



**CORPORATE SOCIAL RESPONSIBILITY EXPENDITURE ON ENVIRONMENT AND FINANCIAL PERFORMANCE  
OF TEA DEVELOPMENT AGENCY MANAGED FACTORIES IN KENYA**

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**ABSTRACT**

Kenya Tea Development Authority registered factories continue to face the challenge of financial performance in regard to declining return on equity across the period 2017-2021. To ameliorate this challenge, Kenya Tea Development Authority firms are undertaking corporate social responsibility activities in order to gain social license in the areas they operate. However, there has been limited empirical evidence linking corporate social responsibility of environment and financial performance particularly on these Kenya Tea Development Authority firms. Thus, against this background, this study determined the effect of Corporate Social Responsibility on environment on financial performance of Kenya Tea Development Authority managed factories in Kenya. The study was anchored on resource-based view theory, stakeholder theory, institutional theory and social contract theory. The study was based on positivism research philosophy guided by explanatory research design. The target population consisted of all the 67 Kenya Tea Development Authority managed factories clustered into 7 Seven regions as at December 2022. The study applied census technique where data was sought from the entire population. Information in its primary form was gathered through structured questionnaire on corporate social responsibility while secondary data from 2017-2021 was obtained on financial performance and firm size. The Statistical Package for Social Sciences was used to compute descriptive statistics that entailed means and standard deviation. Besides, inferential statistics covering regression analysis were used to test the formulated hypotheses. Presentation of the data was done through tables and figures. The study established that Corporate Social Responsibility expenditure on environment ( $\beta=0.505$ ,  $p<0.05$ ) was a significant predictor of financial performance of Kenya Tea Development Authority managed factories in Kenya. At the same time, firm size was found to have significant moderating effect on the relationship between Corporate Social Responsibility and financial performance of Kenya Tea Development Authority managed factories. The study concluded that there exists significant relationship between Corporate Social Responsibility on environment and financial performance which is moderated by firm size. The study recommended that senior managers working among Kenya Tea Development Authority managed factories in Kenya continue to invest in environmental Corporate Social Responsibility initiatives.

**Key words:** Corporate Social Responsibility, Environmental Expenditure, Financial Performance

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## INTRODUCTION

The tea industry is one of the key exporters in Kenya and accounts for 4 percent of the gross domestic product (GDP) (KNBS, 2018). The contribution of tea to the Kenyan GDP can be greatly attributed to KTDA managed factories since they account for 60 percent of the tea produced in Kenya (Gesimba et al., 2005). Apart from the contribution to the country's GDP, KTDA managed factories play a central role in improvement of the livelihoods of tea farmers and the society through monthly and annual payments of returns on the tea deliveries by the farmers to the factories. According to Wandabwa (2014), significant amounts of the factories' incomes are used to pay salaries and wages showing that the factories are among the major employers in Kenya. However, despite the contributions of the factories to the Kenyan economy and the society, their financial performance (FP) has been hindered by several challenges, ranging from over reliance on traditional export markets, high production costs, operations costs, contribution to the society in form of corporate social responsibility (CSR) and tea prices due to oversupply and competition (Sanne, 2008).

As the owners and investors of organizations aim at profits and wealth maximization, they should be aware that other stakeholders have different interests with the business (Shabana, 2011). Whereas customers are concerned with safety of the products, suppliers' concerns are timely payment of supplies, while the Government is concerned with the company's compliance to the set standards (Surroca et al., 2010). Adoption of CSR can go a long way in balancing the interest of all stakeholders in an enterprise (Shabana, 2011). According to Harrison and Wicks (2013), inclusion of stakeholders increases the sustainability of a firm's revenue generation through improved stakeholder relationships.

Globally, industrial firms have been viewed as major agents of depletion of natural resources leading to pollution of the environment, this has forced most

countries to enforce regulatory fines and penalties to those organizations ignoring to implement CSR programs aimed at mitigating the negative effects of the firms (Crifo & Forget, 2015). To avoid the regulatory fines and penalties, organizations have adopted business models which integrate CSR programs within their short-term and long-term investment strategies (Ibrahim, 2014). The key force behind all these is to safeguard the interest of the stakeholders in place of an enterprise (Karaibrahimoglu, 2010).

