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## Stakeholders Orientation: Instrumental or Intrinsic Commitment

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### ABSTRACT

*The objective of this research is to check if social orientation of citizens firms is undertaking an instrumental approach or intrinsic commitment. Based on a sample composed by most admired firms, we examine - in cross sectional studies and industrial analysis - financial, strategy and social characteristic of these firms. We intend to verify that the realization of the interests of various stakeholders - other than shareholders - can be a tool to increase financial performance. Empirically, the normative approach was examined through the mediation model of the interests of stakeholders. The instrumental approach was assessed by the moderation model. Our data and empirical results have supported and validated the latter approach.*

**KEYS WORDS:** *Citizens firms, normative strategy, mediation model, instrumental strategy, moderation model, stakeholders, social interests*

### INTRODUCTION AND HYPOTHESIS DEVELOPMENT

The growing demands of ethics, expressed today, is interpreted often as a reaction to the lack of confidence in the business and the loss of meaning of certain behaviors, to regain their credibility and legitimacy through a social process that is living a real exploitation. Despite the awareness of the importance of stakeholders' management, most companies demonstrated reluctance towards this direction. Often the social responsibility is treated in literature as a strategic tool (Wood, 1991; Watson, 1993; Verkindt, 2004; Tchotourian, 2006; Suddaby and Greenwood, 2006; Stoney and Winstanley, 2001; Peeters, 2007; Paradas, 2005; Panwar and Hansen, 2008; Pfeffer, 1981; Preston and Sapienza, 1990; Pasquero, 2004; Plender, 1997; Orlitzky and Al, 2008; Martinet and Reynaud, 2000, Levitt 1958, Kotha and Jones 1999; Freeman 1994, 1984; Demontrond, 2002; Berman et al, 1999. Abbott and Monsen 1979).

The woes of Enron and the reality of many practices of other companies reflected a blurred image of strategic corporate decisions and helped lay a great discredit to the rhetoric of ethics. It is in this sense that social responsibility is sometimes seen as a fad as some companies are very skeptical about and consider as a strategic tool (Martinet and Reynaud, 2004; Freeman Evans, 1993; Donaldson and Preston, 1995; Duong, 2006; Demontrond, 2000).

Also the idea of a moral and social business is still a utopia opposite realities in business (Stoney and Winstanley, 2001). The creation of value for other stakeholders of the company is considered only as an instrument to achieve only the interests of shareholders (Friedman, 1970; Mercier, 2001; Berger, 2007; Antheaume, 2005; Reich, 2008, Quairel, 2005). Indeed, social responsibility has become a means by which to achieve a well defined goal: the search for a better image and greater profitability. This is true for the majority of companies who adopt the status of citizens without warrant their commitments (Jeannicot and Ducassy, 2008; Jacquet, 2008; Gond, 2001, Gendron and Lapointe, 2004; Frooman, 1997).

This leads us to propose our research hypothesis:

**H1: undertaking the social interests of stakeholders can be through instrumental approach.**

In addition, we hope to verify in this research that the realization of the interests of various stakeholders - other than shareholders - can be a tool to increase financial performance.

To do this, we suggested many equations of regressions including a set of social and financial proxies.

We used different descriptions of models to estimate this relationship, inspired mainly from Berman and al (1999), Brown and al (2001) works.

### SAMPLE AND DATA COLLECTION

In this study, we focus exclusively to firms defined as citizens by "Business Ethic."

Moreover, it should be noted that we have excluded from our sample all financial institutions (banks, insurance companies, investment companies and investment securities), taking into account the specificity of rules preparation and presentation of financial statements. In addition, we eliminated firms with missing data. This led us to reduce our sample size of 600 to 507 firms in six years.

All the information required on different variables were extracted from the following websites: www.edgarscan.com, www.sec.gov, www.forbes.com, www.yahoofinance.com, www.Business-ethic.com. These sites have allowed us to recover all the cash flow statements, financial statements, notes to the financial statements, the list of top 100 companies, as well as data on the rankings of companies, according to pre-established social criteria.

### DESCRIPTION OF MODELS

We develop three main models,

The first model as follows:

**Financial Performance = F (strategic management variables + control variables).**

This model reflects the instrumental approach according to which this concern is motivated by the perception that it can improve financial performance.

The second model can be written in this way:

**Financial Performance = F (strategic management +variables that reflect relationships with stakeholders + controls).**

Both models are based on the assumption that the objective of the leaders is to maximize the profitability of their firms, regardless of the interests of other stakeholders, that is to say, the leaders must address only, the interests of shareholders and consider the interests of other stakeholders as a means to achieve this goal. The first model detects the direct effect of policy variables on the financial performance of the firm. In the second model of moderation, managerial orientation towards stakeholders establishes a strategy for the firm moderates the relationship between strategy and financial performance.

The third model is derived from the normative perspective of stakeholders.

It may be written as follows:

**Financial Performance = F (variables that reflect relationships with stakeholders + controls).**

This model retains the assumption that the firm has a moral obligation to promote the interests of stakeholders. Hence, the designation of this model as the intrinsic commitment model for stakeholders.

Indeed, the definition provided by Freeman (1984) proposes two types of relationships between the firm (management) and its stakeholders. Each element of this relationship is a cornerstone of the stakeholder management model proposed above.

Firstly, if the stakeholders can affect the achievement of the company, its performance and strategic decisions can be affected by the activities of stakeholders. This link provides the instrumental perspective of stakeholders in achieving its objectives of profit maximization. According to this approach, firms consider their stakeholders as part of the environment that must be managed in order to provide income and better returns to shareholders.

Then, if the stakeholders are affected by the achievement of the firm, it follows that the decisions of the firm affect the well-being of stakeholders, which implies a normative obligation for stakeholders.

Berman and al (1999), Hambrick (1983) and Capon and al (1990) have proposed some strategy variables, considered relevant to show the orientation of the firm to its stakeholders.

\*Cost efficiency measure the degree to which the cost per unit of output are low. If the company manages to have lower costs per unit of output, profitability should increase. While a low value

indicates a more efficient firm. For better detection efficiency of the firm we added turnover of assets, as another variable measurement.

\*"Asset Parcimony" indicates the use of assets per unit produced: producing at low cost, the firm must generate high profitability. It is determined by using the average of the following two variables: capital intensity, which is a crucial variable in the strategic option. It is measured as total assets divided by the number of employees and it is then divided by one hundred. The second variable is constituted by capital expenditures. It is measured by the ratio of capital expenditures to sales and then multiplied by one hundred.

\*Differentiation indicates the effort of the firm to be distinguished from the others. It is closer to marketing efforts (intensity of sales).

Financial performance of the firm is assessed by the variable ROA.

The four variables (efficiency, capital expenditures, capital intensity and intensity of sales) are presumed to have a significant and negative relationship to financial performance.

We wish, through these different models to validate the following sub-hypotheses:

***Hypothèse1.1: strategy variables and variables reflecting relationship with stakeholders will have direct and separate effect on financial performance of the firm.***

***Hypothèse1.2: strategy variables have a direct effect on the financial performance of the firm, which will be moderated by variables related to the stakeholders.***

***Hypothèse1.3: managerial commitment to the interests of stakeholders will lead to strategic decisions, which in turn affect the financial performance of the firm.***

**In other words, strategy variables negotiate the association between the variables of relationship with stakeholders and will strengthen financial performance.**

## ECONOMETRIC APPROACH

Our approach is to prove empirically, which of these two perspectives could better capture our data. Then, we will strengthen this part by an analysis between sectors.

If one of these two descriptions of models - in which key stakeholders are seen by firms as an instrument or means for achieving their financial goals paramount - is proven statistically significant empirical support will be lent to model of strategic management of stakeholders.

If the model in which the interests of stakeholders are seen as priority over other financial concerns is proven statistically significant, empirical support will be lent to the model of intrinsic commitment for stakeholders.

We thus show that in the case where our data would bear better model of strategic management of stakeholders, we conclude that this is in order to meet more profits managers could take into account the interests of a stakeholder among other (eg, the natural environment). Whereas if the data support the model of intrinsic commitment of stakeholders, we are entitled to believe that there is a moral orientation and commitment for stakeholders and that they can lead to strategic decisions.

To evaluate the three hypotheses, it was necessary to estimate four different models of regression.

To validate the model direct effects, all strategy variables and relations with stakeholders have been incorporated into the model simultaneously as independent variables.

For the moderation model, we included all interactions between relationships variables with strategies variables in the regression equation. Moderation would be supported if the model represented a statistically significant improvement over the model with only the direct effects.

The hypothesis 2.3, which includes mediation model, was evaluated using a method described by Baron and Kenny (1986) and demanding evaluation at least two regression models, one containing only the stakeholders relationship variables of and the other comprising the strategy variables. If the strategy negotiating the association between relationships with stakeholders and the financial performance of the firm, the significance of relationships variables would be deleted when policy variables are included in the regression equation. This means that the perfect mediation would, if the variables relationships with stakeholders had no effect on performance when the mediating variables (in this case, strategy variable) are included in the equation.

