

# Relationship between corporate social responsibility and performance: The moderating effect of financial leverage

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## ABSTRACT

As an extension of theoretical work from several socio-political approaches, such as stakeholder theory and agency theory, the purpose of this study is to examine the nonlinear effects of corporate social responsibility (CSR) on firms' financial performance and identify the degree of financial leverage as a channel through which CSR exerts its influence on firm financial performance. The present research was carried out in France, where the legislation on sustainable development reports is significant. Using a sample of 70 French firms listed on the SBF 120 index, a factorial interaction model is estimated for the period 2005-2014. We find that the relationship between CSR and firms' financial performance is non linear, exhibiting an inverted U-shaped pattern. In particular, our results reveal that the CSR financial performance relationship is moderated by firms-specific factors, namely financial leverage. Our study demonstrates also the important of the evolution in the dynamic behavior of CSR effect on the financial performance firms.

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## 1. Introduction

Over the last thirty years, a considerable attention in the literature has been given to the corporate social responsibility (CSR) issues, especially in the fields of management sciences and economics of organization (Anthony Okafor et al., 2021). The interest of CSR must be understood in a dynamic sense, enabling new and important aspects to be taken in the world of business. It emphasizes that companies must go beyond complying with the regulatory constraints imposed on them, by integrating voluntary social and environmental concerns into their activities and relationships with stakeholders (Farah et al., 2021; P. & Busru, 2021). Hence, CSR is considered as a strategic decision by which organizations committed can resolve social and environmental issues aiming to have a positive effect on people outside the organization (Ramzan et al., 2021). Indeed, engagement on CSR issues appears today as an inevitable necessity, through which raises several questions: *By which mechanisms can the pursuit of CSR activities contribute to the improvement of the financial performance and how does CSR relate to a firm's financial performance?*

A core issue for companies targeting CSR might be required in order to maintain well balance between financial benefits and public welfare and the preservation of the environment. Beyond the question of the existence of the link between financial and extra-financial performance, which has not been agreed upon, the mechanism surrounding this link is complex and still academically debated.

The CSR literature survey suggests two main viewpoints: the proponents of the first refer to the classic argument defended by Awaysheh et al. (2020), which argues that the sole responsibility of corporations is to increase shareholder wealth and that CSR activities are not the responsibility of commercial organizations but, rather, that of the individuals and community and individuals.

This view suggests the existence of negative or inconclusive relationship between CSR and firm financial performance entailing additional costs reducing competitiveness and profitability (Kao et al., 2018; P. & Busru, 2021). Two related hypotheses are suggested for the negative relation between CSR and firm performance. First, the trade-off hypothesis, related to the neoclassical theory summarize that CSR incurs costs directly or implicitly which reduce profit and lower shareholder wealth (Luis René Vásquez-Ordóñez et al., 2023).

Second, anchored in agency cost theory, CSR engagement reflects an agency problem between shareholders and managers. It expects that managers extract personal benefits from CSR investments by building their own managerial reputation at the expense of shareholders' interests. In fact, the involvement in CSR activities entails a net waste of valuable resources (Z. Chen & Xie, 2022; Kao et al., 2018).

Whereas interest of traditional view focuses on the profit maximization of the firm, a CSR approach is to provide a modern, stakeholder-oriented notion of organizations. Stakeholder theory as a reference of the thesis of Latapí Agudelo et al. (2019) underlines a positive impact of CSR on corporate financial performance. Meeting the expectations and demands of different stakeholders including the shareholders, environmental advocates, employees, customers, suppliers, community, society... contributes to improve the reputation of the company leading to higher net financial performance (Kao et al., 2018).

According to this theory, many studies support that the success of a company depends on its management's relationships with stakeholders as a whole (Jamil & Rasheed, 2023). In addition, an increase in social spending leads to improve the relationship with stakeholders, which, in turn, leads the firm's to decrease social cost and offer opportunities for their business activities as a source of competitive advantage (C.-J. Chen et al., 2018). CSR practices appear as an investment tool which induces business organizations to spend more in such activities (Ramzan et al., 2021).

