IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 13, Issue 2 Ser. VII (Mar. – Apr. 2022), PP 17-23
www.iosrjournals.org

Socio-environmental Sustainability and Economic Performance of Banks: An Empirical Analysis

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Abstract
Sustainable banking can be seen as a promotional opportunity to leverage the profits of the firms. The present study is an attempt to understand the perspective of the employees working in the banking industry, education industry, and senior employees in several other industries in India. This research expects to throw light on the perceived role of banks' investments in environmentally sustainable practices and improved social relations to achieve a sustainable financial outcome for the shareholders and the banks as a whole. The empirical findings show a positive and significant impact of the variables on the financial outcomes of the banks. All the four variables SOC1, SOC2, ENV1, and ENV2 had a positive association with the economic variables ECO1 and ECO2.

Keywords: *social sustainability, environmental sustainability, economic performance, canonical correlation*
JEL Classification: *G20, G21, M14, Q20*

Date of Submission: 02-04-2022 Date of Acceptance: 15-04-2022

I. Introduction

Sustainable banking is the present-day obligation of financial institutions to invest in the environment and socially conscious projects, to provide products and services that will improve social welfare, and; to ensure equitable and long-term wealth for the stakeholders (Mohammad and Wasiuzzaman, 2021). Responsible financing is expected to improve the environment and reduce the social gap. This can be achieved through improving product value, balancing the work-life quality of employees, and expanding the economic prospects of the organizations. Collaborations with NGOs can help the banks have a great effect in successfully implementing their socio-environmental initiatives and creating value in the process. (Lodsgard and Aagaard, 2017) But we should remember that banks are commercial institutions and thus, CSR activities are sometimes seen as a burden on the profitability and shareholders' wealth (Simpson and Kohers, 2002). On the contrary, recent studies have shown that banks also avail significant benefits by adopting CSR. The work done by banks for rural development, environmental, and other socio-communal issues helps them to increase their public presence (Williams and Badugu, 2016). Given the awareness level and the perceived concern among customers about CSR, the initiatives will help the banks to build a level of trust, favourable response from them, and thus brand loyalty (Pratihari and Uzma, 2017; Paluri and Mehra, 2018). Sontaite-Petkeviciene (2015) wrote a review paper emphasizing various reasons that induce the CSR practices by corporates. He enumerated that CSR actions help them to retain existing customers and expand the customer base by highlighting responsible behavior on economic, ethical, and philanthropic grounds. Thus, sustainable banking can be seen as a promotional opportunity to leverage the profits of the firms. Upon synthesis of the prior literature, it was found that the investigation of the employees' intent to participate in sustainable banking is few and far between. Moreover, most studies on sustainable banking are based in developed countries. A huge gap can be seen in the existing literature from the perspective of Indian consumers, employees, and policy-makers.

The present study is an attempt to understand the perspective of the employees working in the banking industry, education industry, and senior employees in several other industries in India. This research expects to throw light on the perceived role of banks' investments in environmentally sustainable practices and improved social relations to achieve a sustainable financial outcome for the shareholders and the banks as a whole. The sections of the manuscript consist of the reviewed literature and development of hypotheses in Section 2 followed by empirical analysis in Section 3. The policy implications and conclusion have been enumerated in Section 4. The last section consists of the scope for future research.

