

## MANAGERIAL PERSPECTIVE ON ESG AND FINANCIAL PERFORMANCE OF CAR MANUFACTURERS

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**Abstract:** This study aims to analyse the relationship between world-largest car manufacturers' environmental, social and governance (ESG) disclosures and their financial and market-based performance. For this purpose, the models of choice were panel data considering ten years. A set of independent control variables and ESG score or subsets of the ESG score were investigated against the dependent measures of a firm's financial (ROA) and market-based (Tobin's Q) performance. The paper's novelty is the industry-specific perspective and results that are scarce and indicate a mixed influence of the ESG subsets. The results obtained by regression analysis underline a non-significant positive relationship between ESG and ROA, meaning ESG activities are valued less than expected. Interestingly, the market's valuation, which Tobin's Q should capture, has presented some significant influence. That implies that investors value ESG performance in the long term, which is particularly relevant information for decision-makers in the automotive industry.

**Key words:** ESG performance; financial performance; market-based performance; regression analysis, longitudinal data

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## Introduction

Recent societal, regulatory, and investment trends indicate that Environmental, Social and Governance (ESG) is no longer a buzzword. It is incorporated into the decision-making of all company stakeholders and has found its way into mainstream investing. Consumers' product choices, talents' choice of an employer, the European Union taxonomy for sustainable activities, and the rising share of sustainable investments in asset managers' portfolios around the globe are just some recent examples to confirm this development. Private companies are expected to exist no longer to serve their shareholders but all stakeholders like customers, employees, the environment, and the global community. At the same time, investors regard a strong ESG performance as a driver for long-term profitability and assessing their investment decisions (Cayón and Gutierrez, 2021). With an increasing proportion of investors weighing in on ESG issues, tens of thousands of publicly listed firms now provide "materiality assessment" of ESG issues, prioritising specific issues positioned based on their distinguished materiality to society, firms and investors.

However, the following questions arise,

- To what extent does a company's ESG performance influence its financial or market-based performance?
- How much is the commitment towards ESG performance valued by investors and reflected in a company's market performance?
- Does it pay off to do good?

## Literature Review

The central research question surrounding the relationship between ESG performance and corporate performance has been subject to numerous academic studies in the past decades as it impacts the credibility around the ESG domain, and the competitiveness of automobile firms certainly impacts the trust of investors and stakeholders (Billio et al., 2021, Tarmuji et al., 2016). Supporters of the stakeholder theory argue that it is more necessary than ever to focus on good stakeholder relationships to achieve profit maximization in today's difficult business context. They are subsequently attaining a competitive edge over their competitors and enhancing firm value (Xie et al., 2019; Plastun et al., 2023; Riana et al., 2020). From a stakeholder theory perspective, it is reasonable to acknowledge the link between a firm's ESG performance and financial benefits, as the main stakeholders are directly affected by its ESG-related activities. ESG should be perceived as a scope of expansion, competitive advantage and opportunity for corporate development. Safeguarding stakeholders' interests eventually assists firms in achieving long-term success leading to higher financial performance (Zailani et al., 2021; Balzer et al., 2020; Soni, 2023). Subsequently, for regulators, firms that increasingly dedicate resources towards ESG issues and responsibilities could help stabilize and stimulate long-term sustainable development in the industry.