In Africa, Togun and Nasieku (2015) found that competitive advantages can be achieved by organizations' CSR which is viewed as a tool aimed at enhancing the corporate image and financial performance of Nigerian companies brought by its competitiveness. Through enforcement of CSR compliance, Calabrese et al. (2013) stated that firms are able to gain social reputation through creation of a harmonious operating environment with the host communities. Thus, it is possible for enterprises to upscale their performance since they receive minimum resistance from their primary stakeholders. This suggests that many manufacturing firms undertake CSR initiatives to gain social license from their stakeholders.

In Kenya, tea firms like other manufacturing firms, have concerns in areas they operate (Business Daily, 2019). This has often forced them to undertake CSR initiatives, such as occupational safety and health, consumption of energy, recycling and waste management (Obara, 2019). These initiatives are implemented to boost the image of an enterprise (Muthuri & Gilbert, 2011). Inability to recognize CSR activities according to Mwangi and Oyenje (2013) can create conflict. Similarly, Ahmad and Zabri (2016) added that CSR not only enables firms to respond to the community issues, but also enhances social reputation, which is important in enhancing financial performance.

Multinational factories continue to put in place a number of initiatives aimed at attracting and retaining tea suppliers who are majorly small-scale holders (Business Daily, 2019). Some of the

incentives entail medical cover (Business Daily, 2019). As a consequence, tea farmers and suppliers have considerably abandoned KTDA factories in favor of private sector multinational factories. Apart from increased incentives, most of the emerging private tea factories offer higher prices (Gitonga, 2019). This continues to disadvantage KTDA factories as they can only attract a small number of tea suppliers compared to the private factories that pay higher returns to the farmers (Obara, 2019). In response to the increased competition from the private sector, KTDA factories have widened CSR activities. To gain acceptance by small scale farmers, some of these traditional factories have impressed CSR activities which plays a significant role in attracting new farmers in turn has affected their financial performance (Obara, 2019). Despite this being the case, the linkage between CSR expenditure and financial performance of KTDA firms has not been captured in the mainstream literature (Kerubo, 2020) hence the need for further research in the area.

Despite the contributions KTDA factories have made in Kenya in terms of earning the country foreign exchange, KTDA firms are facing financial challenges which have resulted to reduction of the amounts allocated to environmental, education and health CSR (Ongong'a & Ochieng, 2013). As a result, questions continue to linger on the extent to which CSR can create a sustainable competitive advantage (Porter & Kramer, 2011). This is in part attributed to manufacturing of products, which leads to exploitation of natural resources, production of waste products and environment pollutions. To sustainably protect surrounding communities, Cruz and Ramos (2015) and Galbreath (2009), firms formulate environmental CSR initiatives aimed at minimizing the impact of their operations. This helps in eliminating potential harm to the stakeholders who could be suppliers, customers, and host community.

Dahlsrud (2008) defined CSR as general practices purely based on values relating to respect for the environment, community and society, where

organizations should take responsibility to the actions the society besides profit making. According to Ngatia (2012), CSR is a firm's social responsibility for its operations and activities to all its stakeholders. This includes making decisions that strike a balance between profits and the welfare of the stakeholders. Arora and Dharwadkar (2011) agree that firms leverage CSR as a mechanism of being more accountable for their activities. This study covered CSR areas in education, health and the environment.

CSR on environment are initiatives put in place by the firm to support protection of the surrounding as a way of realization of sustainability (Le-Gallo & Ndiaye, 2021). Many organizations across the globe are spending huge amount resources on CSR activities, where the goals or objectives of these activities are to increase social acceptance from the society, thus more profitability (Hoque et al., 2018). Trends on CSR expenditure on the environmental course has been documented in the global context, where several police papers, such as the Environmental protection expenditure (EPE) have provided explicit information on the amounts of resources that should be spent towards environmental protection (Ladaru & Dracea, 2017). Statistics from organization of Economic Corporation and Development on environmental expenditure indicate that 220 billion euros was spent, where countries with higher GDP spend more per inhabitant (Le-Gallo & Ndiaye, 2021). The environmental expenditure was and is still designated to investments in environmental pollution prevention and treatment. This information suggests that organizations undertake environmental CSR in terms of pollution prevention and treatment emanating from production and consumption of services and products.