## SPECIFICATION OF EQUATIONS AND VARIABLES DEFINITIONS

Based on work of Berman and Al (1999), as well as of Brown (2001), we considered the following equations:

$$ROA = \{a_0 + A_1 \text{ strategy variables}\} + \{A_2\} + \text{control variables } e, \text{ Model 1}$$

$$ROA = \{a_0 + A_1 \text{ strategy variables}\} + A_2 \{ \text{variable relationship with stakeholders } A_3\} + \{ \} + \text{control variables } e, \text{ Model 2}$$

$$ROA = a_0 + A_1 \{ \text{variable relationship with stakeholders}\} + \{A_2\} + \text{control variables } e; \text{ Model 3}$$

Where A0, A1 and A2 are the vectors of coefficients reflecting the explanatory power of each axis variables as defined in the table below:

**TABLE 1: VARIABLES DEFINITIONS**

Independents variables		
<b>ROA</b>	<b>return on assets calculated as the ratio of operating income to total assets</b>	
Dependent variables		
Strategy variables		
Variables	Maesurements	Assumptions and expected signs
<b>capital intensity(INTENSC)</b> <b>Capital expenditure(EXP)</b>  « Asset Parcimony »(ASSET)	It is measured as total assets divided by the number of employees and it is then divided by 100 It is measured as capital expenditures divided by sales. It is then multiplied by 100 It is calculated as the average of these two variables	<b>This variable has a negative correlation with financial performance.</b>  <b>This variable has a negative correlation with financial performance. thus the sign of average is expected to be negative</b>
<b>Cost efficiency(CEFF)</b>	calculated as the ratio of cost of goods sold to sales	<b>less this ratio is the more financial performance of the firm is (-)</b>
<b>Asset turnover(TURN)</b>	Calculated as the ratio of sales to total assets	<b>The higher this ratio is the higher financial performance is (+)</b>
<b>Marketing effort(RADV)</b>	costs of sales and marketing and other administrative services to total assets	<b>The higher this ratio is the higher financial performance is (+)</b>
Axis of variables representing the relationship with stakeholders		
<b>Customers(CUST)</b>	All these variables are classification criteria of top 100 companies as established by "Business Ethic Magazine»	<b>expected signs for all of these variables is to have a positive effect on the financial performance of the firm</b>
<b>Employees(EMP)</b>		
<b>Environment(ENV)</b>		
<b>Diversity(DIV)</b>		
<b>Community(COMMI)</b>		
Control variables		
<b>Risck(DEBTS)</b>	Calculated as the ratio of total debt to total assets	<b>less is This ratio than the higher financial performance is</b>
<b>R&amp;D(RD)</b>	Calculated as the ratio of R & D expenditures to total assets	<b>The higher this ratio is the higher financial performance is (+)</b>
<b>Size(SIZE)</b>	Calculated as the natural logarithm of total employees	<b>A large company is more visible and it is supposed to be more efficient than a small company</b>
<b>FCF(FCF)</b>	<b>Calculated as the ratio of free cash flow to total assets</b>	<b>+/-</b>

**Descriptive statistics are presented in Appendix N.1**

The Pearson correlation matrix<sup>1</sup> shows significant correlations at a level of risk of 1% and 95%. We present below some examples of these relationships for:

(Ceff, ROA): negative correlation over the six years, this supports our forecast since the financial performance of the firm must be a decreasing function of its cost efficiency.

(Size, ROA): positive correlation over the six years, it is assumed that more the firm is large (in size), the more is its financial performance.

<sup>1</sup> See appendix 2

(Rpub CLT): positive correlation expected in the sense that the marketing effort is designed to attract more customers, taking into account their different tastes and requirements in the design and presentation of products.

## RESULTS

We summarize the estimation results of the three models mentioned above in the following table:

**TABLE 2: RESULTS OF MODELS ESTIMATION**

Model1	2002	2003	2004	2005	2006	2007
ASSET <sup>2</sup>	-0.002588					
INTENSC			- 0.006896**	-0.001494	-0.020860	-0.003872
EXP		-0.003661		- 0.005294***		
CEFF	-0.103357*	-0.004553	-0.041228	-0.037608	- 2.145792***	-0.093937
TURN	0.008008	0.010488	0.031135	0.029160*	0.344638**	0.002141
RADV	0.036293	0.041623	0.065135	- 0.159681***	0.775428	0.025319
DEBTS	0.086476	0.003067	-0.024563	-0.048434	0.051436	-0.070906
RD	-0.388293**	-0.339937**	-0.109232	-0.089930	-0.991966	-0.763187**
SIZE	0.002530	0.001309	0.005334			0.000279
FCF				0.009945***	0.149050***	
	0.797861***	1.291605***	0.332523***	0.854154***	1.183614	1.261270***
R-squared	0.448023	0.575220	0.250484	0.727609	0.395924	0.735131
<b>Model 2</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
ASSET	-0.000432					
INTENSC			- 0.006579**	-0.001466	-0.023499	-0.003994
EXP		-0.003059		-0.003681*		
CEFF	-0.116825*	-0.007177	-0.070753	-0.021128	- 2.272267***	-0.099355
TURN	0.004190	0.012314	0.017628	0.027463	0.294255**	0.005310
RADV	0.071529	0.047679	0.033586	- 0.182013***	0.883627	0.048995
DEBTS	0.130776*	0.004163	0.037384	-0.069170	0.128092	-0.075278
RD	-0.188998	-0.345168*	-0.199392	-0.085106	-1.134062	-0.694645**
SIZE	0.008846	0.000474	0.000865	0.010613**		0.001617
FCF					0.163239***	
	0.709134***	1.295548***	0.355706***	0.862918***	1.095978	1.295072***
COMMI	0.006242	0.000568	0.017488*	0.000910	0.016486	0.001702
DIV	-0.018730	-0.004466	-0.004048	0.005289	-0.037666	-0.002450
EMP	- 0.043004***	-0.008775	-0.010908	-0.015020	-0.028197	-0.014547
ENV	-0.003486	-0.005221	0.003679	-0.004995	0.032844	-0.000831
CUST	0.005100	0.003359	0.039252**	0.001399	0.082901	0.000574
R-squared	0.544533	0.586139	0.353678	0.749584	0.413590	0.744046
<b>Model 3</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
COMMI	0.007717	0.002594	0.021719**	0.003419	0.046148	0.004754
DIV	-0.016661	-0.001041	0.000111	0.006207	0.114041	-0.006106
EMP	- 0.041455***	-0.007474	-0.012997	-0.014559	-0.135955	-0.010947
ENV	-0.012455	-0.003504	0.000999	-0.002811	-0.022943	0.004851
CUST	0.005259	0.005127	0.040748***	0.008536	0.076877	0.001149
DEBTS	0.090372	0.009287	0.042740	-0.075385	-0.371553	-0.037395
RD	-0.149528	-0.344043*	-0.095458	-0.280503*	-0.802786	-0.709011**
SIZE	0.002120	0.004783	0.000254	0.003658	0.051636*	0.002065
FCF						
	0.784831***	1.240343***	0.386354***	1.051723***	0.530659	1.234559***
R-squared	0.487490	0.569214	0.281214	0.640399	0.131780	0.726733

\*, \*\*, \*\*\* : risk levels 1%, 5% et 10% respectivement

<sup>2</sup> The variable "asset parcimony" and its tow items are taken into account only when the significance of the model is improved,

This table shows the estimation of the three models as defined before. The first model (Model 1) is the restricted model including the control variables and those of strategy. Model 2, the full model includes control variables, relations with stakeholders and strategy variables.

We note that the fitness of the three models became weak especially in 2005. Moreover, we note that model 2 does not represent a significant improvement over that of the model 1 on the six years studied, with the exception of 2002 and 2004.

The five relations with stakeholders, are significant only for the year 2002 (the relationship with employees) and two are for the year 2004 (relations with the community and customers).

Moreover, we find that the correlation with the stakeholder (employees) is negative for all years. This is justified by the fact that the costs incurred (eg training, recruitment, salaries ...) in this axis represent costs that may affect financial performance. In addition, this relationship is significantly negative for the year 2002. This is may be explained by the economic downturn due, probably, to the attack of 2001, in the United States. In this case, the first casualty is, of course, that the employees were dismissed to reduce costs (salaries and other benefits granted to employees) to overcome financial difficulties. We, therefore, revealed that U.S. economic mentality favors at all costs, shareholders providers of financial capital at the expense of other social partners. However, the relationship with customers and the community is positive on all years. This strengthens our hypothesis which states that citizens companies can give an interest to customers and to community only to enhance their image and reputation.