Furthermore, with regulatory compliance in place for ESG disclosures, the depth of information collected industry-wide could be utilized for supervision, evaluation and guidance, with necessary enforcement measures to be placed where needed (Zhao et al., 2018). Henceforth, Giese et al. (2019) confirm, since the last decade, firms with higher ESG scores exhibited a reduced recurrence of idiosyncratic risk events suggesting that high ESG-rated firms were more effective at minimizing serious business risks and firms with stronger ESG commitments are more resistant to systematic market shocks and now sustain lower systematic risks. Thus, enhanced risk management and ESG practices keep firms away from such incidents, ultimately resulting in the reduced stock-specific downside in a firm's stock price, further lowering its volatility. Alfalih (2022) conducted research on the impact of the Corporate Social Responsibility (CSR) initiatives on the financial performance of SP-500 non-financial companies in the USA and found that social and governance dimensions of ESG influence companies' financial performance, while the environmental dimension is significant with Tobin's Q measure. The study also found that economic conditions positively moderate the effects of different ESG disclosure practices on financial performance. Cho et al. (2023) explored the relationship between ESG performance and firm value in 1,072 Korean-listed firms from 2011 through 2019. They found that ESG performance is positively associated with firm value, but this association almost disappears for firms with below-median Return on Assets (ROA). Feng (2021) studied the impact of the target's ESG score on the acquirer's ROA and stock price changes after mergers and acquisitions (MandA) deals and found that the impact of the target's ESG score on the acquirer's ROA change is significant and varies for low-ESG and high-ESG acquirer groups. Kim et al. (2022) investigated the relationship between the national pension fund's (NPF) socially responsible investing, ESG, and the financial performance of the investee firms. They found that ESG performance acts as a moderator or a mediator between NPF's shareholding and financial performance. Dinca et al. (2022) explore the relationship between non-financial sustainability, measured by ESG scores, and firm value in the automotive industry, where empirical evidence is scarce. A structural equation modelling (SEM) approach has been used. Their results indicate a mixed influence of the E, S, and G scores on firm value in the analyzed period, with some inconclusive effects, especially from the social score.

The overall consensus in existing literature implies that aggregated ESG scores positively influence financial performance and market-based performance to a lesser extent (Li et al., 2018; Kazakakou Powaski et al., 2022; López et al., 2018; Alareeni and Hamdan, 2020; Inkabova et al., 2021; Yen-Yen, 2019). Several studies have revealed a significant correlation between good governance and a specific aspect of ESG factors. This suggests that stakeholders highly value a company's transparency and willingness to embrace ESG principles. The extent to which a firm openly discloses its annual charts, profit reports, and sustainability reports appears to be closely linked to its overall performance and commitment to attaining ESG objectives and targets.

## Research Methodology

This study analyzes the available data of the twenty largest car companies in the world, publicly listed on the stock market, under the assumption that attention towards ESG factors has increased sharply recently. Based on this data, the relationship between ESG performance, financial performance and market value shall be analyzed using a regression analysis model. The following hypotheses have been examined:

H1: *Environment, Social and Governance performance has no significant positive impact on a firm's financial performance in the automotive sector.*

H2: *Environment, Social and Governance performance has no significant positive impact on the car manufacturer's market-based performance.*

H3: *Control variables have expected effects on a firm's financial or market-based performance in the automotive sector.*

The population of this study consists of the 20 largest global car companies in the world, consisting of German, Japanese, Dutch, French, Swedish, USA, South Korean, Chinese and Japanese car manufacturers publicly listed on the stock market. The period covers ten years, from 2011 to 2020. The financial data is collected from the investment research platform YCharts and annual reports of sampled car manufacturers. The ESG scores and sub-scores, which act as a proxy for ESG performance, are sourced from the global ESG data provider Arabesque S-Ray.

The dependent variables in this regression are Return on Assets (ROA) and Tobin's Q (TQ), commonly used as proxies to measure Financial Performance and Market-based Performance. ROA is calculated as net income divided by the average total assets of a fiscal year and is expressed in percentage. In line with prior studies, Tobin's Q is calculated as the ratio between the market value of equity and total liabilities on the one hand and total assets on the other hand (Bellavite Pellegrini et al., 2019). As the effects will not be noticeable immediately, one-year lagged variables of ROA and Tobin's Q are used to evaluate the impact of ESG performance.

The main independent variables are the ESG score and sub-scores, a proxy for a company's ESG performance. This data is aggregated into an overall ESG score, which will be used as a proxy for a company's ESG performance. In addition, S-Ray offers E, S, and G scores for the sub-categories, which are useful as the ESG score is a multidimensional index combining the three dimensions of ESG. Differences in FP and MP can not only be explained by the ESG score. Therefore, it is necessary to include control variables. Control variables might not be the focus of the research, but their influence on the dependent variables must be addressed. Thus, they help increase the explained variance within a regression model. The existing body of literature suggests the incorporation of various control variables to account for systematic and unsystematic risk, which are believed to influence a company's financial performance. Systematic risk is captured through the company's beta factor (BETA), reflecting how its equity price fluctuates concerning market movements.

