial listed companies in the period 2001-2006. Three aspects of CSR have been considered separately and were used to create a three dimensional measure of CSR which, together with the use of different business performance measures, allowed the finding of important results about the CSR-CFP relationship in Brazil.

The estimation of a set of econometric models has provided results that exhibit a trend toward a negative effect of CSR on firm value in Brazil. This negative influence, in turn, appears to be strongly influenced by social action relative to the relation with employees and environmental concerns. Indeed, these two social actions have shown to the ones Brazilian firms are more focused in. Furthermore, considering specifically the financial accounting performance, the study did not identify any significant material effect of CSR on financial performance, except for the relationship with employees on which a negative effect was observed. Besides, no effect of financial performance on CSR was observed, contrary to the predictions of the slack resources theory. Additionally, there also seems to be sectors that are more inclined to undertake social action, as is the case of the financial sector.

We consider this work as a contribution to CSR literature since it presents an investigation of the CSR-CFP relationship in Brazil, an emerging market with increasing international visibility, where such kind of research is still absent.

Finally, we consider that this paper may have implications for academics, managers and other stakeholders. For academics, the work broadens the analysis of the CSR-CFP relationship once it

investigates it in an emerging market making use of CSR indexes relative to three social action segments. Results indicate that in Brazil CSR is value decreasing for firms and has no relation with financial accounting performance being one more result to the literature. At the same time, more research is needed to confirm such the results in this market. For managers, CSR is ultimately an investment decision that should be treated in the firm's budgeting process. Presumably it is a strategic decision to undertake it. Perhaps such actions should be better publicized so that firm image might gain with it in medium and long term once this seems to a process. At the present moment, maybe external stakeholders in general are not completely aware of firms' CSR in Brazil so as to have their decisions of consumption or investment positively influenced for it. Indeed, the ideal positive effects of CSR to the firm, found in some other works in different developed economies, are consequence of a long process of firms' social actions. Perhaps in developing economies this process may be longer once firms are more prone to financing difficulties.

Notes

1. Data from the Social Investment Forum (2007) show that the number of funds that invest in socially responsible firms has grown from US$639 billion 55 in 1995 to US$2.71 trillion in 2007, a 324% growth.

2. The results of estimates using ROE to proxy for financial performance are not shown in virtue of space priority. Such estimations are available upon request.

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Table 1. Descriptive Statistics of the model variables

	N	Mean	Standard Deviation	Median	Minimum	Maximum
Q	296	0,95	0,97	0,76	0,03	9,38
ROA	296	5,85%	9,56%	4,60%	-39,18%	38,40%
ROE	296	13,67%	17,51%	14,08%	-37,11%	50,81%
CSR_I	296	0,67%	0,99%	0,46%	0,00%	11,94%
ER_I	295	0,71%	0,56%	0,52%	0,06%	2,33%
ESA_I	263	0,25%	0,59%	0,06%	0,00%	4,61%
ENV_I	266	0,76%	1,10%	0,28%	0,00%	6,69%
LEV	257	25,54%	17,56%	24,96%	0,00%	94,98%
SIZE	296	14,47	1,63	14,26	10,01	18,77

Table 2. Average of social performance (CSR_I) by sector

Sector	N	Mean CSR_I	Std Err	Minimum	Maximum
Siderurgy and Metallurgy	19	0,61%	0,37%	0,00%	1,51%
Vehicles and components	21	0,60%	0,21%	0,30%	0,97%
Paper and cellulose	11	0,46%	0,12%	0,31%	0,72%
Oil and other combustibles	12	0,38%	0,20%	0,12%	0,80%
Food and beverage	11	0,62%	0,26%	0,25%	0,96%
Electrical Energy	109	0,61%	0,85%	0,05%	8,22%
Telecommunication and Transport	38	0,30%	0,11%	0,14%	0,58%
Finance and Insurance	39	1,23%	1,24%	0,13%	6,80%
Other	36	0,92%	1,91%	0,32%	11,94%

Table 3. Correlation matrix between CSR and performance indices

The table shows the correlation coefficients and p-values. † if $p < 0.10$, * if $p < 0.05$; ** if $p < 0.01$; *** if $p < 0.001$.

	Q	ROA	ROE	CSR_I	ER_I	ESA_I
ROA	0,549***					
p-value	0,000					
ROE	0,313***	0,653***				
p-values	0,000	0,000				
CSR_I	-0,102†	-0,025	0,011			
p-values	0,081	0,667	0,857			
ER_I	-0,120**	-0,044	0,038	0,622***		
p-values	0,039	0,449	0,516	0,000		
ESA_I	-0,111†	-0,052	0,056	0,318***	0,016	
p-values	0,073	0,398	0,370	0,000	0,796	
ENV_I	-0,083	0,031	-0,019	0,199**	-0,045	0,111†
p-values	0,175	0,614	0,763	0,001	0,469	0,088

Table 4. Analysis of the explanatory power of the CSR over company value (Q)

The table presents estimated coefficients concerning models derived from the equation (1). Standard errors (not reported) are robust to heteroskedasticity. Q is the dependent variable in all models, CSR indicators are the independent ones. † if $p < 0.10$, * if $p < 0.05$; ** if $p < 0.01$; *** if $p < 0.001$.