We also estimated a third model includes only the variables relationships with stakeholders. This model marked a significance lower than Model 1 and Model 2, with the exception of the two years 2002 and 2004. Relationships identified as significant in both models 1 and 2 remain significant for the latter model. Taken together, these results support Hypothesis 1.

Hypothesis 2.2 states that relations with stakeholders moderate the relationship between strategy and performance. To examine this impact, interactions links were introduced in the model 5, the results of the estimation are presented in the following table:

**TABLE 3: TESTING THE MODERATING EFFECT**

<b>Model 4</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
ASSET	-0.000432					
INTENSC			- 0.006579**	-0.001466	-0.023499	-0.003994
EXP		-0.003059		-0.003681*		
CEFF	-0.116825*	-0.007177	-0.070753	-0.021128	- 2.272267***	-0.099355
TURN	0.004190	0.012314	0.017628	0.027463	0.294255**	0.005310
RADV	0.071529	0.047679	0.033586	- 0.182013***	0.883627	0.048995
DEBTS	0.130776*	0.004163	0.037384	-0.069170	0.128092	-0.075278
RD	-0.188998	-0.345168*	-0.199392	-0.085106	-1.134062	-0.694645**
SIZE	0.008846	0.000474	0.000865	0.010613**	 0.163239***	0.001617
FCF	0.709134***	 1.295548***	0.355706***	0.862918***	1.095978	1.295072***
COMMI	0.006242	0.000568	0.017488*	0.000910	0.016486	0.001702
DIV	-0.018730	-0.004466	-0.004048	0.005289	-0.037666	-0.002450
EMP	-0.043004***	-0.008775	-0.010908	-0.015020	-0.028197	-0.014547
ENV	-0.003486	-0.005221	0.003679	-0.004995	0.032844	-0.000831
CUST	0.005100	0.003359	0.039252**	0.001399	0.082901	0.000574
<b>R-squared</b>	<b>0.544533</b>	<b>0.586139</b>	<b>0.353678</b>	<b>0.749584</b>	<b>0.413590</b>	<b>0.744046</b>
<b>Model5</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
ASSET	-0.000990					
INTENSC			0.015040	-0.002712	-0.054121	0.008145
EXP		-0.004989		-0.009625**		
CEFF	-0.178477	-0.202069	-0.275689	0.423348*	-0.461575	-0.149222
RADV	0.182668	0.317832	0.211668	0.180668	1.039824	-0.192148
ROT	-0.008910	-0.095990*	0.205199*	-0.122750	0.009824	0.054414
DEBTS	0.205688*	-0.019060	0.169869*	0.003775	0.317160	0.005627

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SIZE	0.009492	0.009402	-0.022403	0.003434	-0.023170	0.002471
RD	-0.160215	-0.475316*	-0.373902	-0.022767	-1.360537**	-0.706432**
FCF	0.817625***	1.001959***	0.409281**	0.950025***	0.572388	1.131029**
COMMI	0.165483	0.005001	0.058708	-0.159861*	0.099639	0.129525
EMP	-0.340466	-0.052188	-0.066981	-0.006185	-1.130762**	-0.064718
CUST	0.257910	0.041017	0.111882	0.158125	1.772723**	0.023014
DIV	-0.050042	-0.052090	0.098683	0.136072*	2.211632***	-0.100250
ENV	0.577243	-0.045504	0.103848	-0.265229**	-0.126837	-0.016687
INTENSC-CUST	0.006972	0.005510	-0.002610	0.005609	-0.042271	-0.001937
EXP-CUST	0.000157	-0.000423	0.003408	-0.009413**	-0.005756	-0.012624
CEFF-CUST	-0.149224*	-0.099339*	0.076902	-0.232966*	-2.303320**	0.031577
ROTCUST	0.066741	-0.100198	-0.064618	0.075251*	0.258427	0.002135
RADV-CUST	0.128153	0.069897	-0.286118	0.582110***	2.232139	0.059474
INTENSC-EMP	-0.016019	0.002924	-0.000206	0.001279	0.048400	-0.003698
EXP-EMP	0.002396	0.003437	-0.002542	-0.003555	0.021318**	0.000660
CEFF-EMP	0.062994	0.108570*	0.068193	-0.121467	1.240960***	0.016197
TURN-EMP	0.076208	0.011421	-0.077716**	-0.035206	-0.202333*	-0.017674
RADV-EMP	-0.057956	0.112826	0.019726	0.106253	-1.323171	0.069800
INTENSC-ENV	0.027351	0.003236	-0.003275	0.004229	0.050848	-0.004855
EXP-ENV	0.003312	0.000875	-0.001515	0.012472**	-0.007431	0.002822
CEFF-ENV	0.097893	0.069495	-0.030778	0.145933	0.041386	0.036494
TURN-ENV	0.051319	0.034997	-0.044052	-0.003681	-0.141231	-0.014477
RADV-ENV	0.059324	0.054595	-0.048995	-0.440561**	0.417178	0.057598
INTENSC-DIV	-0.004772	0.001198	-0.004493	-0.003273	-0.039889	0.005609
EXP-DIV	0.004259	0.003556	-0.001129	0.002905	-0.036212*	-0.005289
CEFF-DIV	0.045582	0.059467	-0.013676	-0.213892*	2.454258***	0.109866
TURN-DIV	0.038209	0.052394**	-0.030596	0.030639	0.269236*	-0.001955
RADV-DIV	0.035674	-0.013427	-0.150873	-0.141091	3.126069***	0.123863
INTENSC-COMMI	-0.004092	-0.000371	-0.000368	0.003355	-0.025598	-0.008928
EXP-COMMI	-0.003520	-0.001047	-0.001171	0.002812	3.08E-05	-0.003627
CEFF-COMMI	-0.052819	-0.046486	-0.041948	0.094918	-0.038286	-0.029844
TURN-COMMI	-0.028710	0.012882	-0.008424	0.007499	0.128812	-0.026935
RADV-COMMI	-0.058515	0.117110	0.006405	-0.302790**	-0.350291	-0.066595
<b>R-squared</b>	<b>0.677345</b>	<b>0.741012</b>	<b>0.585622</b>	<b>0.911170</b>	<b>0.926814</b>	<b>0.829288</b>

\*, \*\*, \*\*\* :Risk level 1%,5% et 10% respectively

In this table, we present two regressions of (model 4: the complete model and Model 5: the model includes all the variables and all interactions between relationships with stakeholders and strategy variables) to evaluate the hypothesis which states that relationships with stakeholders moderate

(ie to say that the stakeholders are ways to increase financial performance) the Performance-Strategy link.

Model 5 shows an improvement, distinctly significant. Indeed, the addition of the interaction increases its explanatory power comparing with the full model. We note that 14 of 25 links were significant interactions including: DEP-CUST, CUST-CEFF, TURN-CUST, CUST-RADV, EXP-EMP, EMP-CEFF, TURN-EMP, EXP-ENV, RADV-ENV, EXP-DIV, DIV-CEFF, TURN-DIV, RADV-DIV, RADV-COMMI. These results confirm our second hypothesis insofar as relations with stakeholders moderated the relationship between strategy and financial performance of the firm.

An important note is to reveal the relationships with stakeholders became statistically significant in Model 5, especially for 2005. This can be explained by the integration in this year, governance as a new evaluation criterion which seems more or less, align the strategies of corporate citizenship on stakeholders interest. However, this orientation is cyclical, if not opportunistic, because later - in 2006 and 2007 - it seems more subdued.

To validate the hypothesis 3 stating that mediate strategy is in fact a means to achieve the interests of stakeholders and explain the relationship between stakeholders interest and the financial performance of the firm, we used a comparison between two models:

- Model 6, which is a restricted model including only the stakeholders variables .
- Model 7, which is a comprehensive model including strategy variables, in addition to variables in the model 6. If strategy negotiates the link between stakeholders and performance, all variables statistically significant in Model 6 should no longer be in the model 7. The following table summarizes the results of these two estimation:

**TABLE 4: TESTING THE MEDIATION EFFECT**

Model 6	2002	2003	2004	2005	2006	2007
COMMI	0.007717	0.002594	0.021719**	0.003419	0.046148	0.004754
DIV	-0.016661	-0.001041	0.000111	0.006207	0.114041	-0.006106
EMP	- 0.041455***	-0.007474	-0.012997	-0.014559	-0.135955	-0.010947
ENV	-0.012455	-0.003504	0.000999	-0.002811	-0.022943	0.004851
CUST	0.005259	0.005127	0.040748***	0.008536	0.076877	0.001149
DEBTS	0.090372	0.009287	0.042740	-0.075385	-0.371553	-0.037395
RD	-0.149528	-0.344043*	-0.095458	-0.280503*	-0.802786	-0.709011**
SIZE	0.002120	0.004783	0.000254	0.003658	0.051636*	0.002065
FCF	0.784831***	1.240343***	0.386354***	1.051723***	0.530659	1.234559***
R-squared	0.487490	0.569214	0.281214	0.640399	0.131780	0.726733
Model 7	2002	2003	2004	2005	2006	2007
ASSET	-0.000432					
INTENSC			-0.006579**	-0.001466	-0.023499	-0.003994
DEP		-0.003059		-0.003681*		
CEFF	-0.116825*	-0.007177	-0.070753	-0.021128	- 2.272267***	-0.099355
TURN	0.004190	0.012314	0.017628	0.027463	0.294255**	0.005310
RADV	0.071529	0.047679	0.033586	- 0.182013***	0.883627	0.048995
DEBTS	0.130776*	0.004163	0.037384	-0.069170	0.128092	-0.075278
RD	-0.188998	-0.345168*	-0.199392	-0.085106	-1.134062	-0.694645**
SIZE	0.008846	0.000474	0.000865	0.010613**	0.163239***	0.001617
FCF	0.709134***	1.295548***	0.355706***	0.862918***	1.095978	1.295072***
COMMI	0.006242	0.000568	0.017488*	0.000910	0.016486	0.001702
DIV	-0.018730	-0.004466	-0.004048	0.005289	-0.037666	-0.002450
EMP	- 0.043004***	-0.008775	-0.010908	-0.015020	-0.028197	-0.014547
ENV	-0.003486	-0.005221	0.003679	-0.004995	0.032844	-0.000831
CUST	0.005100	0.003359	0.039252**	0.001399	0.082901	0.000574
R-squared	0.544533	0.586139	0.353678	0.749584	0.413590	0.744046



Our results do not lend support to the model of intrinsic engagement of stakeholders since the three significant variables in Model 6 (employees, customers and community) are still in the model 7. Thus, the results do not support the model of intrinsic commitment to stakeholders.

About the correlations of the different variables considered in this study, it is interesting to note that the variable efficiency is - negatively and strongly - correlated with performance on all years. The lower the ratios, the better the efficiency of the company's business is, so the negative sign is in the expected direction. In addition, capital intensity and capital expenditures are negatively and significantly related to performance. This confirms previous studies that have shown that the intensity of capital and capital expenditures were generally negatively related to performance (Capon et al, 1990).

Overall, the results suggest that the relationship with the various stakeholders are managed as part of an instrumental approach (moderating effect on the financial performance) while our results provided no support for the intrinsic model of engagement to stakeholders (mediation effect in the management of stakeholders), which validates our overall hypothesis.

### SECTORAL ANALYSIS

We identified three sectors described as follows:

S1: Food and goods / services consumption.

S2: Goods and medical and pharmaceutical services.

S3 Technologies manufactures industrial electrical and computer products.

**TABLE 5: SAMPLE SIZE DISTRIBUTION BY YEAR AND BY SECTOR**

	2002	2003	2004	2005	2006	2007
<b>N</b>	68	73	67	68	60	70
<b>NS1</b>	21	26	27	22	18	26
<b>NS2</b>	13	16	10	12	12	13
<b>NS3</b>	34	31	30	34	30	31

To discern the sector most opportunistic -taking the interests of various stakeholders as a means to improve financial performance (instrumental approach), we propose, in what follows, an industry analysis where we apply the model of management strategic (the moderating effect) on the three areas identified in the previous section to identify the one that shows the greatest affinity with this opportunistic behavior with stakeholders. We will then make a comparison between the degrees of significance of the three regressions applied to three sectors. The table below summarizes the adjustment coefficient values of the three regressions:

**TABLE 6: SUMMARY OF CORRELATION VALUES OF COEFFICIENTS OF STRATEGIC MODELS IN THE THREE SECTORS**

SECTORS	2002	2003	2004	2005	2006	2007
<b>S1</b>	0.999693	0.999984	0.999928	0.999924	1.000000	0.999922
<b>S2</b>	0.999872	0.999998	0.998856	0.999726	0.999666	0.999997
<b>S3</b>	0.999041	0.999736	0.994191	0.999979	0.999714	0.999975

Overall, the adjustment coefficients obtained show a high values for all three sectors, which confirms the overall instrumental orientation for the various stakeholders in (top 100 companies). However, we can distinguish some differences, even if they are almost negligible, which can be a justification in the direction of the overall objective of our research.

Indeed, for the years 2002, 2003 and 2007, the instrumental social orientation is dominant within companies in sector 2(pharmaceutical business), which supports the work of Cowen, Ferreri and Parker (1987)who are linking the level of practicing social responsibility to the nature of the industry. This can be explained by several factors:

Firstly, we should know that this type of business –in sector 2-is highly regulated. Therefore, the managers of these companies are assigned and forced to show their charity towards all partners of

the firm. This response comes, therefore, from the requirement of competitiveness in sector (the phenomenon of "Free Rider"). This is why the commitment of management of these companies is taken through instrumental strategies. In this perspective, taking into account the interests of various stakeholders can be a way to improve profitability and not as a goal in itself.

In addition, it is interesting to note that this instrumental orientation dictated by the nature of the sector affiliation, may not mean full and effective involvement of these companies in the pursuit of social objectives. In fact, many abuses have been observed in the practices of some companies (such as Johnson & Johnson), despite being subject to rather strict regulations. In the American context, these companies are immune from sanctions in case of unintended consequences of their products.

Indeed, New York Times reveals repeated patterns of the pharmaceutical industry seeks by all means to escape the responsibility and fully unleash the trade, regardless of the consequences, even destroy safeguard legal may impede the maximization of profits.

And here is the article of the editorial in the New York Times: "The pharmaceutical industry is working hard to prevent consumers from obtaining legal redress injury caused by drugs approved by the federal authorities. The Supreme Court may soon proceed to their assistance, which has already rejected a lot of complaints about defective drugs and devices. If this perverse legal doctrine known as the federal preemption continues to expand, the public will be deprived of a vital tool to curb the excesses of the pharmaceutical companies and obtain documentation that reveals their machinations. We conclude that patients who have suffered injury because of dishonest manufacturers are deprived of the right to sue".

For the years 2004.2005 and 2006, companies operating in the sector of production of goods / services consumption (foodstuffs) tend, during these years, to be more opportunistic (relative to other years of study), taking advantage of the various stakeholders to increase their profitability. These companies are involved in instrumental social processes, given the nature of their activities requires a system of social values to be respected. For this purpose, these companies can take marketing action conveys ethical values. Consumers are very sensitive to social issues in their purchasing behavior for such products; therefore, to attract more consumers and increase their sales, these companies can adopt natural environment strategies.

But this does not look like breaking scandals involving Macdonald, who shows a dual social responsibility as a 'Janus' two faces. This iconic company has always wanted to assert its economic commitments, social and environmental. Nevertheless, it has been greatly criticized for unethical practices, as illustrated by the workers' complaints that relate to working conditions, abuse of employees, advertising abusive and cruel treatment of animals.

In conclusion, note that these companies, qualified by KLD as socially responsible are motivated to engage in instrumental approaches for several reasons:

- The first is that these companies can optimize their financial performance, trying to take into account social factors in their objectives functions.

- The second motivation is market advantage. Indeed, the perception of the company as socially responsible can improve its market position. The consumer is no more interested in the simple consumption, the most concerns is showed for the environment and ethics, and for that companies use, for example, the ecological and environmental marketing to highlight the effectiveness of their means of production. More importantly, the attitude consumer of the products of corporate citizenship depends on the nature of the product offered, the social aspect has no effect if they are two different products or two identical products but with different price.

Corporate citizenship can guard against risks and deal with criticism, avoiding the costs incurred by disputes with its partners. Taking into account the social aspects improves the image perceived by the community. Indeed, the reputation allows the company to increase and retain customers, as well as new markets.

- Finally, the company can increase its financial performance by reducing costs, through the manipulation of social interests.

From this point of view, we can call these corporate citizens of "corporate strategists" or proactive companies or followers. Indeed, under strong pressure from stakeholders, they make social

responsibility an opportunity to strengthen the link strategy -financial performance. Finally, the social actions of these companies can be included in interim and instrumental approaches. Moreover, these U.S. companies self-regulate themselves and set goals and how to achieve them, while engaging in unilateral commitments seems to be in generally qualitative.

## CONCLUSIONS

The purpose of this research, adopting a critical opinion, is to identify the nature of the social orientation in the American context. We hope to contribute to the literature in a virtually unexplored axis, by examining the theory of stakeholders and more specifically, under its two approaches. The first is the normative approach, examined through the mediation model of the interests of stakeholders. The second is the instrumental approach, represented by the model of moderation.

Our data and empirical results have supported and validated the latter approach. We found that only three of the five relationships (employees, customers and community) have direct effects on the financial performance since the diversity and the natural environment have only indirect effects. Therefore, it is likely that the cultures, the intentions of the leaders and state conventions in force in this respect, not encourage, empirically, such commitments. It is interesting to note that, until 2007, the U.S. government has not signed the Kyoto agreement, which indicates a lack of will pop, bolstered by the non-existence of legal texts farms and sanctions in case of violations. Neglect of the environment, diversity or other variables can be explained by the fact that these interests have not a legal contractual obligation.