On the other hand, unsystematic risk is represented by the debt ratio (DEBT), which is derived by dividing total liabilities by total shareholder's equity and serves as a measure of the company's leverage. It is anticipated that firms with higher financial leverage are more susceptible to encountering financial distress and experiencing a decline in profitability (Li et al., 2018). However, Abdi et al. (2020) argue that low-growth firms with stable cash flows and tangible assets (like car manufacturers) are likely to show higher levels of financial leverage which does not necessarily have a negative impact. A firm's size (SIZE) should also be controlled by the natural logarithm of a firm's total assets. A positive effect could be explained by larger firms having more resources to invest in ESG activities and non-financial disclosure. They are also expected to benefit from economies of scale or scope which are difficult to imitate. On the other hand, a negative effect of size can also be linked to costly structural changes and complex processes in decision-making (Velte, 2017). Capital expenditure (CAPEX) has also been regarded as one of the potential control variables and is calculated by the net capital expenditure divided by revenue (Bellavite Pellegrini et al., 2019). To test for possible country features, a dummy variable is included in line with prior studies (Xie et al., 2019). Summarising descriptive statistics of the variables are presented in Table 1.

**Table 1. Descriptive statistics of all variables included in the regression analysis**

	Mean	Median	Min.	Max.	St. Dev.	C.V.
<i>Dependent variables</i>						
<b>TQ</b>	1.0311	0.9970	0.6886	2.0016	0.1913	0.1855
<b>ROA</b>	0.0347	0.0382	-0.1731	0.1828	0.0416	1.1991
<i>Explanatory variables</i>						
<b>ESG</b>	51.7634	51.3050	38.8000	63.6500	5.3117	0.1026
<b>E</b>	70.3302	71.2950	51.3500	84.2900	7.5927	0.1080
<b>S</b>	55.5426	56.0950	34.6100	74.1300	8.2566	0.1487
<b>G</b>	35.0826	32.8500	13.7000	64.4700	11.7007	0.3335
<i>Control variables</i>						
<b>SIZE</b>	7.9596	8.1753	7.1059	8.7516	0.5304	0.0666
<b>COUNTRY</b>	0.7000	1.0000	0.0000	1.0000	0.4606	0.6580
<b>BETA</b>	1.0419	1.0555	0.2283	1.9787	0.3603	0.3458
<b>DEBT</b>	2.0117	1.7137	0.8359	3.9845	0.8430	0.4191
<b>CAPEX</b>	0.0659	0.0617	0.0062	0.1489	0.0316	0.4791

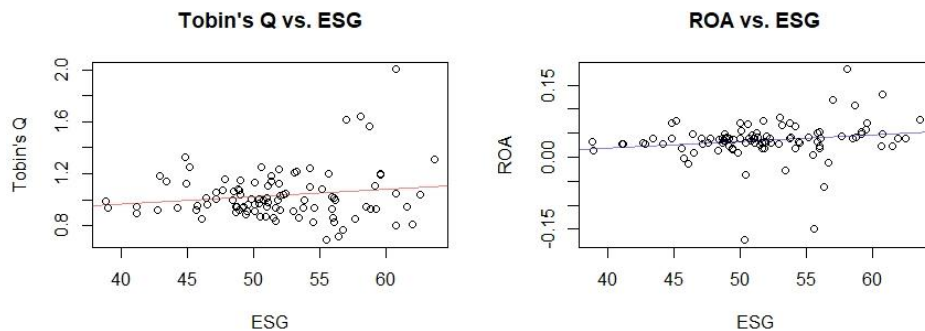
Multiple regression analysis is executed in the statistical software R, where a Pooled Least Ordinary Squares (POLS) model was used at our research's beginning, then panel regression as a fixed or random effect panel.

