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The Role of Integrating Sustainability Accounting into Financial Reporting: Evidence from Kurdistan Manufacturing Companies

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ABSTRACT

This study aims to explore the roles of the independent variable (integrating sustainability accounting) into the dependent variable (financial reporting) in Kurdistan manufacturing companies and identify possible solutions to these roles. Primary data was collected from 105 sustainability managers, chief executive officers, and chief financial officers of 35 companies drawn from 7 vital industries to the Kurdistan economy. Consequently, a multiple regression model was estimated to determine the impact of each purported role on financial reporting. The results of the study indicated that the Lack of awareness of sustainability accounting, Insufficient data and resources, and adverse perceptions about sustainability accounting undermine manufacturing companies' financial reporting. The study recommends that company managers prioritize educational and training initiatives aimed at enhancing understanding of sustainability accounting to enhance the effective integration of sustainability accounting in financial reporting. Additionally, the study commands companies to invest in data management processes and systems to enhance the availability and accuracy of sustainability data.

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1. Introduction

Sustainability has grown to be a vital subject in several fields and its integration with financial reporting serves to offer valuable contributions. With benefits such as ensuring that there are adequate and sustainable resources for future uses (Shen et al., 2020) and that corporations are easily held accountable for the harm inflicted on the environment and society (Hamat, 2014), one can commend the adoption of sustainability accounting practices in companies. Such initiatives and outcomes are highly coveted in the context of Kurdistan's manufacturing companies that are struggling in ensuring the effective integration of sustainability accounting with financial reporting. The existence of such problems undermines numerous corporate and economic activities as the performance of the companies and their abilities to achieve set goals are restricted (De Villiers & Maroun, 2017). One of the key issues that trigger such problems is the prevalence of possible roles affecting the integration of sustainability accounting with financial reporting. However, examinations in this regard are limited and this places a huge demand for contemporary examinations to explore such issues in depth.

Meanwhile, with numerous sustainability accounting studies being restricted in countries like Malaysia (Hamat, 2014), Bangladesh (Khan, Marinova & Todorov, 2021), and China (Shen et al., 2020), one can contend that their exclusion from regions like Kurdistan overshadows clarity and the idea that region-specific factors have a huge toll on the extent to which corporations adopt sustainability accounting practices. Of paramount importance is the lack of studies determining the roles limiting the integration of sustainability accounting into financial reporting, especially in Kurdistan's manufacturing companies. Though roles such as operational capacity (De Villiers & Maroun, 2017) and government policies (Shen et al., 2020) can be listed as key roles, roles like the lack of awareness of sustainability accounting, insufficient data and resources, and adverse perceptions about sustainability have been overlooked in sustainability accounting debates. As a result, this clouds judgments about the effectiveness of sustainability accounting in enhancing financial reporting.

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In that regard, the study aims to explore the roles of integrating sustainability accounting into Kurdistan manufacturing companies' financial reporting. Additionally,

1.1 Research Problem

The incorporation of sustainability accounting into financial reporting presents substantial difficulties for Kurdistan's industrial enterprises. Sustainability accounting seeks to include environmental, social, and governance (ESG) issues into financial statements; nevertheless, the acceptance and successful implementation of such techniques are hampered by a number of hurdles. This research issue focuses on comprehending and resolving these obstacles, which may be classified as follows:

Limited Awareness and Understanding:

Many industrial enterprises in Kurdistan may lack knowledge and an in-depth grasp of sustainability accounting concepts, making it challenging to incorporate ESG issues into financial reporting in a smooth manner.

Data Collection and Measurement:

Many industrial enterprises in Kurdistan may lack knowledge and a full grasp of sustainability accounting concepts, making it challenging to incorporate ESG factors effectively into financial reporting.

Complexity of Reporting Frameworks:

There are several reporting frameworks for sustainable accounting, each with its own set of reporting standards and rules. Companies may struggle to choose the proper reporting framework and successfully connect their reporting with it.

1.2 Research Question

1) What are the key roles confronting Kurdistan's manufacturing companies in integrating sustainability accounting into financial reporting? Specifically, the study seeks to answer the question of how significant the lack of awareness

of sustainability accounting, insufficient data and resources, and adverse perceptions about sustainability's effects on financial reporting are.

2) How can manufacturing companies overcome the lack of awareness of sustainability accounting, insufficient data and resources, and adverse perceptions about sustainability roles affecting the integration of sustainability accounting into financial reporting?
3) What are the benefits of integrating sustainability accounting into financial reporting?