Especially these firms operate in a context where the dominant mentality of private capital as it is recommended by most major U.S. investors.

We have demonstrated that the interests of stakeholders are taken into account only if they can increase financial performance. Our moderate model results indicate that associations between stakeholders -strategy, that is to say, decisions on resource allocation- financial performance are more complex than those suggested by the direct effects. In contrast, our results indicate no support for the intrinsic model. Relationships with stakeholders seem to have not an empirical impact on strategic options of corporate citizens.

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### APPENDIX .1 Descriptives statistiques

	2002	INTENS	EXP	SIZE	ASSET	CEFF	ROE	TURN
Mean		15.65822	7.497762	9.674383	6.618689	0.596460	-0.009810	0.924053
Maximum		18.38489	46.88796	12.66315	24.83285	1.461114	0.917400	2.574868
Minimum		11.99041	1.339648	6.870053	1.250304	0.086961	-4.186374	0.170247
Std. Dev.		1.474380	7.757332	1.337237	4.979837	0.259736	0.645701	0.497712
Observations		68	68	68	68	68	68	68
Mean	2003	4.363034	4.913172	9.547219	4.638103	0.678502	0.067337	1.066077
Maximum		20.29186	16.23743	12.67380	18.26465	8.531909	1.790466	3.931018
Minimum		0.776912	1.133293	6.238325	1.322254	0.000433	-6.877310	0.109388
Std. Dev.		3.746744	3.189505	1.448354	2.777831	0.988614	0.888844	0.662543
Observations		73	73	73	73	73	73	73
Mean	2004	4.261697	5.408876	9.487494	5.793147	0.532377	0.198696	1.067052
Maximum		19.53585	27.70291	12.70382	52.37137	0.867490	0.890444	2.584486
Minimum		0.344175	0.956084	6.293419	1.256664	0.000641	-0.395832	0.201310
Std. Dev.		3.841219	4.768279	1.507191	6.830136	0.208194	0.172682	0.555951
Observations		67	67	67	67	67	67	67
Mean	2005	6.568767	5.048495	8.909462	5.791348	0.524549	0.212527	0.984145
Maximum		33.96355	21.10266	11.91839	27.27879	0.951948	3.160000	3.039703
Minimum		0.668356	0.926064	5.808142	0.845906	0.112198	-0.823634	0.116164
Std. Dev.		6.414650	4.465571	1.498750	4.600303	0.198959	0.429558	0.614933
Observations		68	68	68	68	68	68	68
Mean	2006	3.728672	6.066476	9.782775	4.897483	0.534857	0.194933	1.217198
Maximum		9.803598	32.87307	12.78098	20.42048	0.862882	0.906524	3.454106
Minimum		0.492288	1.345851	5.894403	1.515447	6.46E-07	-0.432997	0.429680
Std. Dev.		2.584298	5.786653	1.428782	3.309236	0.207879	0.188305	0.686235
Observations		60	60	60	60	60	60	60
Mean	2007	4.207084	4.622209	15.53705	4.843275	0.525470	0.222971	1.391585
Maximum		15.07635	26.11200	20.62728	43.64767	0.811363	0.831294	11.58127
Minimum		0.459018	1.312510	12.19885	1.186673	0.000702	-1.130100	0.012398
Std. Dev.		2.884619	3.828434	1.605096	5.438495	0.187335	0.253866	1.563605
Observations		70	70	70	70	70	70	70

	2002	FCF	RD	RADV	ROA	COMMI	DEBTS
Mean		0.123403	0.050979	0.227037	0.081373	0.569824	0.475487
Maximum		0.313168	0.234022	0.945827	0.447522	4.028000	0.933785
Minimum		-0.165825	0.000000	0.001889	-0.392277	-0.372000	0.117166
Std. Dev.		0.083808	0.052026	0.170643	0.127488	1.152870	0.211260
Observations		68	68	68	68	68	68
Mean	2003	0.134274	0.049796	0.270137	0.101992	1.033397	0.570588
Maximum		0.322344	0.370899	0.910161	0.566507	5.000000	1.529492
Minimum		-0.005445	0.000000	0.002865	-0.209781	-0.186000	0.194367
Std. Dev.		0.068356	0.061917	0.190548	0.118426	1.499055	0.227919
Observations		73	73	73	73	73	73
Mean	2004	0.131545	0.045298	0.235557	0.135358	0.847284	0.491446
Maximum		0.330652	0.372270	0.504768	0.600970	5.000000	0.888152
Minimum		-0.688580	0.000000	0.030997	-0.005904	-0.426000	0.061420
Std. Dev.		0.128098	0.060939	0.121530	0.100512	1.361340	0.217655
Observations		67	67	67	67	67	67
Mean	2005	0.123788	0.052950	0.283071	0.115761	0.928721	0.483663
Maximum		0.343837	0.221634	0.951912	0.428764	5.993000	1.361146
Minimum		-0.131380	0.000000	0.029557	-0.397600	-0.240000	0.076136
Std. Dev.		0.087120	0.049187	0.175530	0.120340	1.483910	0.244765
Observations		68	68	68	68	68	68
Mean	2006	0.142717	0.116223	0.245993	0.212412	1.277783	0.491633
Maximum		0.938678	0.511527	0.613673	4.946629	4.577000	1.510510
Minimum		-0.033792	0.000000	0.038996	-0.025056	-0.447000	0.000664
Std. Dev.		0.126401	0.100679	0.133248	0.627376	1.193082	0.242701
Observations		60	60	60	60	60	60
Mean	2007	0.146909	0.063673	0.242183	0.128643	1.133900	0.505903

**Bouguila Sihem**

Maximum	0.545049		0.484015	0.600605	0.820175	4.443000	0.892411
Minimum	-0.081237		0.000000	0.013420	-0.750786	-0.944000	0.016835
Std. Dev.	0.099405		0.082203	0.133480	0.159532	1.276469	0.214035
Observations	70		70	70	70	70	70

	2002	DIV	EMP	ENV	CUST
Mean		0.721691	1.017338	0.569941	0.681647
Maximum		3.804000	3.073000	2.376000	2.808000
Minimum		-1.354000	-1.186000	-2.124000	-2.786000
Std. Dev.		1.079460	1.058679	0.876408	0.922310
Observations		68	68	68	68
Mean	2003	1.170041	1.198945	0.477890	0.543644
Maximum		4.662000	3.539000	2.640000	3.024000
Minimum		-1.346000	-1.412000	-2.253000	-3.783000
Std. Dev.		1.411067	1.230088	1.029897	1.048327
Observations		73	73	73	73
Mean	2004	1.217761	1.024522	0.757716	0.720269
Maximum		4.542000	3.434000	2.743000	3.917000
Minimum		-1.254000	-1.328000	-2.430000	-1.904000
Std. Dev.		1.327024	1.162367	1.013597	0.843995
Observations		67	67	67	67
Mean	2005	1.151765	0.705294	0.675397	0.649368
Maximum		4.081000	3.460000	4.223000	2.773000
Minimum		-0.481000	-0.974000	-1.198000	-0.721000
Std. Dev.		1.198709	1.248507	1.021640	0.695189
Observations		68	68	68	68
Mean	2006	1.123733	1.268583	1.320800	0.618600
Maximum		3.834000	4.069000	4.748000	1.870000
Minimum		-1.138000	-0.707000	-0.760000	-1.240000
Std. Dev.		0.986931	1.037546	1.103371	0.751752
Observations		60	60	60	60
Mean	2007	1.227929	1.249829	1.484614	0.645943
Maximum		3.883000	4.661000	4.346000	2.299000
Minimum		-1.469000	-1.462000	-0.302000	-2.921000
Std. Dev.		1.017810	1.219708	1.229906	0.938572
Observations		70	70	70	70