Before applying the POLS model, five assumptions regarding the model's specification should be tested to ensure the coefficient estimates are unbiased (Han et al., 2016). Firstly, the linearity of the coefficients and error term of the regression should be tested. For this, a Ramsey Reset test is conducted with the null hypothesis claiming no omitted nonlinearity. This hypothesis must be rejected, as the resulting

p-value is smaller than 0.0000, which implies that the model is indeed suffering from some omitted variables or misspecification. However, secondly, ROA and Tobin's scatter plot diagrams against the total ESG indicate a slight positive linear relationship (Figure 1). Scatter plots for the other independent and control variables indicate the same.

Thirdly, endogeneity concerns should be addressed by looking at the correlation between the residuals and all the explanatory variables. No significant correlation between the residuals and any variable should be identified for these models. That is a sign of exogeneity and means that disturbances have the same variance and are unrelated to any independent variable.

Fourthly, an OLS model should demonstrate a constant variance instead of an escalating variance. That can be tested by White's test with the null hypothesis that there is no heteroscedasticity. A p-value of 0.3859 has been found for the ROA model, which gives us reason to reject the null hypothesis and confirm homoscedasticity. In contrast, a p-value at 0.03947 was found for Tobin's Q model, thus confirming heteroscedasticity and reducing the precision of the estimates in the OLS regression.



**Figure 1: Scatterplot of Tobin's Q vs. ESG (left) and ROA vs. ESG (right)**  
 Source: Own elaboration

Finally, multicollinearity should be addressed. The Pearson correlation matrix has revealed one multicollinearity concern among the total ESG score and its three sub-scores. The E score (0.5898) and G score (0.7371) showed moderate correlation, so a variance inflation factors test for multicollinearity was conducted. VIF values higher than ten may indicate a collinearity problem (Abdi and Camara-Turull, 2020). The test revealed that the E score (30.093), S score (10.848), and G score (16.488) might bear a collinearity problem. Replacing the total ESG score with its three sub-scores is hence recommended.

As the assumptions have highlighted, the POLS might not be the first choice for this panel data, but it is still a good base model. Additionally, a fixed or random effect model should be used. The Hausman test has revealed that a fixed effect model is

suggested over a random effect model, as applied in other studies (Abdi et al., 2020; Han et al., 2016; Dziadkowiec, 2021).

The following regression model should be applied to test H1 and examine the relationship between ESG and financial performance:

$$ROAi,t+1 = \alpha + \beta1ESGi,t + \beta2BETAi,t + \beta3DEBTi,t + \beta4SIZEi,t + \beta5CAPEXi,t + \beta6COUNTRYi + \epsilon_{i,t} \quad (1)$$

To test H2 and examine the relationship between ESG and market-based performance, ROA should be added as an independent variable, and Tobin's Q should become the dependent variable:

$$Tobin'sQi,t+1 = \alpha + \beta1ESGi,t + \beta2BETAi,t + \beta3DEBTi,t + \beta4SIZEi,t + \beta5CAPEXi,t + \beta6COUNTRYi + \beta7ROAi,t+1 + \epsilon_{i,t} \quad (2)$$

### Research Results

First, the regression results to test hypothesis 1 will show a positive relationship between ESG performance and ROA. The initial model (1) is accompanied by model (3a), where the total ESG score is replaced by its sub-scores, and additionally, model (3b) uses a Fixed Effects Panel data model instead of a simple POLS.

Table 2 signifies results from the first regression model with ROA as the dependent variable. All three models show marginal to no significant relationships between ESG performance with ROA, neither as a total score nor on a sub-level. R<sup>2</sup> ranges from 0.16870 to 0.18679, which is deemed satisfying. The range of R<sup>2</sup> aligns with recent studies. However, the insignificant effect of ESG performance on ROA contradicts most studies.

Control variables Beta and debt ratio, which represent risk factors, display a negative effect at a significance level of at least 10%, except for the fixed effect model. In addition, the country dummy variable shows a negative relationship with ROA at a significance level of 10%, indicating that non-European car manufacturers, compared to their EU counterparts, experience lower ROA.