The main objective of the research is to validate the moderating effect of financial leverage, hitherto almost unexplored, on the link between CSR and financial performance. The contribution of this article is mirrored in the following two aspects. First, we validate analytically the influence of financial leverage as a channel through which CSR can influence a company's financial performance. Given the focus of prior studies on the direct link between CSR and financial performance, there should be a mutual and interactive relationship between these variable. The majority of previous studies introduce size, risk, industry, and research and development as control variables affecting both the level of social responsibility and financial performance. To our knowledge, the effect of moderating variables on the CSR-financial performance relationship has only been explored in the case of certain factors linked to the degree of innovation and to the size of the company (Sánchez-Infante Hernández et al., 2020) or intangible assets (Saini et al., 2023) or even the firm ownership type (Kao et al., 2018). To fill this gap, our study attempts to determine how contingency factors such as financial leverage moderate the CSR-financial performance relationship. Second, due to the dynamic nature of firms and their environment, few studies explicitly examine how CSR and firm performance are related over times (Bahta et al., 2021; Kraus et al., 2020). Therefore, in this study, incorporating the moderating effect of the financial leverage, we examine the dynamic effect of CSR activities on financial performance, over several sub-periods, allows us to appreciate the extent to which the time factor conditions its nature. Using a factor interaction model, we empirically test this relationship on a panel of 70 French companies listed over the period 2005 to 2014.

Over recent decades, CSR has garnered much attention from companies, regulators, policy-makers, and other stakeholders (Farah et al., 2021). CSR is defined as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" according to . More generally, the primary purpose of the business is economic nature, also is inevitably involved both in social and environmental spheres. This triple commitment is spread out in the objectives, processes and results of the business, providing three types of responsibilities economic, social and environmental which generate intrinsic value (Sánchez-Infante Hernández et al., 2020). However, the question of the CSR and financial performance relationship remains a very controversial subject despite the abundant literature explored (Anthony Okafor et al., 2021), thus it is still required to fully understand the drivers of this relationship, and how companies succeed both financially and extra-financial levels (Saini et al., 2023).

In this study, the theoretical framework adopted is stakeholder theory, which is one of the two competing theories used for conceptualizing the relationship between CSR and financial performance. The social impact hypothesis based on the theory of stakeholders argues that CSR wields a positive impact on firms' financial performance. Indeed, CSR engagement can improve relationships among various stakeholder groups and thus will result in better firm financial performance (Paltrinieri et al., 2020). In the same line, (Blasi et al., 2018) highlights that CSR involvement represents a response for managers to resolve conflicts among stakeholders and maximize the shareholders' wealth leading to improve a firm's reputation and thus predicts a positive effect on a firm's performance. Theoretically, this research shows that taking social responsibility into account in the formulation of corporate choices involves financial costs and provokes comparative advantages/disadvantages.

Several factors can be involved in mediating CSR-financial performance relationship such as, size, risk, reputation, research and development... (Latapí Agudelo et al., 2019).

However, the moderating effects such as the financial leverage on CSR-financial performance have not been examined by literature.

In this context, this research will contribute to estimate empirically this link. Indeed, we postulate that power of creditors as a stakeholder, depends on the ability of the firm on debt financing. Engaging in CSR could be relevant to provide financial benefits to firms by ensuring their long-term sustainability (Giese et al., 2019). Given the aforementioned theoretical and empirical context, we formulate our main hypothesis below: **Hypothesis H1:** Firm financial leverage has a moderating effect on the relationship between CSR and financial performance. **Hypothesis H2:** The CSR-financial performance relationship is not stable over time.

The remainder of this study is organized as follows: Section 2 introduces the data source and methodology. Section 3 presents the empirical results and discussions. Section 4 is reserved for conclusion.

## 2. Research Method

In this paper, we use an annual panel data covering the period from 2005 to 2014 for 70 French firms listed in SBF 120 representing all sectors except for financial services. Financial institutions were excluded from our sample because their financial characteristics and structure differ from those of non-financial companies. Disaggregated score capturing a company's CSR performance environmental taxes are from Asset4 database (Farah et al., 2021). The accounting data are from Thomson Reuters database. Descriptive statistics (mean, dispersion) can be found in Table 1.

### Financial performance (dependant variable)

Accounting-based and market-based measures consisting are adopted for financial performance analysis (Luis René Vásquez-Ordóñez et al., 2023). Market-based measurements indicate market expectation of future financial performance, while accounting-based measures indicate a firm's current financial performance (Jamil & Rasheed, 2023). With reference to Paltrinieri et al. (2020), we adopt Return On Asset (ROA) as an accounting-based measurement to analyze the impact of CSR activities on financial performance.