Academic endeavors analyzing the roles of integrating sustainability accounting into financial reporting are limited. Hence, the study enhances understanding and contributes to the existing body of knowledge by shedding insights into sustainability practices applied in emerging economies., Insufficient data and resources and adverse perceptions about sustainability accounting undermine manufacturing companies' financial reporting. The study contributes to the development of existing research by introducing a novel scale of measures of sustainability accounting roles. The study's theoretical Implications place considerable significance on the importance of collecting, reporting, and analyzing effectively to support the integration of sustainability accounting in financial reporting. The study's practical implications demand that standard-setters and regulators consider the significance of awareness and understanding of sustainability accounting when designing and implementing sustainability accounting regulations and standards.

2. Literature review

2.1 Theoretical Framework: Sustainability Accounting

The subject matter of sustainability accounting deals with social, economic and environmental aspects of accounting with the aim of ensuring that there are adequate and sustainable resources for future uses (Shen et al., 2020). As such, sustainability accounting is a broader aspect of accounting that approaches accounting activities from a social, economic, and environmental aspect of the society, individuals, and corporate institutions. In financial reporting, the integration of sustainability accounting seeks to account for corporate issues affecting the environment and society. Hence, by disclosing such issues, corporations can be easily held accountable for the harm inflicted on the environment and society (Hamat, 2014). Furthermore, De Villiers and Maroun (2017) contend that sustainability accounting serves to enhance the disclosure of the reported corporate activities. The desirability of sustainability accounting is of huge importance and relevance in contemporary studies. As such, its benefits extend to aid companies in achieving their goals (De Villiers & Maroun, 2017) and for such purposes, further examinations are required to explore how sustainability accounting can easily be integrated with financial reporting and identify inherent roles that can undermine such integration activities.

2.2 Financial reporting

Financial reporting is of huge essence in business and its existence serves to provide commendable benefits. For instance, Van Greening, Scott, and Terblanche (2011) contend that financial reporting provides managers with a basic understanding of the business' operations and performance. In another instance, Olayinka (2022) associates the benefits of financial reporting with investors' and stakeholders' ability to make rational decisions that maximise their interests. Moreover, other parties such as the government are interested in the corporation's financial reporting as part of their due diligence exercises to ascertain whether such a corporation is fulfilling its legal and financial obligations (Buhmann, 2018). Hence, it, therefore, shows that financial reporting is of huge essence and measures capable of fostering and enhancing financial reporting quality are highly welcomed. It is in the background of these notions that manufacturing companies stand to benefit a lot from integrating other methods and practices capable of enhancing their financial reporting. With the limited examination of the role and integration of sustainable accounting with financial reporting being the traditional norm of academic research (Markota Vukić, Vuković & Calace, 2018; Ferrero, Sanchez & Ballesteros, 2015; Salameh et al., 2022; Zyznarska-Dworczak, 2018), this study seeks to uncover novel as to what benefits and roles are associated with the integration of sustainable accounting with financial reporting. Therefore, the next section of the study reviews related examinations with the aim of uncovering these benefits and roles as well as empirical gaps surrounding such examinations.

2.3 Related studies

Studies on financial reporting have always been the subject of several accounting debates. For instance, Martínez-Ferrero, Garcia-Sanchez and Cuadrado-Ballesteros (2015) underscore that there is positive interaction spanning from financial reporting quality to sustainability information disclosure. Though such offers valuable financial reporting insights, the implications of such strategies on financial reporting are inevitable as the adoption of sustainable accounting affects the company's financial reporting practices. Hence, contemporary studies like this study are required to enhance clarity regarding the interaction connections linking sustainability accounting and financial reporting.

Zyznarska-Dworczak (2018) in a study on accounting theories towards non-financial reporting, established that corporate performance on sustainability is measured by employing sustainability accounting and its tool of nonfinancial reporting. Consequently, this highly dispels the notion of significant interactions existing between sustainability accounting and financial reporting. In another related examination, Vukic et al(2018) indicated that non-financial reporting trends are expected to continue and grow as stakeholders demand more governance, social and environmental information. Despite this excluding the vital role of financial reporting, it discloses the limited availability of information essential in promoting corporating reporting, especially financial reporting. Amid such observations, this study seeks to shed insights concerning the nature of interactive connections linking sustainability accounting and financial reporting.