**Table 2. Regressions with ROA**

<i>Dependent variable: ROA</i>				
Model	(1)	POLS	(3a) POLS	(3b) FE
	Coefficient		Coefficient	Coefficient
	(Std. Error)		(Std. Error)	(Std. Error)
<i>Independent Variables</i>				
ESG	0.00096 (0.11921)			
E			0.00011 (0.00067)	-0.00080 (0.00067)

S		-0.00000 (0.00057)	-0.00094* (0.00066)
G		0.00045 (0.00049)	0.00032 (0.0005)
SIZE	0.01145 (0.01285)	0.01358 (0.01406)	-0.11602** (0.05256)
CTRY	-0.03158* (0.01602)	-0.02902* (0.01732)	
BETA	-0.03784*** (0.0116741)	-0.03397** (0.01294)	-0.0292276** (0.01385)
DEBT	-0.01712** (0.01167)	-0.01593* (0.00899)	-0.00638824 (0.01032)
CAPEX	-0.12649 (0.18959)	-0.16082 (0.19731)	-0.180516 (0.1986)
Constant	-0.00183 (0.18959)	0.00430 (0.12697)	1.11044** (0.42980)
N Observations	200	200	200
R <sup>2</sup>	0.18679	0.18570	0.16870 (within)

Note: \*\*\*, \*\*, and \* denote a significance level of 1, 5, and 10 per cent, respectively

The software R from model (3b) omitted the dummy variable due to exact collinearity. It was probably due to the strong correlation with debt level. In the fixed effects model, size shows a negative coefficient of -0.11602 at a significance level of 5%. Ceteris paribus, a one per cent increase in size would lead to a 0.001162% decrease in ROA. However, model (3b) shows a statistically significant negative effect on the social score at a significance level of 5% in the fixed effect model (3b). That indicates that ESG sub-scores have contradicting effects on the return on assets indicator. Social issues are likely to be marginally associated with costs or corporate burdens. These findings support hypothesis 1 and show a statistically significant relationship between the S sub-score of the ESG and ROA.

**Table 3. Regressions with Tobin's Q**

<i>Dependent variable: Tobin's Q</i>					
Model	(2)	POLS	(4a) POLS	(4b) FE	(4c) FE
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
	(Std. Error)	(Std. Error)	(Std. Error)	(Std. Error)	(Std. Error)
<i>Independent Variables</i>					
ESG	0.00136 (0.00374)				
E		0.00105 (0.00245)	-0.00055 (0.00237)	-0.0005457 (0.0012891)	
S		-0.00435** (0.00210)	-0.00404* (0.00232)	-0.0040411** (0.0014494)	



G		0.00371** (0.01823)	0.00332* (0.00181)	0.0033210** (0.0019118)
ROA	2.3989*** (0.39833)	2.33166** (0.38485)	1.87610*** (0.38450)	1.8761038* (0.8054615)
SIZE	-0.1506*** (0.04957)	-0.09450* (0.05190)	-0.66642*** (0.18946)	-0.6664254*** (0.1594207)
CTRY	-0.02741 (0.06280)	-0.00862 (0.06459)		
BETA	-0.09207* (0.04731)	-0.04470 (0.04929)	0.04041 (0.04981)	0.0404162 (0.0342563)
DEBT	0.05308 (0.03240)	0.08668** (0.03359)	0.07953** (0.03622)	0.0795307*** (0.0148391)
CAPEX	0.45262 (0.73001)	-0.02539 (0.72702)	-0.07651 (0.76326)	-0.0764958 (0.6744191)
Constant	2.05471*** (0.45794)	1.61985*** (0.46614)	6.21981*** (1.56494)	-
N Observations	200	200	200	200
R <sup>2</sup>	0.43984	0.48779	0.41223 (within)	0.41227 Arellano

**Note:** \*\*\*, \*\*, and \* denote a significance level of 1, 5, and 10 per cent, respectively

Table 3 provides results for the regression with Tobin's Q as the dependent variable. In the first POLS model with the total ESG score as the main explanatory variable, no statistically significant relationship with Tobin's Q could be observed, partly neglecting hypothesis 2. However, models (4a) and (4b) show a statistically significant negative effect on the social score and a positive effect on the governance score at a significance level of 5% in model (4a) and 10% in the fixed effect model (4b). That indicates that ESG sub-scores have contradicting effects on market-based performance. Investors award Strong Corporate governance, while social issues are marginally associated with costs or corporate burdens. The environmental score coefficient is negative but does not show any significant relationship with Tobin's Q. The negative sign could be associated with higher costs resulting from measures to limit environmental damage or pollution, which are likely to increase with firm size and negatively affect Tobin's Q.

