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The impact of societal performance on the financial performance of companies listed on the Casablanca Stock Exchange: explanation by accounting and stock market measures

L'impact de la performance sociétale sur la performance financière des entreprises cotées à la bourse de Casablanca : explication par des mesures comptables et boursières

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Abstract

The problem of the link between Social Performance (SP) and Financial Performance (FP) has attracted the attention of several researchers in several fields. A review of the literature on this relationship is subject to considerable controversy, mainly due to the confusion surrounding attempts to operationalize social performance, the lack of uniformity in the assessment of financial performance, and the methodological anomalies found in the analysis of the relationship.

Several studies have been conducted to prove the existence or non-existence of this link, with mixed results.

This article attempts to shed light on this issue while presenting a synthesis of the work that has focused on verifying this causal link between the two constructs. The results obtained raise, on the one hand, the existence of a link between SP and FP and, on the other hand, the absence of a relationship.

Keywords :

Societal performance, financial performance, linkage, accounting measures, stock market measures.

Résumé

La problématique du lien entre la Performance Sociale (PSE) et la Performance Financière (PF) a interpelé l'attention de plusieurs chercheurs dans plusieurs domaines. L'examen de la littérature portant sur cette relation se trouve sujette à de vives controverses liées principalement aux confusions entourant les tentatives d'opérationnalisation de la performance sociale, à l'absence d'uniformité en matière d'évaluation de la performance financière ainsi qu'aux anomalies méthodologiques constatés lors de l'analyse du lien. Plusieurs études ont été conduites afin de prouver l'existence ou l'inexistence de ce lien et qui ont donné lieu à des résultats mitigés.

Cet article tente d'apporter un éclairage à cette problématique tout en présentant une synthèse des travaux qui se sont intéressés à la vérification de ce lien de causalité entre les deux construits. Les résultats obtenus soulèvent d'une part l'existence d'un lien entre la PSE et la PF et d'autre part, l'absence d'une relation.

Mots clés :

Performance sociétale, performance financière, lien, mesures comptables, mesures boursières.

Introduction

Today, the issue of the impact of societal performance on financial performance is one of the most widely debated topics. It developed in the United States in the 1970s following the ideological controversies raised by Friedman (1962; 1970) against social performance.

The first problematizations related to this questioning are attributed to Moskowitz (1972) and symbolized the beginning of a structured reflection seeking to frame the question. Since then, numerous studies, with an accelerated rate of publication, have made it possible to articulate the empirical knowledge around this problem (Gond, 2006). Indeed, a review of the literature on the relationship between the two constructs is subject to considerable controversy, mainly due to the confusion surrounding attempts to operationalize social performance, the lack of uniformity in the assessment of financial performance, and methodological pitfalls in the analysis of the relationship (Griffin and Mahon, 1997; McWilliams and Siegel, 1997; Griffin, 2000; Margolis and Walsh, 2003). Certainly, several tests have been conducted at this level to prove the existence or non-existence of this link. However, research in this area has yielded mixed results. Some studies demonstrate the impact of social performance on financial performance, while other studies show a weak or non-existent link (Allouche and Laroche, 2005).

Despite the large body of literature on this topic, many questions persist and several blind spots recur in empirical investigations. This article proposes to contribute to the clarification of the nature of the link between PES and FP by answering the following question:

Is there a relationship between CSR practices adopted by companies and financial performance?

Indeed, the literature on the effect of societal performance on financial performance is not very consensual on the nature of this effect. The work provided suffers from several methodological and conceptual shortcomings that strongly compromise its scope and validity. Moreover, this issue has been widely discussed in the Western and essentially American context, it remains unexplored in the Arab world and in particular the Maghreb.

To answer our problem, this work will be structured as follows:

In the first part, we will define the concepts of social performance and financial performance and then focus on the results of research that has studied the impact of social performance on financial performance.

The second part will present our research model, the methodology followed and the results obtained, and will discuss and comment on them in relation to previous work, so as to draw out all the lessons learned and their contributions to the debate on the relationship between social performance and financial performance.

1. Theoretical corpus on social performance

The notion of social performance originates from the notion of social responsibility. It is part of a long tradition of reflection on social responsibility and refers to the evaluation of a company's capacity to manage its social responsibility (Carroll, 1999). Indeed, academic research on social responsibility first questions the limits of the notion of social responsibility by seeking, on the one hand, to evaluate its boundaries, and on the other hand, to identify its foundations. This research then focuses on examining the ways in which companies manage this responsibility from a more managerial and less philosophical point of view, through the notion of social sensitivity, which reflects the company's ability to prevent and manage societal issues in its environment (Frederick, 1960).

Thus, the notion of social performance is presented both as a synthesis of previous work, with a view to reconciling the two previous perspectives, and as an extension of this reflection by placing at the heart of the concerns the problem of measuring the actions concretely deployed by the companies (Gond, 2003).

Societal performance presents itself as a unifying concept, a conceptual synthesis and a reconciliation of previously divergent approaches within the research field (Aggeri et al, 2005).

