



**ENVIRONMENTAL SOCIAL RESPONSIBILITY, FIRM SIZE AND
PERFORMANCE OF MANUFACTURING FIRMS LISTED AT THE NAIROBI
SECURITIES EXCHANGE**

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ABSTRACT

With the constant awareness of healthy living in the society, the role of businesses towards the human well-being through environmental conservation has become a major business practice. This study is based on the debate surrounding the apparent value of Environmental Social Responsibility on the performance of firms. The overall objective of the study was to examine the influence of Environmental Social Responsibility on the performance of the manufacturing firms listed at the Nairobi securities exchange with the firm size as the moderating variable. The study is grounded on stakeholder's theory, social contract theory and legitimacy theory. The operationalization of environmental social responsibility was based on three main dimensions: pollution prevention, renewable energy and environmental rehabilitation. Performance on the other hand was measured using financial and non-financial indicators. Census survey of nine manufacturing firms was used owing to the small population size. Primary data was collected using a questionnaire while secondary data was obtained from the published financial records. Regression analysis model is adopted as the econometric tool to establish the relationship between variables. The findings suggested that pollution prevention, renewable energy and environmental rehabilitation were negatively and

significantly associated with financial performance but in contrast positively and significantly related with non-financial performance.

Key Words: Environmental Social Responsibility, Firm Performance, Manufacturing firm, Nairobi Stock Exchange

Introduction

Climate change has been recognized as an extraordinary threat to long-term economic interests and production, as well as a threat to human health, animals, and plants across the world. Climate change poses major risks not only to the environment and human health, but also to the global economic system (UNEP report, 2015)

The manufacturing industry in Kenya is one of the key businesses that has a huge impact on the environment and social costs attributed to high pollution. Manufacturing firms tend to overuse natural resources and cause high pollution through the emission of toxins that lead to the degrading of the environment, which risks threats to the natural diversity of the planet. As a result, the sector has a two-way responsibility in relation to climate change. First, they must incur the financial problems brought about by climate change, and secondly, they have a duty to control the emissions of environmental toxics from their operations (Vlachos, 2017). Consequently, Environmental Social

Responsibility (ESR) has emerged as a way in which manufacturing firms can reduce the negative effects of their production activities on the environment and, simultaneously, increase their organizational sustainability through increased financial and non-financial performance (Magness, 2016).

ESR refers to the collective responsibilities, duties, and obligations taken by an organization to refrain from activities that are damaging to the natural environment by minimizing pollution, making coherent use of natural resources and respecting the environment through rehabilitation and reintegration activities.

Problem Statement

The actual impact of ESR on the performance of an organization is still controversial and unclear, both to policymakers and investors (Aupperle et al., 2010). Several studies tested the existence of a relationship between a firm's ESR and performance. However, these findings are rather unconvincing in answering the question of whether a firm's performance in terms of its

environmental social responsibility can be translated into positive corporate performance. There have been mixed findings on the links, with some studies indicating a positive correlation, others indicating a negative link and others showing no correlation at all.

Secondly, there has been inadequate research that has based their focal point entirely on ESR and the firm's performance. Most academics have based their studies on CSR, which is a broader proportion of study, hence there is a lack of enough literature on the environmental responsibilities and performance of organizations. Additionally, there has been insufficient study on ESR and firm's performance in developing countries and especially based on a high pollutant industry.

Research Objectives

The general objective of this study was to determine the effects of environmental social responsibility on the performance of manufacturing firms in Kenya listed on the NSE.

Theoretical Literature

Stakeholders Theory

Originality traced back to Freeman (1984) the Stakeholder's theory is based on capitalism and argues that business is an interlocked relationship between its customers, employees, investors, shareholders, and the government, among others. According to the theory, for firms to be successful, their management should create value for not just their shareholders but all stakeholders. The stakeholder's theory relevant to this study because the environment is now viewed as a basic stakeholder in firms, not only because its demise is threatening to businesses but also because the organizations' operations play a key role in its existence. This research recapped the criticisms surrounding the stakeholders' theory to determine whether ESR is beneficial to the stakeholders' investments or not. By establishing the relationship between ESR and firms' performance, the scholars will be able to find answers to the critics of the theory.

Social Contract Theory

The social contract can be traced back to ancient Greek scholars, but it gained popularity in the 18th century and is

closely associated with Thomas Hobbes, John Locke, and Jean Jacques Rousseau (1987). The theory suggests that people live together according to agreements on certain values and norms (Hilson, 2018). Social contract theory defines the relationships between an organization and its stakeholders as ones that depend on the adherence of socially built norms and expectations. For organizations to survive, they must be sensitive to the various values and norms of the society in which they exist. This theory is relevant to the study because environmental conservation and management are rules and values demanded by society. Firms are indebted to preserving their image as authentic firms by adhering to social norms and values (Hilson, 2018). With the rising awareness of pollution and global warming, environmental management has emerged as one of the social responsibilities of an organization.