All four models yield similar results concerning the significant positive effect of ROA on Tobin's Q, which is no surprise as the market's evaluation is closely linked to the accounting-based performance of the firm. Therefore, a one-unit increase in ROA should increase Tobin's Q by 2.3989 units, *ceteris paribus*. Size negatively affects Tobin's Q in all models, which signified that larger companies have lower valuations. Therefore, the debt ratio has a positive sign at a significant level of 5%, implying a higher share of debt against the book value of equity and positively affecting Tobin's Q. The remaining control variables show no significance but the expected signs. R<sup>2</sup> ranges from 0.41223 to 0.48779, which is deemed satisfying. The

range of  $R^2$  is in line with recent studies, and all models prove to be significant based on an F-statistic p-value of less than 5%.

Due to issues of the 4b model (one-way individual effect within) with heteroskedasticity and serial correlation, the Arellano–Bond estimator has been applied as a generalised method of moments estimator to estimate dynamic panel data model as visible in Table 3 in the 4c model. The method was proposed in 1991 by Manuel Arellano and Stephen Bond to address certain endogeneity problems. The proposed estimator is also robust to heteroskedasticity, cross-sectional dependence and serial correlation.

The empirical findings are clear. Therefore, hypothesis H1 concerning the impact of ESG performance on ROA might be partially accepted, as the S sub-score of the ESG shows a statistically significant relationship to the return on assets or ROA.

Hypothesis H2 could be partially confirmed as the social and governance score statistically impacted the market-based performance. However, only the government score has a positive influence. While the governance score had a positive effect, the social score had a negative effect.

On the other hand, the environmental score did not present any statistical significance and had a negative sign. Therefore, one central assumption that environmental issues would show significance in the automotive industry was denied. Possible explanations should be discussed in the following.

To do justice to the fact that ROA is a profitability metric representing the past, one-year lagged data was used to ensure a time gap to the independent variables representing ESG performance. The results imply that the corresponding costs offset benefits from ESG activities and therefore show little to no effect on profitability. The size was the only control variable with statistical significance and had a negative sign. Larger companies, subject to more public pressure than smaller firms, show more willingness and capabilities to spend money on these costly activities. Another possible explanation is that a one-year lag is too short to test if ESG activities bear fruits. Thus, Tobin's Q might be the suited metric for identifying long-term effects related to future expectations.

Tobin's Q is a forward-looking metric that might cover long-term effects. A company's market equity value heavily influences it and is therefore driven by investors' portfolio decisions. The regression analysis found a significant negative relationship between the social score and a significant positive relationship between Tobin's Q and the governance score. Activities in the social dimension might be associated with high initial costs for training, better working and training conditions, or career development programs, which also result in an improved reputation and retention for firms. However, the resulting benefits seem not to offset the corresponding costs, or they are just not valued highly by the market.

On the other hand, good governance is often associated with more capable managers, better risk management, and a tighter relation to strong corporate operations and, thus, profitability. In this case, the costs are offset by the benefits. The market prioritizes governance over social and environmental performance. The size was also

identified as a significant control variable. A possible explanation would be that larger companies face more public and regulatory pressure on ESG matters and are therefore forced to allocate more resources to ESG activities and disclosure. The results align with the stakeholder theory, which implies that a good relationship of a firm with its stakeholders will eventually result in long-term value creation. However, it should be noted that stricter regulatory guidelines and societal pressure force investors around the globe to incorporate ESG matters in investment decisions and distance themselves from firms violating ESG principles.

