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Commercial Banks ESG integration and MSMEs support: Evidence from Kenya

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Commercial Banks ESG integration and MSMEs support: Evidence from Kenya

David Muriithi Ndwiga

Abstract

The paper examines the effects of commercial banks' adoption of Environmental, Social and Governance practices on Micro, Small and Medium-sized Enterprises support in Kenya. The study is underpinned on the growing demand for sustainable financing by enterprises in the wake of need for sustainable businesses. The study focused on commercial banks that have adopted ESG practices and report their sustainability progress. Using panel data analysis study found that environmental, social and governance practices integration significantly increases the number of Micro, Small and Medium-sized Enterprises trained. Conversely, banks' ESG adoption was found to positively but insignificantly affect MSME lending. The results conclude that banks' training to MSMEs is necessary but not sufficient for increased MSME lending.

1.0 Introduction

1.1 Motivation of the study

The concept of sustainability has gained popularity in the current wake of circular economy. This is reflected in the current corporates' move towards integrating Environmental, Social and Governance (ESG) practices in their operations. To this effect, financial institutions have been in the forefront of adoption and implementation of ESG in their pursuit of offering sustainable financing to businesses.

However, as financial institutions adopt ESG, concerns over their profitability remains elevated. Studies on ESG integration among financial institutions report mixed results. While a negative effect of ESG practices on operational and market performance is reported in Italy (Menicucci and Paolucci 2023), positive effect is reported in developed and developing economies (Akdogan *et al.*, 2020; Buallay *et al.*, 2021; Cornett *et al.*, 2016) while absence of significant relationship is reported by Matuszak and Róžańska (2017) and Soana (2011).

In African context, United Nations Environmental Programme (2022) assessed green financing mechanisms available for the African Micro, Small and Medium-sized Enterprises (MSMEs). The report asserts the importance of environmental concerns on MSMEs financing. This is anchored on the understanding MSMEs need green finance to absorb shocks and take advantage of opportunities amid the changing environmental issues that affect lending. Trend analysis reveals that the flow of sustainable financing from development partners and the private sector has been increasing in Africa, majorly from donors, development finance institutions and advanced economies governments. This presents an opportunity for MSMEs access to sustainable finance. Specifically, climate-related financing has increased from USD 463 billion in 2015/16 to USD 632 billion by 2019/2020 (UNEP, 2022). Further, maturing of carbon markets globally is providing new pools of green-oriented financing to Africa.

Within the financial space, commercial banks are continually integrating ESG practices in their operations owing to benefits arising from them. Adoption of ESG unlocks access to green financing from the development partners. Further are the reputational and brand value to banks. Therefore, given the long-term benefits of ESG adoption, it's imperative for banks to strive in their adoption amid circular

economy concerns. Banks aligned with green lending certifications often benefit from enhanced credibility and access to favourable funding conditions, such as lower-cost capital from investors prioritizing ESG-compliant institutions (Mirza et al, 2024). Resultantly, is the improvement in the bank's net interest margin by reducing the cost of funds while maintaining competitive loan pricing. Notably, alignment with green certifications signals robust risk management and long-term sustainability. Certified green lending practices enhance a bank's reputation, attracting stable funding sources and reinforcing its capital base, positively affecting solvency (Mirza et al, 2024).

On the MSMEs sustainable financing front, studies have found that sustainable finance solutions particularly those geared toward ESG principles are crucial in supporting MSMEs' transition to sustainable business practices and reducing their carbon footprint (Afzal *et al.* 2022; Horne and Fichter, 2022). However, despite this finding, the government and financial providers have overtime failed to address MSMEs sustainable financing challenges for the transition into the circular economy. Therefore, Xu (2024) concludes that today's green finance is not inclusive, and inclusive finance is not green. This presents an operational gap that calls for research investigation into the extent to which financial institutions ESG integration affects MSMEs support. Further, according to (World Bank, 2019), in many emerging markets and developing economies, financial policies towards supporting MSMEs largely focus on mitigating financing barriers such as use of credit guarantee scheme, subsidized credit and capacity building programmes thus overlooking the importance of sustainable financing from ESG perspective.