Legitimacy Theory

The legitimacy theory was developed by Dowling, Prefer and Deegan (1975). The theory stipulates that organizations tend to influence their legitimacy in society by running their operations in ways that meet social expectations. Like Social

Contract, the theory is based on the notion that there's a mutual contract between society and an organization where both sides stand to benefit. Hence, a company is judged good or bad according to the standards of society, and they must therefore consider the rights of society to avoid sanctions that might be imposed on them. The theory is relevant to the study because the relationship between firm performance and community expectations is fundamental to business success. Consequently, society puts pressure on organizations to be environmentally conscious, which demands that organizations practice ESR, for example, by preventing environmental pollution in order for them to remain legitimate.

Empirical Review

Environmental and Social Responsibility, Firm Size and Performance

Ibrahim (2021) investigated the impact of an ESR as a branch of CSR on the financial performance of Maldives public limited companies. The study used a mixed method of research and studied annual reports of listed companies on the MSE between 2014 and 2018 with the firms' size as the

moderating factor. The data were collected from the annual reports of the companies and used judgmental sampling techniques and analyzed through the data regression method. The financial performance of the study was measured through ROE and EPS. The study revealed that when firm size is controlled, there exists a negative effect on ESR and the firm's performance. However, by focusing on the firms listed in MSE only, the study can easily be deemed too shallow. As of 2014–2018, only eight companies were listed on the MSE, two of which did not fit into the study, indicating that the sample size was very limited due to the inadequate target population (Ibrahim, 2021). This study focused on manufacturing firms listed at the NSE thus widening the target population.

Mwaura, Letting, Ithinji and Orwa (2017) aimed at studying the importance of pollution prevention to manufacturing firms in Canada in relation to the firm size. They investigated the degree to which a firm's pollution prevention strategies are associated with the performance of the organization. More specifically, their work examined four attributes of pollution prevention; that is,

development and compliance with pollution prevention policies, employee continuous involvement in pollution prevention, management support in Pollution prevention initiatives and provision of pollution prevention reports to external bodies in relation to firm size. They established that pollution prevention strategies are more associated with active larger firms. However, the study did not find a direct link between pollution prevention strategies and a firm's performance. It also limited the study on pollution prevention alone which is too narrow. This study used pollution prevention, use of renewable energy and environmental rehabilitation as indicators of ESR.

Fauzi and Rahman (2017) examined the relationship between ESR and financial performance of companies listed on the Jakarta stock exchange in Indonesia with size as a moderating variable. Secondary data was collected from published audited reports of 383 firms from 2002–2003. Using the regression model, the research established the link between ESR and performance to be inconclusive. Hence, this study did not find any significant association between ESR and firm performance. The

relationship between firm size and FP was negative. The study focused on the financial performance of the company alone leaving out the non-financial performance which is equally critical.

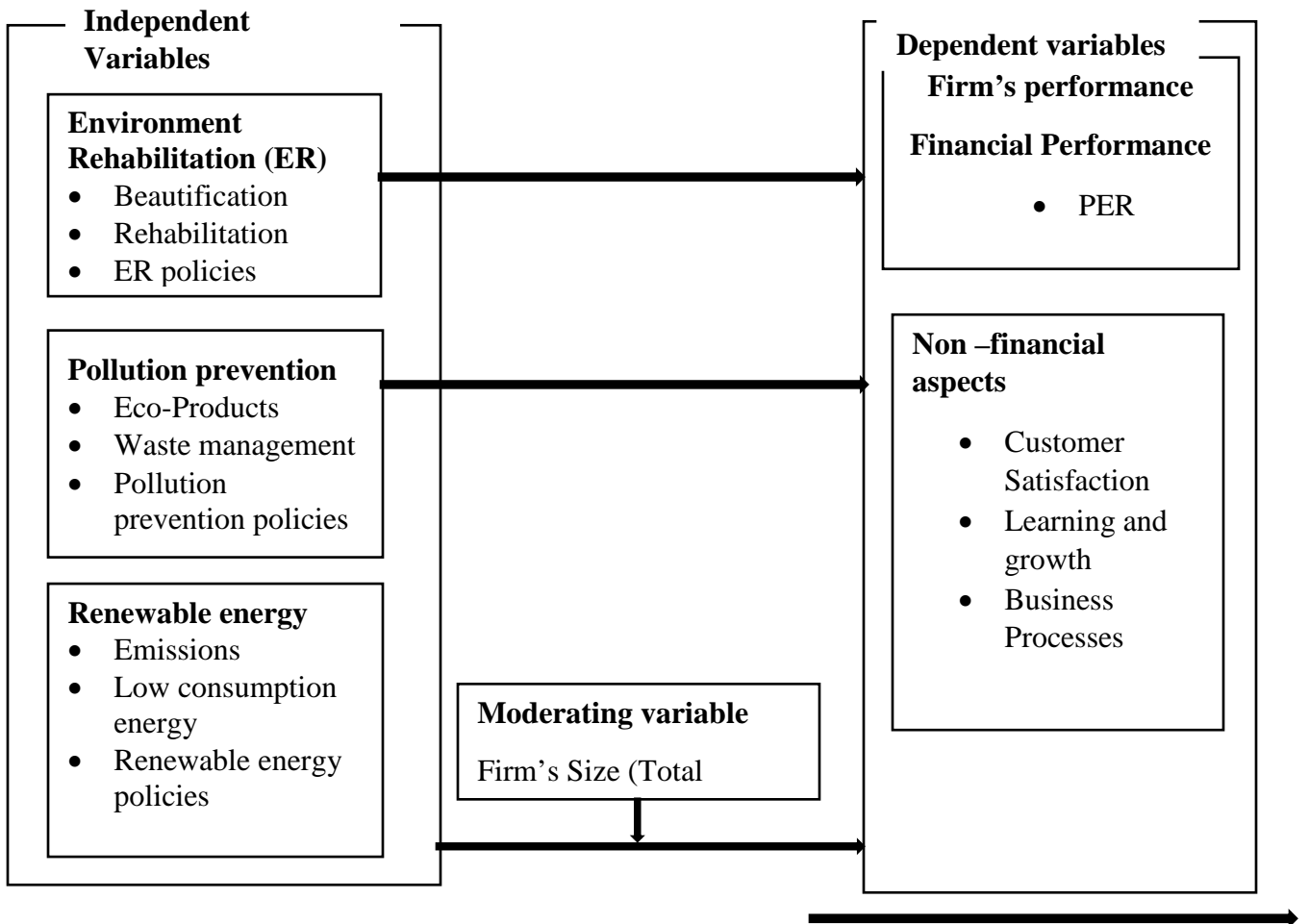
Mwangangi (2018) carried out an empirical study of the manufacturing firms in Kenya with the aim of determining the effects of ESR on the performance of the manufacturing firms in Kenya. The objectives sought to establish the impact of ESR on financial and non-financial firms' performance with the company's size as the controlling variable. The study was anchored on the stakeholders' theory, resource-based theory, social identity theory, and slack resource theory. They used a descriptive survey design to determine the relationship between ESR practices and the firm's performance. He studied 853 manufacturing firms based in Nairobi and the Athi River. Primary data was collected through the administering of questionnaires, and secondary data was collected from the organization's annual reports, books, research, and journals. He used regression analysis to show the relationship between ESR and firm performance, with size as the moderating