Buhmann (2018) discloses the role of the EU's non-financial reporting directive as a pillar one avenue for promoting pillar two action and due diligence. In that context, non-financial reporting is viewed as enhancing due diligence and similar effects are observable when applied in the context of financial reporting. This is because governments are other stakeholders will utilize such information to whether such a corporation is fulfilling its legal and financial obligations. Such the integration of sustainability accounting serves to ensure that stakeholders' interests in this regard are safeguarded.

Salameh et al. (2022) established that disclosing sustainability accounting-related information in small and medium-sized enterprises is effective in raising the reliability of financial reports. However, this is not always the case as organizations can lack awareness of sustainability accounting and do not always have adequate data and resources to execute such strategies. therefore, this study extends Salameh et al.'s ideas by identifying roles limiting the integration of sustainability accounting with financial reporting.

La Torre et al. (2020) Sustainability and non-financial reporting are essential for noting rebuilding trust in the European Union regulation. Despite being of huge importance, these examinations are still yet to be extended to financial reporting. This is of huge importance as employees and managers can adversely perceive the importance of integrating sustainability accounting with financial reporting. In that regard, further examinations are required to ascertain the degree of such effects. As such, the current study satisfies such inquiries. However, with roles such as the lack of awareness of sustainability accounting, insufficient data and resources and perceptions about sustainability accounting being evident in sustainability accounting and financial reporting debates but with little or no empirical validations, the next section of the study is designed to the analysis of possible effects posed by the lack of awareness of sustainability accounting, insufficient data and resources and perceptions on the integration of sustainability accounting with financial reporting.

2.4 Roles of sustainability accounting

Bearing in mind that the study offers novel ideas concerning the roles affecting the integration of sustainable accounting with financial reporting, the prevalence of

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nascent ideas regarding such connections is not a new phenomenon. Hence, efforts to dispel notions that the integration of sustainable accounting with financial reporting is subject to country-specific factors are difficult to dispel in this regard.

Meanwhile, De Villiers and Maroun (2017) disclosed that uncovers yet-to-be-tested notions highlighting that the practice of sustainability accounting has evolved on a voluntary basis because of a need for information, and pressure for more transparent reporting. Such aspects are further complicated by the lack of awareness of sustainability accounting. But attempts to explore further how this undermines financial reporting are limited. Hence, in order to validate such notions, the study for the first time formulates a hypothesis linking sustainable accounting with financial reporting as follows:

The first role is intertwined with the unavailability of insufficient data and resources to integrate sustainable accounting with financial reporting. Drawing from Mazzei and Noble's (2017) establishments, it can be noted that adequate data and resources facilitate the effective adoption and/or execution of any corporate strategy. Hence, this implies that Insufficient data and resources stand to hinder the integration of sustainable accounting with financial reporting. Amid such observations, the following hypothesis was proposed:

Based on the behavioral approach (Sanders, 2010), it can be noted that both employees' and managers' perceptions of sustainable accounting influence the extent to which it is integrated to enhance financial reporting. As a result, adverse perceptions are most likely to deter employees and managers from using sustainable accounting in financial reporting. Alternatively, it can be said that positive perceptions about sustainable accounting tend to promote its widespread integration with financial reporting. However, such notions have not been the subject of related examinations. hence, to fill such empirical voids, the following hypothesis was proposed:

Conceptual framework shown in Figure 1 was developed by integrating the above-formulated hypotheses to highlight their underlying effects.