**APPENDIX.2 MATRIX CORRELATIONS  
CPRRELATION 2002**

	INTENSC	EXP	SIZE	ASSET	CEFF	ROE	TURN	FCF
INTENSC	1.000000	-0.140171	0.821705	0.072428	-0.069844	-0.002659	-0.246791	-0.076702
EXP	-0.140171	1.000000	-0.247385	0.808251	0.290582	0.176804	-0.301060	-0.045428
SIZE	0.821705	-0.247385	1.000000	-0.317158	0.017005	-0.064387	0.062849	-0.058108
ASSET	0.072428	0.808251	-0.317158	1.000000	0.115159	0.138852	-0.441463	-0.100969
CEFF	-0.069844	0.290582	0.017005	0.115159	1.000000	0.002102	0.014145	-0.356551
ROE	-0.002659	0.176804	-0.064387	0.138852	0.002102	1.000000	-0.155604	0.172618
TURN	-0.246791	-0.301060	0.062849	-0.441463	0.014145	-0.155604	1.000000	0.287849
FCF	-0.076702	-0.045428	-0.058108	-0.100969	-0.356551	0.172618	0.287849	1.000000
RD	-0.011937	-0.133435	-0.060775	-0.080742	-0.337978	0.071956	-0.166412	0.010635
RPUB	-0.240048	0.294857	-0.279628	0.263977	-0.135249	-0.014566	-0.114483	0.042374
ROA	-0.040060	-0.168482	0.049150	-0.198967	-0.325998	0.188444	0.270017	0.603771
DEBTS	0.147772	-0.143665	0.288088	-0.149246	0.279173	0.197117	0.191384	-0.075748
COMMI	0.195716	-0.025035	0.219941	-0.002800	-0.034489	0.032393	0.096726	0.057980
DIV	0.358333	-0.062445	0.330950	0.279173	-0.086347	-0.253750	-0.015489	-0.066506
EMP	0.178191	-0.009345	0.126079	0.021134	0.110552	0.050186	-0.122424	-0.191709
ENV	-0.113299	0.077540	0.063369	-0.069746	0.257229	0.103661	0.011154	-0.024060
CUST	-0.148364	-0.090019	-0.067854	-0.130495	0.229717	0.006160	0.095933	-0.095956

	RD	RADV	ROA	DEBTS	COMMI	DIV	EMP	ENV	CUST
INTENSC	-0.011937	-0.240048	-0.040060	0.147772	0.195716	0.358333	0.178191	-0.113299	-0.148364
EXP	-0.133435	0.294857	-0.168482	-0.143665	-0.025035	-0.062445	-0.009345	0.077540	-0.090019
SIZE	-0.060775	-0.279628	0.049150	0.288088	0.219941	0.330950	0.126079	0.063369	-0.067854
ASSET	-0.080742	0.263977	-0.198967	-0.149246	-0.002800	0.058373	0.021134	-0.069746	-0.130495
CEFF	-0.337978	-0.135249	-0.325998	0.279173	-0.034489	-0.086347	0.110552	0.257229	0.229717
ROE	0.071956	-0.014566	0.188444	0.197117	0.032393	-0.253750	0.050186	0.103661	0.006160
TURN	-0.166412	-0.114483	0.270017	0.191384	0.096726	-0.015489	-0.122424	0.011154	0.095933
FCF	0.010635	0.042374	0.603771	-0.075748	0.057980	-0.066506	-0.191709	-0.024060	-0.095956
RD	1.000000	0.066594	-0.109976	-0.215357	-0.165147	0.021754	0.186966	-0.196234	-0.058843

### Bougula Sihem

RADV	0.066594	1.000000	0.044195	-0.029007	0.161302	0.029780	-0.406780	0.082066	0.054217
ROA	-0.109976	0.044195	1.000000	0.101646	0.109621	-0.110773	-0.383026	-0.011289	-0.045216
DEBTS	-0.215357	-0.029007	0.101646	1.000000	0.156551	0.078021	0.107330	0.114096	-0.085723
COMMI	-0.165147	0.161302	0.109621	0.156551	1.000000	0.196214	-0.322954	-0.113981	-0.256068
DIV	0.021754	0.029780	-0.110773	0.078021	0.196214	1.000000	-0.082566	-0.172789	-0.169100
EMP	0.186966	-0.406780	-0.383026	0.107330	-0.322954	-0.082566	1.000000	-0.035943	0.008217
ENV	-0.196234	0.082066	-0.011289	0.114096	-0.113981	-0.172789	-0.035943	1.000000	-0.024596
CUST	-0.058843	0.054217	-0.045216	-0.085723	-0.256068	-0.169100	0.008217	-0.024596	1.000000

### CORRELATIONS 2003

	INTENSC	EXP	SIZE	ASSET	CEFF	ROE	TURN	FCF
INTENSC	1.000000	0.278418	-0.079463	0.834241	-0.135301	0.127117	-0.411060	-0.106307
EXP	0.278418	1.000000	0.069369	0.761865	0.124649	0.003612	-0.329954	0.032755
SIZE	-0.079463	0.069369	1.000000	-0.013765	0.220735	0.095568	-0.326246	-0.009248
ASSET	0.834241	0.761865	-0.013765	1.000000	-0.019686	0.087802	-0.466645	-0.052889
CEFF	-0.135301	0.124649	0.220735	-0.019686	1.000000	0.066072	-0.102622	-0.111679
ROE	0.127117	0.003612	0.095568	0.087802	0.066072	1.000000	-0.215505	0.158123
TURN	-0.411060	-0.329954	-0.326246	-0.466645	-0.102622	-0.215505	1.000000	0.114172
FCF	-0.106307	0.032755	-0.009248	-0.052889	-0.111679	0.158123	0.114172	1.000000
RD	-0.014570	0.051760	0.026105	0.019890	-0.027523	0.144271	-0.151178	0.024966
RADV	-0.068871	0.052990	0.165571	-0.016025	0.368925	0.187715	-0.384235	0.163246
ROA	-0.035932	-0.071532	0.018914	-0.065299	-0.149890	0.317150	0.125715	0.728824
DEBTS	-0.295242	-0.270691	0.161534	-0.354515	-0.093500	-0.201279	0.235894	-0.035989
COMMI	0.019004	0.025805	0.181535	0.027631	-0.156493	0.116052	-0.095255	0.164391
DIV	0.269174	0.027468	0.236881	0.197300	-0.319081	0.170037	-0.220998	-0.028347
EMP	0.017258	0.107178	0.032498	0.073170	0.027615	-0.054730	-0.104291	-0.005785
ENV	0.022500	-0.101341	-0.224178	-0.043006	-0.026933	0.005631	0.081013	0.002326
CUST	-0.242017	-0.220990	0.064002	-0.290087	0.178278	0.058488	0.100134	0.002267

	RD	RADV	ROA	DEBTS	COMMI	DIV	EMP	ENV	CUST
INTENSC	-0.014570	-0.068871	-0.035932	-0.295242	0.019004	0.269174	0.017258	0.022500	-0.242017
EXP	0.051760	0.052990	-0.071532	-0.270691	0.025805	0.027468	0.107178	-0.101341	-0.220990
SIZE	0.026105	0.165571	0.018914	0.161534	0.181535	0.236881	0.032498	-0.224178	0.064002
ASSET	0.019890	-0.016025	-0.065299	-0.354515	0.027631	0.197300	0.073170	-0.043006	-0.290087
CEFF	-0.027523	0.368925	-0.149890	-0.093500	-0.156493	-0.319081	0.027615	-0.026933	0.178278
ROE	0.144271	0.187715	0.317150	-0.201279	0.116052	0.170037	-0.054730	0.005631	0.058488
TURN	-0.151178	-0.384235	0.125715	0.235894	-0.095255	-0.220998	-0.104291	0.081013	0.100134
FCF	0.024966	0.163246	0.728824	-0.035989	0.164391	-0.028347	-0.005785	0.002326	0.002267
RD	1.000000	0.031125	-0.155552	-0.094219	-0.095904	0.163493	-0.070468	-0.065005	0.061272
RADV	0.031125	1.000000	0.052524	-0.087546	0.031941	0.020135	-0.108921	-0.104310	-0.021713
ROA	-0.155552	0.052524	1.000000	0.021134	0.178276	-0.051896	-0.068323	-0.005368	0.023400
DEBTS	-0.094219	-0.087546	0.021134	1.000000	-0.007103	0.148254	0.019777	-0.296877	0.038349
COMMI	-0.095904	0.031941	0.178276	-0.007103	1.000000	0.250510	-0.286049	-0.285167	-0.231378
DIV	0.163493	0.020135	-0.051896	0.148254	0.250510	1.000000	-0.139875	-0.249138	-0.220612
EMP	-0.070468	-0.108921	-0.068323	0.019777	-0.286049	-0.139875	1.000000	-0.047528	0.064902
ENV	-0.065005	-0.104310	-0.005368	-0.296877	-0.285167	-0.249138	-0.047528	1.000000	0.085166
CUST	0.061272	-0.021713	0.023400	0.038349	-0.231378	-0.220612	0.064902	0.085166	1.000000