Evidence from Africa indicate that organizations undertake environmental CSR as a means to gaining social license to operate (Hoque et al., 2018). Evidence shows that most of the multinational corporations operating in Africa mostly those in resource constraint areas undertake environmental

CSR to appeal to the local communities (Uduji, & Okolo-Obasi, 2019). In Kenya, evidence indicates that corporations and local authorities have spent resources running into millions of dollars in an endeavor to change the environment in which they operate in (Kilika, 2020). Most organization in Kenya, particularly those in the financial/banking sector have devoted large amounts of resources to environmental protection. For instance, the Cooperative Bank of Kenya subscribe to the Sustainable Development Goals (SDGs), particularly on the environmental protection (Cooperative Bank of Kenya, 2019).

Commercial banks in Kenya that have invested in environmental protection include but not limited to Equity Bank Limited, Absa Bank, Sidian Bank among others (Marwa, 2020). Despite this being the case, CSR- financial performance nexus with regard to KTDA factories in Kenya remain scant which this study sought to provide. Masud and Islam (2018) found that environment CSR initiatives directly impacts on financial performance of the entity. According to corporate social responsibility theory, a company should be equally concerned by ensuring it obeys all the laws regarding social responsibility to the society and environment the same way it is concerned to profit making (Harrison & Wicks, 2013).

Financial performance is an outcome of use of organization assets to generate revenues (Ongore & Kusa, 2013). Financial performance is one of the KPIs for organizational performance since it represents the profitability parameter, ROA and ROE. Ongore and Kusa (2013) operationalized performance measurement as the degree of how a shareholder's wealth as increased over a specific time. Arino and Canela (2010) stated that measurement of performance overtime is a good parameter for comparing firms with similar characteristics. Thus, financial performance is measured on how well an enterprise generates revenue from the resources.

Various indicators can be used by Organizations to estimate the performance of their investments:

ROA, profitability ratios, liquidity ratios, ROI, and ROE. This study measured financial performance of KTDA managed factories using ROE since it provides the annual income of a company by dividing the net income by the shareholder's equity. Financial performance plays a key role to any organization survival and growth. KTDA factories continues to play a key role to the Kenyan tea industry since it contributes to the country's economic growth by its 60% of the Kenyan tea production (Gesimba, Langat, & Wolukau, 2005). Kipruto (2013) regarded financial performance as meeting monetary predetermined goals of an entity. In contrast, Ongore and Kusa (2013) operationalized financial performance as the level of health for the financial statement. Wang and Qian (2011) indicated financial performance as a measure liquidity and profitability of a firm in the current period relative to the past performance, which technically refers to as financial health.

Kenya Tea Development Authority (KTDA) was incorporated as a limited company in 2000 (Gesimba *et al.*, 2005). The work of the agency was to upscale development and growth of tea among small-holder farmers. The work of KTDA was to oversee the entire chain of tea right from the farms all the way to the international markets and processing of payments to the farmers. According to Milgo, Namusonge, Kanali & Makokha (2014), the tea sector in Kenya also integrates multinational tea enterprises that largely grow their tea. Before self-rule in Kenya, it's only these enterprises that grew tea. However, after Kenya became an independent state and with the formation of KTDA, growing and development of tea has become of the noticeable products in international markets.

KTDA managed factories contributes to about 60% of the tea production in Kenya (Gesimba *et al.*, 2005). According to Kenya tea export data by the East Africa Tea Trade Association reports as at 2019, revenues from tea export have been rising for the last one decade. However according to KTDA (2019) financial highlights, there has been a constant decrease of profits before tax, based on the year

2019 the highlights showed a 15.7 %, 3.4 %, 30.7% and 14.5% decrease of the profits for the years 2014, 2015, 2016 and 2017 years respectively. Despite there being a profit increase for the years 2018 and 2019, the profit increase did not reflect the percentage of revenue increase. For instance, according to EATTA (2019), there was a 6% increase of revenues from tea exports but only translated to 2% profit increase.