factor. The findings indicated a positive but insignificant effect of ESR on the performance of manufacturing firms in Kenya. It further indicated that firm size had a significant controlling effect on the relationship between ESR and firm performance. This study limited the geographical areas covered by its list to manufacturing firms registered by Kenya Association of Manufacturers (KAM) and those that are located in Nairobi and Athi River. It also failed to bring out clear indicators of financial and non-financial performance and measurement and the factors considered in defining firm size.

Through the Study of CSR and Organization Performance, Kakakhel *et al.* (2017) studied 15 listed companies in Pakistan from 200–2014 with the intention of revealing the relationship between ESR and firm performance. The study used ESR as a key variable of CSR, Return on Assets (ROA) to measure the financial performance of organizations and total assets of the organization to measure the firms, which was the intervening variable of the study. The study indicated a positive relationship between CSR/ESR and firm performance, while the relationship

between firm size and FP was negative. However, the study did not exclusively cover ESR as an independent variable but looked at it as a branch of CSR. Again, the sample size of 15 companies was small, which could have led to overestimation.

Figure 2.1: Conceptual Framework



Conceptual Framework

This part gives a visual representation of the variables of the study, showing the relationship between the variables. This study examines the effect of ESR on the financial and non-financial performance of manufacturing firms in Kenya, with the firms' size as a moderating variable. The conceptual framework is based on the variables as shown in

Research Methodology

This study adopted a descriptive study design. This design is appropriate since it allows the study of secondary data to measure changes in variables over some period. It also enables the researchers to compare variables and trends, as well as define the characteristics of the targeted population and verify existing conditions. The choice of a descriptive design ensured that the objectives of this study are objectively met. Due to the small target population, the study adopted census survey. Primary data on non-financial performance was collected through structured questionnaires. The respondents were required to read, understand, and tick an appropriate choice. Secondary data on the firm's size

and performance covering a period of 5 years (2015–2020) was extracted from the firm's annual report and NSE publications. To test the face and content validity of the research instruments, the researcher solicited the assistance of experts. Furthermore, Cronbach's alpha was used to test the reliability of the research instruments. Regression analysis was preferred because it not only predicts and forecast the future but also indicates the casual relationship between the dependent, moderating and independent variables (Kothari, 2019).

Research Findings

Descriptive Statistics

Environmental Social Responsibility

Environmental social responsibility was modelled as the independent variable. This variable was operationalized using three indicators, namely: pollution prevention, renewable energy and environmental rehabilitation. In a scale of one to five, the respondents were asked to rate their organizations with respect to various aspects of environmental social responsibility. The

	N	Min	Max	M	SD
Pollution prevention	9	3	5	3.63	0.98
Renewable energy	9	1	5	2.83	1.49
Environmental rehabilitation	9	1	5	3.11	1.17

findings are as displayed in the table below.

Environmental Social Responsibility

A composite score for the six items that were used to represent pollution prevention was (M = 3.63, SD = 0.98) implying that a greater number of respondents agreed that their firms had adopted pollution prevention measures and there was marginal variation in their opinions as indicated by the standard deviation. The average score for six features that were used to measure renewable energy was modest (M = 2.83, SD = 1.49) suggesting that majority of the respondents were neutral on whether their organizations use renewable energy in their operations and their opinions considerably varied as confirmed by magnitude of their standard deviation. The composite score of six attributes that were utilized to

operationalize environmental rehabilitation was also modest (M = 3.63, SD = 1.17) revealing that a larger proportion of the respondents were not sure whether their firms were carrying out environmental rehabilitation programs whereas the disparities in responses were minimal.