### CSR performance: independent variables

According to Farah et al., 2021, we use CSR scores to measure effect on financial performance which includes economic performance, social performance, environmental performance, and governance performance: a) The social dimension (CSRSoc). It takes into account seven elements including: quality of employment; health and safety; training and development; human rights, community; product responsibility; diversity and opportunity. b) The economic dimension (CSREco). This dimension is taken into account customer loyalty, shareholder loyalty and performance. c) The environmental dimension (CSR Env). This dimension incorporates resources reduction, emissions reduction and product innovation. d) The governance dimension (CSRGov). It assesses the company in terms of board structure, remuneration policy, board functions, shareholder rights and vision and strategy.

In addition, in order to take into account the heterogeneity performance of firms, these indicators are weighted according to their sector relevant and performance firms. Thus, each company receives a score for each of the pillars in a given year  $t$ , comparing its performance with the rest of the companies and based on all the available information in year  $t-1$ . Although they can be criticized, these indicators have the advantage of being better informed and regularly updated (monthly) for better exploitation. In order to know whether

the CSR performance plays a continuous role, we also considered his dynamic effect over several periods.

### Control variables

In this study, we select firm size measured by total assets and age firms to identify the effect on financial performance (Hasan et al., 2018). Lastly, in order to identify moderating effects, we have introduced interaction terms into our model referring to (Anthony Okafor et al., 2021).

The combined effect of certain company-specific factors such as financial leverage is likely to resolve causal bias is to assume that the link between CSR and financial performance is not directly established but can be reinforced by a moderator. In fact, the introduction of the interactive term (CSR\*LEV), allows us to assess CSR impact on financial performance.

Table 1 provides descriptive statistics of variables. The heterogeneous distribution of financial performance, characterized by a Skewness coefficient greater than zero, reflects the intrinsic nature of the variable itself to understand different financial performance between companies. Moreover, the coefficients of variation CSR levels indicate an almost similar distribution between the series. Apart from the CSR<sub>env</sub> series where the coefficient of variation is almost half of the other three, the coefficients of the series are around 0.4. This indicates that the distribution of these series is relatively homogeneous and confirms our use of the database of the rating agency "Asset 4", which provides homogeneous information for all companies. Furthermore, given the nature of the variety of measures used to evaluate CSR, the coefficient of variation allows us to ensure the homogeneity of the criteria used.

Table 1 presents the number of observations, mean, standard deviation, minimum and maximum of the variables used. The Variance Inflation Factor (VIF) measures multicollinearity between the scores of the four dimensions of CSR.

The differences in the mean according to the level of the CSR performance score are presented in Table 1. We assume that when the firm's overall score is below the sample average, it is low CSR, otherwise it is high. More than the average companies tend to have high CSR and significantly growing financial performance. For example, in terms of governance score, 85.86% of companies are highly responsible and only 14.14% have low responsibility.

Table 3 reveals that most firms have higher net financial performance based on the CSR scores in Table 2. Firms with higher financial performance have positive ROA while those with lower financial performance have negative ROA. The table shows that 90.14% of the companies have high financial performance against only 9.86% with low financial performance. However, we can highlight that performance on CSR dimensions has a strong correlation with financial performance and thus motivates our intuition on exploring a positive relationship that could exist between these two variables.

Table 3 reveals that more than half of the companies have a very low level of financial leverage. Table 3 shows that 65.75% of companies have a low level of financial leverage, because it is lower than the average and 34.25% of the sample has a high level of financial leverage. More specifically, companies having both higher financial and CSR performance are those with a low financial leverage level.

**Table 1.** Descriptive statistics of the variables

	ROA	CSRsoc	CSRenv	CSRgov	CSReco	SIZE	AGE	DEBT
Mean	0.0531639	99.177	76.97883	53.79732	66.97755	3.22E+07	72.5317	0.2396219
Median	0.0486	116.28	88.19	55.53	74.9	9648855	56.5	0.1805298
Maximum	0.4967505	144.55	97.14	96.64	98.52	7.90E+08	310	2.48363
Minimum	-0.3246	-34.88	10.02	2.16	1.5	581551	0	0.0001362
Std.Dev.	0.06272	43.4968	23.04955	24.85315	27.04429	8.84E+07	60.33034	0.2761282
Coefficient variation	-	0.43857749	0.29942713	0.46197747	0.40378142	-	-	-
Variance	0.0039334	1891.972	531.2819	617.6789	731.3938	7.81E+15	3639.75	0.0762468
Skewness (S)	0.8576673	-1.585	-1.504704	-0.2157987	-0.7359446	6.689289	1.180303	4.799148
Kurtosis	15.19979	4.377	4.110127	1.909482	2.368334	51.76654	4.621235	34.39617
Observations	700	700	657	657	657	700	694	697