### **Discussion**

Although the overall impact seems limited, the findings imply that ESG activities should be implemented in corporate strategies for good stakeholder relationships and long-term value creation. These findings also align with the stakeholder theory, which focuses on long-term profitability.

There are several limitations to this study. These findings cannot be generalised as only one particular ESG score is used as a proxy for ESG performance in the analysis. Studies have found that ESG scores tend to show differing results based on the choice of the ESG score provider, as they each use distinct methodologies and criteria weightings varying across providers (Rossi et al., 2020).

The underlying study for the automotive industry and its leaders does not confirm the generally positive results of firms in different industries, like those analysed by Koundouri et al. (2022) or Brogi and Lagasio (2019). But our results are in accord with sector-specific research provided by Buallay and Al Marri (2022), who examined the relationship between the level of sustainability disclosure and sectors' performance and found that there is a significant negative relationship between ESG and market performance (TQ), but no significant effect of ESG on operational (ROA), or with results provided by Dinca et al. (2022). They explore the relationship between non-financial sustainability, measured by ESG scores, and firm value in the automotive industry, where empirical evidence is scarce. Their results indicate a mixed influence of the E, S, and G scores on firm value in the analysed period, with some inconclusive effects, especially from the social score.

### **Conclusion**

The main objective of this study was to investigate the relationship between ESG performance on the one hand and corporate financial as well as market-based performance on the other. The focus was placed on the twenty largest car manufacturers worldwide. Recent developments in sustainability reporting, ESG investing and the automotive industry globally have revealed trends toward more sustainability. ESG has finally entered the mainstream, but is it still just a buzzword? Results from the regression analysis have found no significant relationship between ESG performance and ROA, contradicting the central hypothesis of this study in the case of this sample. Only the ESG sub-score S has contradicting effect on the return

on assets indicator. Social issues are likely to be marginally associated with costs or corporate burdens. In the area of discussion concerning ESG and the Automobile Industry, several studies have tried to establish the link between the two variables. Results obtained by our regression analysis underline a non-significant positive relationship between ESG and ROA. ESG activities are valued less than expected. Interestingly, the market's valuation, which Tobin's Q should capture, has presented some significant influence. That implies that investors indeed value ESG performance in the long term. Regulatory and societal pressure is bearing fruit. Nonetheless, the challenge of capturing a company's real efforts to address ESG issues and prevent greenwashing remains as tackling the comparison challenge could make performance identification across firms and sectors straightforward by greater accountability by corporations leading to institutional changes in times ahead.

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## ESG I WYNIKI FINANSOWE PRODUCENTÓW SAMOCHODÓW W PERSPEKTYWIE MENEDŻERSKIEJ

**Streszczenie:** Niniejsze badanie ma na celu analizę związku między ujawnianymi przez największych światowych producentów samochodów informacjami dotyczącymi środowiska, społeczeństwa i ładu korporacyjnego (ESG) a ich wynikami finansowymi i rynkowymi. W tym celu wybrano modele danych panelowych obejmujące dziesięć lat. Zestaw zmiennych kontrolnych niezależnych i wynik ESG lub podzbiory wyniku ESG zostały zbadane pod kątem zależnych miar wyników finansowych (ROA) i rynkowych (Q Tobina) firmy. Nowością w artykule jest perspektywa branżowa i wyniki, które są rzadkie i wskazują na mieszany wpływ podzbiorów ESG. Wyniki uzyskane za pomocą analizy regresji podkreślają nieistotny dodatni związek między ESG a ROA, co oznacza, że działania ESG są wyceniane niżej niż oczekiwano. Co ciekawe, wycena rynkowa, którą powinno odzwierciedlać Q Tobina, wykazała pewien znaczący wpływ. Oznacza to, że inwestorzy cenią wyniki ESG w perspektywie długoterminowej, co jest szczególnie istotną informacją dla decydentów w branży motoryzacyjnej.

**Słowa kluczowe:** Wyniki ESG; wyniki finansowe; wyniki rynkowe; analiza regresji, dane podłużne