1.2 Demand for green financing in Kenya

In 2018, KES 243.3 billion (USD 2.4 billion) of public and private capital was invested in climate-related activities. This is approximately half of the financing that Kenya needs annually to meet the targets set in its Nationally Determined Contribution (NDC) to the Paris Agreement. Kenya's Financing Strategy for the NDC (UNDP, 2020) estimated USD 40 billion of new investment is needed for the next 10 years (2020 - 2030) to implement priority climate mitigation and adaptation actions. By 2019, the overall, public green financing investment (from domestic and international providers) totalled KES 144.3 billion (59.4%) while investment from the private sector totalled KES 98.9 billion (40.7%).

Within the public green financing, the Kenyan government disbursed KES 76 billion (USD 752.4 million) in climate-related development expenditures in the fiscal year 2017/18. This amount included KES 42 billion (55%) of external resources from international partners channelled into the national budget, while KES 34 billion (45%) was from domestic public resources. On the other hand, private financing, 34.4% originating domestically from Kenyan companies through their own resources and 65.6% from overseas private companies investing into projects located in the country. However, to meet the climate ambitions outlined in the NDC, both public and private climate finance needs to be scaled up significantly by 2030.

Kenya's green financing needs for 2019-2023 and 2024-2030 periods in line with the NDC by 2030 across sectors is summarized as follows:



Table 1: xxxxxxxxxxxxxxxx cxxxxxxxxx

Sector	2019-2023 period green financing requirements (Kes' Bn)	2024-2030 period green financing requirements (Kes' Bn)
Energy	710	1,039
Water and Blue Economy	430	629
Agriculture	277	404
Transport	222	325
Tourism and wildlife	62	91
Health	51	74
Environment	28	41
Manufacturing	7	5

Source: UNDP (2020), Kenya's Financing Strategy for NDC.

1.3 MSMEs and sustainable financing in Kenya

MSMEs play a crucial role in economic growth and development. In Kenya, it is estimated that the sector employs over 15 million people and contributes about 30% to the national value-added (KIPPRA, 2019; Kenya National Bureau of Statistics, 2016; Kenya Banker Association, 2021).

However, despite their pivotal role in the economy, MSMEs' access to formal credit has been hindered largely by lack or inadequate collateral. In efforts to support MSMEs operations commercial banks have been intentional in setting aside sizeable proportions in their balance sheet directed towards MSMEs support. Evidently, in 2024, banks did commit Kes150 billion towards supporting MSMEs over the next three years as part of the banking sector's commitment to support MSMEs access more affordable credit to boost their growth and

development (Kenya Bankers Association, 2024). In addition, commercial banks have mobilized different lines of credit from development partners directed towards MSMEs lending across various sectors.

The quest for sustainable financing has gained traction among Kenyan banks currently. This is evidenced by banks' pursuit for sustainability in their lending and internal operations. ESG adoption is one of mechanisms banks are integrating in furthering their sustainability agenda. A review of ESG score cards in banks' sustainability reports, reveals presence of ESG targets that are MSMEs specific. This confirms the bank's keen focus on MSMEs as key economic growth driver. Against this background, it is important to examine how the adoption and integration of ESG practices among Kenya banks affects MSMEs support.

1.4 Research problem

The quests and provision of sustainable financing is revolutionizing the financial landscape globally. Underpinning this development is the call for circularity in economic management. Given the crucial role of financial institutions in financing growth, financial institutions have been in the forefront in embedding sustainability in their lending and internal operations. One of the key mechanisms in furthering the sustainability agenda among commercial banks is the adoption and implementation of ESG practices. These practices have been vital in promoting green financing to both large corporates and MSMEs, setting asides resources targeting youths, women and other socially disadvantaged persons in the economy.