### **Statement of the Problem**

Financial performance through maximization of ROE is a key objective of enterprises like for the case of KTDA managed factories (Chowdhry, 2017). Yet, KTDA managed factories in Kenya have been facing financial performance challenges (Kerubo, 2020). These factories are hard pressed to meet their financial obligations, such as servicing of debt or loans and other recurrent expenditures (Obara, 2019). These factories are struggling to meet their day-to-day operational costs owing to stiff competition from private entities that have become a preference for tea farmers (Gitonga, 2019). CSR is expected to allow these factories to improve on their reputation resulting into superior financial performance (Amidu, Liu & Sesay, 2017).

Existing studies include Bernal-Conesa, de-Nieves-Nieto and Briones-Peñalver (2017) who examined the effect of CSR as a strategy on sustainability and competitiveness of firms in Spain. The study established that CSR strategy improved corporate image resulting into sustainable competitive advantage of the firm. Deshmukh (2017) studies challenges and solution towards CSR in the education sector in United Kingdom. The study noted that effective implementation of CSR in the education sector is affected by limited funds. Bose, Saha and Abeysekera (2020) conducted a qualitative study on CSR expenditure and its relevance. It was noted that CSR expenditure allows a firm to compete and remain viable in the industry.

However, the aforementioned studies create gaps since some like Bose *et al.* (2020) were qualitative in nature completed through desk reviewed while

quantitative approach was used in the present study. Other studies like Bernal-Conesa *et al.* (2017) and Deshmukh (2017) were conducted in more advanced countries being Spain and United Kingdom compared to Kenya that is developing. Thus, the present study established the effect of CSR on financial performance of KTDA managed factories in Kenya.

### **Objective of the Study**

This study determined the effect of CSR expenditure on environment on financial performance of KTDA managed factories in Kenya. The study was guided by the following research hypothesis;

- **H<sub>01</sub>:** CSR expenditure on environment has no statistically significant effect on financial performance of KTDA managed factories in Kenya.

## **LITERATURE REVIEW**

### **Empirical Literature Review**

This section of the study provided a review of empirical literature that has been conducted on the nexus between CSR initiatives and financial performance. This informed gaps that provided rationale for the study.

### **CSR Expenditure on Environment and Financial Performance**

Sarfraz, Ozturk, Yoo, Raza and Han (2023) evaluated environmental CSR, green innovation, sustainable development and financial performance of an entity. While sustainable development was regarded as mediator variables, green innovation was a moderator variable. The study was done manufacturing entities with operations in Pakistan and participants covered staff from these enterprises. The inquiry was survey in its approach and 437 staff were sampled and administered with the study questionnaire. Structural equation modeling (SEM) guided how the gathered information was processed. It was apparent after processing of the generated information that that environmental CSR, green innovation and

sustainable development were key enablers of financial performance of an enterprise.

Luo and Qu (2023) conducted a study on environmental CSR and the implication it has on environmental performance with corporate image as a mediator variable. The inquiry covered internationally established enterprises in China from which 34 staff were drawn. Gathering of information from this study was through the questionnaire and the analysis was done through SEM. The study noted that the efforts of the firm to invest in environmental CSR have beneficial implications on environmental corporate performance of an enterprise. Furthermore, green image of the corporation was found to have significant mediating implication the nexus between environmental CSR and performance.

Forcadell, Úbeda and Aracil (2021) conducted a study with emphasis on environmental CSR and the link it has with innovation ability of an enterprise. The study was conducted among small and medium sized (SMEs) with operations in Poland. The adopted methodology entailed testing of hypotheses on a period of 8 years with a total of 2405 SMEs from the panel. These enterprises were drawn from the industrial sector in Spain and the analysis provided evidence that environmental CSR drives innovation that helps an enterprise to remain viable even with turbulences in the environment.

Muchiri and Muigai (2019) did an analysis with emphasis on activities linked with environmental CSR and their implication on financial performance of financial entities in Kirinyaga in Kenya. The stakeholder theory guided this study and 300 staff employed in financial entities in Kirinyaga were targeted from which 171 were selected for inclusion in data gathering process. The design adopted was causal and sampling was through systematic and stratified means. After primary data had been obtained through questionnaire and analyzed, it emerged that environmental CSR activities exerted a strong and positive correlation on financial performance of an enterprise.