Non-Financial Performance

Non-financial performance was modelled as the response variable. This variable was measured using three indicators, namely: customer satisfaction, learning and growth and internal business processes. In a scale of one to five, the respondents were asked to rate their organizations with respect to several aspects of non-financial performance. The outcomes are as displayed in the table below:

Non-Financial Performance

	N	Min	Max	M	SD
Customer focus	9	2	4	2.98	0.88
Learning and growth	9	2	4	3.2	0.86
Business processes	9	2	3	2.3	0.38

A composite score was developed from six items was to proxy customer focus

(M = 2.98, SD = 0.88) inferring that vast of the respondents were impartial on whether their organization had integrated customer focus into their performance attributes. The small standard deviation indicated that there was marginal variation in the opinions among the respondents. The composite index computed using six attributes was used to operationalize learning and growth was (M = 3.20, SD = 0.86) denoting that majority of the respondents were neutral on whether their firms use learning and growth in performance evaluation. The small standard deviation suggests that there were minimal disparities in opinions among the respondents. The composite score of six attributes that were employed to proxy business process was relatively low (M = 2.30, SD = 0.38) inferring that a larger percentage of the participants disagreed that their firms had integrated business process into their corporate actions whereas the disparities in responses were nominal.

Firm Size

Firm Size was modelled as the moderating variable. This variable was represented by natural log of total assets.

The outcomes of descriptive statistics are as displayed in the table below:

Variable	N	Min	Max	M	SD
Total Assets	9	21.6	25.1	23.6	1.26

The average score for total assets was (M = 21.57) while the standard deviation was (1.26). This implies that there was insignificant variation amongst the listed manufacturing firms in Kenya on the basis of their asset bases.

Financial Performance

Financial performance was modelled as the outcome variable. This variable was proxied by market to book ratio. Price earnings ratio is a measure of share market price relative to earnings per share and generally indicates whether the firm is overvalued or undervalued. It shows investors' current demand for firm's shares. A high price earnings ratio signifies increased demand for company's shares since investors' expect firm's earnings growth in the future. The outcomes are as displayed in the table below:

Price Earnings Ratio

Variable	N	Mi n	Ma x	M	SD
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Financial Performance	9	0.3	2.75	1.3	0.7
				5	2

objective of the study are captured in the tables below:

The mean score for price earnings ratio was (M = 2.75) was relatively high implying that the listed manufacturing firms were largely overvalued. The standard deviation (SD = 0.72) was considerably low suggesting that there was minimal variation in terms of price earnings ratio among the listed manufacturing firms.

Inferential Statistics

The study sought to determine the relationship between environmental social responsibility and firm performance. The primary data on environmental social responsibility and firm performance was collected using a questionnaire while secondary data was collected using data collection sheet. The key estimation technique adopted was regression analysis. The test for significance of the beta coefficients was carried out at 5% level of significance.

Pollution Prevention and Firm Performance

The outcomes relating to the influence of the pollution prevention on firm performance which was the first

Pollution Prevention and Financial Performance

N	9			
R ²	0.54			
Adj. R ²	0.47			
F (1, 7)	8.12			
Prob > F	0.02			
FP	β	SE	t	p
Constant	3.28	0.70	4.66	0.00
PP	-0.53	0.19	-2.85	0.03

Source: Research Findings (2022)

From the findings, the overall regression model was significant {Adj. R² = 0.47, F (1, 7) = 8.12, P = < 0.05}. The adjusted (R²) indicates that closely to 47% of variance in financial performance is clarified by the pollution prevention while the outstanding 53% is described by other factors not included in the regression model. Pollution prevention was found to be a negative significant predictor of financial performance (β = -0.53, t = -2.85, p < 0.05). This suggest that for every additional unit upsurge in pollution prevention financial

performance reduces by 53%, *ceteris paribus*.

Pollution Prevention and Non-Financial Performance

N	9
R²	0.67
Adj. R²	0.62
F (1, 7)	13.93
Prob > F	0.00
NFP	β SE t p
Constant	0.80 0.56 3 0.20
PP	0.56 0.15 3 0.00

Source: Research Findings (2022)

On the basis of the results, the overall estimation model was significant {Adj. R² = 0.62, F (1, 7) = 13.93, P = < 0.05}. The adjusted (R²) suggest that nearly 62% of disparity in non-financial performance is explained by the pollution prevention while the outstanding 38% is depicted by other factors excluded in the regression model. Pollution prevention positively and significantly predicted non-financial performance (β = 0.56, t = 3.73, p < 0.05). This suggest that for every additional unit upsurge in pollution prevention non-financial performance improved by 56%, *ceteris paribus*.