A few major models have shaped the thinking around the concept of social performance and have served as reference points in this regard. These include Carroll (1979), Wood (1991), Clarkson (1995), Aupperle et al (1985), and Quazi and O'Brien (2000). First, according to Carroll (1979), ESP is defined as the interface of three levels: the principles of social responsibility (economic, legal, ethical and discretionary), the philosophies of response to societal issues and the societal domains in which the company is involved (Gond, 2003).

These three dimensions of ESP have been explained by two authors, Germain and Trébucq (2004) as follows:

- The first dimension corresponds to the ends pursued by the company through social responsibility. This implies not only the imperatives of economic profitability and compliance with legal obligations, but also the use of ethical behavior, in accordance with social norms and expectations, as well as a more voluntary and discretionary element of philanthropic inspiration.

- The second dimension is societal sensitivity. It is measured according to four possible postures summarized by the RCAP scale (refusal, contestation, adaptation and pro-action or anticipation). In the refusal position, the company opposes any changes. When it chooses to contest, it generally sticks to the legal minimum. Adaptation represents a more progressive posture. Finally, anticipation allows the company to obtain an original positioning, as a leader and avant-gardist.
- The third dimension provides a non-exhaustive list of areas in which responsibility can be exercised. Depending on the time period and the company's sector of activity, the issues may be environmental, social, shareholder issues or product quality and safety.

For her part, Donna Wood (2001) identifies corporate social performance (CSP) as a business configuration in which social responsibility principles, socially responsive processes, and observable programs, policies, and outcomes work together to build links between business and society. In his definition, Wood makes it clear that "companies are part of a network of stakeholders at the center of a web of rights and duties, not just interests. The author concludes that "social performance theory must take into account the role and relationships of stakeholders, the importance of values within and outside the firm, and the nature of the power relationships of social actors" (Wood, 2001).

Inspired by Schultz, Wood confirms that this notion must be put in a global context where "managers will have to ensure the protection of human rights to stabilize economic conditions" (Wood, 2004).

Like McDonough and Braungart, Wood predicts that "sound environmental practices will change our habits toward products and processes (Wood, 2004).

According to the author, social performance should guide business practices, communities and even nations towards a more promising future. In addition, Clarkson takes a more pragmatic approach to social performance. To this end, he proposes to mobilize the analytical framework of stakeholder theory to develop a model of social performance. The latter is presented as "the ability to manage one's stakeholders" in such a way as to satisfy them.

2. The concept of financial performance

Initially, measures of an organization's overall performance were developed on the basis of financial criteria. For a long time, the notion of performance was reduced to its financial dimension, which consisted of achieving the profitability demanded by shareholders in relation to sales and market share (Dohou and Berland, 2007).

Generally, the financial performance of organizations in all sectors is seen as an indicator of their well-being, their raison d'être and the quality of their management and governance. It is an indicator of the profitability and good health of each organization, and therefore of its chances of survival in the medium and long term. (Alami, Boughaba and El idrissi, 2021). The assessment of overall performance is done through financial performance and is perceived as the main measure of interest to shareholders.

Financial performance is the ability of an organization to make a profit, to be profitable by adding value and by achieving its fixed objectives based on a strategy. It can be defined as the achievement of good profitability, satisfactory growth, or as the creation of shareholder value (Guérard S. 2006). Financial performance ensures the stability of the firm's financing, which will subsequently limit its recourse to borrowing. (Ibenrissoul and Kamoune, 2022).

According to P. Paucher, a successful firm is one that invests on a regular basis, such as immediate expenditures made with a view to future revenues, to ensure its survival and growth. However, the author adds that the financing of these immediate expenses will only be possible if the firm has previously realized a monetary surplus or savings. The financial performance[1] of the company depends on the management of the financial resources available to the company. This management determines the profitability of the funds originally invested and the renewal of the most profitable operations for the company.

The financial performance can be like the income from holding the shares. The shareholders are the last link in the chain to benefit from the company's activity (Sahut et al, 2003).

3. Summary of empirical work on the link between social performance and financial performance

In recent decades, the issue of the possible link between social and financial performance has increased the number of studies attempting to synthesize the results obtained from the empirical literature on this issue. In this respect, let us mention the work carried out by Ullman (1985), Griffin and Mahon (1997), Margolis and Walsh (2003) and Allouche and Laroche (2005). The synthesis prepared by Margolis and Walsh (2003) seems to be the most exhaustive and the most abundant insofar as it declines the nature of the link according to whether social performance is the dependent or independent variable in the analysis.

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[1] GHOZLEN. O, « Contribution à l'étude des déterminants de la performance de l'entreprise : impact de la création de valeur pour le client sur la performance des entreprises hôtelières en Tunisie », Thèse en Gestion et management, Université Côte d'Azur, 2016, p.24.

However, it should be noted that the methodologies adopted to present the results appear to be inconsistent[2]. Some authors propose results broken down according to the measure of ESP (Ullman, 1985), others propose them according to whether ESP is a dependent or independent variable (Margolis and Walsh, 2003), while the majority of research is limited to a simple indication of the relationship without specifying which variable influences the other (Griffin and Mahon, 1997; Orlitzky et al, 2003).