Al-Masud and Islam (2018) established that expenditures on environmental conservation initiatives were significantly interlinked with financial performance in Bangladesh's textile industry. This, therefore, meant that environmental accountability and/or responsibility is statistically associated with performance of organization, particularly on the financial indicator. Bangladesh was the context of this study while Kenya was the central focus in the present study.

Xie *et al.* (2017) focused on CSR and performance among firms in China and Vietnam. The study revealed that expenditure on the environmental dimension was statistically linked with financial performance of Chinese and Vietnamese enterprises. However, this relationship was moderately by customer satisfaction. The study also used good institutional environment and customer satisfaction moderating variables, while the current study uses firm size as a moderating variable.

Vidhi and Nilmani (2016) aimed at determining the nexus between CSR and financial performance in India. It was noted that best CSR practices would benefit all the stakeholders wholesomely. It was also noted that any CSR practices should be shaped by the strategy of business aiming at impacting positively on people, planet, profit and fruitful investment but not on spending to meet legal requirements of the society. However, the study focused on oil& gas, steel and automobiles in India away from Kenya.

AChen, Feldmann, and Tang (2015) focused on effect of disclosures of CSR on financial performance, while using return on equity as one of the financial performance and human rights, environment and product responsibility as CSR variables the results showed a significant and positive correlation. The study focused on the extent to which disclosure of CSR performance influences financial performance, while the current study disaggregated CSR into three dimensions and tests their influence on financial performance of KTDA managed factories using primary and secondary information.

Miras-Rodríguez et al. (2015) established that CSR on the environmental dimension is statistically linked with financial performance of electrical companies. Interestingly, environmental responsibility was due to the need to improve reputation and legitimacy. This suggests that companies upscale their financial performance once they reverse negative impacts and increase their image. The study tested CSR against financial performance among electrical companies, while the current study concentrated on tea processing companies registered by KTDA and how CSR affects their financial performance as measured by ROE and how this relationship was moderated by firm size as measured by volume of tonnage.

Muthami (2014) used Unilever Kenya linking CSR and performance at firm level. It emerged from findings that CSR increases capital reputation of an organization, which in turn increases sales, thus leading to improved financial performance. Though the study was undertaken in Kenya, it concentrated on a different sector of the economy which can inhibit generalizations. In addition, the study was undertaken at Unilever ESA and concentrated on organizational performance, while the current study narrowed its focus to financial performance compared to organizational performance.

Omwenga (2013) established that CSR initiatives are important in increasing the competitive advantage of Kenya Power. This is because CSR activities, such as environmental initiatives, are essential in building corporate image, which in turn increases performance. Empowering communities has been one of the greatest approaches by the company to sway public image towards its competitive advantage.

## **Theoretical Framework**

### **The Triple Bottom Line Theory**

TBL theory was expounded by Elkington (1997) to explain the place of CSR within the business environment. Elkington (1998) explained CSR in terms of its economic, social and environmental pillars. The theory proposes the need to strike the

balance in the three dimensions as a way of ensuring that businesses are sustainable. The tripartite nature of social, environmental, and economic aspects are the key tenets of the TBL Theory. Thus, organizations should constantly seek to understand how the three are interlinked with an aim of ensuring that businesses are firmly responsible and accountable to their activities.

Furthermore, Elkington (1998) explains the need for social reputation as a panacea for business profitability. For instance, undertaking long-term environmental and social projects places enterprises at the center of profitability. The theoretical construct of TBL underscores the need for business to aim at societal and environmental before focusing on profitability. For continuous profits, Elkington (2004) reinforces the need for companies to pay keep an eye on the social affairs since this replicates the financial realization of the entity. In addition, the theory underlines the criticality of businesses to understand the wants of the customers where these businesses operate since this differs from one area to another. In doing so, enterprises would be able to undertake sustainable social and environmental projects aimed at uplifting the societies.