Renewable Energy and Firm Performance

The results concerning to the effect of the renewable energy on firm performance which was the second objective of the study are indicated in the tables below:

Renewable Energy and Financial Performance

N	9
R²	0.45
Adj. R²	0.37
F (1, 7)	5.66
Prob > F	0.05
FP	β SE t p
Constant	2.25 0.43 5.25 0.00
RE	-0.32 0.14 -2.38 0.04

Based on the estimated results, the overall estimation model was statistically significant {Adj. R² = 0.37, F (1, 7) = 5.66, p = < 0.05}. The adjusted (R²) verify that close to 47% of variation in financial performance is explicated by the renewable energy while the other 63% is explained by other variables overlooked in the regression model. Renewable energy associated with financial performance negatively and significantly (β = -0.32, t = -2.38, p < 0.05). This suggest that for every additional unit increment in renewable energy financial performance reduces by 32%, *ceteris paribus*.

Renewable Energy and Non-Financial

Performance				
N	9			
R²	0.89			
Adj. R²	0.88			
F (1, 7)	57.61			
Prob > F	0.00			
NFP	β	SE	t	p
Constant	1.162	0.18	9.15	0.00
RE	0.43	0.06	7.59	0.00

Source: Research Findings (2022)

The Table displays the results showing the link between renewable energy and non-financial performance. The overall regression model was significant {Adj. $R^2 = 0.88$, $F(1, 7) = 57.61$, $p < 0.05$ }. This implies that nearly 88% of inconsistency in non-financial performance is described by the renewable energy while the outstanding 12% is due to other factors omitted in the regression model. Renewable energy was a significant and positive predictor of non-financial performance ($\beta = 0.43$, $t = 7.59$, $p < 0.05$). This implies that for every additional unit upsurge in renewable energy non-financial performance ameliorated by 43%, *ceteris paribus*.

The findings of this study greatly contradicts those of D’Arcimoles and Trebucq (2016) who while focusing on

US based firms observed that there was an insignificant positive relationship between the use of renewable energy management and a firm’s performance. Likewise, the findings of this study are not in line with those of Machiel and Daan (2020) whose study did not reveal any evidence of the impact of renewable energy on the company’s profit. The findings of this study also are not in agreement with those of Babajide *et al.* (2019) who found a negative relationship between the use of renewable energy and the performance of among sub-Saharan African firms. The results of this study equally contradict those of Ochieng (2019) who suggested that whereas the use of renewable energy improved the social image of a service industry, it had very little impact on its financial performance.

Environmental Rehabilitation and Firm Performance

The outcome of the influence of the environmental rehabilitation on firm performance (objective 3) is presented in the tables below:

Environmental Rehabilitation and Financial Performance

N	9
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R²	0.60			
Adj. R²	0.54			
F (1, 7)	10.72			
Prob > F	0.01			
FP	β	SE	t	p
Constant	2.82	0.48	5.85	0.00
ER	-0.48	0.15	-3.27	0.01

Source: Research Findings (2022)

The findings suggest that the overall regression model was significant {Adj. $R^2 = 0.54$, $F(1, 7) = 10.72$, $p < 0.05$ }. This implies that nearly 54% of variance in financial performance is elucidated by the environmental rehabilitation while the outstanding 46% is described by other variables disregarded in the regression model. Environmental rehabilitation related with financial performance negatively and significantly ($\beta = -0.48$, $t = -3.27$, $p < 0.05$). This implies that for every additional unit increment in environmental rehabilitation financial performance reduces by 48%, ceteris paribus.

Environmental Rehabilitation and Non-Financial Performance

N	9
R ²	0.64

Adj. R²	0.59
F (1, 7)	12.6
Prob > F	0.00

NFP	β	SE	t	p
Constant	1.39	0.43	3.23	0.02
ER	0.46	0.13	3.55	0.01

Source: Research Findings (2022)

The findings indicating the nexus between environmental rehabilitation and non-financial performance. The overall regression model was significant {Adj. $R^2 = 0.59$, $F(1, 7) = 12.56$, $p < 0.05$ }. This imply that nearly 59% of variation in non-financial performance is depicted by the environmental rehabilitation while the outstanding 41% is due to other factors excluded in the regression model. Environmental rehabilitation was a significant and positive predictor of non-financial performance ($\beta = 0.46$, $t = 3.55$, $p < 0.05$). This suggests that for every additional unit increase in environmental rehabilitation non-financial performance improves by 43%, ceteris paribus.

Environmental Social Responsibility, Firm Size and Firm Performance

The findings of the moderating influence of firm size on the relationship between environmental social responsibility and firm performance (objective 4) is illustrated in the tables below:

Environmental Social Responsibility, Firm Size and Financial Performance

N	9
R²	0.60
Adj. R²	0.36
F (1, 7)	2.50
Prob > F	0.17

FP	β	SE	t	p
Constant	0.89	3.87	0.23	0.83
ESR	-0.49	0.25	-1.97	0.11
FS	0.09	0.16	0.53	0.62
ESR*FS	0.03	0.27	0.11	0.92

Source: Research Findings (2022)

The findings of this study indicate that the overall estimation model was insignificant {Adj. R² = 0.36, F (1, 7) = 2.50, p = > 0.05}. This implies that nearly 36% of variation in financial performance is jointly explained by the environmental social responsibility, firm size and interaction term while the outstanding 64% is depicted by other variables ignored in the regression model. The empirical findings show that environmental social responsibility (β = -0.49, t = -1.97, p = > 0.05), firm size (β = 0.09, t = 0.53, p = > 0.05) and the interaction between environmental social responsibility and firm size (β = 0.03, t =

0.11, p = > 0.05) were insignificantly related with financial performance. Since the coefficient of the interaction term was insignificant, the moderating effect of firm size on the relationship between environmental social responsibility and financial performance was ruled out.