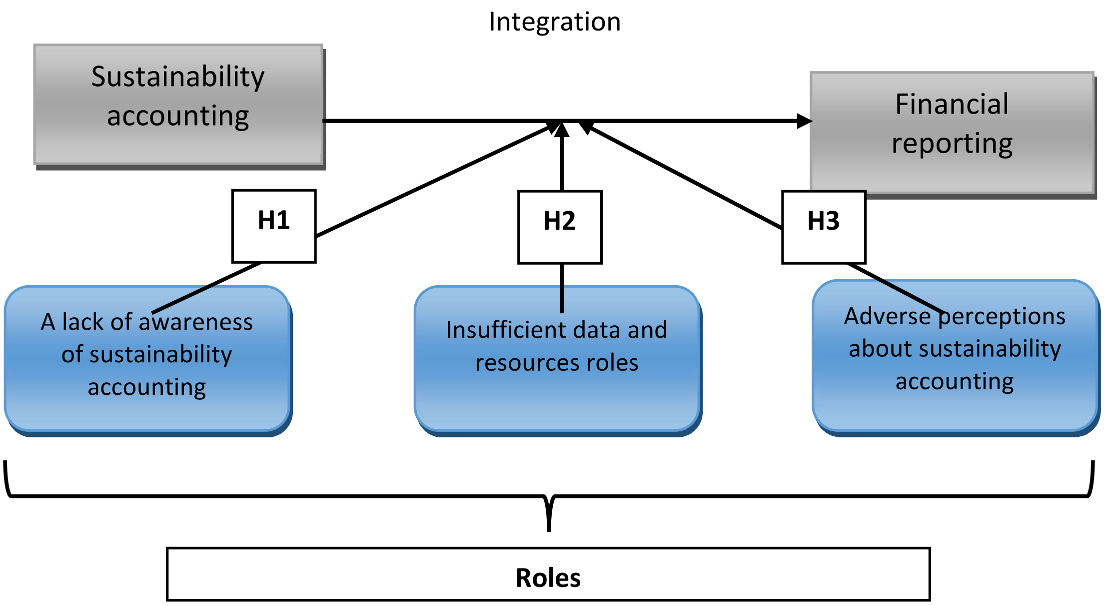

Figure 1: Conceptual framework

3. Research methodology

3.1 Method

The study's methodological contributions are initially centred on developing a novel analysis of roles affecting the integration of sustainability accounting in financial reporting by Kurdistan manufacturing companies. As such, related examinations overlooked emerging countries and have been confined to countries like Malaysia (Hamat, 2014), Bangladesh (Khan, Marinova & Todorov, 2021) and China (Shen et al., 2020). Therefore, a combination of qualitative and quantitative analysis was adopted to reinforce the notion that country-specific factors have a huge toll on the extent to which corporations adopt sustainability accounting practices. By using a qualitative approach, the study was able to obtain an in-depth view of Chief Executive Officers (CEOs), Chief Financial Officers (CFOs) and sustainability managers' perceptions, feelings, thoughts and approaches to sustainability accounting (see Norman et al.,

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2021). On the other hand, the integration of qualitative research methods served an essential purpose of enhancing efficiency in data computation and testing the formulated hypotheses (Bloomfield & Fisher, 2019). Therefore, primary data was collected using questionnaires and analysed using a combination of qualitative and quantitative data analysis methods so as to test the formulated hypotheses.

3.2 Data analysis procedures

Prior data analysis involved the application of factor analysis to select variables that are related under the guideline that variables with factor loadings of at least 0.60 are related (Taherdoost, Sahibuddin & Jalaliyoon, 2022). The study proceeded to test the reliability of the variables using Cronbach's alpha test bearing in mind that reliability is achieved when Cronbach's alpha values of at least 0.70 are established (Amirrudin, Nasution & Supahar, 2021).

Frequency tabulations were further applied to shed insights into the participants' demographic features. Mean and standard deviation were also used to enhance understanding of the participants' degree of agreeing to sustainability accounting and financial reporting notions. Further tests involving ANOVA's F-test were done to test the validity of the following hypotheses:

- ***Hypothesis 1:*** A lack of awareness of sustainability accounting has significant adverse effects on the integration of sustainability accounting in financial reporting.
- ***Hypothesis 2:*** Insufficient data and resource roles have significant adverse effects on the integration of sustainability accounting in financial reporting.
- ***Hypothesis 3:*** Adverse perceptions about sustainability accounting have significant adverse effects on the integration of sustainability accounting in financial reporting.

The decision was to accept the null hypotheses as valid when the probability of the F-statistics is greater than 0.05. The entire data analysis was carried out using Statistical Package for Social Sciences (SPSS) 26.

3.3 Population and sampling procedures

the study centres on the examination of manufacturing companies that are of vital importance to the economy of the Kurdistan Region of Iraq. As a result, 7 vital manufacturing industries (medical, oil and gas manufacturing, metal, automotive industry, consumer electronics manufacturing, chemical manufacturing, and food and drink manufacturing). Furthermore, a purposive sample of 5 companies under each industry was selected so as to squeeze a lot of information out of the collected data and describe the major impact of the findings on the population (Sibona, Walczak & White Baker, 2020). Only manufacturing companies fitting this criterion and operating in Erbil City were selected.

Meanwhile, given that the study analyses sustainability accounting's effects on financial reporting, only accountants, CEOs, CFOs and sustainability managers' opinions were considered. As a result, 4 questionnaires were distributed to each of the selected 35 companies resulting in 140 participants. 131 respondents completed the questionnaires resulting in a response rate of 93.57%, which is relatively high enough to offer suggestions that highly reflect the studied population.