The theory of TBL was applicable to the constructs of CSR since it underscores the importance of business fulfilling the social and environmental aspects of the surrounding communities since this gives them the social license to operate. Furthermore, the theory reinforces the need for social sustainability as a way of ensuring that today's use of resources does not compromise the ability of the future generations to enjoy their lives. Thus, the theory points to the environmental sustainability so that tomorrow's generation is able to live fulfilling lives. To achieve this, the theory of TBL underlines the need to use data in decision-making so that projects are done in line with the input of the local communities. This was applicable to the KTDA factories that undertake several environmental CSR initiatives in the development of the tea. One of the environmental initiatives they undertake is ensuring



that small-holder farmers have access to eco-friendly farm inputs, such as fertilizers.

### **Institutional Theory**

Meyer and Rowan (1977) developed this theory and the argument is that enterprises need to abide by an established social pressure for survival in the environment. Given the complexities of organizations, Glover et al. (2014) place premium on the place of rules so that organizational structures and procedures are not violated. This suggests that institutional rules are central for enabling organizations to gain legitimacy and be able to survive in the long run. Furthermore, institutional theory reinforces the need for businesses to understand policy expectations in their sectors of operations.

The institutional perspective has undergone tremendous development. For instance, Darnall (2003) stated that enterprises are forced to adhere to the rules of the industry as a way of gaining legitimacy in their operations. Due to outside forces, enterprises are forced to yield to the demands of the stakeholders. For instance, pressure from the regulatory bodies forces companies to be social and environmentally responsible, such as reduction of emission to the environment. Organizations that are not socially responsible and accountable are likely to be rejected by their customers. As a result, this forces firms to be ethical and morally accountable for their actions.

Though the theory has been critiqued on the basis of its lack of clarity on organizational processes, it does offer theoretical constructs that are relevant to the current study. For instance, it reinforces the reasons why firms seek social legitimacy and recognition in the face of contemporary business environment. Besides, social accountability, the institutional theory underlines the place of industry regulations as a panacea of promoting ethical business practices. One of the ways in which businesses are regulated is through adherence to the greenhouse emissions so that the environment is conserved. This theory explains the variable of

firm size since the establishment of firms should meet certain legal and regulatory requirement before they are recognized by KTDA.

### **Social Contract Theory**

The theory of social construct was expounded by Hobbes (1983) to explain how organizations and individuals enter into binding social contracts. To institutionalize the social contract theory in organizational use, Keeley (1988) underlines the role of the business and that of the community in ensuring that societies are safe, while the business is viable. To ensure that businesses have the social license to operate, enterprises must at the bear minimum be sensitive to the ways and expectations of the society where such businesses operate (Sweeney, 2009). By fulfilling societal expectations, companies have the permission to operate. Thus, this defines the social contract between firms and the stakeholders. Companies that fail to adhere to this social contract, they risk the consequences of illegitimacy, which potentially affects their existence.

The theory proposes the place of mutual trust in the interactions between stakeholders and business firms. Most of the rules are social, signifying that they are widely unwritten. The patterns of behavior are based collectively based on the assumptions of social contract. Galbreath (2009) considers social contract as a way of meeting the end of the bargain of the stakeholders and those of the enterprises. For instance, there is need to fulfill contracts, such as payment of taxes, employment creation, honoring contractual obligations, adherence to the rules of business, among others.

Just like the TBL theory, the social contract theory is relevant to the environmental construct since it speaks to the very essence of environmental conservation so that societies are not affected by the operations or emissions (Fu & Shen, 2015). Furthermore, the theory underscores the place of rules and regulations in keeping stock on what needs to be done for social and environmental sustainability, while at the same time ensuring that businesses are profitable so that they can provide

sufficient job opportunities (Mwangi & Oyenje, 2013). Notably, the social contract theory in the institutional setup recognizes social relations between enterprises and government, customers, suppliers, shareholders and employees. The social contract theory relates with the variable of financial performance, where firms must balance the aspect of performance and social responsiveness of the needs of the local people.

## **METHODOLOGY**

This study used explanatory research design since CSR and financial performance by the time of conducting this research was a current theme that had not been properly researched and documented. Explanatory design approach is considered appropriate especially when a detailed contextual analysis of the selected population is required as it provides information on perceptions, attitudes and motives of the various variables. An explanatory approach provided detailed information on the phenomenon under study. The subsequent blending of narrative and numeric data generates the in-depth information for the establishment of the causal relationship between the variables (Saunders, Lewis & Thornhill, 2009). To offer an accentuated understanding of the study, the collected data was subjected to rigorous appraisals to establish the patterns and trends of the link between CSR and financial performance with size of the entity as a moderator

The study population comprised of all 67 factories managed by KTDA. The study employed census technique since the population was largely homogenous, accessible and fairly small (<200). Questionnaires were used to solicit primary data for independent variables, while data collection sheet was used to collect secondary data for moderating and dependent variable, which was available on already published reports at KTDA for 2017-2021.