Source: W. Sahraoui & R.E. Kaboré

**Table 2.** Sample distribution by level of CSR

	CSR <sub>Eco</sub>		CSR <sub>Soc</sub>		CSR <sub>Env</sub>		CSR <sub>Gov</sub>	
	Number of firms	Percentage	Number of firms	Percentage	Number of firms	Percentage	Number of firms	Percentage
Low CSR	267	38.14	178	25.43	212	30.29	99	14.14
High CSR	433	61.86	522	74.57	488	69.71	601	85.86
Total	700	100	700	100	700	100	700	100

Source: W. Sahraoui & R.E. Kaboré

**Table 3.** Sample distribution by level of financial leverage

	Number of firms	Percentage
Low financial leverage	432	65.75
High financial leverage	225	34.25
Total	657	100

Source: W. Sahraoui & R.E. Kaboré

Our main estimates are based on a factorial interaction model, which is reduced, linear and easily relatable to the subject of our study. This model captures, on the one hand, the responses of the different CSR dimensions when they interact with the level of financial leverage that the firm can take and, on the other hand, the responses of the firm's financial performance.

The specification of our model therefore consists in analyzing the interaction of each of the four CSR dimensions with the level of financial leverage. The first interactive term consists in crossing the environmental dimension of CSR with the level of financial leverage. Thus, we obtain the variable  $CSR_{Env} \times LEV$ . The second term crosses the social aspect of CSR with the level of financial leverage and allows us to obtain the variable  $CSR_{Soc} \times LEV$ .

We added the third term which crosses the economic dimension of CSR with the level of financial leverage and allowed us to obtain the interaction variable  $CSR_{Eco} \times LEV$ . Finally, the last interactive term named  $CSR_{Gov} \times LEV$  is obtained by multiplying the governance dimension by the level of financial leverage. The particularity of this specification is to explore the mechanisms of the interaction between CSR and ROA and to determine how CSR can influence financial performance.

This specification is estimated using the ordinary least squares (OLS) method. Given the type of variables used we calculate the marginal effects of the different CSR dimensions of the firm following the regressions, once the estimations are done. The introduction of the interactive term of two variables "A" and "B", the evaluation of the global effect of the variable "A" requires a calculation of its marginal effect conditional on the values that the variable "B" can take.

The multivariate analysis is completed by estimating the logistic model based on equation (2) on the entire sample of companies in terms of social responsibility.

### Econometric specification

We investigated whether the level of financial leverage influences the relationship between CSR and financial performance. Furthermore, this methodology allows us to capture the dynamic link between financial and non-financial performance. The impact of explanatory variables on firms' financial performance was assessed through panel data modeling.

In line with previous literature, the basic model for estimating the link between corporate financial performance and CSR is as follows:

$$\ln ROA_{it} = \alpha_0 + \alpha_1 CSR_{it} \times \ln LEV_{it} + \alpha_2 \ln SIZE_{it} + \alpha_3 \ln AGE_{it} + \varepsilon_i + \varepsilon_t + \varepsilon_{it} \quad (1)$$

In order to test the effect of moderating variables upon the CSR-financial performance relationship, we propose an extension to model (1) that introduces the interactive term  $CSR \times LEV$ . The estimation model becomes:

$$\ln ROA_{it} = \alpha_0 + \alpha_1 \ln X_{it} \times \ln LEV_{it} + \alpha_2 \ln SIZE_{it} + \alpha_3 \ln AGE_{it} + \varepsilon_i + \varepsilon_t + \varepsilon_{it} \quad (2)$$

With  $X_{it}$  the type of CSR dimension:

*CSR economic dimension*

$$\ln ROA_{it} = \alpha_0 + \alpha_1 \ln CSR_{Eco\ it} \times \ln LEV_{it} + \alpha_2 \ln SIZE_{it} + \alpha_3 \ln AGE_{it} + \varepsilon_i + \varepsilon_t + \varepsilon_{it} \quad (3)$$