3.4 Data collection

Data used in this study was collected from accountants, CEOs, CFOs, and sustainability managers' of 35 manufacturing companies in Erbil City using a questionnaire. The questionnaire was designed using related examinations on sustainability accounting and financial reporting (Kontorinis, 2020). Sustainability accounting comprised 12 items while financial reporting comprised 8 items measured on a five-point Likert scale (1=strongly disagree to 5= strongly agree). Nonetheless, new measures of A lack of awareness of sustainability accounting, insufficient data and resources roles, and perceptions about sustainability accounting were designed by the researcher. Hence, the study contributes to the development of existing research by introducing a novel scale of measures of sustainability accounting roles. Each variable comprises 10 items that were also measured on a five-point Likert scale (1=strongly disagree to 5= strongly agree).

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Facial validity tests and 3 focus group examinations were conducted prior to distributing the questionnaires. Both examinations made sure that the questionnaire was easy to understand and had no errors. Consequently, no issues were found to affect the questionnaire and hence, the researcher proceeded to distribute the questionnaires from the 13th of February to the 18th of March 2023.

4. Results and Discussion

4.1 Demographic analysis

The findings were collected from 77 male participants and 54 female participants comprising 35 Accountants, 35 Chief Financial Officers, 35 Chief Executive Officers and 26 Sustainability Managers. 62.60% of the participants were aged between 30-39 years old with the least number of participants being aged at least 50 years and above. 35.88% had bachelor's degrees, 61.83% had master's degrees and 2.29% had PhD qualifications as shown in Table 1. 6.87%, 80.15% and 12.98% of the participants have been working for their respective companies for less than 5 years, 5-9 years and at least 10 years. On a general level, the findings imply that the study participants were relatively educated and well-experienced to approach matters involving the integration of sustainability accounting into financial reporting.

Table 1: Frequency tabulations of the study participants

Description		Frequency	%
Gender	Male	77	58.78%
	Female	54	41.22%
Total		**131**	**100**
Age	20-29 years	18	13.74%
	30-39 years	82	62.60%
	40-49 years	26	19.85%
	50 years and above	5	3.81%
Total		**131**	**100**
Academic qualification	Bachelor	47	35.88%
	Master	81	61.83%

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	PhD	3	2.29%
Total		**131**	**100**
Job position	Accountants	35	26.72%
	Chief Financial Officers	35	26.72%
	Chief Executive Officers	35	26.72%
	Sustainability Managers	26	19.84%
Total		**131**	**100**
Years of Experience	Less than 5 years	9	6.87%
	5-9 years	25	80.15%
	At least 10 years	17	12.98%
Total		**131**	**100**

4.2 Factor analysis

Following Taherdoost, Sahibuddin and Jalaliyoon's (2022) propositions, only variable items with factor loadings of at least 0.60 were selected. This implies that the selected variable items were related and valid in explaining the roles of integrating sustainability accounting into financial reporting in Kurdistan manufacturing companies. As such, 8 sustainability accounting, 4 financial reporting, 5 lack of awareness of sustainability accounting, 4 insufficient data and resources roles, and 3 perceptions about sustainability accounting items were related. The selected variable items are shown in Table 2. As a result, the entire data analysis was conducted using these selected variable items.

Table 2: Factor analysis

Item	Factor loadings
Sustainability accounting	
Our company utilizes sustainability accounting to develop strategies and inform decision-making.	0.619
Sustainability accounting helps the company to operate in a socially responsible way.	0.736
The company sets targets and checks sustainability performance progress.	0.724
There are adequate resources made available by the company to ensure that employees are finally trained to understand sustainability accounting.	0.700