Table N°1 : Summary of the main assessments of the relationship between social performance and financial performance

Nature du lien	**Ullman (1985)**	**Pava et Krausz (1996)**	**Griffin et Mahon (1997)**	**Roman et al., (1999)**	**Margolis et Walsh (2003)**		**Orlitzky et al., (2003)**	**Allouche et Laroche (2005)**
Positive link	8	12	33	33	54	16*	27	41
Negative link	1	1	20	5	7	-	2	8
Non-significant link	4	8	9	14	28	3*	-	34
Mixed link	-	-	-	-	20	3*	23	-
Number of works analyzed	13	21	62	52	109	22*	52	82

** Social performance as an independant variable*

Source : Inspired by Gond, 2006, Allouche & Laroche, 2005

In addition, a detailed synthesis of 26 published articles was carried out for the period from 1975 to 2004 with the objective of deepening the analysis of the empirical results.

This has made it possible to highlight, on the one hand, the evolution of concerns on the subject, and on the other hand, the methodologies deployed, more specifically, the modes of apprehending social performance and financial performance (Boussoura, 2012).

This synthesis was inspired by a study provided by Gond (2006) who deepened his analysis by studying the temporal evolution of this research.

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[2] BOUSSOURA. E, « Dimension institutionnelle et finalités de la performance sociétale de l'entreprise en Tunisie », Thèse de Doctorat en sciences de gestion, Université de Bourgogne, 2012.

The survey was conducted by the author over the period from 1972 (when the first study by Moskowitz was published in 1972) to 2002.

The author uses a distribution of periods according to regular five-year intervals. Thus, the results of 109 studies taken from the work of Margolis and Walsh (2003) have been summarized in order to understand the constitution of this corpus over time.

Gond thus declines the number of publications per year over each period as well as their growth rate.

Table N°2: Temporal evolution of the number of studies

Période	**Results of studies with social performance as a dependent variable**				**Evolution of the number of studies carried out**		
	Positive link	Negative link	Non-significant link	Mixed link	Number of studies	Number of studies/ year	Growth rate
[1972-1977[	7	1	2	1	11	2,2	-
[1977-1982[	5	0	4	1	10	2	20%
[1982-1987[	4	0	5	3	12	2,4	17%
[1987-1992[	6	1	4	3	14	2,8	64%
[1992-1997[	10	2	5	6	23	4,6	70%
[1997-2002[	12	3	8	6	39	6,5	179%
Total	**54**	**7**	**28**	**20**	**109**	**3,6**	-

Source : Gond, 2006, p.363

The results reveal the following findings:

- An acceleration in the pace of empirical work with a peak observed between 1997 and 2002 and an average of 6.5 studies per year.
- The majority of studies have revealed the existence of a positive link between social performance and financial performance.

The negative relationship remains stable, but the non-significant or mixed relationship increases considerably during the study intervals. This abundance of empirical work reflects, on the one hand, the growing interest of researchers in this issue, which is beginning to make its way into the literature, and on the other hand, the absence to date of a consensus on the nature of the link, with mixed results beginning to reappear. The ambiguity raised results from the methodological anomalies repeatedly observed in this research.

Refining the analysis and breaking down the results according to the nature of the social and financial performance measures leads to even more confused results.

The positive link seems to be confirmed, but the generalization is not very credible due to the heterogeneity of the measures. This diversity of results once again leads to questioning the methodologies and measures deployed.

Table N°3: Results of selected work broken down by type of social performance and financial performance measure

Social Performance Measures	Financial Performance Measures	Results of the analysis	References
Reputation indices	Accounting Measures	Positif link	Preston et O'Bannon (1997) ; Griffin et Mahon (1997)
	Stock market Measures	Positif link	Cottrill (1990) ; Brown (1998)
	Accounting & Stock market Measures	Positif link	Brown et Perry (1994) ; McGuire et al. (1988) ; Riahi-Belkaoui (1991)
Pollution indices	Accounting Measures	Positif link	Dooley et Lerner (1994) ; Marcus et Goodman (1986)
	Stock market Measures	Positif link	Shane & Spicer (1983) ; Stevens (1984)
	Accounting & Stock market Measures	Positif link	Roberts (1992) ; Spicer (1978)
		Mixed link	Lerner et Fryxell (1988) ; Pava et Krausz (1996)
Perceptual measures (values and attitudes)	Accounting Measures	Positif link	Fry et al. (1982) ; Galaskiewicz (1997) ; Levy et Shatto (1980) ; Navarro (1988)
		Neutral link	Buehler et Shetty (1976)
	Stock market Measures	Positif link	Jones et Murrell (2001) ; Posnikoff (1997)
	Accounting & Stock market Measures	Positif link	Zeribi et Boussoura (2007) ; Judge et Douglas (1998)
Content analysis of annual reports	Accounting Measures	Neutral link	Cowen, Ferreri et Parker (1987) ; Patten (1991)
	Stock market Measures	Positif link	Blacconière et Patten (1994) ; Lacconière et Northcut (1997)
	Accounting & Stock market Measures	Positif link	Mills & Gardner (1984)
Indices produced by measurement agencies (e.g. KLD)	Accounting Measures	Positif link	Russo et Fouts (1997) ; Waddock et Graves (1997)
	Stock market Measures	Mixed link	Guerard (1997b) ; Hillman et Keim (2001)
	Accounting & Stock market Measures	Positif link	Graves et Waddock (2000); Dowell, Hart et Yeung (2000)

Source : Constructed from Margolis & Walsh, 2003

Although the synthesis work carried out by Griffin and Mahon (1997) and Margolis and Walsh (2003) has provided an overview of the theoretical corpus built around the problem of the interaction between social performance and financial performance, it is not very relevant from a methodological point of view insofar as it uses the same weights for all the studies, which makes such an approach inappropriate given the heterogeneity of the work in terms of the sample and the measurement of the variables. As a result, the results identified could be biased and the existence or not of the link remains dependent on the sample and the measures selected (Boussoura, 2012).

