



“Environmental Performance Reporting in Commercial Banks of India: Exploring Association with Financial Performance”

Parul Munjal, Deergha Sharma

Abstract: Environmental issues such as global warming and subsequent climate changes have stimulated the need for environmental performance reporting by organizations. Extant literature highlights that adoption of environmental practices is expected to influence financial performance of organizations. Despite extensive literature available on relationship between environmental performance and financial performance, results still remain indecisive. This research attempts to investigate environmental performance reporting in the context of commercial banks operating in India and compare the relationship between environmental performance and financial performance on a sample of 21 public and 20 private sector banks for a period of five years (2013-14 to 2017-18) using content analysis and linear regression. Secondary data was collected from annual reports, corporate social responsibility reports, business responsibility reports and sustainability reports of respective banks. Results obtained evince no considerable association amid environmental performance and financial performance of public sector banks functioning in India. Correspondingly, no considerable association was found amid environmental performance and return on equity of private sector banks. Conversely, positive significant relationship was observed between environmental performance and return on assets of private sector banks. Research provides an insight to banking sector to incorporate environmental practices in core business operations to improve profitability.

Keywords: Environmental Performance; Financial Performance; Environmental Performance Reporting; Commercial Banks; Content Analysis

I. INTRODUCTION

Global warming and ensuing climate changes have become the most strongly debated issue in present scenario. Since late 19th century, earth’s surface has warmed to about 0.9 degrees Celsius as an outcome of global warming [1]. Intergovernmental Panel on Climate Change (IPCC) regards global warming owes to greenhouse effect caused by increase in amount of CO₂ in the earth’s atmosphere [2] and estimates rise in carbon dioxide emissions by almost 50 percent since 1990 [3]. NASA [4] considers that increased amount of CO₂ concentration has ascended sea level, lessened sea ice and has resulted in extreme heat waves.

Climate scientists believe rise in level of CO₂ as an outcome of global warming and ensuing climate changes to be driven largely by human activities and emissions [5]. One of the prime reasons for rise in such activities and emissions is industrialization. It has increased the dependence of industries and business organizations across the globe for their operations on natural resources, thereby radically affecting the environment either directly or indirectly. NASA [6] predicts that industrial activities have raised the level of carbon dioxide in the atmosphere to 400 parts per million from 280 parts per million in past 150 years.

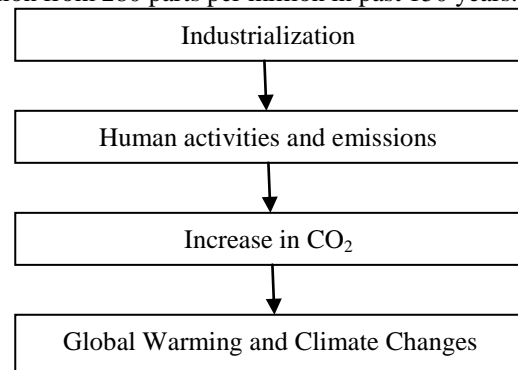


Fig. 1. Industrialization and its consequences

Consequently, environment deterioration, deforestation and other allied environment and climate issues have become a great matter of concern [5] and obstruct ability of a nation to attain sustainable development as observed by Yohe et al. [7]. It becomes ethical responsibility of industries and business organizations to conserve and protect the environment so as to minimize the dismal consequences of global warming and subsequent climate changes. Duran [8] suggests that it would facilitate in attaining sustainable development with a focus on achieving better gains for humans and effective utilization of resources whilst maintaining equilibrium with the environment. Vigano and Nicolai [9] regards banking sector to be a ‘clean sector’, yet it is susceptible to environmental issues and risks since banks interact with the environment and finance the industries and various business sectors of an economy [10]. Henceforth, banking sector contributes significantly towards sustainable development [11], [12]. Indeed, banks acknowledge their indirect contribution in environmental deterioration and recognize ecological sustainability. Anticipation of stakeholders concerning sustainable development reinforces significance of environmental issues and activities in banking sector [13]. Wang and Bernell [14] emphasizes that mounting attention in environmental issues requires banks to take into consideration environmental outcomes of their financing decisions and disclose information about environmental performance through environmental reports.

Revised Manuscript Received on October 30, 2019.