Sustainability accounting positively affects the company's image and brand.	0.710
Sustainability accounting helps the company identify environmental and social opportunities and risks.	0.691
The company uses well-recognized standards to regularly report its sustainability performance.	0.706
sustainability accounting plays an important role in assessing the company's impact on the environment.	0.707
Financial reporting	0.642
The company sufficiently discloses its financial reports to help shareholders to make rational decisions.	0.637
Financial reporting is essential for enhancing accountability among shareholders.	0.699
The company uses well-recognized standards when preparing its annual financial reports.	0.655
The prepared financial reports correctly reflect the company's annual performance.	0.703
Lack of awareness of sustainability accounting	
Several employees in the company are not familiar with sustainability accounting.	0.718
Several employees in the company are not familiar with sustainability accounting helps the company achieve its goals.	0.682
The company needs to educate employees more about sustainability accounting.	0.744
The company does not prioritise sustainability accounting the way it is supposed to.	0.726
There is a lack of understanding among stakeholders about sustainability accounting.	0.745
Insufficient data and resources roles	0.711
The company does not have the right expertise to implement sustainable accounting practices.	0.715
Sustainability accounting demands too much effort and time from the company.	0.699
The company does not have the adequate resources required to implement sustainable accounting practices.	0.707
The company does not have adequate data to implement sustainable accounting practices.	0.700
Perceptions about sustainability accounting	
Employees in our company are not sure about how sustainability accounting can be used to communicate the company's sustainable performance to its stakeholders.	0.612
Employees doubt that sustainability accounting can help the company identify how best to improve its sustainable practices.	0.723
sustainability accounting does not provide a good measure and report of the company's social and environmental effects.	0.685

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4.3 Questionnaire reliability

The selected 8 sustainability accounting, 4 financial reporting, 5 lack of awareness of sustainability accounting, 4 insufficient data and resources roles, and 3 perceptions about sustainability accounting items were highly reliable. This is evidenced by their respective Cronbach's Alpha values of 0.789, 0.845, 0.810, 0.762 and 0.804 which were greater than the set standard of 0.70 (Amirrudin, Nasution & Supahar, 2021). Additionally, the combined variables had an overall reliability value of 80.2%, which reinforces the notion that the variables offered reliable explanations about the roles of integrating sustainability accounting into financial reporting in Kurdistan manufacturing companies.

Table 3: Reliability test

Variables	Cronbach's Alpha	No. of Items
Sustainability accounting	0.789	8
Financial reporting	0.845	4
Lack of awareness of sustainability accounting	0.810	5
Insufficient data and resources	0.762	4
Perceptions about sustainability accounting	0.804	3
Overall	**0.802**	**24**

4.4 Descriptive analysis

A high financial reporting mean score of 4.789 indicates that the accountants, CFOs, CEOs and sustainability managers had high positive perceptions about the manufacturing companies' financial reporting. Similarly, mean scores of 4.789 and 4.762 show that the accountants, CFOs, CEOs and sustainability managers had relatively high positive perceptions about these aspects. On the other hand, it can be said that the accountants, CFOs, CEOs and sustainability managers had less positive perceptions about roles posed by insufficient data and resources as denoted by a mean score of 2.913. Concerning the variables' variations, it can be seen in Table 4 that there are fewer variations in insufficient data and resources as evidenced by a standard deviation of 0.645. On the contrary, a standard deviation of 1.216 implies

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that there were significant variations in the manufacturing companies' sustainability accounting practices.

Table 4: Descriptive analysis

Variables	Mean	Standard deviation
Sustainability accounting	4.789	1.216
Financial reporting	4.845	1.113
Lack of awareness of sustainability accounting	4.637	1.098
Insufficient data and resources	2.913	0.645
Perceptions about sustainability accounting	4.762	1.122

4.5 Correlation analysis

The Pearson correlation coefficient test was applied to ascertain the type of correlation between sustainability accounting, financial reporting, lack of awareness of sustainability accounting, insufficient data and resources and perceptions about sustainability accounting. Table 5 shows that sustainable accounting is highly and positively correlated with financial reporting by 0.688. This implies that the manufacturing companies' adoption of sustainable accounting practices is associated with improvements in the company's financial reporting. Such findings had not been uncovered in prior studies (De Villiers & Maroun, 2017; Hamat, 2014; Salameh et al. 2022).

The novel findings portrayed by the correlation results depict that the prevalence of Lack of awareness of sustainability accounting, insufficient data and resources and adverse perceptions about sustainability accounting demands significant improvements in sustainability accounting of 0.594, 0.213 and 0.626, respectively. Similarly, the prevalence of these roles also commands similar improvements in financial reporting of 0.191, 0.077 and 0.060, respectively. As a result, the practical implications of these findings caution accountants, CFOs, CEOs and sustainability managers into dealing with roles affecting the integration of sustainability accounting into financial reporting.

