

Can the using of SASB standards lead to a reduction in pollution?

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Abstract

This study aimed to examine the correlation between the implementation of SASB (Sustainability Accounting Standards Board) standards and pollution levels. Data was collected through a questionnaire administered to a sample of 25 experts specializing in environmental issues and pollution. To ensure the accuracy of the scale, reliability and validity measures were employed, along with calculations of mean and standard deviation. Additionally, various statistical analyses were conducted to explore the associations between the variables in the questionnaire. Ultimately, the findings indicate a significant relationship between the adoption of standards and the reduction of pollution.

Introduction

Sustainability reporting is important for companies to communicate their environmental, social, and governance (ESG) performance to stakeholders (Weber, O., 2014). The Sustainability Accounting Standards Board (SASB) has developed industry-specific sustainability accounting standards to help companies disclose material ESG information in a standardized and comparable way. One area of interest is whether using SASB standards in managing and reporting performance can reduce pollution (Rodriguez, A., Cotran, H., and Stewart, L.S., 2017). This study investigates the potential impact of SASB standards on reducing pollution, an urgent global challenge. It contributes to the literature on sustainability reporting and the effectiveness of using standards to manage and reduce environmental impacts. The study is relevant to companies, investors, policymakers, regulators, and sustainability reporting standard-setters. The study aims to address whether using SASB standards in managing and reporting performance reduces pollution. Hypotheses may include: Companies adopting SASB standards will show reduced pollution. The objective is to investigate the relationship between SASB standards use and environmental performance. Study motivations: This research provides insights for companies, investors, and policymakers on the benefits of adopting SASB standards for managing and reporting performance. Results benefit those interested in sustainability reporting and reducing environmental impacts. The study contributes to the field by providing evidence on the effectiveness of SASB standards in managing

and reducing environmental impacts, informing the ongoing development of sustainability reporting standards.

Limitations may include establishing causality between SASB adoption and environmental outcomes, limited data availability on SASB adoption, and potential self-selection bias among companies adopting SASB standards.

literature review

Recent studies have investigated the relationship between the use of sustainability reporting standards and environmental performance. One such standard is the Sustainability Accounting Standards Board (SASB) standards, which have been increasingly adopted by companies as a framework for disclosing sustainability information. A study by Li and Liu (2021) analyzed the relationship between the adoption of SASB standards and the environmental performance of Chinese firms. The results showed a positive correlation between the adoption of SASB standards and the reduction of environmental emissions. Another study explored the impact of SASB adoption on corporate environmental reporting quality in the US context. The study found that companies that adopted SASB standards had higher quality environmental disclosures compared to non-adopters. (Pizzi, &eatl. 2022).

Furthermore, a recent study by(Ferrat, Y., 2021) investigated the impact of SASB adoption on firm environmental performance in the US manufacturing sector. The results suggested that the adoption of SASB standards was associated with a reduction in greenhouse gas emissions. In conclusion, recent research suggests that the adoption of SASB standards can contribute to reducing pollution and improving environmental performance.

According to the Sustainability Accounting Standards Board (SASB) standards are a set of voluntary disclosure guidelines that aim to help investors make better-informed decisions by providing standardized, reliable, and comparable information about non-financial performance metrics. These metrics cover various aspects of sustainability, including environmental, social, and governance (ESG) factors that are relevant to a company's operations, supply chain, and impact on society and the environment.(Pizzi, S., Principale, S. and De Nuccio, E., 2022)

The SASB standards are structured around 77 industry-specific sustainability accounting metrics that are designed to reflect the unique characteristics and risks of each industry. These standards are developed through a rigorous process of stakeholder engagement, research, and consultation with subject matter experts, investors, and companies. Once developed, the standards are subject to public comment and review before being finalized and published. Companies are encouraged to use these standards to disclose ESG performance metrics in their financial filings or sustainability reports. The adoption of SASB standards can provide several benefits for companies, investors, and other stakeholders. SASB standards can help companies demonstrate their commitment to sustainability and

improve their ESG performance by identifying areas for improvement and setting targets for future performance. For investors, SASB standards can provide reliable and comparable information about ESG factors, allowing them to better assess the risks and opportunities of their investments and make more informed decisions. Finally, SASB standards can also contribute to a more sustainable and equitable global economy by encouraging greater transparency and accountability from companies on their ESG performance.(Kannenbergenberg & and Schreck, 2019)

(Ellili, N.O.D., 2022) find that firms with higher-quality SASB reporting have higher firm value. Similarly, they find that SASB adoption is associated with higher-quality disclosures. Also, (Georgiev, G.S., 2020). find that SASB adoption leads to higher-quality disclosures. others. find a positive relationship between sustainability disclosure and financial performance(Khan&ealts.,2022). Overall, these studies suggest that SASB adoption can have a positive impact on the quality of environmental disclosures, which in turn can have a positive effect on firm value and financial performance. There is a limited amount of research available on the mechanisms through which SASB adoption leads to better environmental outcomes.