* Correspondence Author

CS Parul Munjal*, Doctoral Research Scholar, School of Management, The NorthCap University, Gurugram, Haryana, India.

Dr. Deergha Sharma, Assistant Professor, School of Management, The NorthCap University, Gurugram, Haryana, India.

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an open access article under the CC-BY-NC-ND license <http://creativecommons.org/licenses/by-nc-nd/4.0/>



Shearer [15] suggests that it would provide environmental information to stakeholders and reflect environmental performance on environmental issues. Taking this into account, many banks in India willingly reveal information concerning environmental outcomes of their actions through environmental reports [16], [17]. Extant literature highlights that embracing environmental practices and reporting is anticipated to persuade financial performance [18]. Ample research is available on analysis of environmental performance reporting and association between environmental and financial performance in the context of Indian banking sector. However, there exists no comparative study on association between the two constructs amid public and private sector banks of India and that too based on GRI G4 environmental indicators for financial sector. Since, GRI standards are widely used by companies and banking sector [19], research adopts environmental indicators from GRI G4 standards due to its extensive recognition and reliability. To address above research gap, present research is a modest endeavour to provide wider insight on environmental performance reporting and investigate association between environmental performance and financial performance amid public and private sector banks of India. In the next section, research reviews extant literature followed by research methodology. Further, results are presented and analyzed. Final section concludes the research followed by implications, limitations and scope of future research.

II. LITERATURE REVIEW

Malarvizhi and Matta [20] mentioned that environmental performance reporting is unorganized and insufficient by Indian companies in contrast to reporting on financial aspects. Conversely, depressing outcomes caused by global warming and succeeding climate changes has amplified universal significance of environmental performance reporting. Barnett [21] estimated financial gains of engaging in environmental activities exceed costs and triggers environmental activities and its reporting. Barnett and Salomon [22] demonstrated that involvement in environmental practices augments brand recognition and corporate repute, leading to increase in firm value. Besides, individuals exhibit more purchase intent for products of firms having superior environmental performance. It results in enhanced future earnings [23]. This has elicited research on association between environmental and financial performance in the past few decades, yet the results remains indecisive with respect to positive, negative and no relationship between the two constructs [24], [25]. Prior literature indicates that positive relationship between the two constructs is commonly reported [26], [27]. Al-Tuwaijiri et al. [28] asserted that there is significant positive relationship between environmental performance and financial performance with comprehensive quantifiable environmental disclosure. Yin et al. [29] analysed the relationship between environmental information disclosure and financial performance based on symbolic and substantive methods of disclosure of environmental information. Results evince positive relationship exist between environmental information disclosure and financial performance for both types of disclosures. Nonetheless, contribution of firms with symbolic-style environmental disclosure to financial performance is larger than that of substantive-style disclosure. Using a different empirical

analysis method, Salama [30] measured the impact of environmental performance on financial performance on panel data of British companies and observed relationship between environmental and financial performance to be stronger when median regression method is used than simple OLS regression. Many studies have examined the association between environmental performance and financial performance in the context of developed and developing countries. Manrique and Ballester [18] observed effect of implementation of environmental practices on financial performance is stronger for firms located in developing countries in contrast to developed countries. However, Iwata and Okada [31] examined the relationship on impact of carbon emissions as a proxy of environmental performance on financial performance of Japanese manufacturing firms for a five-year period and discovered that carbon emission reductions increase long run firm financial performance. Contrary to this, prior literature exhibit negative association amid environmental and financial performance [32], [33]. Mahapatra [34] compared pollution control expenditures as environmental performance indicator with average market returns and found negative correlation between environmental and market performance. Similarly, Cordeiro and Sarkis [35] conducted a research on US pulp and paper sector and observed negative association amid environmental and financial performance. Barnett [21] and Artiach et al. [33] asserted that cost involved in implementing environmental practices affects financial resources of an organization resulting in negative relationship between two constructs [36], [37]. This view was supported by Magner [38] on research conducted on 523 US firms. It was observed that more environmental activities lessen earnings per share growth, thereby asserting a negative relationship between two constructs. Another view suggests that environmental and financial performance have no association [39], [40] and it is social disclosures that matters to investors as highlighted by Qiu et al. [41]. Nyirenda et al. [42] observed that moral obligations to follow environmental management practices to mitigate climate change impact triggers environmental management practices. However, no considerable association subsists amid environmental and financial performance since it is complex to determine the association owing to likelihood of various superseding variables.

