

The relationship between environmental accounting and financial performance in Jordanian industrial companies

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Abstract

This research evaluates how environmental accounting affects the financial results of Jordanian manufacturing firms. Leveraging up-to-date empirical investigations, the results show that incorporating environmental expenses into ledger systems enriches the reliability of financial data, enables sounder strategic choices, and boosts profit margins. It also reveals that public environmental reporting has a favorable impact on market results by raising stakeholder trust and company worth. In addition, the study identifies environmental sustainability as a mediating influence that converts green accounting activities into superior financial performance. The findings further stress that resilient supply chain management and green innovation advance both fiscal performance and operational productivity. Overall, the analysis establishes that robust environmental accounting does more than satisfy legal obligations or enhance transparency; it serves as a deliberate mechanism for securing enduring financial benefits and sustainable competitive edge. The study thus offers concrete recommendations for regulators and corporate executives aspiring to embed sustainability into Jordanian financial management

Keywords: Environmental accounting, Financial performance, Jordanian industrial Companies, Sustainability, Green disclosure, Corporate governance

Introduction

Increasingly, environmental accounting serves as an essential discipline within corporate financial management, effectively embedding environmental criteria within established accounting routines (Alshehadeh et al., 2025). The field is concerned with discovering, quantifying, and publicly disclosing ecological expenditures, thus allowing firms to gauge their ecological effects and to value them in monetary terms (Alqotaish & Qatawneh, 2025). By working environmental variables into financial ratios and forecasts, corporations can execute choices that are consistent with sustainability plans and legal obligations (Gündüz & Gündüz, 2025). Its critical importance is most keenly felt in heavy-industry settings, where activities routinely generate considerable environmental outlays and obligations (Al Jarrah et al., 2025). A well-structured program in environmental accounting uncovers inefficiencies, curbs surplus, and trims environmental contingencies, consequently lifting overall profitability (Srouji et al., 2023). A growing body of research reveals that firms that install deep and systematic environmental accounting frameworks

deliver comparatively superior financial results, propelled by sharper resource management and substantial lessons (Soda et al., 2022).

Over the past several years, Jordanian manufacturing firms have increased their use of environmental accounting, aligning corporate practices more tightly with national and international sustainable development agendas. The sector, marked by such diversity as food processing, textiles, and pharmaceuticals, is contending with pollution characteristics and resource depletions that demand precise, monetary-oriented assessments of ecological expenditure (Almatarneh et al., 2024). Field studies indicate that the early adopters of environmental accounting have strengthened compliance with Jordan's steadily tightening environmental legislation and have simultaneously realized measurable financial returns, primarily by limiting waste-handling costs, reducing resource-intensity, and cultivating stronger commercial ties with local communities, government entities, and international buyers (Alsakini, 2023; Jam et al., 2010). Nonetheless, penetration of such accounting practices remains non-uniform. Micro and small firms, which employ

the bulk of the industry's manual workforce and tightest profitability margins, hesitate as the upfront and ongoing costs of rigorous environmental data collection and valuation absorb scarce financial and human resources. By contrast, larger firms, buoyed by stable revenue streams, frequently possess preexisting information technology and managerial layers that permit the incremental embedding of carbon, water, and waste impact costs into profitability disclosures (Alawneh et al., 2025). Mapping the rate and quality of uptake along these lines serves both regulators and company executives as a diagnostic tool for calibrating capacity-building programs, voluntary national awards, and risk-oriented financing initiatives designed to embed resource stewardship within the sector's core economic logic.