MSMEs have continually faced financing challenges amid limited lending due to lack of collaterals and informal operating structures. In addition, the high-risk score associated with them has disadvantaged them in so far as funding access is concerned. In Kenya, commercial banks have been passionate in embedding ESG practices in their operations. Currently, Kenyan banks have rallied to the call for green financing, social impact, good and inclusive governance evidenced in bank's sustainability reports. Consequently, the number of Kenya commercial banks embedding ESG practice has been on the rise overtime with the early adopter reporting remarkable progress.

A review of the Kenyan banks' ESG score card evidence presence of MSMEs specific targets. Further, according to Kenya Bankers Association (2014) banks committed a KES 150 billion towards MSMEs lending. Moreover, to enhance MSMEs lending, banks have sourced lines of credit from development financial

institutions directly linked to MSMEs lending and support purpose such as capacity building. Despite these efforts, limited empirical analysis exist on how ESG integration affects MSMEs support in Kenya. Existing studies largely focus on green lending with no clear distinction between MSMEs green lending and large corporates green lending. Moreover, studies fall short of undertaking granular analysis of analysis on how environment safeguards, social responsibility and corporate governance practices affect by banks affect MSMEs support. In addition, majority of studies focus on one aspect of ESG mainly, the green financing under environmental component. This study seeks to analysis effect of ESG on MSMEs support using granular attributes of environmental, social and governance. Further, the study analyses the effects of environmental, social and governance on SMEs support simultaneously.

1.5 Research objectives

The study sought to examine the effects of ESG adoption among Kenyan commercial banks on MSMEs support.

Specifically, the study sought:

- To determine the effect of environment safeguard principles adoption among Kenyan commercial banks on MSMEs support.
- To examine the effect of social responsibility adoption among Kenyan commercial banks on MSMEs support.
- To determine the effect of corporate governance principles among Kenyan commercial banks on MSMEs support.



1.6 Significance of the study

This study is timely given the banks' current endeavor in integration of ESG practices in their operations. Relatedly, from the regulatory scope, commercial banks will effective 2027 be required to report on their sustainability undertaking in line with the Kenya Green Finance Taxonomy developed by the Central Bank of Kenya. Therefore, the findings of the study are important in providing empirical evidence on effect of ESG on MSMEs green lending as banks prepare for mandatory reporting in 2027. Secondly, the significance to banks is especially on eliciting evidence on green portfolio drawdowns by

the MSMEs. The study sheds light on banks' green portfolio and MSMEs training on one hand and MSME lending on the other hand. This empirical evidence is crucial for banks decision making by shedding light as to whether MSME training on green financing leads to MSME green borrowing, hence differentiating between potential and effective demand for green financing among MSMEs. This is crucial for bank's strategy development mainly regarding conversion of potential MSMEs lending pipeline to effective borrowers thus increasing the uptake of green financing by MSMEs.

2.0 Literature Review

2.2 Theoretical literature

The study is anchored on trade – off theory Myers and Majluf (1984). Specifically, is the trade – off theory of ESG that is cognisant of the concerns on the financial costs associated with ESG practices, investment as stakeholders in the ESG mechanism hence the need for the balance of costs in short term and financial benefits in long term.

Thus, we argue that by choosing to integrate ESG in operations, banks must forego some financial benefit and be willing to incur some costs. Therefore, there is possibility of ESG adoption in reducing bank's financial profitability in the short run with payoff likelihood in the long run. Based on trade – off theory, the bank is likely to choose which ESG practices to adopt at a given period and load more practices over time. This presents a gradual and incremental ESG embedment in bank's operations given the need to manage adoption costs associated with these practices. Therefore, underpinning this argument, ESG adoption has a bearing in the banks' ability to support MSMEs largely on lending and entrepreneurship training aspect. Supporting more MSMEs through entrepreneurship training as part of sustainable business model could be an additional cast to the bank. However, this could later be beneficial to the bank should the trained MSMEs take a bank facility.