III. RESEARCH METHODOLOGY

A. Data and Variables

Research aims to examine the extent of environmental performance reporting and compare the association amid environmental performance and financial performance on a sample of 21 public sector banks and 20 private sector banks functioning in India during 5 years (2013-14 to 2017-18). Research employs secondary data collected through annual reports, corporate social responsibility reports, business responsibility reports, sustainability reports obtained from official website of respective banks. Environmental performance has been taken as independent variable [43], [44] and measured by environmental variables based on GRI G4 guidelines for financial sector [45].

Content analysis which has been extensively utilized in the extant literature has been employed in this research to determine environmental disclosure score [46]. A score of “1” was assigned if the bank has disclosed environmental variable and “0” was assigned if environmental variable has not been disclosed by the bank. Based on the scores computed, environmental disclosure index was computed based on following formula:

$$\sum_{i=1}^{mj} di/N$$

Where, di assumes the value of “1” if the information regarding the variable is disclosed by the bank or “0” if information if not disclosed, N is the maximum expected score of environmental variables, j is the bank, i is the environmental variable. Accounting based performance measures of financial performance have been employed as dependent variables [47] represented by return on assets (ROA) computed by ratio of net income over total assets and return on equity (ROE), computed by ratio of net income over total equity.

B. Hypothesis Framed

Hypothesis 1: There is significant association between environmental performance and return on assets of private sector banks operating in India.

Hypothesis 2: There is significant association between environmental performance and return on equity of private sector banks operating in India.

Hypothesis 3: There is a significant association between environmental performance and return on assets of public sector banks operating in India.

Hypothesis 4: There is a significant association between environmental performance and return on equity of public sector banks operating in India.

C. Conceptual Framework

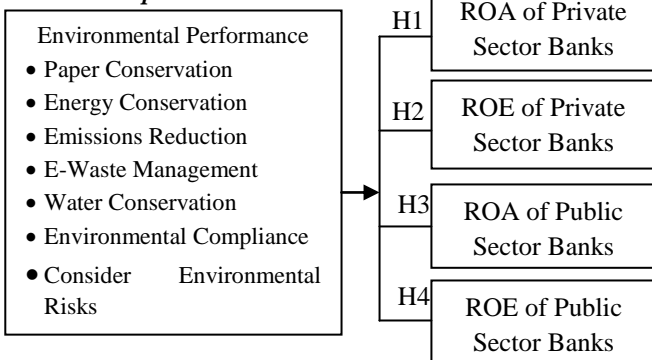


Fig. 2. Conceptual Framework

D. Model Analysis

Existence of association amid environmental performance and financial performance of banks under this research was examined by means of multiple regression using statistical software SPSS. Significance level used for the test was 5%. Equation model employed is:

Financial performance = f (Environmental performance)

Empirical Model employed is:

$$FP = \beta_0 + \beta_1 EP + \epsilon$$

Where,

FP = Return on assets (ROA) and Return on equity (ROE)

β_0 = Constant

β_1 and β_2 = Estimates of independent variable and control variable respectively

EP = Environmental Performance as a proxy of material, energy, emissions, effluents & waste, water, compliance, products & services based on GRI G4 environmental indicators

ϵ = Error term

IV. RESULTS AND FINDINGS

Table 1: Descriptive Information

		Mean	Standard Deviation	N
Private Sector Banks	Return on Assets	0.96	0.72458	20
	Return on Equity	9.11	8.14267	20
	Environmental Performance Score	57.25	24.89422	20
Public Sector Banks	Return on Assets	-.19	0.382	21
	Return on Equity	-3.57	6.490	21
	Environmental Performance Score	53.62	21.006	21

Table 1 depicts descriptive statistics of dependent and independent variables of public and private sector banks functioning in India. Negative mean score of financial performance of public sector banks indicate that banks need to take stringent steps to improve their return on assets and return on equity. Mean score of environmental performance of 53.62 in public sector banks and 57.25 in private sector banks indicates that banks in India are much slower in adopting environmental reporting practices [45]. Involvement of banks towards environmental activities and its reporting is still in its preliminary phases.