To identify sources of heterogeneity between studies, Orlitsky et al. (2003) used a stratified meta-analysis. The results indicate that social performance measures are more strongly correlated with accounting indicators, while reputation indices are more strongly correlated with financial performance than any other social performance measure.

For their part, Allouche and Laroche (2005) based their meta-analysis on a larger sample of studies, namely 82 studies carried out in the United States and other countries, mainly in the United Kingdom. Their conclusions assume the existence of a positive but weak link. The analysis also highlighted the contingency factors likely to impact the relationship between social performance and financial performance. The authors also show that the results vary according to the methodologies adopted.

4. Empirical survey

Several hypotheses can be envisaged in relation to the problem of this research. However, we have selected those that are most important in relation to the objectives pursued.

Based on the theoretical and empirical findings on the link between CSR and financial performance and on discussions with Moroccan and foreign researchers in this field, we have formulated two hypotheses, each of which relates to a key aspect of the research conducted.

4.1. Research model

Based on a thorough exploration of the state of the art, there are three categories of theoretical explanations for the relationship between social performance and financial performance: the existence of linear relationships between the two variables, the absence of relationships, and the existence of non-linear relationships (more complex relationships) between the two variables.

In our research, we will limit ourselves to testing the first two categories: the existence of linear relationships between the two variables in one direction and the absence of relationships between the social performance and the financial performance of companies.
Thus, we built our research model on the basis of two research hypotheses.

Table N°4: Research model

Causal link	Sign of causality	
	Positive link	**Negative link**
PSE ⇒ PF	Social impact hypothesis (H1) **Theoretical basis** : Stakeholder theory (Freeman, 1984)	Trade-off hypothesis (H2) **Theoretical basis :** Neoclassical economic theory (Friedman, 1970)

Source : Inspired by Gond, 2006

4.2. Presentation of the research hypothesis

For our problem, we have chosen two hypotheses.

- *Hypothesis stating the positive impact of corporate social performance on financial performance*

The first hypothesis, the "social impact hypothesis" (H1), predicts the positive effect of social performance on financial performance. It is based on stakeholder theory, which considers that satisfying the needs of the company's various stakeholders will ultimately lead to an increase in financial performance and vice versa (Freeman, 1984).

- *Hypothesis stipulating the negative impact of corporate social performance on financial performance*

The second hypothesis, "The trade-off hypothesis," states that social performance has a negative effect on financial performance. This hypothesis refers to Friedman's (1962, 1970) neoclassical economic theory, according to which the adoption of socially responsible practices involves financial costs.

4.3. Methodology

This study proposes to analyze the financial impact of social performance, in other words, to verify the nature of the relationship that exists between societal practices and the economic and financial profitability of companies. Specifically, we will examine the relationship in a linear framework and also test the effect of some firm-specific factors that moderate the relationship between social and financial performance, namely, size, age, industry and risk.

To this end, we will estimate social performance through aggregated and disaggregated social performance scoring measures that identify the different measures of corporate social responsibility presented later. While the financial performance will be assessed through the average over five years of certain ratios (ROA, ROE, Beta and standard deviation). Thus, the years selected are: 2010-2011- 2012-2013 and 2014.

ROA was assessed on the basis of the ratio of net income to net assets. ROE was calculated on the basis of the ratio of net income to equity.

Indeed, we used accounting and stock market measures, as recommended in the literature, in order to approach financial performance and highlight the multidimensionality of the construct.

Furthermore, the literature has shown that the relationship between social responsibility and financial performance is not absolute and that it must take into account the weight of elements specific to each company (Ullmann, 1985; Waddock and Graves, 1997), which are likely to moderate the relationship between the two constructs. These are the control variables.

Therefore, we took into account the size effect, the age effect, the activity sector effect and the risk effect. The information collected from the website of the Casablanca Stock Exchange comes from the income statements of the companies that make up our sample (54 companies) for the years from 2010 to 2014.

In the case of this research, the target population includes firms listed on the Casablanca Stock Exchange. Their number is 74 companies located in various regions of Morocco and working in various sectors.

There are several reasons for this choice. First of all, the availability of financial information (accounting and stock market). In addition, these companies are relatively large both in terms of number of employees and total assets, and more often than not, their social activities are generally successful.

These reasons are in addition to the transparency and reliability of the financial information that is a legal requirement for any IPO. The sample unit will be the respondent. Most of the time, it is the manager himself. In the case of large companies, and because of the difficulties of accessing managers, it was agreed that a senior manager could answer our questionnaire. The only requirement is that this person has full knowledge of the company's societal orientations. These are mainly human resources directors, administrative and financial directors, quality directors or communication directors of the company surveyed.