Further, adoption of ESG could affect MSMEs lending in different dimensions. First could be through enhancing bank's access to cheaper lines of credit targeting MSMEs. Secondly, possibility of deterioration in bank credit quality arising from increased MSMEs lending that comes with onboarding of more risky borrowers leading to reduced MSMEs lending over time. Therefore, there is need for the bank to balance between the costs and benefits of ESG practices adoption to avoid undermining their performance while servicing the most crucial economic agents: – MSMEs. Against this backdrop, the study examines how banks' ESG adoption is likely to affect banks' services to MSMEs.

2.3 Empirical literature

Notable recent empirical on how bank adoption of ESG practices affect SME lending are summarized. Shabir, *et al.* (2024) examines the impact of Environmental, Social and Governance practices on bank lending in the European Union banking sector. The findings are that ESG activities play a significant role in increasing bank lending. However, the environmental and governance-friendly activities are found to impact bank lending more than social friendly activities.

Habib and Khan (2025) report that ESG practices adoption significantly influence investment sensitivity, with stronger effects observed in high-environment sensitivity firms compared to their low- environment sensitivity firms. Further, bank financing was found to play a moderating role in the relationship of bank sustainability and investment sensitivity. Additionally, green finance was found to mediate investment by reducing investment sensitivity by channelling resources toward sustainable investment initiatives, particularly in high-sensitivity firms.

An examination of green lending impact on banking performance from the SME credit portfolios in the among BRICs reveals a positive relationship between green SME lending and bank net interest margin. However, a negative relationship between sustainable lending to small firms and the default risk of the banks was reported. These findings demonstrate that if banks expand their sustainable SME lending, they are likely to get bottom-line support from improvement in net interest margin and a reduction in default risk (Mirza, *et al*, 2023). Study findings posit existence of financial incentives for the banks to extend sustainable credit to SMEs and commercial banks can contribute to sustainability agenda.

An investigation into the impact of green banking awareness on green FinTech adoption further affecting ESG investments, perceived profitability and sustainable banking by Sharma *et al* (2025) reports a significant positive relationship between green banking awareness and green FinTech adoption, hence suggesting that heightened awareness of green banking positively influences the adoption of sustainable FinTech solutions. Additionally, green FinTech adoption was found to be positively associated with increased ESG investments, perceived profitability and sustainability of personal investment portfolios. These findings underscore the potential of GFA to drive financial empowerment and environmental responsibility Sharma *et al* (2025).

Implications of green lending to SMEs on bank performance has been investigated within Eurozone though from a bank performance perspective. The study finds that higher loan exposure to green SMEs enhances NIM and Z Score, indicating that sustainable lending can be profitable and stabilizing. The findings conclude that green lending standards improve profitability but do not directly affect solvency, suggesting that certification alone does not reduce financial risk (Zheng *et. al*, 2025).

Arnane *et al* (2024) examined the access to credit in the context of the ESG Framework at Global level. The findings suggest that while ESG integration presents challenges, it offers significant opportunities for banks to enhance their competitiveness and foster resilient financial systems. The paper concludes by proposing policy recommendations aimed at improving the incorporation of ESG factors within credit risk management and promoting sustainable finance.

In examining the impact of green lending on banking performance: Evidence from SME credit portfolios in the BRIC, Mirza et al (2023) reports a negative relationship between sustainable lending to small firms and the default risk of the banks. These findings demonstrate that if banks expand their sustainable SME lending, they are likely to get bottom-line support from improvement in net interest margin and a reduction in default risk. These observations suggest that there are financial incentives for the banks to extend sustainable credit to SMEs and commercial banks can contribute to sustainability goals by tapping these opportunities.

Further, Khan *et al* (2025) in examining the mediating role of ESG practices integration on sustainable finance and bank lending practices found that sustainable finance positively influences bank lending practices, with ESG integration acting as a significant mediator that strengthens this relationship. The findings underscore the importance of banks' aligning sustainability strategies with operational ESG

mechanisms while designing regulatory policies that support, rather than hinder, banks' efforts to advance responsible lending practices.