Table 2: Model Summary of Private Sector Banks

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Return on Assets	.693	.480	.447	.539	2.243
Return on Equity	.439	.193	.146	7.527	2.775

Predictors: (Constant), Environmental Performance Score

Dependent Variable: Return on Assets, Return on Equity

Table 3: Model Summary of Public Sector Banks

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Return on Assets	.368	.136	.090	.364	2.749
Return on Equity	.398	.159	.114	6.108	2.756

Predictors: (Constant), Environmental Performance Score

Dependent Variable: Return on

“Environmental Performance Reporting in Commercial Banks of India: Exploring Association with Financial Performance”

Assets, Return on Equity Table 2 and table 3 demonstrate model summary and overall fit statistics of banks under this research. Durbin Watson values indicate residuals are independent and there is no autocorrelation in the data [48]. R value reflects the correlation between the observed and predicted values of dependent variables (return on assets and return on equity). R square value of .480 and .193 indicates that 48% of the variation in return on assets and 19.3% of variation in return on equity in private sector banks can be explained by independent variable environmental performance. Correspondingly, 13.6% of the variation in return on assets and 15.9% of variation in return on equity in public sector banks can be explained by independent variable environmental performance.

Table 4: Coefficients Table of Private Sector Banks

		Unstandardized Coefficients	t	Sig.	Collinearity Statistics	
					B	
Return on Assets	Constant	-.317	-.891	.386		
	Environmental Performance Score	.021	3.841	.001	1.000	1.000
Return on Equity	Constant	.879	.198	.845		
	Environmental Performance Score	.144	2.017	.060	1.000	1.000

Predictors: (Constant), Environmental Performance Score
 Dependent Variable: Return on Assets, Return on Equity
 Table 4 relates to coefficients and provides information to forecast dependent variable from independent variable and estimates contribution of independent variable towards the model. VIF value of less than 10 [43] and tolerance value of more than 0.1 suggests no multicollinearity in the data [49]. Significance value (p value) of .001 (<0.05) indicates that β coefficient is statistically significant in predicting return on assets of private sector banks. Positive β coefficient of .021 evince than 1% increase in environmental performance score corresponds to 2.1% increase in return on assets. On the contrary, p value of .060 (>0.05) indicate insignificant relationship between environmental performance and return on equity of private sector banks. Results thereby fail to reject hypothesis 1 but reject hypothesis 2 and suggest positive significant relationship between environmental performance and return on assets of private sector banks [50]. Conversely, no considerable association subsists amid environmental performance and return on equity of private sector banks functioning in India [51].

Table 5: Coefficients Table of Public Sector Banks

		Unstandardized Coefficients	t	Sig.	Collinearity Statistics	
					Beta	
Return on Assets	Constant	-.545	-2.446	.024		
	Environmental Performance Score	.007	1.728	.100	1.000	1.000
Return on Equity	Constant	-10.16	-2.724	.013		
	Environmental Performance Score	.123	1.893	.074	1.000	1.000

Return on Assets	Constant	-.545	-2.446	.024		
	Environmental Performance Score	.007	1.728	.100	1.000	1.000
Return on Equity	Constant	-10.16	-2.724	.013		
	Environmental Performance Score	.123	1.893	.074	1.000	1.000

Predictors: (Constant), Environmental Performance Score
 Dependent Variable: Return on Assets, Return on Equity
 Conversely, p value of .100 (>0.05) and .074 (>0.05) depicted in table 5 indicates that β coefficient of environmental performance score is statistically insignificant in predicting return financial performance of public sector banks. Results thereby reject hypothesis 3 and 4 and suggest no considerable association amid environmental performance and financial performance of public sector banks [44].

V. CONCLUSION

Banks occupy a critical role by lending to various sectors of an economy that might directly or indirectly impact the environment. Evaluating environmental performance of banks is consequently noteworthy. In this context, this research attempts to analyze environmental performance reporting and compare relationship amid environmental performance and financial performance of public and private sector banks in India. Research highlights that environmental performance reporting by banks under study is yet in preliminary phases and provides mixed results. Results indicate no considerable association amid environmental performance and return on equity of private sector banks. Additionally, no considerable association was observed between environmental performance and financial performance of public sector banks. Conversely, positive significant relationship was observed between environmental performance and return on assets of private sector banks. Research suggests that involvement in environmental practices and its reporting improves return on assets. Consequently, it calls for banks to integrate environmental performance reporting into mainstream banking operations to be profitable in due course.