*CSR social dimension*

$$\ln ROA_{it} = \alpha_0 + \alpha_1 \ln CSR_{SOC\ it} \times \ln LEV_{it} + \alpha_2 \ln SIZE_{it} + \alpha_3 \ln AGE_{it} + \varepsilon_i + \varepsilon_t + \varepsilon_{it} \quad (4)$$

*CSR environmental dimension*

$$\ln ROA_{it} = \alpha_0 + \alpha_1 \ln CSR_{Env\ it} \times \ln LEV_{it} + \alpha_2 \ln SIZE_{it} + \alpha_3 \ln AGE_{it} + \varepsilon_i + \varepsilon_t + \varepsilon_{it} \quad (5)$$

*CSR governance dimension*

$$\ln ROA_{it} = \alpha_0 + \alpha_1 \ln CSR_{Gov\ it} \times \ln LEV_{it} + \alpha_2 \ln SIZE_{it} + \alpha_3 \ln AGE_{it} + \varepsilon_i + \varepsilon_t + \varepsilon_{it} \quad (6)$$

With  $i$  is the number of firms and  $t$  the year of observation. Where  $\ln ROA_{it}$  is the financial performance of firm  $i$  at time  $t$ .  $X_{it}$  is the CSR of firm  $i$  at time  $t$ .  $\ln SIZE$  represents logarithm of total assets of firm  $i$  at time  $t$ .  $LEV$  is the ratio of total debt to total equity of firm  $i$  at time  $t$ .  $\ln Age$  is logarithm of years elapsed since firm foundation of firm  $i$  at time  $t$ .  $\varepsilon_t$  and  $\varepsilon_i$  capture the unobservable time fixed effects and the vector of individual fixed effects respectively. Fixed individual effects aim to capture all the permanent differences between sectors observed in financial performance; fixed individual effects. Whereas fixed temporel effects capture the temporal shocks common to the sectors, i.e. shocks that can affect all sectors in the same way.  $\varepsilon_{it}$  represents the error term i.i.d. orthogonal to the individual and temporal levels.

This model is estimated when the financial leverage is not zero, i.e. assuming that there is a minimal level of leverage in the financial market. The specification (2) allows us to detect a possible moderating effect of financial leverage, otherwise it would be zero and the model would be irrelevant. Thus, we establish the link between CSR and financial performance according to the level of financial leverage in the market. For instance, the equation (2) shows that when the level of financial leverage is set at 1%, the level of CSR on financial performance is  $\alpha_1 \ln LEV$  %. This reveals clearly that the effect of CSR level is conditional on the financial leverage level.

### Marginal effect of CSR

Since we introduced interaction terms between the level of CSR and the level of financial leverage, the evaluation regarding the expected overall effect of the level of social responsibility on the firm's financial performance requires the calculation of its marginal effect conditional on specific values of the level of financial leverage. The marginal effects of CSR in our estimation model allow us to interpret the coefficient  $\bar{\alpha}_1$  in each of our specifications as an elasticity. Formally, it is a partial elasticity.

Indeed, from our main equation (equation 2), we obtain the marginal effects as follows:  $E_{m|x} = \frac{\partial \ln ROA}{\partial \ln X} = \bar{\alpha}_1 \ln LEV$

The marginal effects in our estimation model reveal the effect of the interaction between the level of CSR scores and the level of financial leverage. The marginal effect value reflects the x% change in financial performance of firm induced by a one percent change in CSR level. Detecting an  $\bar{\alpha}_1 > 0$  and significant shows that for a firm with low financial leverage, a high level of CSR of 1% leads to an increase in  $\bar{\alpha}_1 \ln LEV$  % of the firm's financial performance. In our regressions, we evaluate the marginal effect and its significance for various levels of financial leverage, i.e., at three deviations, two deviations, one deviation below the mean, at the mean level of leverage, at one deviation, two deviations, and 3 deviations above the mean.

### 3. Results And Discussions

Table 4 below presents our main results regarding the impact of CSR on financial performance moderated by the level of leverage. These results are obtained by stepwise estimation of equations 2 through 5 above. For each regression, the table below shows the estimated marginal effects of the level of CSR for different levels of financial leverage. The first row of the bottom part of the table provides the value of the marginal effect of corporate social responsibility when the level of financial leverage is at its mean minus three standard deviations (SD). The last row of this part of the table provides the marginal effect value of the level of corporate social responsibility when the level of leverage is at its maximum, i.e., at its mean plus three standard deviations. The marginal effect coefficients are also presented for the average level of leverage, the average level minus 2SD, the level minus 1SD, the average level plus 1SD and the average level plus 2SD.