### CORRELATION 2004

	INTENSC	EXP	SIZE	ASSET	CEFF	ROE	TURN	FCF	RD
INTENSC	1.000000	0.105576	-0.161617	0.133077	-0.027054	0.019149	-0.244637	-0.202450	0.097837
EXP	0.105576	1.000000	-0.085683	0.188350	0.041654	-0.042518	-0.124099	-0.044503	-0.139697
SIZE	-0.161617	-0.085683	1.000000	-0.188441	0.155281	0.187463	-0.003826	0.140819	0.025955
ASSET	0.133077	0.188350	-0.188441	1.000000	-0.232302	-0.118237	-0.448473	-0.163745	-0.155695
CEFF	-0.027054	0.041654	0.155281	-0.232302	1.000000	-0.241828	0.153305	-0.415111	-0.288849
ROE	0.019149	-0.042518	0.187463	-0.118237	-0.241828	1.000000	0.089480	0.362219	0.293122
TURN	-0.244637	-0.124099	-0.003826	-0.448473	0.153305	0.089480	1.000000	0.291790	0.036405
FCF	-0.202450	-0.044503	0.140819	-0.163745	-0.415111	0.362219	0.291790	1.000000	0.253845
RD	0.097837	-0.139697	0.025955	-0.155695	-0.288849	0.293122	0.036405	0.253845	1.000000
RADV	-0.026970	0.051905	-0.015068	-0.128066	-0.464702	0.270744	-0.163662	0.272873	0.133874
ROA	0.093641	-0.049511	-0.061715	-0.076286	-0.313142	0.439301	0.156687	0.456463	0.094365
DEBTS	0.001092	-0.016804	0.246802	-0.169065	0.257913	0.279061	0.126546	-0.101722	0.020911
COMMI	0.128362	-0.195703	0.294706	-0.113943	-0.093508	0.296283	0.013722	0.137727	-0.025716
DIV	0.190801	-0.123134	0.354808	-0.158612	-0.165681	0.216158	-0.080923	0.182979	0.249218
EMP	-0.015668	0.339839	0.018811	0.166789	0.073600	-0.341370	-0.018925	-0.087297	-0.035953
ENV	-0.165051	0.023295	-0.197844	0.093122	0.188912	-0.199051	0.052464	0.051982	-0.068361
CUST	-0.069844	0.084483	-0.066359	-0.043830	0.055271	0.020939	0.120327	-0.012856	0.189001

	RADV	ROA	DEBTS	COMMI	DIV	EMP	ENV	CUST
INTENSC	-0.026970	0.093641	0.001092	0.128362	0.190801	-0.015668	-0.165051	-0.069844
EXP	0.051905	-0.049511	-0.016804	-0.195703	-0.123134	0.339839	0.023295	0.084483

**Bougoula Sihem**

SIZE	-0.015068	-0.061715	0.246802	0.294706	0.354808	0.018811	-0.197844	-0.066359
ASSET	-0.128066	-0.076286	-0.169065	-0.113943	-0.158612	0.166789	0.093122	-0.043830
CEFF	-0.464702	-0.313142	0.257913	-0.093508	-0.165681	0.073600	0.188912	0.055271
ROE	0.270744	0.439301	0.279061	0.296283	0.216158	-0.341370	-0.199051	0.020939
TURN	-0.163662	0.156687	0.126546	0.013722	-0.080923	-0.018925	0.052464	0.120327
FCF	0.272873	0.456463	-0.101722	0.137727	0.182979	-0.087297	0.051982	-0.012856
RD	0.133874	0.094365	0.020911	-0.025716	0.249218	-0.035953	-0.068361	0.189001
RADV	1.000000	0.142985	0.113985	0.270742	0.291958	-0.283893	-0.126239	-0.097580
ROA	0.142985	1.000000	-0.115120	0.201576	0.040410	-0.032970	-0.089637	0.194962
DEBTS	0.113985	-0.115120	1.000000	0.144263	0.127796	-0.152400	-0.108070	-0.281975
COMMI	0.270742	0.201576	0.144263	1.000000	0.282467	-0.390349	-0.228316	-0.274460
DIV	0.291958	0.040410	0.127796	0.282467	1.000000	-0.169981	-0.234799	-0.212751
EMP	-0.283893	-0.032970	-0.152400	-0.390349	-0.169981	1.000000	-0.048676	0.053355
ENV	-0.126239	-0.089637	-0.108070	-0.228316	-0.234799	-0.048676	1.000000	-0.050771
CUST	-0.097580	0.194962	-0.281975	-0.274460	-0.212751	0.053355	-0.050771	1.000000

**CORRELATION 2005**

	INTENSC	EXP	SIZE	ASSET	CEFF	ROE	TURN	FCF
INTENSC	1.000000	0.400836	-0.435976	0.750878	0.005162	-0.270294	-0.316683	-0.344634
EXP	0.400836	1.000000	-0.100855	0.706936	-0.201732	-0.209593	-0.247395	-0.059706
SIZE	-0.435976	-0.100855	1.000000	-0.296537	0.142283	0.311550	0.172957	0.193260
ASSET	0.750878	0.706936	-0.296537	1.000000	-0.124803	-0.342629	-0.523653	-0.429612
CEFF	0.005162	-0.201732	0.142283	-0.124803	1.000000	-0.019068	0.439757	-0.323244
ROE	-0.270294	-0.209593	0.311550	-0.342629	-0.019068	1.000000	0.183342	0.217937
TURN	-0.316683	-0.247395	0.172957	-0.523653	0.439757	0.183342	1.000000	0.391343
FCF	-0.344634	-0.059706	0.193260	-0.429612	-0.323244	0.217937	0.391343	1.000000
RD	-0.092192	0.092266	-0.019123	-0.096341	-0.384280	-0.070930	-0.068971	0.371926
RADV	0.496995	0.198063	-0.322395	0.477167	-0.240270	-0.260346	-0.339085	-0.355845
ROA	-0.471919	-0.317101	0.155023	-0.607921	-0.173978	0.312178	0.422947	0.769630
DEBTS	0.223843	0.031064	0.284815	0.108947	0.446183	0.280278	0.302983	-0.288622
COMMI	-0.204900	-0.115300	0.442779	-0.234734	0.013497	0.183268	0.256272	0.276002
DIV	-0.109688	-0.141581	0.437556	-0.148775	-0.090113	0.359720	-0.052168	0.067367
EMP	-0.089081	0.229196	0.090137	0.114299	-0.104865	0.011720	-0.124163	0.118535
ENV	-0.080603	-0.013735	0.176322	-0.060414	0.136571	-0.031589	0.181157	0.092409
CUST	-0.099857	-0.104771	0.117706	-0.149264	0.103594	-0.009566	0.064771	0.188090

	RD	RADV	ROA	DEBTS	COMMI	DIV	EMP	ENV	CUST
INTENSC	-0.092192	0.496995	-0.471919	0.223843	-0.204900	-0.109688	-0.089081	-0.080603	-0.099857
EXP	0.092266	0.198063	-0.317101	0.031064	-0.115300	-0.141581	0.229196	-0.013735	-0.104771
SIZE	-0.019123	-0.322395	0.155023	0.284815	0.442779	0.437556	0.090137	0.176322	0.117706
ASSET	-0.096341	0.477167	-0.607921	0.108947	-0.234734	-0.148775	0.114299	-0.060414	-0.149264
CEFF	-0.384280	-0.240270	-0.173978	0.446183	0.013497	-0.090113	-0.104865	0.136571	0.103594
ROE	-0.070930	-0.260346	0.312178	0.280278	0.183268	0.359720	0.011720	-0.031589	-0.009566
TURN	-0.068971	-0.339085	0.422947	0.302983	0.256272	-0.052168	-0.124163	0.181157	0.064771
FCF	0.371926	-0.355845	0.769630	-0.288622	0.276002	0.067367	0.118535	0.092409	0.188090
RD	1.000000	-0.064977	0.198152	-0.294540	-0.054252	-0.176272	0.019203	0.012445	0.144559
RADV	-0.064977	1.000000	-0.580217	0.176094	-0.035459	-0.049252	-0.280161	-0.042257	-0.185941
ROA	0.198152	-0.580217	1.000000	-0.288668	0.271789	0.132012	-0.027449	0.061994	0.169411
DEBTS	-0.294540	0.176094	-0.288668	1.000000	0.240988	0.177561	-0.226280	0.130194	-0.093269
COMMI	-0.054252	-0.035459	0.271789	0.240988	1.000000	0.313191	-0.128761	0.072866	-0.078759
DIV	-0.176272	-0.049252	0.132012	0.177561	0.313191	1.000000	-0.043352	0.152966	-0.107307
EMP	0.019203	-0.280161	-0.027449	-0.226280	-0.128761	-0.043352	1.000000	-0.147337	0.084791
ENV	0.012445	-0.042257	0.061994	0.130194	0.072866	0.152966	-0.147337	1.000000	-0.052769
CUST	0.144559	-0.185941	0.169411	-0.093269	-0.078759	-0.107307	0.084791	-0.052769	1.000000