II. Reviewed Literature and Development of Hypotheses

Social sustainability and Economic performance

Social sustainability dimension of banking involves the relationship of the bank with its employees, community, and customers, which is achieved through the responsible provision of products and services (Miralles-Quirós et al., 2019). Fijałkowska et al. (2018) in their study analyzed the relationship between the socio-environmental performance of banks and their tangible financial outcome through panel regression and data envelopment analysis. The financially efficient banks were found to be more active in socially responsible activities. Weber (2017) also found a bi-directional causality between sustainability and financial variables of Chinese banks. This is because when corporate social responsibility (CSR) yields a positive outcome for the firms in the form of financial benefits, it will be taken as a voluntary initiative rather than a legal compulsion (Maqbool and Zameer, 2018). CSR can prove to be a valuable and rare resource that can bring the firms a competitive edge over other firms. This will motivate them to go beyond the legislative formalities and will bring them closer to the social and natural environment. Responsible business activities not only improve profitability but also enhances stock returns (Jan, 2019). Several similar studies based on secondary data have found a significant positive relationship between CSR and financial performance (Maqbool and Zameer, 2018; Nobanee and Ellili; Oyewumi et al., 2018; Batae et al, 2020). Simpson and Kohers (2002) have identified several contradictory theories which argue that initiatives for social causes add to the costs of the organizations and reduce profitability. This has been validated by the results of Moufty et al. (2021). In India, the social outreach of banks in the form of rural development is also lacking (Williams and Badugu, 2016). Fayad et al. (2017) also opined that the conduct of socially responsible business brings positive financial results for the banks only when they are directly related to the core business activities. Thus, based on these contradictory results the first hypothesis of the study is:

H1a: Socially-responsible banking yields positive economic results.

Environmental Sustainability and Economic Performance

The detrimental effect of carbon emissions on the environment has been more visible in our surroundings. Nations are now more concerned about environmental sustainability. This has induced an environmental consciousness among the consumers and has affected their consumption patterns (Taneja and Ali, 2020). In a general sense, environmental performance is not brought about by planting several trees. Rather it is achieved by making pollution abatement investments (Zhang, 2021). Countries that have strict environmental liability adhere to credit risk assessment before financing any project. But this may negatively affect the banks' volume of business and profitability. Thus, it is the principles of operations of management that plays a significant role in such critical aspects. Kartadjumena and Rodgers (2019) investigated the role of executive compensation in pursuance of corporate sustainability (CS) measures in terms of climate and environmental performance. Further, the model analyses the impact of climate and environmental concerns and executive compensation on the financial health and market performance of commercial banks in Indonesia. The analysis based on Throughput Model suggests that executive compensation has a positive relation with sustainability performance; however, CS performance negatively impacts the financial health and market value performance. Dhaimesh and Zobi (2019) believe that the level of sustainability disclosures has a significant effect on the behavior of society toward the bank. They found that whereon one hand, all the three sustainability dimensions i.e., social, environmental, and economic disclosures have a combined positive effect on the return on assets, the environmental disclosure had no significant positive result on ROE. Shakil et al. (2019) opined that this may be because management generally adheres to greenwashing to cover up negative news, attract social media, or improve the social image and thus, leading to overinvestment in ESG activities. On the positive side, the improved financial performance of the banks will ultimately deepen the banks' outreach to more environmentally conscious and socially- responsible projects. This will make investors aware of the implications of disclosures for the prospects of their company (Nizam, 2019).

H1b: Environment-conscious banking positively affects the economic performance

III. Data and Methodology

3.1. Variables and data collection

For the study, the variables have been adopted from Han and Huo (2019), Afum et al. (2020), and Yusliza et al. (2019). The variables have been listed in Appendix 1. The questionnaires were distributed to 210 respondents, out of which 202 were processed after filtering the unengaged responses. Table 1 represents the sample characteristics. 67.3% of the respondents are male and 32.7% are female. The majority of the respondents are in the age group of 20-30 and 30-40 and have a work experience of more than 10 years in their respective fields.

Table 1: Respondents' Profile

	Frequency	Percent
Gender		
Male	136	67.3
Female	66	32.7
Age		
20-30	103	51.0
30-40	61	30.2
40-50	28	13.9
50-60 & above	10	5.0
Industry		
Banking	123	60.9
Educational Institutions	28	13.9
IT and Data Science	51	25.2
Experience		
Less than 1 Year	46	22.8
1 to 5 Years	42	20.8
5 to 10 Years	19	9.4
More than 10 Years	95	47.0

Source: Authors' findings

3.2 Sample Reliability
To test the reliability of the data set, Cronbach's (1951) alpha has been used. The alpha for the data set used in the study is .871 which is above the acceptable range of .7.