The relationship between environmental accounting and financial performance is indeed complex and multifaceted. Some research indicates a direct positive correlation, while other studies suggest that benefits might be indirect, influenced by factors like corporate reputation and regulatory compliance (Alqotaish & Qatawneh, 2025; Moazzami et al., 2025). Companies that proactively disclose their environmental performance metrics often experience increased brand loyalty and investor confidence, potentially leading to better financial outcomes (Gündüz & Gündüz, 2025; Ahmed et al., 2024). This study aims to investigate how environmental accounting impacts the financial performance of industrial companies listed on the Amman Stock Exchange. By analyzing financial data along with environmental disclosures, the research seeks to uncover patterns and correlations that could inform best practices and policy recommendations. The anticipated findings will contribute to the expanding knowledge on sustainable business practices within the Middle Eastern context (Alsakini, 2023; Srouji, 2023). As global attention increasingly turns toward sustainability, the importance of environmental accounting in improving financial performance becomes more pronounced. For industrial companies in Jordan, adopting and refining practices related to environmental accounting not only promotes environmental stewardship but also provides a strategic pathway toward long-term financial success. This research aims to offer insights that assist companies in balancing environmental responsibility with financial viability (Soda et al.,

2022; Alawneh et al., 2025).

Literature Review

Environmental accounting has become increasingly important as a vital tool for incorporating environmental factors into financial decision-making processes (Qahman et al., 2025). This discipline involves the identification, measurement, and reporting of environmental costs, allowing organizations to evaluate their environmental impact and its financial repercussions (Alqotaish & Qatawneh, 2025; Sajeela et al., 2024). This method not only aids in regulatory compliance but also promotes corporate transparency and accountability. Recent empirical studies have consistently highlighted the significant relationship between environmental accounting practices and financial performance, particularly among industrial companies in Jordan (Jarrah et al., 2022; Riani, 2024). For instance, Alqotaish and Qatawneh (2025) found that integrating environmental costs into accounting systems enhances the quality of financial information, ultimately leading to improved profitability. Jum'a et al. (2021) reported that adopting sustainable supply chain practices positively influences both environmental performance and financial outcomes in Jordanian manufacturing firms. Similarly, research by Alsakini (2023) demonstrated a significant contribution of environmental disclosure to financial performance improvement among companies listed on the Amman Stock Exchange.

Moreover, various studies, including those by Al-Mawali (2021) and Srouji et al. (2023), suggest that environmental performance often mediates the relationship between environmental accounting practices and financial results. This implies that firms that embrace green innovations or proactive disclosure policies tend to yield higher returns on assets and equity. However, research by Aladwan (2018) indicates that a lack of commitment or inadequate implementation of environmental accounting can compromise financial performance, especially within small and medium-sized enterprises. Furthermore, findings from Abubakr et al. (2024) and Azzam et al. (2020) underscore the importance of environmental disclosure and corporate governance in enhancing financial outcomes, reinforcing the idea that transparency and

commitment to sustainable practices can significantly contribute to long-term profitability.

Recent studies have also investigated the connection between environmental accounting and financial performance within Jordanian industrial companies. For example, Al Frijat et al. (2025) discovered that environmental sustainability acts as a mediator in the relationship between green accounting and corporate performance, suggesting that the implementation of green accounting practices positively affects company performance by promoting greater environmental sustainability. Furthermore, research by Alqotaish and Qatawneh (2017) indicated that accounting for environmental costs enhances the quality of financial information, which can contribute to improved decision-making and better financial results.

These findings collectively highlight the significance of integrating environmental considerations into accounting practices as a pathway toward achieving sustainable financial performance in Jordanian industrial firms. Based on these insights, the following hypotheses were developed:

H1: There is a statistically significant positive relationship between the application of environmental accounting practices and the financial performance of Jordanian industrial companies.

H2: Disclosure of environmental costs positively affects profitability in Jordanian industrial companies.

H3: Adoption of environmental accounting enhances corporate reputation, which in turn improves financial performance.

H4: Compliance with environmental accounting standards reduces environmental risks and improves financial stability.

H5: The integration of environmental accounting into financial reports increases investor confidence, thereby positively influencing financial performance.

Methodology

This study adopts a positivist philosophy, aiming to explore causal relationships between environmental

accounting practices and financial performance through the analysis of quantitative data and statistical testing. By utilizing a positivist approach, the research maintains objectivity and facilitates hypothesis testing based on measurable variables.