Table 5: Pearson correlation coefficient test

		SA	FR	LASA	IDR	PASA
SA	Pearson Correlation	**1**				
	Sig. (2-tailed)					
FR	Pearson Correlation	0.688**	**1**			
	Sig. (2-tailed)	0.000				
LASA	Pearson Correlation	0.594**	0.191**	**1**		
	Sig. (2-tailed)	0.000	0.000			
IDR	Pearson Correlation	0.213**	0.077**	0.045**	**1**	
	Sig. (2-tailed)	0.000	0.000	0.000		
PASA	Pearson Correlation	0.626**	0.060**	0.034**	0.157**	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	**1**

SA=Sustainability accounting; FR= Financial Reporting; LASA=Lack of awareness of sustainability accounting; IDR: Insufficient data and resources and PASA= Perceptions about sustainability accounting.
**. Correlation is significant at the 0.01 level (2-tailed), n=131

Significantly positive correlations between a lack of awareness of sustainability accounting, insufficient data and resources and adverse perceptions about sustainability accounting entail that an increase in one role causes an increase in the other roles. As a result, this reinforces the need for effective attempts by manufacturing companies' accountants, CFOs, CEOs, and sustainability managers to effectively deal with roles affecting the integration of sustainability accounting into financial reporting.

4.5 Hypotheses testing

After having established the correlations between the variables, the study proceeded further to test the established hypotheses using the ANOVA test. Table 6 shows that hypothesis 1 (F-stat=14.012, p=0.000) is valid and hence, it can be said that integrating sustainability accounting is not just a technical matter but is also influenced by the stakeholders' awareness of sustainability accounting. Given that no

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study has established these effects, the study places a considerable demand for education and training in companies so as to boost awareness and understanding of sustainability accounting in companies. Unlike De Villiers and Maroun (2017) who limit sustainability accounting examinations to integrated reporting, these findings imply that the lack of awareness of sustainability accounting impairs companies' ability to achieve sustainable development goals and their long-term financial performance.

Concerning hypothesis 2, the study successfully established that insufficient data and resource roles have significant adverse effects on the integration of sustainability accounting in financial reporting (F-stat=9.164, p=0.000). Though not documented in Salameh et al.'s (2022) study, these findings imply that insufficient data and resources can cause inaccurate or incomplete sustainability reporting. This can eventually undermine the achievement of sustainable development goals and impact the companies' long-term financial performance.

Table 6: Hypotheses testing

Hypothesis	F-statistic	Sig.	Decision
A lack of awareness of sustainability accounting has significant adverse effects on the integration of sustainability accounting in financial reporting.	14.012	0.000	Accept
Insufficient data and resource roles have significant adverse effects on the integration of sustainability accounting in financial reporting.	9.164	0.000	Accept
Adverse perceptions about sustainability accounting have significantly adverse effects on the integration of sustainability accounting in financial reporting.	12.497	0.000	Accept

Hypothesis 3 was validated (F-stat=12.497, p=0.000) and this entails that it can be accepted that adverse perceptions about sustainability accounting have significant adverse effects on the integration of sustainability accounting in financial reporting. These findings mirror nascent suggestions denoting the negative effects of issues

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undermining the adoption of sustainability accounting practices in companies. Therefore, the study contributes to existing studies by enhancing understanding of the existence of roles undermining companies' ability and effectiveness to integrate sustainability accounting in their financial reporting.

Conclusion

The study was aimed at exploring the roles of integrating sustainability accounting into Kurdistan manufacturing companies' financial reporting. Along similar lines, possible solutions to these roles were identified.

It can be inferred from the study's hypothesis one that the lack of awareness of sustainability accounting among manufacturing companies undermines their financial reporting practices. Therefore, the study recommends that company managers prioritise educational and training initiatives aimed at enhancing their understanding of sustainability accounting to enhance the effective integration of sustainability accounting in financial reporting. Such can also be achieved by encouraging companies to invest more in training investors, managers, employees and other stakeholders to enhance their awareness and understanding of sustainability accounting. Furthermore, the study's practical implications demand that standard-setters and regulators consider the significance of awareness and understanding of sustainability accounting when designing and implementing sustainability accounting regulations and standards.

Further inferences can be made from hypothesis two that the lack of sufficient data and resources significantly undermines the integration of sustainability accounting in financial reporting. Therefore, the study's theoretical Implications place considerable significance on the importance of collecting, reporting, and analyzing effectively to support the integration of sustainability accounting in financial reporting. Therefore, the study commands companies to invest in data management processes and systems to enhance the availability and accuracy of sustainability data.