(Pizzi, &eatls. 2022) examines the impact of SASB adoption on firms' environmental performance and finds that firms that adopt SASB standards tend to have better environmental performance. The study proposes two mechanisms through which SASB adoption leads to better environmental outcomes: (1) improved monitoring and reporting of environmental performance, and (2) increased stakeholder pressure to improve environmental performance. Also,(Gold, N.O. and Taib, F.M., 2020.)This study investigates the relationship between environmental sustainability reporting and financial performance and suggests that SASB adoption can lead to better environmental outcomes through increased stakeholder pressure and improved environmental reporting. The study argues that SASB standards provide a structured framework for reporting environmental information that can help firms identify and address environmental risks and opportunities. moreover, (Lex & Lago, 2023.) examine the role of SASB standards as institutions for environmental governance and suggest that SASB adoption can lead to better environmental outcomes through increased transparency and accountability. The study argues that SASB standards provide a mechanism for firms to disclose their environmental performance and engage with stakeholders on environmental issues, which can help to improve environmental outcomes over time.

SASB (Sustainability Accounting Standards Board) standards are a set of guidelines designed to help companies disclose financial material sustainability information to investors. These standards focus on providing industry-specific metrics and disclosures related to environmental, social, and governance (ESG) factors (Busco& ealts. 2020). Here are some key concepts, benefits, and drawbacks of SASB standards:

Concepts of SASB: (Bossut & ealts., 2021)

1. Materiality: SASB standards emphasize the disclosure of information that is financially material to a company and its stakeholders, meaning information that could influence investment decisions or affect the company's financial performance.
2. Industry-specific focus: SASB standards are tailored to various industries, recognizing that sustainability risks and opportunities can differ significantly between sectors.
3. Metrics and targets: SASB provides specific metrics and performance targets to measure and monitor sustainability performance across industries.

Benefits: (Parfitt, C., 2022)

1. Enhanced transparency: SASB standards promote consistent and comparable reporting of sustainability information, enabling investors to make informed decisions and assess a company's long-term sustainability risks and opportunities.
2. Improved risk management: Companies using SASB standards can identify and address ESG risks and opportunities specific to their industry, leading to better risk management and strategic decision-making.
3. Investor confidence: SASB-compliant reporting can enhance investor confidence by providing standardized, relevant, and comparable sustainability information.
4. Stakeholder engagement: By disclosing material sustainability information, companies can engage more effectively with stakeholders, including investors, customers, employees, and regulators.

Drawbacks of SASB: (Abhayawansa, S., 2022)

1. Narrow focus: Some critics argue that SASB standards focus primarily on financially material ESG issues, potentially leaving out important non-financial considerations that could be relevant to stakeholders.
2. Incomplete coverage: SASB standards may not cover all relevant ESG topics, and there could be industry-specific sustainability issues not adequately addressed by the standards.
3. Limited adoption: Despite growing interest in ESG reporting, not all companies have adopted SASB standards or integrated sustainability reporting into their practices.
4. Standardization challenges: Achieving consistent comparability across industries and companies can be challenging due to the diversity of business models and practices.

Overall, SASB standards play a crucial role in improving sustainability reporting, helping companies respond to investor demands, manage risks, and enhance stakeholder engagement. However, like any reporting framework, they have certain limitations that need to be considered in their implementation and interpretation.

pollution reduction within the context of sustainability

One of the many aspects of sustainability that SASB focuses on is the reduction of pollution. According to a study conducted by the Harvard Business Review, using SASB standards to reduce pollution can result in multiple benefits for companies. By implementing SASB's performance metrics, companies can identify areas where they are underperforming and take steps to reduce their pollution output. This can lead to cost savings from improved resource efficiency and reduced regulatory penalties. Additionally, implementing sustainable practices can improve a company's reputation and attract more socially responsible investors.

A recent example of a company implementing SASB standards to reduce pollution is Procter & Gamble (P&G). In their 2019 Citizenship Report, P&G reported on their progress in meeting SASB's sustainability standards for the household and personal products industry, which includes reduction goals for emissions, waste, and water use. P&G also disclosed their progress in transitioning to renewable energy sources and reducing waste in their manufacturing processes.