Panel A - Dependent variable: Q

	i	ii	iii
CSR_I	-8,826*		-9,497**
CSR_I_{t-1}		-13,592	-9,272
LEV	-0,563	-0,886†	-0,944†
SIZE	-0,141*	-0,174†	-0,186†
N	257	189	189
F	5,020***	3,760***	4,140***
R^2	0,189	0,201	0,209

Panel B - Dependent variable: Q

	i	ii	iii
ER_I	-28,112**		-25,844†
ER_I_{t-1}		-13,981	-2,932
LEV	-0,578	-0,878†	-0,919†
SIZE	-0,144*	-0,175†	-0,182†
N	256	189	188
F	5,620***	3,700***	3,680***
R^2	0,194	0,201	0,208

Panel C - Dependent variable: Q

	i	ii	iii
ESA_I	-4,715		-5,246
ESA_I_{t-1}		-2,235	-10,817
LEV	-0,471	-0,842	-0,723
SIZE	-0,180†	-0,163	-0,176
N	224	164	156
F	4,060***	3,890***	5,460***
R^2	0,203	0,201	0,216

Panel D - Dependent variable: Q

	i	ii	iii
ENV_I	-8,211*		-8,573†
ENV_I_{t-1}		-7,622†	-2,013
LEV	-0,498	-0,862†	-0,783†
SIZE	-0,086	-0,176†	-0,119
N	235	189	174
F	5,490***	4,180***	4,330***
R^2	0,208	0,205	0,237

Table 5. Analysis of the explanatory power of the CSR over financial performance (ROA)

The table presents estimated coefficients concerning models derived from the equation (2). Standard errors (not reported) are robust to heteroskedasticity. ROA is the dependent variable in all models, CSR indicators are the independent ones. † if $p < 0.10$, * if $p < 0.05$; ** if $p < 0.01$; *** if $p < 0.001$.

Panel A - Dependent variable: ROA

	i	ii	iii
CSR_I	-0,680		-0,673
CSR_I_{t-1}		0,785	1,091
LEV	-0,213***	-0,234***	-0,238***
SIZE	-0,000	0,002	0,001
N	257	189	189
F	7,690***	6,430***	5,880***
R^2	0,261	0,305	0,310

Panel B - Dependent variable: ROA

	i	ii	iii
ER_I	-4,594*		-5,637†
ER_I_{t-1}		-0,391	1,926
LEV	-0,219***	-0,236***	-0,245***
SIZE	-0,001	0,001	0001
N	256	189	188
F	7,970***	6,750***	6,550***
R^2	0,287	0,305	0,342

Panel C - Dependent variable: ROA

	i	ii	iii
ESA_I	0,096		-0,884
ESA_I_{t-1}		1,362	1,338
LEV	-0,198***	-0,244***	-0,238***
SIZE	-0,001	0,002	0,003
N	224	164	156
F	6,840***	5,020***	4,230***
R^2	0,224	0,300	0,286

Panel D - Dependent variable: ROA

	i	ii	iii
ENV_I	-0,261		-0,515
ENV_I_{t-1}		-0,086	0,167
LEV	-0,214***	-0,236***	-0,245***
SIZE	0,003	0,002	0,005
N	235	189	174
F	7,530***	7,000***	5,720***
R^2	0,262	0,305	0,311

Tabela 6. Analysis of the explanatory power of financial performance (ROA) over CSR

The table presents estimated coefficients concerning models derived from the equation (3). Standard errors (not reported) are robust to heteroskedasticity. CSR indexes (CSR_I, ER_I, ESA_I and ENV_I) as dependent variables in each panel, and the performance (ROA) the explanatory variable. † if $p < 0.10$, * if $p < 0.05$; ** if $p < 0.01$; *** if $p < 0.001$.

Panel A - Dependent variable: CSR_I

	i	ii	iii
ROA	-0,007		-0,006
ROA_{t-1}		-0,011	-0,009
LEV	-0,007*	-0,009†	-0,010†
SIZE	-0,001†	-0,001	-0,001
N	257	189	189
F	5,660***	3,300***	3,250***
R^2	0,077	0,089	0,091

Panel B - Dependent variable: ER_I

	i	ii	iii
ROA	-0,008*		-0,008
ROA_{t-1}		-0,006*	-0,004
LEV	-0,004*	-0,003*	-0,005*
SIZE	-0,000**	-0,000*	-0,000*
N	256	188	188
F	12,910***	11,850***	10,070***
R^2	0,223	0,201	0,225

Panel C - Dependent variable: ESA_I

	i	ii	iii
ROA	0,000		0,000
ROA_{t-1}		0,002	0,002
LEV	-0,003	-0,003	-0,003
SIZE	0,000	-0,000	-0,000
N	224	167	167
F	3,830***	2,940**	2,660**
R^2	0,145	0,175	0,175

Panel D – Dependent variable: ENV_I

	i	ii	iii
ROA	-0,003		-0,007
ROA_{t-1}		0,002	0,004
LEV	-0,004	-0,004	0,004
SIZE	-0,001	-0,001	-0,005
N	235	174	174
F	12,110***	6,970***	6,520***
R^2	0,193	0,187	0,190