Reading this part of the table shows how social responsibility affects the financial performance of the firm. Thus, it explains how the effect of the level of CSR changes when the level of financial leverage changes from its average level.

### **The marginal effect of csr on the financial performance**

The model estimated in this paper is a multiplicative interaction model that highlights the interaction between the level of CSR and the financial leverage of the firm. Such a specification allows us to show, through the marginal effects, that the beneficial effect of CSR activities on financial performance depends very much on the ability or not of firms to take on more debt. Table 4 presents the results of the estimation of this model. As several studies have shown (Anthony Okafor et al., 2021; Awaysheh et al., 2020; Luis René Vásquez-Ordóñez et al., 2023), one can conclude from the results in the upper part of Table 4 that there is a negative effect of CSR on firm financial performance, regardless of the nature of the CSR measures.

However, this is not the case when examining the coefficients associated with the marginal effects, as this is considered an interactive model. Thus, through the results in the lower part of Table 4, which propose the coefficients of the marginal effects of social responsibility, we obtain a differentiated effect of the level of CSR on the firm's financial performance depending on the level of financial leverage.

The results in this table show that the effect of the increase associated with CSR differs according to the firm's level of financial leverage. For companies with a level of financial leverage equal to the mean minus three, minus two and minus one standard deviation, CSR, regardless of its dimension, has a positive effect on the firm's financial performance for different degrees of financial leverage. Conversely, when the level of financial leverage is equal to the mean plus two, plus three or more standard deviations, CSR has a disproportionately negative effect on the firm's financial performance.

For low-leverage firms, those with below-average leverage, the results show that the lower the leverage level, the more socially responsible the firm's behavior, the better the firm performs financially. This table shows a strong variation in the elasticity as the level of financial leverage moves from one level to another. Thus, when the leverage level is at its average level, a 1% increase in the CSR score leads to a 0.046% improvement in the company's financial performance. Whereas, when the level of financial leverage is very low, at its average level minus 3 SD, an increase in the CSR score of 1% leads to an improvement in financial performance of 0.765%. On the other hand, for firms with a very high level of financial leverage (those with a leverage level higher than the average level), our results show that as the level of financial leverage increases, corporate social responsibility has a negative impact on financial performance. The table reveals that the coefficients are even negatively very elastic when the level of financial leverage becomes very high.

Indeed, when the level of financial leverage goes from its average level plus 2 SD to its average level plus 3 SD, the elasticity of financial performance goes from -0.046% to -1.368%. Thus, when the level of financial leverage increases until it reaches its maximum level (here set at the average level plus 3 SD), the adoption of socially responsible behavior by the firm does not improve its financial performance. It even leads to a more than proportional decrease in the firm's financial performance.

### **The evolution in the dynamic behavior of csr effect on the financial performance firms**

In light of the dynamic and evolving character of CSR concept, it is important to be able to evaluate its impact on financial performance over time. This specification allows us not only to confirm our results on the effect of CSR but also to follow its dynamic effect over time. To do so, another analysis arises which consists in observing the evolution of CSR elasticity over time during the period in the study. Thus, we estimate this elasticity by time shifting by one year following the study period. This technique is applied to our different equations previously defined and allows us to estimate, progressively throughout the estimation period, the conditional response of the financial performance when CSR dimensions change over time.

Table 5 sets out the results of the estimation of CSR performance which is categorized into four pillars, i.e. environmental, social, governance and corporate economic<sup>1</sup>. We find that only the coefficients associated with the marginal effects of CSR, as a function of the average level of financial leverage, are retained. Regardless of the criterion adopted to capture CSR, the results show that over time, when the financial leverage level is moderate (i.e., the average level), the socially responsible behavior of the company significantly improves its financial performance. Apart from periods of crisis (the 2008 financial crisis, with

its earlier effect, and the new stock market crash of 2012), the results reveal a positive and increasing elasticity over the years, confirming our previous findings on the positive effect of CSR.

Indeed, the net benefits of CSR on financial performance are not cyclical or circumstantial. It takes time for being social responsive to translate into higher financial performance. That is, a firm has to be socially responsive strategy consistently over time to receive CSR benefits. Our results are consistent with Barauskaite & Streimikiene (2021) that argue CSR as a long-term investment in creating the capacity to influence stakeholder's relations and improve firm's financial performance.