Environmental Social Responsibility, Firm Size and Non-Financial Performance

N	9
R²	0.84
Adj. R²	0.74
F (1, 7)	8.46
Prob > F	0.02

NFP	β	SE	t	p
Constant	0.96	2.33	0.41	0.70
ESR	0.50	0.15	3.25	0.02
FS	0.01	0.10	0.13	0.90
ESR*FS	0.06	0.16	0.39	0.71

Source: Research Findings (2022)

The outcome of this study confirmed that the overall regression model was insignificant {Adj. R² = 0.74, F (1, 7) = 8.46, p = > 0.05}. This suggest that approximately 74% of disparity in non-financial performance is collectively explained by the environmental social responsibility, size and interaction term while the outstanding 26% is described by other variables excluded in the

regression model. Environmental social responsibility associated with non-financial performance positively and significantly ($\beta = 0.50$, $t = 3.25$, $p < 0.05$). On the other hand, firm size ($\beta = 0.01$, $t = 0.13$, $p = > 0.05$) and the interaction between environmental social responsibility and firm size ($\beta = 0.06$, $t = 0.39$, $p = > 0.05$) were insignificantly related with non-financial performance. Since the coefficient of the interaction term was insignificant, the moderating effect of firm size on the link between environmental social responsibility and non-financial performance was ruled out.

Conclusion and Recommendations

Based on the study findings, several conclusions were drawn. First, pollution prevention was negatively related with financial performance. This implies pollution prevention is a costly endeavour that consumes significant resources which consequently has an adverse effect on financial performance. In contrast, pollution prevention was positively associated with non-financial performance. This suggest that pollution prevention significantly contributed to improvement in non-financial aspects of the firm. It can therefore be concluded that pollution prevention responds better

to non-financial performance aspects in comparison to financial aspects.

Secondly, renewable energy was found to have a significant negative influence financial performance. This means that investment in renewable energy is very expensive and usually consumes a greater part of corporate earnings thus reducing firms' overall profitability. On the other hand, renewable energy influenced non-financial performance in a positive manner. This implies that renewable energy a favourable effect on non-monetary aspects of the firm. In conclusion, renewable energy can be said to have significant effect on firm performance.

Thirdly, there was significant negative effect of of environmental rehabilitation on financial performance. This implies that financing environmental rehabilitation is quite expensive and this has an adverse effect on firms' earnings thus negatively affecting the financial performance. On the flipside, environmental rehabilitation was found to be positively related to non-financial performance. This implies that environmental rehabilitation is more sensitive to non-financial measures since

it is capable of tracking corporate strengths and weaknesses as well as being able to reveal business performance. As a result, it can be concluded that environmental rehabilitation positively affects non-financial performance as opposed to financial performance that indicates an inverse relationship.

Fourth, the relationship between environmental social responsibility and performance does not vary with the size of the firm. This implies that size of the firm has no significant effect in either strengthening, reversing or reducing the relationship between environmental social responsibility and performance. As a result, it can be the size does not matter at all in moderating the hypothesized linkage.

The study recommends that the numerous academic practitioners in the strategic management field and more specifically those in the area of corporate social responsibility should consider the empirical evidence amply offered by the extant study to further their research interests. The study also recommends that the outcomes of this study have grim policy implication in regard to the environmental social responsibility and performance in the context of the listed manufacturing firms in Kenya. Finally, the study recommends that the top management team of listed manufacturing firms in Kenya should utilize the upshots of this study for strategic guidance in making key reforms in a bid to protect the environment.

REFERENCES

- Abane, J.A., Brenya, E. (2021). The relationship between organizational environment antecedents and performance management in local government: evidence from Ghana. *Future Business Journal*, <https://doi.org/10.1186/s43093-020-00049-2>
- Abbott, W.F. & Monsen, J.R. (2020). On the measurement of corporate social responsibility. *Academy of Management Journal*, 22 (1), 501-515
- Accenture, UN Global Compact (UNGC). 2014. *A New Era of Sustainability: UN Global Compact–Accenture CEO Study 2010*. United Nations Global Compact–Accenture: New York
- Adriana, P., and Ion G., (2013) (2015). *Strategic corporate responsibility orientation for sustainable global health governance: Pharmaceutical health co-protection in transitioning economies*. Unpublished PhD thesis, Turku: Turku School of Economics.
- Bartolacci, F. Paolini, A. Soverchia, M. & Zigiotti, E. (2016). *Environment rehabilitation and Financial Performance: Evidence from Italian Companies*. University of Macerata, Department of Economics and Law, Italy
- Becker, Wendy & Smith, Richard. (2014). *Social and Environmental Responsibility, Sustainability, and Human Resource Practices*. 10.2139/ssrn.2120195.
- Chen, L. (2015). *Sustainability and company performance: Evidence from the manufacturing industry*. Unpublished PhD thesis, Sweden: Linkoping University
- Chukwuka, E.J. & Eboh, E.A. (2018). Effects of Green Business Practices on Organizational Performance. *International Journal of Development and Management Review*. Vol. 13 No. 1 June, 2018
- Coles, J. Daniel, N. and Li, V. (2015). *Co-opted Boards*. Review of Financial Studies
- Daniel, J. (2014). *Sampling essentials: Practical guidelines for making*