3.3. Results and Discussion
This section presents the empirical relationship between socio-environmentally sustainable banking and their economic performance using canonical correlation analysis. Canonical correlation analysis (CCA) is concerned with investigating the relationship between two sets of variables. In this study, the relationship has been analyzed between Socially-responsible banking SOC1 and SOC2 along with environment-conscious banking viz. ENV1 and ENV2 and economic performance i.e. ECO1 and ECO2.

3.3.1 Relationship between social sustainability and economic performance
Figure 1 along with Table 2 explains the correlation shared between socially responsible banking and the economic performance variables of the banks. As we can see, the canonical covariate F1 which represents the social banking variables SOC1 and SOC2 has a significant positive correlation of .347 with the canonical dependent F2. With deeper analysis, it is clear that with an increase in job satisfaction level of employees (SOC1) and improvement in relations with the community and stakeholders (SOC2), the banks can increase the return generated on their assets(ECO1) and the returns to the shareholders' equity (ECO2) as well.

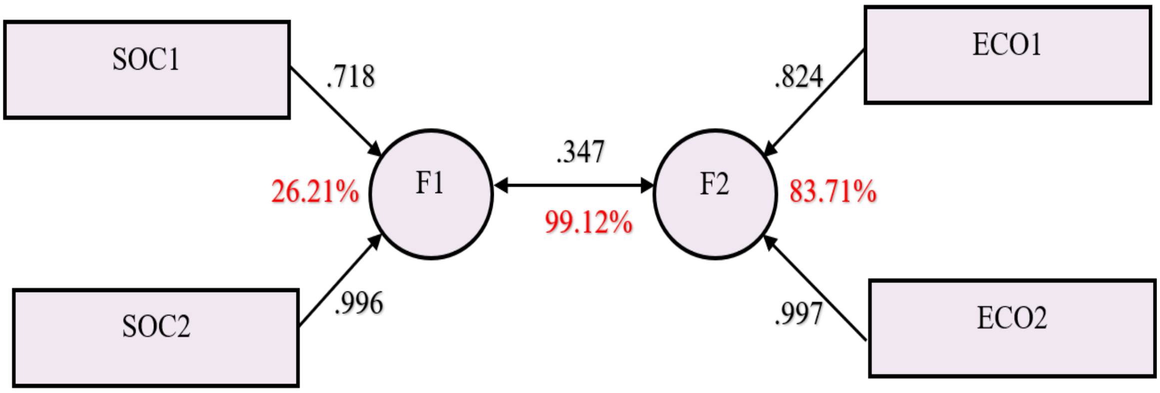

Figure 1: Correlation explained between social sustainability and economic performance

Source: Authors' compilation

Table 2: Canonical Correlation

Root No.	Eigenvalue	Percent	Cumulative Percent	Canonical Correlation	Squared Correlation	Wilks L.	Sig.
1	.53152	99.118	99.118	.58911	.34706	.64987	.000
2	.00473	.88169	100.000	.06860	.00471	.99529	.333

Source: Authors' findings

The canonical loadings through root 1 (Table 3) show that ECO1 and ECO2 explain 83.71 percent of the variance in the canonical dependent F2 and SOC1 and SOC2 explain 26.21 percent of the variance in the canonical covariate F1. This means certain unexplored variables can be included to describe socially sustainable banking.

Table 3: Canonical Loadings through Root 1

Variables		Loadings	Variance Explained
Economic Sustainability	ECO1	.82403	83.7125
	ECO2	.99761	
Social Sustainability	SOC1	.71891	26.2129
	SOC2	.99687	

Source: Authors' findings

Table 4: Regression Results

Variables	ECO1		ECO2	
	Beta	S.E.	Beta	S.E.
SOC1	.103 (1.2455)	.062	.055 (.7276)	.061
SOC2	.413* (4.9987)	.072	.549* (7.1822)	.070
R-squared	.23717		.34542	
Adj. R-squared	.22950		.33884	
F (2,199)	30.9553		52.5061	
Prob>F	.000		.000	

*Significance exists at 0.01 level.
t-value of variables presented in parentheses.