2.4 Literature gap

Vast of the literature in this area focus on the effect of banks' ESG practices adoption on banks' profitability. Other empirical works focus on the effect of banks' ESG practices adoption on SME's profitability, sustainability and profitability. Therefore, scanty empirical evidence exist on how banks' ESG practices adoption affects SME's lending as well as SME's support from banks mainly from entrepreneurial training perspective. This study therefore seems to examine whether banks' adoption of ESG practices actually is directed to SMEs. This inquest is anchored on the premises that commercial banks have attracted concessional funding lines from development partners and development financial institutions based on embedding sustainability in their operations with SMEs lending and support being one of top sustainability agenda for banks.

3.0 Research methodology

3.1 Theoretical framework

The study theoretical framework is underpinned on signaling theory by Bhattacharya (1979). Banks adoption of the ESG practices signals to stakeholders on bank's dedication to sustainability through signalling measures. From governance perspective, signalling theory explains how a diverse board might improve the organization's sustainability indicators through comprehensive and thoughtful decision-makers, enhancing their confidence in the business's long-term financing strategies. Therefore, from this governance perspective, a diverse board is perceived to be more SMEs oriented as a signal that its more concerned with majority of businesses that largely support the economy.

The signalling theory demonstrates an explanation proposing that the increase of ESG adoption by firms' performance can reduce corporate risks. Therefore, top-management and shareholders tend to pay attention to ESG responsibility because it can decrease risk as well as enhance sustainable development. Therefore, banks that adopt ESG practices signal their dedication to embedding sustainability in their lending businesses and are likely to attract more sustainable financing from development partners. In addition, banks that adopts ESG practices signals their commitment to supporting MSMEs through more lending and capacity enhancement. Therefore, adoption of ESG practices and continuous reporting by banks through banks sustainability reports is a signal that bank use to attract sustainable financing and more MSMEs in their portfolio.

3.2 Empirical Model

Within the study, the dependent variable is MSMEs' support from commercial banks. This was measured by two indicators: First, is the number of MSMEs onboarded and trained on entrepreneurship during the year. Secondly, is the lending to MSMEs during the year. Independent variables were categorized into three categories namely: environmental, social and governance variables. Environmental adoption was measured by green lending portfolio in a year. Social responsibility adoption was measured by number of bank branches, net loans and advances, economic value distributed and percentage of transactions

on digital channels. Corporate governance principles adoption was measured by percent of women in the board, board independence and proportion of female staff in total workforce.

Panel regression was applied in establishing ESG causality on MSMEs support and MSME lending. However, given the heterogeneity of the unit of analysis, the study controlled for bank – specific factors mainly bank size (log total assets) and bank profitability (Return on equity).

The general model for the study is defined as follows:

$$Y_{it} = x'_{i,t}\beta_i + z'_i\gamma + \delta_i + \varepsilon_{i,t} \dots \dots \dots (1)$$

Where: Y_{it} is the dependent variable i at time t , $X_{i,t}$ is the set of independent variables, is the one period lag dependent variable, δ_i is the within-entity error term; $\varepsilon_{i,t}$ is the idiosyncratic error or time-varying unobserved heterogeneity and $(\delta_i + \varepsilon_{i,t})$ is the composite error term. β and γ are model parameters.

From the general model, the econometric model is defined as follows:

$$MSMEs\ Support_{it} = \alpha + \beta ESG_{i,t} + \lambda Bank-factors_{i,t} + \delta_i + \varepsilon_{i,t} \dots \dots \dots (3)$$

Specific MSME support and lending econometric model is defined as follows:

$$MSMEs\ Support_{it} = \alpha + \beta_1 Environmental\ principles_{it} + \beta_2 Social\ Responsibility_{it} + \beta_3 Governance\ principles_{it} + \gamma_1 Bank\ size_{it} + \gamma_2 Bank\ profitability_{it} + \delta_i + \varepsilon_{i,t} \dots \dots \dots (4)$$

Hausman test was applied to examine the appropriate model between the fixed effects and random

3.3 Study Data

The study utilized bank – level based focusing on Kenyan commercial banks that have integrated ESG in their operations over years. Specifically, the study utilized data for 5 tier 1 banks that have pioneered ESG practices adoption and publish annual sustainability report. Data was extracted from banks’ ESG performance scorecard collaborated with data from annual integrated reports.