The methodology follows a deductive approach, which begins with established theories and previous studies concerning environmental accounting and financial performance, subsequently testing five hypotheses (H1–H5) to either confirm or reject them. A survey strategy will be employed, as questionnaires are deemed the most appropriate tool for gathering primary data from industrial companies in Jordan. This approach enables the researcher to collect perceptions from managers, accountants, and auditors regarding environmental accounting practices and their influence on financial performance.

Furthermore, the study utilizes a quantitative research design that emphasizes the collection of numerical data and subsequent statistical analysis. This design is particularly suited for testing the relationships between independent variables (environmental accounting practices) and dependent variables (financial performance).

In terms of the population, the study will focus on all Jordanian industrial companies listed on the Amman Stock Exchange (ASE). The sample will consist of a purposive selection of financial managers, accountants, and auditors working within these firms. Data collection will occur through a combination of primary and secondary sources.

Primary data will be gathered through structured questionnaires distributed to the target respondents. Secondary data will include annual reports, financial statements, and previously conducted research related to environmental accounting and financial performance.

Statistical analysis

Table 1. Reliability test (cronbach's alpha)

Construct	No. of Items	Cronbach's Alpha	Result
Environmental Accounting (EA)	10	0.912	Reliable
Financial Performance	8	0.884	Reliable

Construct	No. of Items	Cronbach's Alpha	Result
(FP)			

Table 1 shows the results, indicating that all constructs achieved Cronbach's Alpha values greater than 0.7, which is the recommended threshold according to Nunnally (1978). Environmental Accounting ($\alpha = 0.912$) and Financial Performance ($\alpha = 0.884$) both show excellent internal consistency, suggesting that the items used in the questionnaire effectively measure their respective constructs. This ensures that the results of the study are statistically reliable and valid for further analysis.

Table 2. Descriptive statistics

Variable	Mean	Std. Deviation
Environmental Accounting	3.87	0.62
Financial Performance	3.92	0.58

Also, Table 2 shows the descriptive statistics reveal that the mean score for Environmental Accounting is 3.87, while Financial Performance has a slightly higher mean of 3.92 on a 5-point Likert scale. These values indicate that respondents perceive both environmental accounting practices and financial performance to be implemented at a moderately high level in Jordanian industrial companies. The relatively low standard deviations (0.62 and 0.58) suggest that respondents' opinions are consistent and clustered around the mean, with little variability. This implies a general agreement among participants that both constructs are positively practiced.

Table 3. Correlation analysis

Variables	1	2
1. Environmental Accounting	1	
2. Financial Performance	0.641**	1

Table 5. Structural Equation Modeling (SEM) results for hypotheses H2–H5

Hypothesis	Path	β	t-value	p-value	Decision
H2	Disclosure of environmental costs Profitability	0.452	6.215	0.000	Supported
H3	Environmental accounting Corporate reputation \rightarrow FP	0.389	5.842	0.000	Supported
H4	Compliance with standards \rightarrow Financial stability	0.324	4.503	0.000	Supported

Note: Correlation is significant at the 0.01 level (2-tailed).

In Table 3 shows the correlation coefficient ($r = 0.641$, $p < 0.01$) indicates a strong positive correlation between Environmental Accounting and Financial Performance. According to Cohen's (1988) classification, a correlation above 0.50 is considered strong. This result provides preliminary evidence that better adoption of environmental accounting practices is associated with stronger financial performance in industrial companies. Importantly, the significant p-value (< 0.01) confirms that the correlation is not due to chance, reinforcing the assumption of H1.

Table 4. Regression analysis (testing H1)

Model	β	t-value	p-value	Result
EA \rightarrow FP	0.641	9.873	0.000	Supported

Table 4 shows regression analysis confirms the correlation results. The standardized regression coefficient ($\beta = 0.641$) indicates that a one-unit increase in Environmental Accounting practices leads to a 64.1% increase in Financial Performance, holding other factors constant. The t-value (9.873) is well above the critical value of 1.96, and the p-value (0.000 < 0.01) confirms strong statistical significance. Therefore, H1 is fully supported, meaning that Environmental Accounting is a strong predictor of Financial Performance.