VI. IMPLICATIONS

Besides making considerable contribution towards existing literature, research offers practical implications for academicians and practitioners. Reporting on environmental performance ensures that banks consider their impact on the environment which might lead to improved reputation and increased stakeholders trust. This in turn might result in improved financial performance. Thus, research upholds integration of environmental performance reporting into banking operations to improve profitability.



VII. LIMITATIONS AND SCOPE OF FUTURE RESEARCH

Present research is restricted to a short time period viz. -a- viz. five years (2013-14 to 2017-18). Further, research covers only public and private sector banks operating in India and is based on only two financial variables. Longitudinal research can be conducted encompassing more financial variables and taking into account regional rural banks and foreign banks forming an important component of Indian banking sector.

REFERENCES

- NASA, "Global climate change: Vital signs of the planet," 2019. [Online]. Available: <https://climate.nasa.gov/evidence/> [Accessed: June 27, 2019].
- H. J. Blaauw, "Global warming: Sun and water," *Energy & Environment*, vol. 28, no. 4, pp. 468-483, 2017, doi:10.1177/0958305x17695276
- Sustainable Development Goals, "Take urgent action to combat climate change and its impacts," 2019. [Online]. Available: <https://www.un.org/sustainabledevelopment/climate-change/> [Accessed: July 4, 2019]
- NASA, "Global climate change: Vital signs of the planet," 2019. [Online]. Available: <https://climate.nasa.gov/effects/> [Accessed: June 27, 2019].
- V. Khawas, "Global warming and climate change: Implications for human security in India," *Social Change*, vol. 37, no.3, pp. 92-119, 2007, doi:10.1177/004908570703700306
- NASA, "Global climate change: Vital signs of the planet," 2019. [Online]. Available: <https://climate.nasa.gov/causes/> [Accessed: June 27, 2019].
- G. W. Yohe, R. D. Lasco, Q. K. Ahmad, N. W. Arnell, S. J. Cohen, C. Hope, A. C. Janetos and R. T. Perez, "Perspectives on climate change and sustainability, Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 811-841, 2007.
- D. C. Duran, L. M. Gogan, A. Artene and V. Duran, "The components of sustainable development - A possible approach," *Procedia Economics and Finance*, vol. 26, pp. 806-811, 2015, doi.org/10.1016/S2212-5671(15)00849-7.
- F. Viganò and D. Nicolai, "CSR in the European banking sector: Evidence from a survey," *Corporate social responsibility in Europe: Rhetoric and realities*, pp.95-108, Cheltenham: Edward Elgar Publishing, 2009.
- Canadian Securities Administrators (CSA), "CSA Staff notice 51-333 – Environmental reporting guidance," 2010. [Online] Available: http://www.osc.gov.on.ca/documents/en/Securities-Category5/csa_20101027_51-333_environmental-reporting.pdf [Accessed: July 5, 2019].
- O. Weber and B. Feltham, Sustainable banking: Managing the social and environmental impact of financial institutions, Toronto: University of Toronto Press, 2016.
- J. J. Bouma, M. Jeucken and L. Klinkers, Sustainable banking: The greening of finance. New York: Routledge, 2017.
- R. Care, "Exploring the role of banks in sustainable development," *Sustainable Banking*, pp. 39-64, 2018, doi:10.1007/978-3-319-73389-0_3
- H. Wang and D. Bernell, "Environmental disclosure in China: An examination of the green securities policy," *The Journal of Environment & Development*, vol. 22, no. 4, pp. 339-369, 2013
- T. Shearer, "Ethics and accountability: From for itself to the for-the-other," *Accounting, Organizations and Society*, vol. 27, pp. 541-575, 2002
- C. Wright, "Global banks, the environment, and human rights: The impact of the equator principles on lending policies and practices," *Global Environmental Politics*, vol. 12, no. 1, pp. 56-77, 2012.
- B. Caldecott and J. McDaniels, "Financial dynamics of the environment: Risks, impacts, and barriers to resilience," *Documento de trabajo del Estudio del PNUMA*. UNEP Inquiry/Smith School, Oxford University, 2014.
- S. Manrique and C. P. M. Ballester, "Analyzing the effect of corporate environmental performance on corporate financial performance in developed and developing countries," *Sustainability*, vol. 9, pp. 1-30, 2017.