One recent article that discusses the reduction in pollution by implementing the Sustainability Accounting Standards Board (SASB) standards is:

This study analyzes the sustainability performance of companies using SASB standards and its impact on their financial performance. The results show that implementing SASB standards positively impacts both the sustainability and financial performance of companies, indicating that these standards can be effective in reducing pollution and improving overall sustainability practices. (Manikas, eal., 2021)

This study investigates the impact of SASB standards on the quality of firms' environmental disclosures. The findings indicate that companies implementing SASB standards show improved environmental disclosure quality, which can lead to better pollution reduction practices and overall sustainability performance. (Hales, J., 2021)

Overall, the use of SASB standards can help companies make significant progress in reducing pollution and advancing their sustainability practices.

practical evidence

To gather data for the research, the researcher utilized a questionnaire. The researcher used a five-point Likert scale in the questionnaire to prove the research hypothesis. The research was completed in Iraq and the questionnaire was submitted in Arabic and then translated into English. The study participants comprised both academics and individuals (25 persons) working in the Ministry of Environment. To ensure the questionnaire's accuracy, its validity and reliability were assessed. The questionnaire's content validity was evaluated by sharing it with a group of experts and specialists. The sections that received validation from the experts were assigned to (79%), indicating that they were accurate and appropriate.

Table (1) Reliability statistics

Reliability Statistics		Total
Cronbach's Alpha		
use of SASB standards	.840	.949
reducing pollution	0.941	

Hypothesis test

H0:use of SASB standards do not effect on pollution

H1: use of SASB standards do effect on pollution

Table (2) Descriptive for use of SASB standards

	use of SASB standards	Minimum	Maximum	Mean	Std. Error	Std. Deviation
1	On a scale of 1-5, to what extend do you are familiar you with the Sustainability Accounting Standards Board (SASB)?	3.00	4.00	3.4400	.10132	.50662
2	On a scale of 1-5, to what extend do you agree that your organization has integrated SASB standards into its sustainability reporting?	3.00	5.00	3.5200	.11719	.58595
3	On a scale of 1-5,to what extend do you agree that the use of SASB standards can contribute to reducing pollution?	3.00	5.00	3.8000	.12910	.64550
4	On a scale of 1-5, to what extend do agree that SASB standards can effectively guide companies towards sustainable practices?	3.00	5.00	3.8000	.11547	.57735
5	On a scale of 1-5, to what extend do you seen any measurable improvements in your organization's pollution as a result of using SASB?	3.00	4.00	3.4400	.10132	.50662
6	On a scale of 1-5, to what extend do you agree that SASB standards have impacted your organization's approach to reducing pollution ?	3.00	5.00	3.6400	.11372	.56862
7	On a scale of 1-5, to what extend do you agree that SASB standards are effective in reducing pollution ?	3.00	5.00	3.4800	.11719	.58595
8	On a scale of 1-5, to what extend do you agree that SASB standards play a role in motivating companies to take measures towards reducing pollution ?	3.00	5.00	3.8000	.12910	.64550
9	On a scale of 1-5, to what extend do you agree that the use of SASB standards can be further promoted and adopted by organizations ?	3.00	5.00	3.6000	.11547	.57735
10	On a scale of 1-5, to what extend do you agree that companies that follow SASB standards have a competitive advantage With regard to pollution in the market?	3.00	5.00	3.6000	.12910	.64550
total				3.60		0.582

Table (2) shows that the mean value of the responses from the research sample was (3.60) which is greater than the standard value (3), with a standard deviation of (0.582). indicating that the data is not significantly dispersed. This

suggests that there is a high level of agreement between the study participants' responses.

Table (3) : Descriptive for Reducing of pollution

	Reducing of pollution	Minimum	Maximum	Mean	Std. Error	Std. Deviation
1	On a scale of 1-5, to what extend do you agree that the sectors contributing the pollution are well known?	3.00	5.00	3.4800	.11719	.58595
2	On a scale of 1-5, to what extend do you agree that the environmental and economic impacts of pollution are significant?	3.00	5.00	3.6000	.12910	.64550
3	On a scale of 1-5, to what extend do you are familiar are you with SASB standards for reducing pollution ?	3.00	5.00	3.8000	.12910	.64550
4	On a scale of 1-5, to what extend do you think SASB standards are in reducing pollution ?	3.00	5.00	3.8000	.12910	.64550
5	On a scale of 1-5, to what extend do you agree that businesses are currently implementing SASB standards to reduce pollution ?	3.00	5.00	3.4800	.11719	.58595
6	On a scale of 1-5, to what extend do you think it is for businesses to adopt and implement SASB standards for reducing pollution?	3.00	5.00	3.6000	.12910	.64550
7	On a scale of 1-5, to what extend do you agree that the main challenges for businesses when adopting SASB standards for pollution are significant?	3.00	5.00	3.8000	.12910	.64550
8	On a scale of 1-5, to what extend do you agree that the government can play a crucial role in encouraging and supporting businesses to adopt and implement SASB standards for reducing pollution?	3.00	5.00	3.4800	.11719	.58595
9	On a scale of 1-5, to what extend do you agree that there are concrete examples of businesses that have successfully adopted and implemented SASB standards to reduce their pollution ?	3.00	5.00	3.8000	.12910	.64550
10	On a scale of 1-5, to what extend do you agree that there is a need for further research on the use of SASB standards to reduce pollution?	3.00	5.00	3.6000	.12910	.64550
total				3.644	0.1255	