The temporal scope refers to the period during which this survey was conducted, which was during 2014 and the first half of 2015. As for the spatial extent of the target population will be in our case Morocco, specifically the following cities: Casablanca, Rabat, Tangier, Tetouan, Marrakech, El Jadida, Berrechid and Mohammedia.

4.4. Search results

This section aims to test the research model and its hypothetical structure in order to verify the link between social performance and financial performance.

Financial performance t, i = f (Social performance t,i ; age t,i ;industry t,i ; size t,i)

Social performance t,i = f(Social performance employees t,i ; Social performance shareholders t,i ; Social performance community-territory t,i ; Social performance environment t,i; Social performance market t,i)

With :

t= year

Financial performance t,i = current year financial performance measure (ROA) ou average ;

Social performance t,i = aggregate social performance measure based on the average of the 5 disaggregated social performance scores; Age= proxy to measure firm seniority

Industry = « Banque- Finance- Assurance »; « Construction-Real estate » ; « Industry - Services »

Size = proxy to measure the size of the firm (turnover)

The regression analysis[3] conducted on the different measures of financial performance, whether accounting or stock market, assumes that social performance influences financial performance to different degrees.

On the one hand, the study of the effect of social performance on accounting-based performance measures provides significant and clear results.

a- Accounting measures:

❖ Impact of social performance on financial performance measured by ROA

The results obtained for table n°1 show that the regression is significant as a whole, at the 10% level (the significance level is equal to 5%). The R^2 coefficient remains average (R^2=0.26).

[3] Regressions were run controlling for variables (age, industry, size) one by one and then together; but only significant models (based on the F-statistic) were retained and are presented.

Table N°5 : CSR impact on ROA

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	,509[a]	,260	,146	,05590

Source : Developed by authors

At the level of explanatory variables of the regression, the CSR dimension (Social performance) contributes significantly to the explanation of the firm's financial performance (PFE), measured by the average ROA (2010-2014), at the 10% threshold (positive association).

In this case, we find that the control variables "age" and "height" are not significant insofar as they tend towards 1: (threshold=0.726) for the age variable and (threshold=0.988; 0 .873) for the height variable. While the control variable "bank" is highly significant (threshold=0.008).

Table N°6 : Coefficients of first model

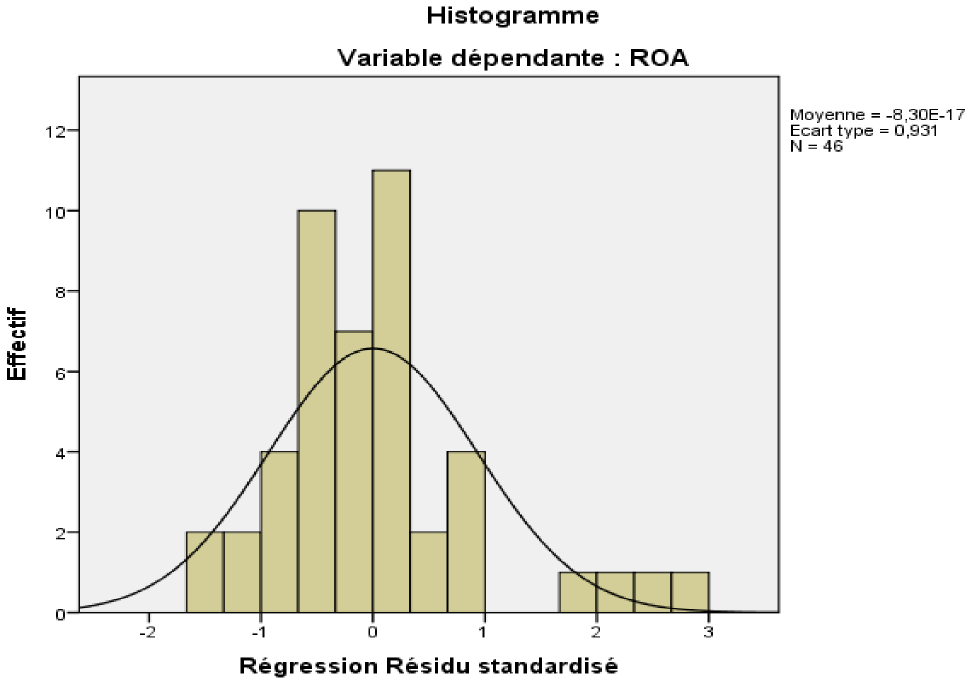
Model		Non-standardized coefficients		Standardized coefficients	T	Sig.
		A	Standard error	Beta		
1	(Constant)	-,004	,070		-,054	,957
	CSR	,119	,067	,316	1,764	,086
	Age	,000	,000	,053	,353	,726
	Bank	-,080	,029	-,552	-2,799	,008
	Industry	-,037	,024	-,302	-1,533	,133
	Size 2	-,001	,064	-,005	-,015	,988
	Size 3	-,010	,065	-,054	-,161	,873

Source : Developed by authors

Thus, our first model is formulated as follows:

ROA= 0,119 CSR -0,080 bank -0,37 industry -0,004 (constant)

Figure N°1 : First model



Source : Developed by authors

The results indicate that financial performance measured by ROA validates the link: the analysis supports the positive effect of social performance on financial performance.