- M. Bednarova, R. Klimko and E. Rievajova, "From environmental reporting to environmental performance," *Sustainability*, vol. 11, pp. 1-12, 2019.
- P. Malarvizhi and R. Matta, "Link between corporate environmental disclosure and firm performance – Perception or reality," *Review of Integrative Business and Economics Research*, vol. 5, no. 3, pp. 1-34, 2016.
- M. L. Barnett, "Stakeholder influence capacity and the variability of financial returns to corporate social responsibility," *Academy of Management Review*, vol. 32, no. 3, pp. 794-816, 2007.
- M. Barnett and R. Salomon, "Beyond dichotomy: The curvilinear relationship between social responsibility and financial performance," *Strategic Management Journal*, vol. 27, pp. 1101-1156, 2006.
- M. Grimmer and T. Bingham, "Company environmental performance and consumer purchase intentions," *Journal of Business Responsibility*, vol. 66, pp. 1945-1953, 2013.
- W. Qian, "Revisiting the link between environmental performance and financial performance: Who cares about private companies?," Adelaide, Australia, 2012.
- M. Porter and M. Kramer, "Strategy and society: The link between competitive advantage and corporate social responsibility," *Harvard Business Review*, vol. 84, no. 12, pp. 78-92, 2007.
- Y. Nakao, A. Amano, K. Matsumura, K. Genba and M. Nakano, "Relationship between environmental performance and financial performance: An empirical analysis of Japanese corporations," *Business Strategy and the Environment*, vol. 16, no. 2, pp. 106-118, 2007.
- T. S. Ong, B. H. Teh and Y. W. Ang, "The impact of environmental improvements on the financial performance of leading companies listed in Bursa Malaysia," *International Journal of Trade, Economics and Finance*, vol. 5, no. 5, pp. 386-391, 2014, doi: 10.7763/IJTEF.2014.V5.403.
- S. A. Al-Tuwaijri, T. E. Christensen and K. E. Hughes, "The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach," *Accounting, Organizations and Society*, vol. 29, no. 5, pp. 447-471, 2004.
- H. Yin, M. Li, Y. Ma and Q. Zhang, "The relationship between environmental information disclosure and profitability: A comparison between different disclosure styles," *International Journal of Environmental Research and Public Health*, vol. 16, no. 9, pp. 1-14, 2019, doi:10.3390/ijerph16091556
- A. Salama, "A Note on the impact of environmental performance on financial performance," *Structural Change and Economic Dynamics*, vol. 16, no. 3, pp. 413-421, 2005, doi:10.1016/j.strueco.2004.04.005.
- H. Iwata and K. Okada, "How does environmental performance affect financial performance?," *Ecological Economics*, vol. 70, no. 9, pp. 1691-1700, 2011, doi:10.1016/j.ecolecon.2011.05.010.
- J. A. Aragon-Correa and E. A. Rubio-Lopez, "Proactive corporate environmental strategies, myths and misunderstandings," *Long Range Planning*, vol. 40, no. 3, pp. 357-381, 2007.
- T. Artiach, D. Lee, D. Nelson and J. Walker, "The determinants of corporate sustainability performance," *Accounting and Finance*, vol. 50, no. 1, pp. 31-51, 2010, doi:10.1111/j.1467-629X.2009.00315.x
- S. Mahapatra, "Investor reaction to a corporate social accounting," *Journal of Business Finance and Accounting*, vol. 11, no. 1, pp. 29-40, 1984, doi: 10.1111/j.1468-5957.1984.tb00054.x
- J. J. Cordeiro and J. Sarkis, "Environmental proactivism and firm performance evidence from security analyst earnings forecasts," *Business Strategy and the Environment*, vol. 6, no. 2, pp. 104-114, 1997.
- K. E. Aupperle, A. B. Carroll and J. D. Hatfield, "An empirical examination of the relationship between corporate social responsibility and profitability," *Academy of Management Journal*, vol. 28, no. 2, pp. 446-463, 1985, doi:10.5465/256210.
- J. B. McGuire, A. Sundgren, and T. Schneeweis, "Corporate social responsibility and firm financial performance," *Academy of Management Journal*, vol. 31, no. 4, pp. 854-872, 1988.
- M. Magner, "How to reconcile environmental and economic performance to improve corporate sustainability: Corporate environmental strategies in the European paper industry," *Journal of Environmental Management*, vol. 76, no. 2, pp. 105-118, 2005.