4.0 Results

4.1 Descriptive statistics

Descriptive statistics indicate that on average, 71,732 MSMEs have been trained yearly on entrepreneurship in effort towards embedding sustainability in MSMEs operations and support the going concern agenda among the MSMEs. This underscores banks' commitment in supporting MSMEs to survive the challenging business environment. On the MSME lending front, the sampled banks have their MSME lending at Kes 63.8 billion on average cumulatively.

On the environmental front, the green lending book averages Ke 67 billion with the highest green book at Kes 476 billion. This underscores banks' efforts towards supporting green economy through environmentally friendly lending. On the social front, local suppliers account for 76 percent of banks' supplies. To drive financial inclusive through branchless banking channels, approximately 91 percent of banks' transactions on average are undertaken through digital channels. Further, to support financial inclusion agenda, branch network averages 65 branches ranging from 25 branches on the least to 392 branches on the highest network. On the social impact through lending to the economy, the sampled banks have advanced Kes 413.1 billion within the period under the study (**table 2**).

Turning to governance lens, regarding gender diversity on overall bank staff, female staff proportion to male staff averages at 47 percent while proportion of women in management and senior management averages at 39 percent and 34 percent respectively. Regarding board governance, board gender diversity reveals 30.5 percent of total board members are female members on average. However, for board independence, the proportion of independent board members to total board members averages 66.3 percent (**table 2**).

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
MSMEs trained	35	71,731.6	114,587.2	588	517,247
MSME lending (Bn)	35	63.811	78.076	3.6	340.8

Variable	Obs	Mean	Std. Dev.	Min	Max
Green lending (Bn)	35	67.031	132.909	1.2	476
Net loans and advances	35	413.068	263.4	38.1	1096
No. of branches	35	165.686	110.6	25	392
Local suppliers support	35	0.761	0.127	0.6	0.97
Digital channel transactions	35	0.909	0.06	0.7	0.99
Female staff proportion	35	0.471	0.04	0.39	0.58
Women in management proportion	35	0.391	0.07	0.23	0.50
Women in senior management proportion	35	0.344	0.07	0.22	0.58
Board gender diversity	35	0.305	0.10	0.14	0.55
Board independence	35	0.663	0.17	0.33	0.95
Total assets	35	693.331	419.7	281	1821
ROE	35	0.198	0.04	0.127	0.276

4.2 Effect of ESG practices on MSMEs training

In examining the commercial banks' ESG practices adoption – MSMEs nexus, the study focused on two aspects of MSME support namely: – MSME training on entrepreneurial skills as well as any other entrepreneurial capacity enhancement and MSME lending. First, the number of MSMEs supported through training and any other capacity enhancement is regressed against different attributes of environmental, social and governance parameters while controlling for the effect of bank size and profitability.

The Hausman test selects the random effects model given the insignificance of the Hausman test chi2 test value ($p=0.452$). The random effects model results indicate that adoption and implementation of ESG practices by commercial banks have positive and significant effects on the number of MSMEs supported by the banks each year. However, the

significance varies across the ESG attributes and across different significance levels. Therefore, the random effects model result supports that commercial banks will train more MSMEs as their green lending portfolio increases. Thus, the bank's green lending portfolio significantly positively affects the number of MSMEs supported by the banks (**table 3**). This finding could imply that as banks access more credit lines for green lending, one of the requirements is on training MSMEs on sustainable business practices that are environmentally friendly to enhance facility draw – drawn. Further, the finding could imply that given the cost commercial banks face from the sustainable portfolio mobilized from development partners and development financial institutions, banks consider training more MSMEs to create a good demand pipeline for drawing down the portfolio thus alleviating high cost that comes with delayed draw down.