The respective values of R^2 and adjusted R^2 are 0.26 and 0.146. These values are moderately significant at the 10% level. This means that 26% of the variation in ROA is explained by the variation in corporate actions. These results corroborate the "social impact" hypothesis and lead us to confirm our first hypothesis (H1) according to which **« societal performance positively influences financial performance ».**

This trend towards a positive relationship has been supported by subsequent analyses (Orlitzky et al., 2003; Alouche and Laroche, 2005b). These results are supported by instrumental stakeholder theory, which states that social practices aimed at stakeholder satisfaction improve a company's image and reputation and, consequently, positively influence its financial performance (Freeman, 1984; Cornell and Shapiro, 1987; Ullman, 1985; Clarkson, 1995; Donaldson and Preston, 1995).

In line with stakeholder theory, social performance is seen as a device to achieve higher financial performance. Socially responsible firms derive ongoing support from their stakeholders that allows them to access important resources that ensure the long-term survival and success of the firm (Freeman, 1984).

❖ Impact of social performance on financial performance measured by ROE

The results obtained show that the regression is not very significant overall, at the 10% level (the significance level is equal to 12%). The R^2 coefficient remains average (R^2=0.298).

Table N°7 : CSR impact on ROE

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	,546[a]	,298	,187	,12255

Source : Developed by authors

At the level of the explanatory variables of the regression, the CSR dimension (social performance) contributes very significantly to the explanation of the firm's financial performance (FP), measured by the average ROE (2010-2014) (positive correlation).

The results obtained indicate that the control variables "age", "height" and "sector of activity" are not significant insofar as their coefficients tend towards 1: (threshold=0.494) for the age variable and (threshold=0.264; 0 .784) for the height variable.

This threshold is 0.671 for the "banking" sector of activity and 0.648 for the "industry" sector of activity.

Table N°8 : Coefficients of second model

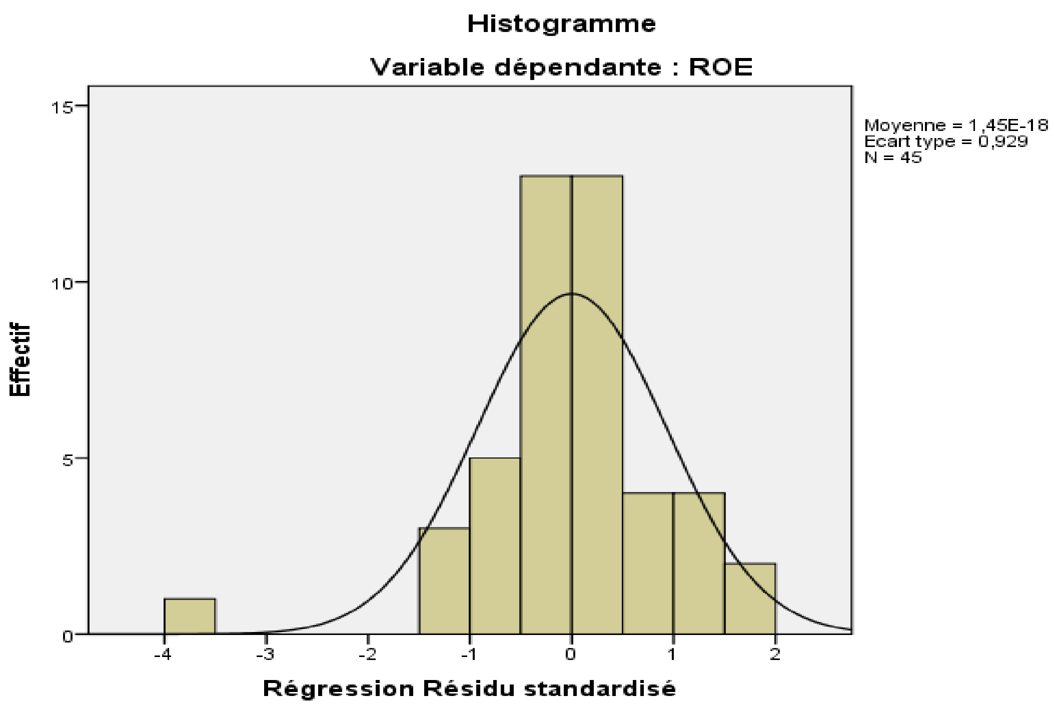
Model		Non-standardized coefficients		Standardized coefficients	t	Sig.
		A	Standard error	Beta		
1	(Constant)	-,052	,154		-,336	,739
	CSR	,300	,148	,358	2,028	,050
	Age	-,001	,001	-,102	-,691	,494
	Bank	-,027	,063	-,083	-,429	,671
	Industry	-,025	,054	-,089	-,461	,648
	Size 2	-,160	,141	-,338	-1,133	,264
	Size 3	-,039	,142	-,092	-,275	,784

Source : Developed by authors

Thus, second model is broken down as follows:

ROE= 0,3 CSR -0,052 (constant)

Figure N°2 : Second model



Source : Developed by authors

The use of ROE as an indicator of financial performance shows the positive effect of CSR on financial performance: R^2 and adjusted R^2 have significant values of 0.298 and 0.187 respectively.