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Lastly, by accepting that adverse perceptions about sustainability accounting have significant adverse effects on the integration of sustainability accounting in financial reporting, the study acknowledges the importance of introducing sustainability accounting awareness programs. Such initiatives can go a long way in enhancing cooperation and commitment among employees, managers and stakeholders concerning the effective integration of sustainability accounting in financial reporting.

Suggestions for future studies

The study confines its examinations of roles affecting the integration of sustainability accounting into Kurdistan manufacturing companies' financial reporting. As a result, the major limitation is that these findings cannot be generalized to non-manufacturing companies such as banks. Hence, to broaden the study's applications and test its validity, future studies can explore similar notions by either conducting a comparative analysis of two or more industries or applying its ideas to a completely new industrial scenario.

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ڕۆڵی یەکخستنی ژمێریاری بەردەوام لە ڕاپۆرتی داراییدا: بەڵگە لە کۆمپانیاکانی بەرهەمهێنانی کوردستان

پوختە:

ئامانجی ئەم لێکۆڵینەوەیە بۆ دۆزینەوەی ئاستەنگەکانی یەکخستنی ژمێریاری بەردەوامبوون لەگەڵ ڕاپۆرتی دارایی کۆمپانیاکانی بەرهەمهێنانی کوردستان و دۆزینەوەی چارەسەری شیاو بۆ ئەم ئاستەنگانە. داتای سەرەتایی کۆکراوەتەوە لە 105 بەڕێوەبەری بەردەوامبوون و بەڕێوەبەری جێبەجێکار و بەڕێوەبەری دارایی 35 کۆمپانیا کە لە حەوت پیشەسازییەوە بۆ ئابووری کوردستان ڕاکێشراون. لە ئەنجامدا، مۆدێلێکی گەڕانەوەی جۆراوجۆر خەملێنرا بۆ دیاریکردنی کاریگەری هەر کێشەیەک لەسەر ڕاپۆرتی دارایی. ئەنجامەکانی لێکۆڵینەوەکە ئاماژەیان بەوە کردووە کە نەبوونی هۆشیاری دەربارەی ژمێریاری بەردەوامبوون و نەبوونی داتا و سەرچاوەکان و تێگەیشتنی نەرێنی دەربارەی ژمێریاری بەردەوامبوون ڕاپۆرتی دارایی کۆمپانیاکانی بەرهەمهێنان لاواز دەکات. لێکۆڵینەوەکە پێشنیاری ئەوە دەکات کە بەڕێوەبەرانی کۆمپانیاکان ئەولەویەت بە دەستپێشخەرییەکانی پەروەردە و ڕاهێنان بدەن بە ئامانجی باشترکردنی تێگەیشتن لە ژمێریاری

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بەردەوامبوون بۆ باشترکردنی یەکخستنی کاریگەری ژمێریاری بەردەوامبوون لە ڕاپۆرتی داراییدا. سەرەڕای ئەوەش، لێکۆڵینەوەکە فەرمان بە کۆمپانیاکان دەکات کە وەبەرهێنان بکەن لە پرۆسەی بەڕێوەبردنی داتا و سیستەمەکان بۆ باشترکردنی بەردەستبوون و وردی داتای بەردەوامبوون

دور دمج معلومات محاسبة الاستدامة في التقارير المالية: دلائل من الشركات الصناعية في أقليم كوردستان العراق

الملخص:

تهدف هذه الدراسة إلى استكشاف تحديات دمج محاسبة الاستدامة مع التقارير المالية لشركات التصنيع في كردستان وتحديد الحلول الممكنة لهذه التحديات. تم جمع البيانات الأولية (105) من المديري العليا والرؤساء التنفيذيين والمدراء الماليين في(35) شركة من (7) صناعات الحيوية لاقتصاد كردستان. وبالتالي ، تم تقدير نموذج الانحدار المتعدد لتحديد تأثير تحديات المزعوم على التقارير المالية. أشارت نتائج الدراسة إلى الافتقار الوعي بمحاسبة الاستدامة، وعدم كفاية البيانات والموارد والتصورات السلبية حول محاسبة الاستدامة تقوض التقارير المالية لشركات التصنيع. توصي الدراسة مديري الشركات بإعطاء الأولوية للمبادرات التعليمية والتدريبية التي تهدف إلى تعزيز فهم محاسبة الاستدامة لتعزيز التكامل الفعال لمحاسبة الاستدامة في التقارير المالية. بالإضافة إلى ذلك ، تطلب الدراسة من الشركات بالاستثمار في أنظمة و عمليات إدارة البيانات لتعزيز توافر ودقة بيانات المستدامة .