On the social front, digital banking channels expansion, branch network expansion and increase in local procurement positively affect the number of MSMEs supported. More branch networks come with more customers initially financially excluded being included into the formal financial system. Similarly, digital network expansion was found to have positive and significant effect on MSMEs support

implying more MSMEs being onboarded and trained to enable them access financial services. However, net loans and advances were found to have a positive but insignificant effect on the number of MSMEs supported by the bank (table 4.2). This finding implies that much of the lending could be to entities are outside the MSMEs category hence the insignificant effect.

Table 3: Random Effects model for ESG integration and MSMEs' entrepreneurial training

MSMEs entrepreneurship training	Coefficient	t-value
Green lending portfolio	0.1055* (0.0567)	1.86
Local suppliers	0.089* (0.0479)	1.87
Digital channel transactions	0.1112** (0.0530)	2.10
No. of branches	0.0078** (0.004)	2.12
Net loans and advances	0.1066 (0.0650)	1.64
Female staff proportion	0.0365 (0.0535)	0.68
Women in management proportion	0.0669 (0.0652)	1.03
Women in senior management proportion	0.1211 (0.0815)	1.49
Board gender diversity	0.1187*** (0.0464)	2.56
Board independence	0.0246 (0.0514)	0.48
ROE	0.1220*** (0.0454)	2.69
Total assets	0.0028** (0.0011)	2.39
Constant	0.107 (0.0601)	1.78

Note: *** $p < .01$, ** $p < .05$, * $p < .1$; Significance levels in parenthesis.

On the governance front, management and board gender diversity has positive and significant effects on MSMEs support. Similar findings are reported for the board's gender diversity (table 4.2). The results indicate that a more gender inclusive management and board is more likely to support MSMEs agenda. Women are likely to more aggressive in championing for the support of the women and youth enterprises in effort to push for more financial inclusion and economic empowerment for women. Therefore, increased women representation in senior management and board is likely to increase women – led MSMEs support (table 4.2). This finding is supported by findings in the individual banks' sustainability report whereby banks do have female targeting programmes and initiatives that seek to support female owned enterprises in pursuit of achieving their ESG gender related targets. Regarding the model control variables, bank profitability and size were found to have a positive and significant effect on MSMEs training. This implies that large and profitable banks are likely to set aside more funds for training MSMEs that is in tandem with their market share with reference to MSMEs market.

Effect of ESG practices on MSMEs' lending

In addition to evaluating effect of commercial banks ESG practices on number of MSMEs supported, the study further examined ESG practices on MSMEs lending by banks. Like the number of MSMEs supported model, the Hausman test favors of the random effects model given the insignificance of the Hausman test chi2 test value ($p=0.7148$). The random effects model result indicates banks' lending to MSMEs increases with the increase in green lending portfolio increases. Regression result indicates that MSME lending increases with increase

in green lending portfolio. Thus, the bank's green lending portfolio positively affects MSMEs lending though insignificant (table 4). This finding reveals that MSMEs training does not translate into a viable lending pipeline. Therefore, training more MSMEs on sustainability issues does not convert them into active off – takers of green financing. This implies that commercial banks need to focus on capacity building of the MSMEs as well as device incentives among MSMEs to increase their uptake of the green financing as opposed to mere training.

On the social front, digital banking channels expansion, branch network expansion and increase in local procurement was found to increase MSME lending. These social attribute have a positive bearing on the financial inclusion of previously financially excluded MSMEs. Therefore, by enhancing financial inclusion through digital and branch networks as well as increasing procurement via local suppliers, commercial banks create opportunities for more MSME lending in the long run.

On the governance front, management and board gender diversity has positive and significant effects on lending to MSMEs. Similar findings are reported for the board gender diversity (table 4.3). The results indicate that a more gender inclusive management and board is more likely to support MSMEs agenda. Women are likely to more aggressive in championing for the loan product that targets women and youth owned enterprises. Therefore, increased women representation in senior management and board is likely to increase development of bank products that are women – led / owned MSMEs. This finding is supported by findings in the individual banks' sustainability report whereby banks do have female

owned enterprises loan facilities that seek to support female owned enterprises in pursuit of achieving their ESG gender related targets.