The positive impact of social performance on financial performance measured in terms of ROE has been supported by the work of Waddock and Graves (1997); Preston and O'Bannon (1997); Ruf et al. (2001); Verschoor (1998), while it has been refuted by other researchers such as Pava and Krausz (1996); Griffin and Mahon (1997); Seifert, Morris and Barktkus (2003). We therefore find that the social impact hypothesis has been further confirmed.

This hypothesis assumes that social performance positively influences financial performance as long as the satisfaction of stakeholders' needs and expectations increases financial performance as measured by ROE. Consistent with the results, companies with high levels of social performance demonstrate better financial performance. According to the existing literature on the subject, several attributes have been suggested in this relationship, namely the improvement of the company's reputation, the attractiveness of investments in the financial markets, etc.

b- Stock market measures or stock exchange measures

On the other hand, the examination of the impact of social performance on financial performance measured by stock market variables provides mixed results.

❖ Impact of social performance on risk measured by Beta

The results obtained show that the regression is not significant at the 10% level (the significance level is equal to 24%).

Table N°9 : CSR impact on risk measured by Beta

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	,663[a]	,439	,348	,24745

Source : Developed by authors

From these data, we note that social performance has no influence on financial performance as measured by Beta since the significance level of social performance found in this model is equal to 0.887.

Indeed, the regression of Beta on the dimensions of social performance gives a non-significant R^2 and adjusted R^2 (R^2=0.439 and adjusted R^2=0.348). This result is consistent with the work of McGuire et al. (1988).

Table N°10 : Coefficients of third model

Model		Non-standardized coefficients		Standardized coefficients	t	Sig.
		A	Erreur standard	Beta		
1	(Constante)	,052	,317		,165	,870
	RSE	-,043	,302	-,023	-,143	,887
	Age	,003	,002	,229	1,725	,093
	Banq	-,387	,132	-,536	-2,941	,006
	Industr	-,464	,115	-,736	-4,032	,000
	Taille2	,383	,285	,363	1,344	,187
	Taille3	,646	,288	,676	2,244	,031

Source : Developed by authors

Based on the results obtained, we can conclude that there is no effect of social performance on financial performance as measured by Beta. This leads to the development of our analytical model by inserting a new relationship that we have just confirmed. These data corroborate the hypothesis that there is no link between social performance and financial performance. Indeed, proponents of no correlation suggest that social performance and financial performance are two completely separate constructs. This result has been confirmed by Ullman, (1985) who points out that the linkage is purely by chance. The author considers that the existing correlation results from intermediate variables that intervene in an unpredictable way and that allow the two dimensions to be linked.

Based on the work of Waddock and Graves (1997), methodological problems in operationalizing social performance tend to obscure the link. Indeed, several recent empirical works predict no relationship between the two dimensions (O'Neil, Saunders, & McCarthey 1989; Seifert, Morris, & Bartkus, 2004; Graves & Waddock, 1999). Others state that the link is too weak or even non-existent (Cochran and Wood, 1984; Pava and Krausz, 1996; Berman et al., 1999; Seifert, Morris and Barktkus, 2003). Griffin and Mahon (1997) and Balabanis et al. (1998) find that the results are inconclusive: the variables selected do not make it possible to distinguish between high-performing and non-performing firms.

❖ Impact of social performance on risk measured by standard deviation

The results obtained show that the regression is significant as a whole; at the 10% level (the significance level is equal to 5%).

The R^2 coefficient remains average (R^2=0.320).

Table N°11 : CSR impact on risk measured by Standard Deviation

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	,565[a]	,320	,209	,00538

Source : Developed by authors

At the level of the explanatory variables of the regression, the CSR dimension (social performance) contributes very significantly to the explanation of the firm's financial performance (FP), measured by the standard deviation, at the 10% threshold.

However, examination of the regression coefficients shows a negative and highly significant association of the impact of social performance on risk as measured by the standard deviation.

The respective values of R^2 and adjusted R^2 are 0.320 and 0.209.

This result is similar to that found by Griffin and Mahon (1997) that the majority of studies using stock market measures find a negative relationship.

In this case, we find that the variables age (threshold =0.881), sector of activity "banking" (threshold = 0.22), sector of activity "industry" (threshold = 0.418) as well as the variable "size 3" (threshold = 0.226) are not significant.

Nevertheless, the variable "size 2" is very significant insofar as it tends towards 0.