- sampling choices*. Thousand Oaks, CA: Sage.
- D’Arcimoles, C. H. and Trebucq, S. (2016). *The corporate social performance - financial performance link*. Working Paper Series, Available at SSRN.
- Deegan, K. 2014. The legitimising effect of social and environmental disclosures: A *Theoretical Foundation*. *Accounting, Auditing and Accountability Journal*, 15 (3): 282 – 311
- Directors of NSE - Nairobi securities exchange (NSE). (n.d.). *Nairobi Securities Exchange - NSE Kenya*. <https://www.nse.co.ke/nse/governance/directors-of-nse.html>
- Durdella, N. (2019). *Qualitative Dissertation Methodology: A Guide for Research Design and Methods*. SAGE Publications
- Efobi, U., Belmondo, T., Orkoh, E. *et al.* (2019). Environmental pollution policy of small businesses in Nigeria and Ghana: extent and impact. *Environ Sci Pollut Res* 26, 2882–2897 (2019). <https://doi.org/10.1007/s11356-018-3817-x>
- Fauzi, H. Mahoney, S. & Rahman, A. (2017). *Link between corporate social Performance and Financial performance evidence from Indonesian companies*. *Issues in Social and Environmental Accounting*, 1(1), 145-159
- FAO (2020). *Position paper on “Ecosystem Restoration” of production ecosystems*. In the context of the UN Decade of Ecosystem Restoration 2021-2030.
- Faulkner, D. & Segal-Horn, S. (2015). *Understanding global strategy*. Croatia: Zrinski
- Fleming, J. (2018). Recognizing and resolving the challenges of being an insider researcher in work-integrated learning [specialissue]. *International Journal of Work-Integrated Learning*, 19 (3), 311-320.
- Franklin, D. (2018). *Just good business*. *The Economist, Special Report*. Corporate Social Responsibility. <http://www.econo>

- mist.com/specialreports/displayStory.cfm?story_id=10491077
- Freeman, R.E. Harrison, J.S. Wicks, A.C. Parmar, B.L. & De Colle, S. (2010). *Stakeholder theory state of the art*. New York: Cambridge University Press
- Fu, Y. & Shen, J. (2015). Correlation analysis between corporate social responsibility and financial performance of Chinese food processing enterprises. *Advanced Journal of Food Science and Technology*, 7(11), 850-856.
- Graham, Stephanie & Mcadam, Rodney. (2016). The effects of pollution prevention on performance. *International Journal of Operations & Production Management*. 36. 1333-1358. 10.1108/IJOPM-05-2015-0289.
- Galbreath, J. (2014). Drivers of corporate social responsibility: the role of formal strategic planning and firm culture. *British Journal of Management*
- Government of Kenya. (2020). *The constitution of Kenya*. Nairobi: Government printer.
- Government of the Republic of Kenya (2018). *National Climate Change Action Plan 2018-2022*. Ministry of Environment and Forestry, Nairobi.
- Googins, B. (2017, July 1). *Why Community Relations is a Strategic Imperative*. <https://www.strategy-business.com>
- Gupta. L.& Gupta, V.K. (2020). Going Green Methods and Initiatives in telecom Sector for Energy Management. *Journal of Telecommunication System Management*
- Hatting. R, Tanner P & Aken M (2019). *Land rehabilitation guidelines for surface coal mines*. Land rehabilitation Society of Southern Africa
- Heyward, C. (2020 Nov 18). *The Growing Importance Of Social Responsibility In Business*. Forbes <https://www.forbes.com/sites/forbesbusinesscouncil/>
- Hilson, A. E. (2018). *Resource enclivity and corporate social responsibility in SubSaharan*

- Africa: The case of oil production in Ghana.* Aston University
- Ibrahim, S. (2021). Impact of corporate social responsibility on organization's financial performance: evidence from Maldives public limited companies. *Future Business Journal.*
- Kasea O (2018). Green economy strategies adoption on financial performance of manufacturing companies, Kenya. *International Academic Journal of Human Resource and Business Administration*, 2(4), 347-365 - Inclusion
- Kenya Association of Manufacturers (KAM). (2015). *Kenya manufacturers and exporters directory.* Nairobi: Adafic communications ltd.
- Kolk, (2020). Trajectories of sustainability reporting. MNCs. *Journal of World Business.*
- Kolk , A. Levy , D. and Pinkse , J. (2018) . *Corporate responses in an emerging climate regime: The institutionalisation and commensuration of carbon disclosure.* European Accounting Review
- Kothari, C.R. (2019). *Research methods & techniques.* New Delhi: wishwaprakashan
- Kumar, S. Gupta, S. & Gayathiri, S. (2018). "“*Environment Rehabilitation*” is the key to drive sustainability: Preliminary findings from a tannery unit in India", *Management of Environmental Quality,*
- Leavy, P. (2017). *Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches.* Guilford Publications
- Li L, Frank W, Dang, & Chongyu. (2016). Measuring Firm Size in Empirical Corporate Finance. *Journal of Banking & Finance.* 2018 *forthcoming.* 10.2139/ssrn.2345506.
- Listed companies. (n.d.). <https://www.nse.co.ke/listed-companies/list.html?limitstart=0>
- Lockett, A. Moon, J. & Visser, W. (2016). Corporate Social responsibility in management