Table 4: Random Effects model for ESG integration and MSME lending

MSMEs entrepreneurship training	Coefficient	t-value
Green lending	0.0098 (0.0344)	0.29
Local suppliers	0.0665** (0.0244)	2.73
Digital channel transactions	0.2657** (0.1134)	2.34
No. of branches	2.9050** (1.140)	2.55
Net loans and advances	0.474** (2.31)	2.05
Female staff proportion	0.0214 (0.0395)	0.54
Women in management proportion	0.707 (2.35)	0.30
Women in senior management proportion	5.932** (2.64)	2.25
Board gender diversity	0.0723** (0.0356)	2.03
Board independence	0.0326 (0.0612)	0.53
ROE	2.674** (0.9967)	2.68
Total assets	0.0965** (0.0478)	2.02
Constant	1.9781*** (0.4469)	4.43

Note: *** p<.01, ** p<.05, * p<.1; Significance levels in parenthesis,

Regarding the model control variables, bank profitability and size were found to have a positive and significant effect on MSMEs overall lending. This implies that large and profitable banks are likely to set aside more funds for MSMEs lending that is in tandem with their market share with reference to MSMEs market. Further large and profitable banks can mobilize deposits for MSMEs lending from customers, development partners and development financial institutions hence have more MSMEs loanable funds.

5.0 Conclusion and Policy implication

5.1 Conclusion

The study sought to examine the implication of commercial banks' adoption and implementation of ESG practices on the MSMEs support. Specifically, the study examined whether commercial banks' adoption and implementation affect the MSMEs training / capacity enhancement by banks and MSMEs lending thereof.

This examination was underpinned on the argument that despite commercial banks mobilization of funds meant for MSMEs support and lending, MSMEs still face a sizeable funding gap. Moreover, commercial banks have been very aggressive in promoting sustainable business practices, thus, their proactive steps in embedding ESGs in their operations.

Using data from the 5 tier one commercial banks who are pioneers in ESG adoption and reporting through their respective sustainability reports, the study findings are that integration of ESG practices among banks has a positive but insignificant effect on the number of MSMEs supported by banks via training. However, on the contrary adoption of ESG practices by banks does not translate to more green lending by banks to the MSMEs implying inadequate capacity for MSMEs to access green financing despite banks holding such portfolio.

5.2 Policy Suggestions

Based on the study findings, the study suggests three key policy implications. First is the need for capacity enhancement among the MSMEs on sustainability to create a viable pipeline for drawing down of green finance credit line from development financing institutions. The study findings indicate that MSMEs training does not necessarily translate to more MSME lending. Therefore, MSMEs capacity enhancement beyond training is crucial for increased lending. Therefore, commercial banks with green lines of credit that have training component should not only focus on training but go further into enhancing the MSME's capacity as viable business ventures that qualify for sustainable financing. This is crucial



in lowering costs mainly associated with green and sustainable credit line for the commercial banks.

Secondly, there is the need for phased adoption and implementation of ESGs among commercial banks. Given the different effects of different ESG attributes on MSME training and MSME lending, there is need for incremental adoption of ESG practices among commercial banks. This is crucial for a learning curve around ESG adoption and effects on MSMEs. Further, this is crucial in cushioning the bank from subjecting itself to stringent ESG audit in attempt to access green finance from development financial institutions and development partners but later be faced with

difficulty in fund draw down by targeted MSMEs thus being costly to the bank in the long run.

Lastly, is the sensitization on ESG reporting through sustainability reports among commercial banks given the low reporting rates. As we near the mandatory ESG reporting deadline, more capacity enhancement on reporting and sensitization is needed for effective adherence and compliance. Notably, there is need for the banks to leverage the upcoming climate risk disclosure framework and reporting templates from the Central Bank of Kenya and the Kenya Bankers Association to obtain more data for future research.

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