Table N°12 : Coefficients of fourth model

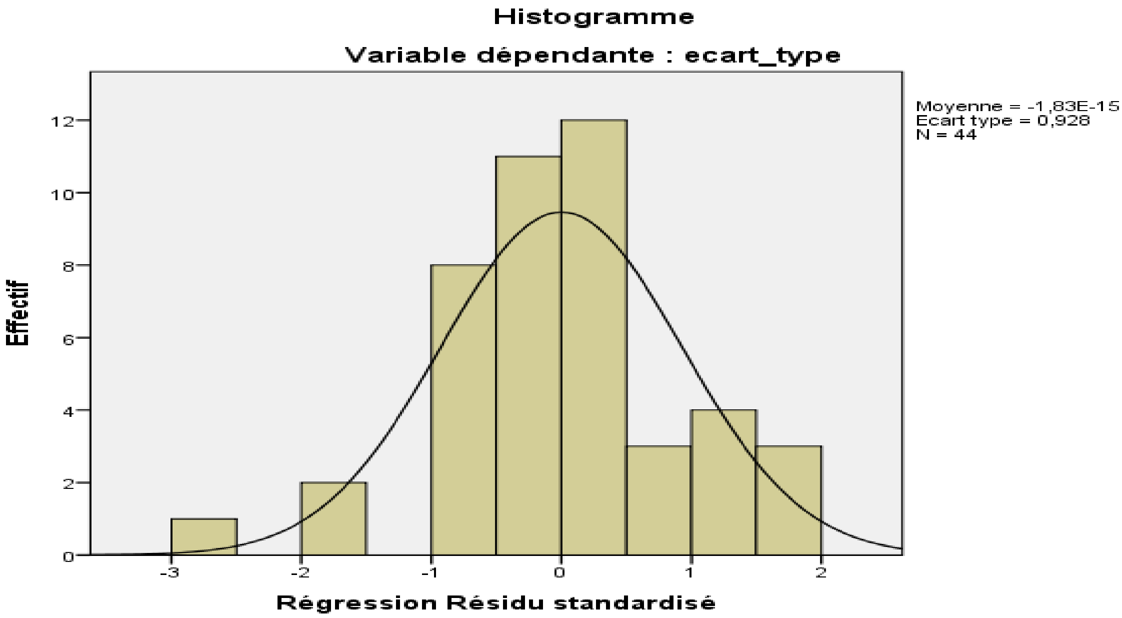
Model		Non-standardized coefficients		Standardized coefficients	t	Sig.
		A	Erreur standard	Beta		
1	(Constant)	,030	,007		4,379	,000
	CSR	-,016	,007	-,441	-2,489	,017
	Age	-5,099E-006	,000	-,022	-,150	,881
	BanK	-,004	,003	-,250	-1,247	,220
	Industry	-,002	,002	-,165	-,819	,418
	Size 2	,012	,006	,568	1,909	,064
	Size 3	,008	,006	,409	1,231	,226

Source : Developed by authors

Thus, the third model is formulated as follows:

Standard deviation = -0.016 CSR+0.012 size (2) +0.03 (constant)

Figure N°3 : Third model



Source : Developed by authors

We confirm our second hypothesis (H2), known as the "trade-off hypothesis", according to which "societal performance negatively influences the financial performance". The negative effect of social performance on financial performance has been supported by many authors who agree that the adoption of socially responsible practices involves financial costs (Friedman, 1962, 1970).

Work confirming this hypothesis considers that CSR is a burden and that it generates additional costs that could be the cause of a competitive disadvantage and a deterioration of financial profitability in the long term (Aupperle et al, 1985; Balabanis et al, 1998). Proponents of the trade-off hypothesis argue that investing in socially responsible actions (e.g., charitable giving, environmental protection, community development, etc.) may require more resources and generate additional burdens, putting the firm at a disadvantage relative to its competitors who are less committed to such actions.

Conclusion

The purpose of this article is to shed some theoretical light on the problem of the link between social performance and financial performance. A review of the work done in this area shows elusive and even controversial results. Some studies have found a positive relationship (Berman et al., 1999, Johnson and Greening, 1999; Preston and O'Bannon, 1997; Waddock and Graves, 1997). Others found a negative relationship (Vance, 1975), while a third group showed no significant relationship between the two performances (Abbott et Monsen, 1979 ; Alexander et Buchholz, 1978 ; Aupperle et al., 1985).

This research is part of this debate and aims to provide some answers to the disparity of conclusions that characterize this field of study. This has led us to embark on an in-depth examination of the impact of social performance on financial performance.

To respond to our problem, we designed a research model based on a certain number of hypotheses structuring the problem posed.

The results indicate that financial performance measured by ROA validates the link: the analysis supports the positive effect of social performance on financial performance. These results corroborate with the "social impact" hypothesis and lead us to confirm our first hypothesis (H1) that "societal performance positively influences financial performance".

At the same time, the use of ROE as an indicator of financial performance shows the positive effect of social performance on financial performance. We therefore note that the social impact hypothesis has been confirmed once again.

Based on the results obtained, we can conclude that there is no effect of social performance on financial performance measured by Beta. This leads to the development of our analysis model by inserting a new relationship that we have just confirmed. These data corroborate the hypothesis of the absence of a link between social performance and financial performance.

By examining the impact of social performance on risk as measured by standard deviation, our results confirm our second hypothesis (H2), known as the "trade-off hypothesis", according to which "Societal performance negatively influences financial performance".

As a conclusion, we can note that the effect of social performance on financial performance is much more felt when it is measured by accounting indicators rather than by stock market indicators. This finding is consistent with previous work stating that accounting-based measures are better at predicting performance than stock market-based measures (Griffin and Mahon, 1997).

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