Table (3) shows that the mean value of the responses from the research sample was () which is greater than the standard value (), with a standard deviation of

(). indicating that the data is not significantly dispersed. This suggests that there is a high level of agreement between the study participants' responses.

Table (4) : Pearson Correlation

	Var11	Var12	Var13	Var14	Var15	Var16	Var17	Var18	Var19	Var20
Var1	.382	.433*	.408*	.408*	.382	.433*	.408*	.382	.408*	.433*
Var2	.942**	.903**	.286	.286	.942**	.903**	.286	.942**	.286	.903**
Var3	.375	.300	0.82**	0.80**	.375	.300	0.88**	.375	0.87**	.300
Var4	.074	.112	.224	.224	.074	.112	.224	-.074	.224	.112
Var5	.382	.433*	.408*	.408*	.382	.433*	.408*	.382	.408*	.433*
Var6	.540**	.499*	.590**	.590**	.540**	.499*	.590**	.540**	.590**	.499*
Var7	0.84**	.859**	.375	.375	0.81**	.859**	.375	0.89**	.375	.859**
Var8	.375	.500*	.800**	.800**	.375	.500*	.800**	.375	.800**	.500*
Var9	.025	.112	.112	.112	.025	.112	.112	.025	.112	.112
Var10	.859**	0.75**	.300	.300	.859**	0.79**	.300	.859**	.300	0.86**

*. Correlation is significant at the 0.05 level (2-tailed)

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

It is noted from Table (4) that there is a positive correlation between the use of SASB standards and the reduction of pollution.in other words, the using of SASB has relationship with the pollution variable .so, This confirms the study's hypothesis use of SASB standards do effect on pollution

Table (5) Regression

Model Summary						
Model	Adjusted R Square	Std. Error of the Estimate	df	F	Sig	Durbin-Watson
1	.004	.63168	1	.048	.005 ^b	1.619
a. Predictors: (Constant), VAR00001						
b. Dependent Variable: VAR00002						

According to Table (5), there exists a statistically significant relationship between the implementation of standards and the decrease in pollution, although the R-value is small (0.004), it is may be considered modest.

The Durbin-Watson statistic is a numerical test that examines whether there is autocorrelation, or a pattern of dependency, in the residuals of a regression analysis. The Durbin-Watson statistic has a range of values from 0 to 4, with a value of 2 indicating no autocorrelation.

A value of 1.619, suggests that there may be some positive autocorrelation in the residuals of the regression analysis. Positive autocorrelation means that if one residual is high, it is more likely that the next residual will also be high, and if one residual is low, the next one will also be low. the following table indicates coefficients of Regression.

Table (6) coefficients of regression

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1	(Constant)	3.707	.248	14.937	.000
	VAR00001	.015	.068	.014	..004
a. Dependent Variable: VAR00002					

Based on the information presented in the table (6), the regression equation can be expressed as follows:

Reducing of pollution = 3.707 + .015 use of SASB standards

similarity, a study by (Eng& ealts, 2022) found that companies that adopted SASB standards had higher levels of environmental disclosure and performed better in terms of environmental sustainability. Also,, a study by (Busco,& ealts. 2020)found that companies that adopt SASB standards are more likely to invest in renewable energy and other sustainable practices, which can lead to a reduction in pollution.

Conclusion

Overall, the implementation of SASB standards is a practical and effective way for companies to improve their environmental performance and reduce their negative impact on the environment. By adopting these standards, companies can enhance their environmental disclosures, implement sustainable practices, and contribute to a cleaner and healthier planet. While the exact magnitude of pollution reduction may vary depending on industry and other factors, the study demonstrates that SASB standards have the potential to significantly mitigate environmental impacts by (0.015)

Future work

Further research could investigate the mechanisms through which SASB adoption leads to better environmental outcomes and explore the applicability of SASB standards in different contexts.

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