- research: focus, nature, salience and sources of influence. *Journal of Management Studies*
- Magness, V. (2016). Strategic posture, financial performance and environmental disclosure: An empirical test of legitimacy theory. *Accounting, Auditing & Accountability Journal*
- Majeed, M. (2021). *Green Marketing Communication and Consumer Response in Emerging Markets*. Green Marketing in Emerging Economies.
- McWilliams. A. Siegel, D. (2011). Event studies in management research: Theoretical and empirical issues. *Academy of Management Journal* 40: 626-657
- Mentis, M. (2020). *Environmental rehabilitation of damaged land*. Forest Ecosystems.
- Mwangangi, A. S. (2018). *Effect of Corporate Social Responsibility on Performance of Manufacturing Firms in Kenya*. Unpublished PhD thesis
- Mwaura, A., Letting, N., Ithinji, G. & Orwa H. B. (2017). Reverse Logistics Practices and Their Effect on Competitiveness of Food Manufacturing Firms in Kenya. *International Journal of Economics, Finance and Management Sciences*. Vol. 3, (6), pp. 678-684.
- New WHO global air quality guidelines aim to save millions of lives from air pollution. 2021, September 22). WHO | World Health Organization. <https://www.who.int/news/item/22-09-2021-new-who-global-air-quality-guidelines-aim-to-save-millions-of-lives-from-air-pollution>
- Nishant R., Thompson G., Mark G. & Krishnan S. (2019). *Does Environmental Performance Affect Organizational*

- Performance: Evidence from IT Organizations.* International Conference on Information Systems, ICIS 2012. 1.
- Ochieng. A. (2019). *Effects of green business practices on an organization's performance: A case study of Safaricom limited, Nairobi-Kenya Organizational strategy - definition and meaning.* Market Business News.
- Ochiri. G. Wario. G. Arasa, R. & Odhiambo. R. (2015). Effects of environment rehabilitation Strategy On Firm Performance: A Survey of Publishing Firms IN Kenya, *International Journal of Economics, Commerce And Management*
- Okeyo, E. O (2017). Green economy strategies adoption on financial performance of Bamburi Cement Company, Kenya. *International Academic Journal of Human Resource and Business Administration*, 2(4), 347-365 - *Inclusion*
- Pearce, J. & Robinson, R. (2019). *Strategic management: Formulation, implementation and control.* New York: McGraw – Hill.
- Ramdhony, D. (2018). *The implications of mandatory corporate social responsibility – A literature*

- review perspective*. Theoretical economics letters, 8, 432-447. Retrieved from <https://doi.org/10.4236>.
- Ruggiero, S. & Lehtonen, H. (2017), Renewable energy growth and the financial performance of electric utilities: A panel data study, *Journal of Cleaner Production*, 10.1016
- Soni, P. (2019). *Companies look at CSR initiatives for branding slump*. Companies-look-at-CSR-initiati.
- Testa, F. Miroshnychenko, I. Barontini, R. & Frey, M. (2018), *Does it pay to be a green washer or a brown washer?*. Business Strategy and the Environment
- Tom, C. (1, December 2018). *Incorporating Social Activism*. 98 Boston University Law Review
- UNEP FI, 2015a. *Finance for carbon Solutions. The Clean Development Mechanism: The Financial Sector Perspective*, CEO briefing, www.unepfi.org.
- United Nations Framework Convention on Climate Change [UNFCCC] (2020). *Chile's Nationally* https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Chile%20First/Chile%27s_NDC_2020_english.pdf.
- Verhoeff, J. (2019). *Brand identification – 5 steps to amazing brand recognition*. <http://ezinearticles.com/?Brand-Identification-5-Steps-to-Amazing-Brand-Recognition>
- Vijh, A.M. and Yang, K. (2014). Are small firms less vulnerable to overpriced stock offers? *Journal of Financial Economics*, forthcoming
- Vlachos, P. A. (2017). Corporate Social Responsibility: Attributions, Loyalty and the Mediating Role of Trust. *Journal of Selected works*.
- Willard, B. (2019, February 28). *Reasons Why “Mother Nature” is a Key Stakeholder*. Sustainability advantage. <https://sustainabilityadvantage.com/2019/02/28/5-reasons-why-mother-nature-is-a-keystakeholder/>

Wincent, J. (2015). Does size matter? a study of firm behavior and outcomes in strategic

SME networks. *Journal of Small Business and Enterprise Development*

Wu, D. (2016). Detecting information technology impact on firm performance using DEA and

decision tree. *International Journal of Information Technology and Management*

Zikmund, W. Babin, B. Carr, J., & Griffin, M. (2016), *Business Research Methods*. Cengage Learning