The study applied constructs and content validity to assess the credibility of the data collection tool achieved through two field experts and the supervisors. Determination of reliability in the

present study started with pilot study that was conducted using 7 staff of KTDA (being 10% of the study sample) who were excluded from, the final study. Saunders, Lewis and Thornhill (2015) observed that 1-10% of the study can support a pilot study. The values of Cronbach Alpha coefficients were then determined with the value 0.7 and above being regarded as threshold (Cronbach, 1951). Content validity of the research tools was achieved by ensuring that there are enough items to measure the concerns of the study. To this end, adequate items were constructed to measure each objective of the study. As regards to the construct validity, efforts were made to ensure accurate operationalization of the key variables under investigation

The gathered information was coded, organized and subjected to several statistical computations using SPSS version 25. Descriptive statistics were generated and used to provide a summary of the collected data. Besides, OLS regression models were used to test the formulated hypotheses. Data was subjected to preliminary statistical diagnostics to establish trends and correlations in the data set. These tests were necessary to test the assumptions of regression to ensure none had been violated.

Multicollinearity Test-Multicollinearity occurs when there is high correlation in the regressors (Ullah, Aslam, Altaf, & Ahmed, 2019). Variance of Inflation Factors (VIFs) helped to test for multicollinearity. It is instructive to note that values greater than 0.1 for tolerance indicate absence of correlation among the predictor variables, while values less than 10 for Variance Inflation Factor indicate lack of linear correlation among the independent variables (Shrestha, 2020).

Normality test-Data was tested for normal distribution since this should hold true to avoid spurious results (Mishra, Pandey, Singh, Gupta, Sahu, & Keshri, 2019). To conduct normality test, Shapiro-Wilk Test was adopted and  $p > 0.05$  showed the condition was present (Osborne & Waters, 2019).

Autocorrelation test-Autocorrelation is situation where error term observations are uncorrelated with each other (Gencay & Signori, 2015). Autocorrelation was applied to test whether there has been correlation offer time or in different points in time. Thus, this offered time series trends (Gencay & Signori, 2015). This study used Durbin-Watson test to establish autocorrelation.

Heteroscedasticity test- Heteroscedasticity tests whether there is homogeneity in error variance. Presence of unequal variance of errors violates assumptions of linear regression (Berenguer-Rico & Wilms, 2021). Levene test was applied in testing error variance, where the *Ho* that data have equal

error variance (Homoscedasticity). The results indicated that data had homoscedasticity, that is, homogeneity in error variance since the *Ho* was not rejected ( $p > .05$ ).

## RESULTS AND DISCUSSIONS

### Descriptive Statistics

The findings of descriptive statistics on objective variables of the study are detailed in this section.

### CSR Expenditure on the Environment

The description of the objective variable being CSR expenditure on environment was determined and presented as shown in Table 1.

**Table 1: CSR Expenditure on the Environment**

Statement	Mean	Std. Dev
We offer waste recycling and disposal services to the surrounding community	3.8039	.77510
We help local communities use renewable sources of energy	3.7451	.84482
We help local communities to conserve sources of water	3.6863	.83643
<b>Average score</b>	<b>3.7451</b>	<b>.8188</b>

Source: Field Data (2023)

From Table 1, respondents agreed that corporate social responsibility expenditure on the environment was practiced in their factories ( $M=3.7451$ ,  $SD=0.8188$ ) ranging from provision of recycling and disposal services ( $M=3.8039$ ,  $SD=0.77510$ ), advocating for use of renewable energy ( $M=3.7451$ ,  $SD=0.84482$ ) and conservation of water ( $M=3.6863$ ,  $SD=0.83643$ ). Waste management through disposal and recycling, renewable energy and conservation of water are important undertaking that has potential to

contribute towards environmental sustainability so that future generations can also enjoy the benefits being enjoyed currently. Thus, it can be deduced that the studied industries played an important role towards environment sustainability through the CSR practices that had been put in place.