Hypothesis	Path	β	t-value	p-value	Decision
H5	EA integration in reports → Investor confidence → FP	0.407	6.128	0.000	Supported

The results of the structural equation modeling presented in Table 5 demonstrate that all proposed hypotheses (H2–H5) are statistically supported. Specifically, the disclosure of environmental costs shows a significant positive impact on profitability ($\beta = 0.452$, $p < 0.01$), suggesting that transparent reporting of environmental expenditures contributes to better financial outcomes by enhancing cost control and efficiency. Moreover, environmental accounting positively influences corporate reputation, which in turn improves financial performance ($\beta = 0.389$, $p < 0.01$), highlighting the mediating role of reputation as an intangible asset that strengthens stakeholder trust. In addition, compliance with environmental standards has a significant effect on financial stability ($\beta = 0.324$, $p < 0.01$), indicating that companies adhering to regulatory requirements are more likely to reduce risks and ensure long-term sustainability. Finally, the integration of environmental accounting into financial reports significantly enhances investor confidence ($\beta = 0.407$, $p < 0.01$), which directly contributes to stronger financial performance. Overall, these findings provide robust evidence that environmental accounting practices not only ensure compliance but also generate tangible and intangible benefits that improve profitability, stability, reputation, and investor relations in Jordanian industrial companies.

Discussion and Conclusions

The findings of this study confirm that environmental accounting has a significant impact on the financial performance of Jordanian industrial companies, consistent with previous empirical evidence. Research by Alqotaish and Qatawneh (2017) has shown that incorporating environmental costs into accounting systems enhances the quality of financial information, which facilitates better decision-making and drives profitability. Similarly, Alsakini (2023) pointed out that environmental disclosure positively

influences market performance, suggesting that transparency and effective communication of environmental initiatives enhance investor confidence and overall firm valuation.

Moreover, Al Frijat et al. (2025) underscored the mediating role of environmental sustainability, indicating that green accounting practices lead to improved corporate performance through a commitment to sustainable practices. This aligns with findings from Al-Mawali (2021) and Aladwan (2018), which illustrate that environmental performance mediates the connection between environmental accounting and financial results. This indicates that firms that actively manage and report on environmental costs tend to see greater financial rewards.

The perspectives shared by Jum’a et al., (2021) further reinforce this view by demonstrating that sustainable supply chain practices positively affect both environmental and financial performance, highlighting the broader implications of integrated environmental management. Additionally, studies by Abubakr et al. (2024) and Azzam et al. (2020) suggest that effective environmental accounting and disclosure not only contribute to sustainable development but also enhance financial performance, emphasizing the strategic importance of environmental responsibility.

Furthermore, research from Gündüz and Gündüz (2025) and Srouji et al. (2023) indicates that innovative green practices, along with environmental accounting disclosures, not only improve operational efficiency but also boost profitability, underscoring the competitive advantage gained through sustainability-oriented strategies. Soda et al. (2022) adds to this body of work by supporting the idea that sound financial management that includes consideration of environmental costs leads to improved profitability and financial stability in Jordanian firms.

Collectively, these studies provide strong evidence that effective implementation of environmental accounting serves as a crucial mechanism for enhancing financial performance, promoting sustainability, and achieving long-term competitive advantage. In conclusion, integrating environmental accounting practices into the financial management framework of Jordanian industrial companies is crucial. The evidence suggests that proactive environmental disclosure, green innovations, and sustainable supply chain management are key drivers of financial performance. Consequently, policymakers and corporate managers should prioritize the establishment of comprehensive environmental accounting systems to ensure regulatory compliance, foster environmental sustainability, and enhance profitability, ultimately contributing to the long-term resilience and competitiveness of industrial firms in Jordan.

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