**Table 4.** Effect of CSR on financial performance: main results

<i>Panel A : Estimation of the cross effect between CSR and ROA</i>				
SIZE	-0.146*** (0.0230)	-0.156*** (0.0228)	-0.143*** (0.0244)	-0.156*** (0.0229)
AGE	0.138*** (0.0284)	0.140*** (0.0286)	0.142*** (0.0306)	0.141*** (0.0286)
CSREco×LEV	-0.0229*** (0.00531)			
CSRGov×LEV		-0.0195*** (0.00594)		
CSRSoc×LEV			-0.0180*** (0.00529)	
CSREnv×LEV				-0.0166*** (0.00559)
<i>Panel B : CSR marginal effects</i>				
3 SD below the mean	0.765*** (0.17724)	0.652*** (0.19800)	0.600*** (0.17669)	0.552*** (0.18660)
2 SD below the mean	0.535*** (0.12411)	0.456*** (0.13865)	0.420*** (0.12379)	0.387*** (0.13067)
1 SD below the mean	0.077*** (0.01785)	0.066*** (0.01994)	0.061*** (0.01798)	0.056*** (0.01880)
Mean	0.046*** (0.01074)	0.039*** (0.01200)	0.037*** (0.01088)	0.034*** (0.01131)
1 SD over the mean	0.016*** (0.00363)	0.013*** (0.00405)	0.013*** (0.00378)	0.011*** (0.00382)
2 SD over the mean	-0.015*** (0.00349)	-0.013*** (0.00390)	-0.011*** (0.00332)	-0.011*** (0.00367)
3 SD over the mean	-0.046*** (0.01060)	-0.039*** (0.01185)	-0.035*** (0.01041)	-0.033*** (0.01116)
Constant	-1.368*** (0.407)	-1.167*** (0.404)	-1.414*** (0.438)	-1.162*** (0.408)
Observations	587	587	551	587
R-squared	0.152	0.140	0.132	0.137

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6.** Evolution of CSREco' effect on financial performance

VARIABLES	(1) >=2005	(2) >=2006	(3) >=2007	(4) >=2008	(5) >=2009	(6) >=2010	(7) >=2011
<i>Estimation of the marginal effects of corporate social responsibility according to the average level of the financial leverage</i>							
Level mean LEV	0.046*** (0.01074)	0.047*** (0.01131)	0.041*** (0.01174)	0.046*** (0.01217)	0.049*** (0.01335)	0.056*** (0.01474)	0.062*** (0.01704)
Constant	-1.368*** (0.407)	-1.254*** (0.435)	-1.128** (0.457)	-1.188** (0.489)	-1.320** (0.550)	-1.500** (0.613)	-1.879*** (0.715)
Observations	587	536	481	418	356	299	233
R-squared	0.151	0.156	0.147	0.159	0.151	0.156	0.162

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### 4. Conclusion

Based on the results of the research above, the conclusions in this study indicate that the majority of informants have a positive perception. The informants benefited from the many promos, discounts, free shipping, vouchers, cashback, easy payment systems, as well as complete and up to date items. Based on the information provided by ten informants, the appearance of Shopee and the brand ambassador used by Shopee did not influence the informants to decide to buy a product at Shopee during National Online Shopping Day

(HARBOLNAS). However, the six informants were more influenced and interested in buying a product at Shopee through advertisements on television and social media presented by Shopee during National Online Shopping Day (HARBOLNAS).

The contribution of this research focuses on ways for researchers to develop scientific methods and insights for researchers regarding the influence of price perceptions, trust in the free shipping tagline on buying interest in Shopee e-commerce, especially among students who like to make purchases in the marketplace.

For future researchers not only to study Shopee e-commerce, it is hoped that future researchers can expand the research object, research subject, and use other methods to further strengthen the research results. It is hoped that the Shopee e-commerce company will continue to be able to develop product quality and service quality in order to better satisfy its customers and the Indonesian people, especially the millennial generation, to always be interested and be able to become loyal customers. The point of view of sources from similar e-commerce can also be used as a comparison, so that the resulting results can represent the overall perception of each e-commerce used.

This research still has many shortcomings or limitations, as follows: this study's population is just the management study program at Sampoerna University, so it does not cover all students in general and cannot be generalized. Only using sources who use Shopee e-commerce so there is no comparison from other e-commerce sides.

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