The further regression analysis of these canonical covariates SOC1 and SOC2 shows that SOC2 has a significant impact on both the economic performance indicators ECO1 and ECO2 at a 1% level of significance. SOC1 has a positive, though not significant, association with the economic performance variables. This may be because good relations with the community lift the image of the bank among the consumers and adds to the brand value. Thus, banks being a part of society and as an organization using the resources of the society should aim for greater goals than simply achieving profits. Meeting their social obligations will effectively bring them positive economic results in the long run. Hence, the following hypothesis is accepted:

H1a: Socially-responsible banking yields positive economic results.

3.3.2 Relationship between environmental sustainability and economic performance

As it can be seen from Table 5, the canonical correlation coefficient through root 1 is .714 with an explained variance of the correlation of 97.65% and an eigenvalue of 1.04032. This indicates a positive correlation between environmental sustainability performance and the economic sustainability performance of banks. The individual canonical loading of ENV1 and ENV2 on the independent canonical variant F1 are .908 and .915 respectively. Further, the variance explained by the canonical variant F1 is 42.37%. Similarly, ECO1 and ECO2 have factor loadings of .859 and .990 on F2 respectively.

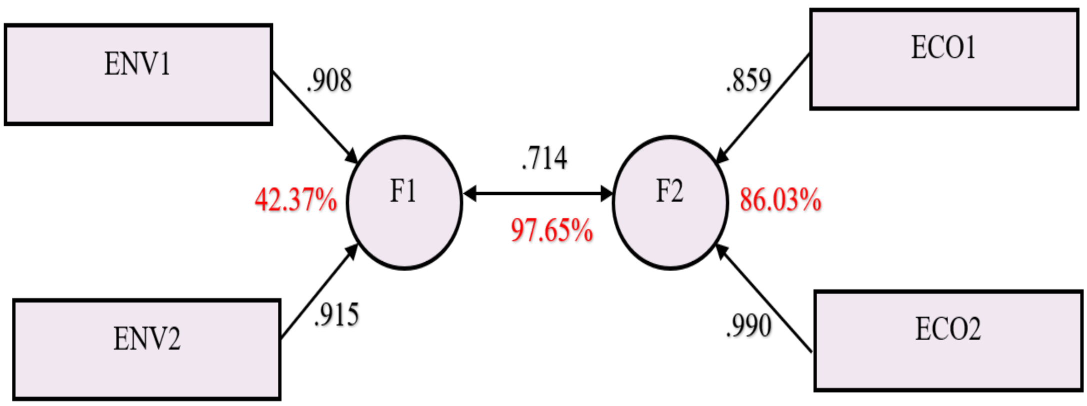

Figure 2: Correlation explained between canonical variables
Source: Authors' compilation

Table 5: Canonical Correlation

Root No.	Eigenvalue	Percent	Cumulative Percent	Canonical Correlation	Squared Correlation	Wilks L.	Sig.
1	1.04032	97.64612	97.64612	.71406	.50988	.47813	.000
2	.02508	2.35388	100.00000	.15641	.02446	.97554	.027

Source: Authors' findings

Table 6: Canonical Loadings through Root 1

Variables		Loadings	Variance Explained
Economic Sustainability	ECO1	.85950	86.03172
	ECO2	.99091	
Environmental Sustainability	ENV1	.90817	42.36825
	ENV2	.91494	

Source: Authors' findings

Table 7: Regression Results

Variables	ECO1		ECO2	
	Beta	S.E.	Beta	S.E.
ENV1	.2328* (3.135)	.05882	.4066* (6.087)	.05610
ENV2	.4396* (5.918)	.06147	.3696* (5.534)	.05863
R-squared	.38306		.50109	
Adj. R-squared	.37686		.49608	
F (2,199)	61.77974		99.93638	
Prob>F	.000		.000	

*Significance exists at 0.01 level.
t-value of variables presented in parentheses.