“Environmental Performance Reporting in Commercial Banks of India: Exploring Association with Financial Performance”

39. S. A. Rahman, R. B. Yusoff and W. N. Mohamed, “Environmental disclosure and financial performance: An empirical study of Malaysia, Thailand and Singapore,” *Social and Environmental Accountability Journal*, vol. 29, no. 2, pp. 46-58, 2010, doi:10.1080/0969160x.2009.9651811.
40. M. Wagner, “How to reconcile environmental and economic performance to improve corporate sustainability: Corporate environmental strategies in European paper industry,” *Journal of Environmental Management*, vol. 76, no. 2, pp. 105–118, 2005, doi:10.1016/j.jenvman.2004.11.021.
41. Y. Qiu, A. Shaikat and R. Tharyan, “Environmental and social disclosures: Link with corporate financial performance,” *The British Accounting Review*, vol. 48, no. 1, pp. 102–116, 2016, doi:10.1016/j.bar.2014.10.007.
42. G. Nyirenda, C. C. Ngwakwe and C. M. Ambe, “Environmental management practices and firm performance in a South African mining firm,” *Managing Global Transitions*, vol. 11, no. 3, pp. 243-260, 2013.
43. Bartolacci, E. Zigiotti and T. T. H. Diem, “Environmental and financial performance in Italian waste management firms,” *Management International Conference*, Slovenia, 2015.
44. D. Earnheart and L. Lizal, “The effect of corporate environmental performance on financial outcomes – Profits, revenues and costs: Evidence from the Czech transition economy,” *DRUID Working Papers 10-15*, DRUID, Copenhagen Business School, Department of Industrial Economics and Strategy/Aalborg University, Department of Business Studies, 2010.
45. K. Kumar and A. Prakash, “Examination of sustainability reporting practices in Indian Banking sector,” *Asian Journal of Sustainability and Social Responsibility*, vol. 4, no. 2, pp. 1-16, 2019.
46. F. K. Aboagye-Otchere, S. N. Y. Simpson and J. A. Kusi, “The influence of environmental performance on environmental disclosures: An empirical study in Ghana. *Business Strategy and Development*, 2019, doi:10.1002/bsd2.81.
47. S. L. Hart and G. Ahuja, “Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance,” *Business Strategy and the Environment*, vol. 5, no. 1, pp. 30-37, 1996.
48. K. H. Chen and R. W. Metcalf, “The relationship between pollution control records and financial indicators revisited,” *The Accounting Review*, vol. 55, no. 1, pp. 168–177, 1980.
49. J. I. Daoud, “Multicollinearity and regression analysis,” *Journal of Physics: Conference Series*. 949012009, 2017.
50. A. King and M. Lenox, “Does it really pay to be green? An empirical study of firm environmental and financial performance,” *Journal of Industrial Ecology*, vol. 5, no. 1, pp. 105-115, 2001.
51. K. H. Chen and R. W. Metcalf, “The relationship between pollution control records and financial indicators revisited,” *The Accounting Review*, vol. 55, no. 1, pp. 168–177, 1980.

AUTHORS PROFILE



CS Parul Munjal is a Doctoral Research Scholar at The NorthCap University, Gurugram, Haryana. She is JRF in Management and is a qualified Company Secretary. She has 5.5 years of teaching experience to her credit. Her research interests are banking, financial accounting and financial management.



Dr. Deergha Sharma is a holder of Ph.D in Finance from University of Rajasthan, Rajasthan, India. Currently she is an assistant professor of Accounting and Finance at The NorthCap University, Gurugram, India. Her major areas of interests are banking, investment management and stock market operations.