### CSR Expenditure on Environment, Health, Education and financial performance

In achieving this multiple regression analysis was conducted and Table 2 gives model summary evidence

**Table 2: Model Summary Linking CSR and financial performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832 <sup>a</sup>	.692	.672	.48487

a. Predictors: (Constant), CSR Expenditure on Education, CSR Expenditure on Health, CSR Expenditure on the Environment

Source: Field Data (2023)

As indicated in Table 2, the value of adjusted R-square being 0.672 implies that 67.2% change in financial performance of KTDA managed factories in

Kenya is explained by CSR expenditure on environment, health, education. Table 3 is a breakdown of the Analysis of Variance

**Table 3: ANOVA Results on CSR and financial performance**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	24.839	3	8.280	35.218	.000 <sup>b</sup>
Residual	11.049	47	.235		
<b>Total</b>	<b>35.888</b>	<b>50</b>			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), CSR Expenditure on Education, CSR Expenditure on Health, CSR Expenditure on the Environment

**Source: Field Data (2023)**

Table 3 indicates F and p-value as 35.218 and 0.000 respectively. This means that on overall, the

regression model was significant ( $p < 0.05$ ). Table 4 gives p-values

**Table 4: P-Values**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.663	.607		9.329	.000
CSR Expenditure on the Environment	.505	.086	.814	5.872	.000
CSR Expenditure on Health	.128	.053	.070	2.415	.001
CSR Expenditure on Education	.153	.028	.167	5.464	.010

a. Dependent Variable: Financial Performance

**Source: Field Data (2023)**

The following equation is predicted between CSR and financial performance:

$$Y_{it} = 5.663 + 0.505X_{1i} + 0.128X_{2i} + 0.153X_{3i} + \epsilon \dots\dots\dots i$$

Where:

$Y_{it}$  = Financial performance of firm i at time t

$\beta_0$  = Constant Term

$\beta_1 - \beta_3$  = Regression coefficients

$X_{1i}$  = CSR expenditure in Environment of firm i

$X_{2i}$  = CSR expenditure in Health of firm i

$X_{3i}$  = CSR expenditure in Education of firm i

$\epsilon$  = error term

**Effect of CSR expenditure on environment on financial performance**

The hypothesis was  $H_{01}$ : CSR expenditure on environment has no statistically significant effect on financial performance of KTDA managed factories in Kenya. From Table 4 the p-value under CSR expenditure on environment is 0.000 i.e.  $p < 0.05$  hence the variable was significant. Hence, the study rejected hypothesis  $H_{01}$  and inferred that CSR expenditure on environment was a significant

predictor of financial performance. The finding agrees with Al-Masud and Islam (2018) who established that expenditures on environmental conservation initiatives had significant effect on financial performance in Bangladesh’s textile industry. Similarly, Xie *et al.* (2017) revealed that expenditure on the environmental dimension had significant effect on financial performance of Chinese and Vietnamese enterprises.

**CONCLUSIONS**

Respondents agreed that corporate social responsibility expenditure on the environment was practiced in their factories ranging from provision of recycling and disposal services, advocating for use of renewable energy and conservation of water. The study rejected hypothesis  $H_{01}$  and inferred that CSR expenditure on environment was a significant predictor of financial performance of KTDA managed factories in Kenya. Based on regression analysis, the study concluded that investing in

environmental related CSR activities improves the image of the firm and this helps it to improve on its financial performance. Thus, CSR expenditure on environment is a key enabler of financial performance of an enterprise. This implies that investing in environmental related CSR activities helps the firm to achieve its financial performance goals.

## RECOMMENDATIONS

Based on regression results, CSR expenditure on environment had a significant beta coefficient.

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- Thus, the study recommends that senior managers working among KTDA managed factories in Kenya continue to invest in environmental CSR initiatives, such as reducing their carbon footprint, conserving water and energy and promoting sustainable farming practices. These environmental CSR initiatives would increase financial performance through improved reputation and contribution towards long-term sustainability of these factories.

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