Source: Authors' findings

Table 5 above shows the regression coefficients. It is found that ENV1 and ENV2 have a significant impact on both ECO1 and ECO2 at a 1% level of significance. With this, the second hypothesis is also accepted:

H1b: Environment-conscious banking positively affects the economic performance

This provides us with a positive insight that along with compliance with environmental standards at the internal level if the banks develop their credit business by exploring the investment opportunities in sustainable energy projects, they will reap a good amount of economic benefit on their assets and for the shareholders (Lian et al., 2022).

IV. Policy Implications and Conclusion

This paper provides quantitative evidence to the bankers and policymakers about the need and benefits of extending their socio-economic facet of doing business. The results reveal that the procurement of greater goals and endurance of sustainable banking largely depend on socio-environmental consciousness. Moreover, the brand of banks in the long-run prominently relies on the responses of its customers in the society.

The emphasis on the socio-environmental dimension of sustainability has grown significantly in the last decade. With the target of 17 Sustainable Development Goals (SDGs) to be achieved by 2030, the nations are now eager to bring radical changes and innovation to the business world. The pursuit of these goals cannot be successful without the assistance of the banking system. Especially in developing countries like India, credit from banks makes a significant portion of the investment in a majority of projects. Given the role and the agenda to achieve a sustainable future, the banks are expected to be more conscious of the socio-environmental outcomes of their finances. It is a part of their social responsibility to invest in sustainable projects and ensure a better outcome for the stakeholders. Now, the Reserve Bank of India has also prioritized the credit for renewable energy projects and has doubled the credit limit to Rs. 30 crores to encourage credit flow to the sector (Business Standard, 2020).

The paper outlined the economic implications of doing socio-environmental banking. The empirical findings show a positive and significant impact of the variables on the financial outcomes of the banks. All the four variables SOC1, SOC2, ENV1, and ENV2 had a positive association with the economic variables ECO1 and ECO2. This shows that good management of the needs and requirements of the people with whom the banks are dealing (i.e., Society and community) and the people who deal with the society on behalf of the banks (i.e., the employees) will bring in positive economic benefits for the organization. A healthy working environment and job satisfaction lead to the retention of a quality workforce and attract better employees (Gangi, 2018). Further, compliance with environmental standards and investing in sustainable projects add to the brand value and brand loyalty through a good public image. Ultimately, this helps the banks to improve their return on investments (ROI) and also improve the return on equity (ROE) to shareholders.

Overall, it can be said that in the contemporary global arena, it is the need the hour that businesses should extend their bottom line to include the socio-environmental dimension. This includes the banks as well. Government support programs and more robust environmental standards can become an effective tools for improving the quality and quantity of credit available. Moreover, well-maintained relations with the external and internal systems will realize greater returns in the long run.

V. Scope for Future Research

The research work presented in this paper is limited to the findings based on the responses of 202 participants only. With the availability and access to a larger sample, the results can be generalized and made more robust. Moreover, other constituents of socio-environmental sustainability may also be explored and analyzed to understand its impact on the economic performance of banks.

Appendix 1: Selection of Constructs

Construct	Codes	Variables	References
Social Sustainability	SOC1	Job satisfaction levels of employees should be improved	Afum et al.(2020); Han & Huo(2019)
	SOC2	Relationships with the community and stakeholders should be improved	
Environmental Sustainability	ENV1	Compliance with environmental standards should be improved	Yusliza et al. (2019)
	ENV2	Investments should be made in projects that promote sustainable energy consumption	
Economic Performance	ECO1	It will improve the Return on equity for the shareholders	Afum et al.(2020)
	ECO2	It will improve the return on assets	

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Smitisikha Guru, et. al. "Socio-environmental Sustainability and Economic Performance of Banks: An Empirical Analysis." *IOSR Journal of Economics and Finance (IOSR-JEF)*, 13(02), 2022, pp. 17-23.