**CORRELATION 2006**

	INTENSC	EXP	SIZE	ASSET	CEFF	ROE	TURN	FCF
INTENSC	1.000000	0.121661	-0.070821	0.374087	-0.254718	-0.077802	-0.314031	0.251266
EXP	0.121661	1.000000	-0.109145	0.599557	0.003978	-0.064559	-0.149050	0.011305
SIZE	-0.070821	-0.109145	1.000000	0.001899	0.117410	0.110186	-0.043834	-0.038259
ASSET	0.374087	0.599557	0.001899	1.000000	-0.110816	-0.229531	-0.476521	0.017864
CEFF	-0.254718	0.003978	0.117410	-0.110816	1.000000	-0.080852	0.295040	-0.337847
ROE	-0.077802	-0.064559	0.110186	-0.229531	-0.080852	1.000000	0.072156	0.116724
TURN	-0.314031	-0.149050	-0.043834	-0.476521	0.295040	0.072156	1.000000	0.326989
FCF	0.251266	0.011305	-0.038259	0.017864	-0.337847	0.116724	0.326989	1.000000
RD	-0.060158	-0.009212	0.104267	0.028466	-0.071230	-0.008052	-0.221884	-0.001828
RADV	0.183573	-0.155651	-0.375084	-0.127141	-0.634011	0.019366	-0.155002	0.158933
ROA	-0.151355	-0.039559	0.193131	-0.139458	-0.379629	0.045327	0.139404	0.052732
DEBTS	-0.013689	-0.119064	0.186082	-0.156367	0.179564	-0.029354	0.293006	0.321308
COMMI	0.003612	-0.018655	0.290482	-0.019201	0.039197	0.100309	-0.081911	-0.077905
DIV	0.091378	-0.266914	0.575117	-0.125005	-0.184390	0.199412	-0.140072	0.016135
EMP	0.305966	0.262205	-0.016422	0.410590	0.002389	-0.096798	-0.265225	0.133502
ENV	0.007136	-0.089843	0.081087	-0.077455	0.221993	0.223661	0.140121	-0.205271



**Bougula Sihem**

CUST	-0.026406	0.090166	-0.326178	-0.089275	0.029625	0.126319	0.037120	-0.038693
GOV	-0.103615	0.136177	0.000828	0.074254	0.173835	-0.091611	0.042749	-0.276718

	RD	RADV	ROA	DEBTS	COMMI	DIV	EMP	ENV	CUST
INTENSC	-0.060158	0.183573	-0.151355	-0.013689	0.003612	0.091378	0.305966	0.007136	-0.026406
EXP	-0.009212	-0.155651	-0.039559	-0.119064	-0.018655	-0.266914	0.262205	-0.089843	0.090166
SIZE	0.104267	-0.375084	0.193131	0.186082	0.290482	0.575117	-0.016422	0.081087	-0.326178
ASSET	0.028466	-0.127141	-0.139458	-0.156367	-0.019201	-0.125005	0.410590	-0.077455	-0.089275
CEFF	-0.071230	-0.634011	-0.379629	0.179564	0.039197	-0.184390	0.002389	0.221993	0.029625
ROE	-0.008052	0.019366	0.045327	-0.029354	0.100309	0.199412	-0.096798	0.223661	0.126319
TURN	-0.221884	-0.155002	0.139404	0.293006	-0.081911	-0.140072	-0.265225	0.140121	0.037120
FCF	-0.001828	0.158933	0.052732	0.321308	-0.077905	0.016135	0.133502	-0.205271	-0.038693
RD	1.000000	-0.170794	-0.137626	0.203343	0.077321	0.148667	0.107407	0.044561	0.025286
RADV	-0.170794	1.000000	0.044805	0.036078	0.115892	0.178512	-0.168526	0.005540	-0.074802
ROA	-0.137626	0.044805	1.000000	-0.080572	-0.037718	0.131467	-0.191583	-0.034351	-0.008526
DEBTS	0.203343	0.036078	-0.080572	1.000000	0.173640	0.203488	-0.027944	0.121463	-0.116702
COMMI	0.077321	0.115892	-0.037718	0.173640	1.000000	0.463045	-0.018720	0.332931	-0.281554
DIV	0.148667	0.178512	0.131467	0.203488	0.463045	1.000000	-0.023479	0.218430	-0.397830
EMP	0.107407	-0.168526	-0.191583	-0.027944	-0.018720	-0.023479	1.000000	-0.125690	0.167416
ENV	0.044561	0.005540	-0.034351	0.121463	0.332931	0.218430	-0.125690	1.000000	-0.099468
CUST	0.025286	-0.074802	-0.008526	-0.116702	-0.281554	-0.397830	0.167416	-0.099468	1.000000

Pearson CORRELATION 2007

	INTENSC	EXP	SIZE	ASSET	CEFF	ROE	TURN	FCF
INTENSC	1.000000	0.245426	0.121779	0.603666	-0.187830	-0.216846	-0.273020	-0.032053
EXP	0.245426	1.000000	-0.050785	0.414983	-0.220837	-0.097065	-0.060762	0.019235
SIZE	0.121779	-0.050785	1.000000	-0.052332	0.000562	0.125592	-0.187230	-0.061145
ASSET	0.603666	0.414983	-0.052332	1.000000	-0.038490	-0.162618	-0.239942	-0.144199
CEFF	-0.187830	-0.220837	0.000562	-0.038490	1.000000	-0.048713	-0.027641	-0.379960
ROE	-0.216846	-0.097065	0.125592	-0.162618	-0.048713	1.000000	0.087968	0.553855
TURN	-0.273020	-0.060762	-0.187230	-0.239942	-0.027641	0.087968	1.000000	0.192596
FCF	-0.032053	0.019235	-0.061145	-0.144199	-0.379960	0.553855	0.192596	1.000000
RD	0.125888	-0.097498	-0.046048	-0.079868	-0.078814	-0.408026	0.098957	0.029187
RADV	-0.152187	0.038151	-0.146613	-0.044543	-0.374145	0.102112	-0.210142	0.025798
ROA	-0.115387	-0.006214	-0.005334	-0.102225	-0.156965	0.811177	0.102465	0.751648
DEBTS	-0.381189	-0.169355	0.068836	-0.166220	0.314776	0.299675	0.123247	-0.179832
COMMI	-0.036049	-0.101470	0.295535	-0.187140	-0.187890	-0.037658	0.149987	0.043102
DIV	-0.062649	-0.165588	0.526711	-0.036745	-0.062843	0.145264	-0.206306	-0.126413
EMP	0.154089	0.078106	0.093410	-0.169044	-0.010437	-0.157569	-0.143467	0.157265
ENV	-0.155924	-0.151955	0.150974	-0.065230	0.281616	-0.094518	-0.070559	-0.298743
CUST	0.064276	-0.097110	-0.280568	0.015925	0.119643	-0.089594	0.200026	-0.045588

	RD	RADV	ROA	DEBTS	COMMI	DIV	EMP	ENV	CUST
INTENSC	0.125888	-0.152187	-0.115387	-0.381189	-0.036049	-0.062649	0.154089	-0.155924	0.064276
EXP	-0.097498	0.038151	-0.006214	-0.169355	-0.101470	-0.165588	0.078106	-0.151955	-0.097110
SIZE	-0.046048	-0.146613	-0.005334	0.068836	0.295535	0.526711	0.093410	0.150974	-0.280568
ASSET	-0.079868	-0.044543	-0.102225	-0.166220	-0.187140	-0.036745	-0.169044	-0.065230	0.015925
CEFF	-0.078814	-0.374145	-0.156965	0.314776	-0.187890	-0.062843	-0.010437	0.281616	0.119643
ROE	-0.408026	0.102112	0.811177	0.299675	-0.037658	0.145264	-0.157569	-0.094518	-0.089594
TURN	0.098957	-0.210142	0.102465	0.123247	0.149987	-0.206306	-0.143467	-0.070559	0.200026
FCF	0.029187	0.025798	0.751648	-0.179832	0.043102	-0.126413	0.157265	-0.298743	-0.045588
RD	1.000000	-0.155648	-0.367735	-0.174623	0.204683	0.027935	0.338944	0.053004	0.083619
RPUB	-0.155648	1.000000	0.041748	-0.026123	0.193959	0.247614	-0.225722	0.063784	-0.288948
ROA	-0.367735	0.041748	1.000000	-0.100946	-0.082766	-0.137686	-0.073002	-0.245110	-0.069603
DEBTS	-0.174623	-0.026123	-0.100946	1.000000	-0.000557	0.300091	-0.196897	0.211622	0.008285
COMMI	0.204683	0.193959	-0.082766	-0.000557	1.000000	0.303382	0.199148	0.361307	-0.305070
DIV	0.027935	0.247614	-0.137686	0.300091	0.303382	1.000000	-0.081023	0.296534	-0.231571
EMP	0.338944	-0.225722	-0.073002	-0.196897	0.199148	-0.081023	1.000000	0.074504	0.123582
ENV	0.053004	0.063784	-0.245110	0.211622	0.361307	0.296534	0.074504	1.000000	-0.109000
CUST	0.083619	-0.288948	-0.069603	0.008285	-0.305070	-0.231571	0.123582	-0.109000	1.000000