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THE ROLE OF KANSEI ENGINEERING IN STAKEHOLDERS' TRUST IN SUSTAINABILITY REPORTS

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***ABSTRACT*:**

Objective: This study aims to investigate the role of Kansei Engineering in enhancing stakeholders' trust in sustainability reports by examining how emotional and design-based reporting elements influence perceptions of transparency and credibility. Specifically, the study explores the impact of ease of understanding, emotional comfort, and visual appeal on stakeholders' confidence in sustainability disclosures.

Design/methodology/approach: The study adopts a descriptive-analytical approach supported by Kansei Engineering methodology. Data were collected through a structured questionnaire distributed to stakeholders and sustainability-related professionals in industrial organizations in the Kurdistan Region of Iraq. A total of 152 valid responses were analyzed using the Statistical Package for the Social Sciences (SPSS), including reliability analysis, Pearson correlation, and multiple regression analysis.

Findings: The findings reveal that Kansei Engineering elements have a significant positive relationship with stakeholders' trust in sustainability reports through both credibility and transparency. The regression results indicate that emotional comfort and visual appeal are the strongest predictors of stakeholders' trust, while ease of understanding alone does not show a significant independent effect when other design dimensions are considered. The models explain 37.2% of the variation in trust through credibility and 39.8% through transparency.

Empirical implications: The study provides empirical evidence that sustainability reporting effectiveness depends not only on the accuracy and quantity of disclosed information but also on the way information is designed and communicated. Organizations can strengthen stakeholder confidence by integrating emotional and visual design principles into sustainability reports, improving transparency, reducing information complexity, and enhancing the usefulness of non-financial disclosures.

Originality/value: This study contributes to the sustainability accounting literature by integrating Kansei Engineering, a methodology traditionally applied in product and service design, with sustainability reporting practices. It introduces a new perspective that views report design as a strategic tool for building stakeholder trust and improving the credibility of corporate sustainability communication.

***Keywords**: Kansei Engineering; Sustainability Reports; Stakeholders' Trust; Transparency; Credibility; Emotional Design; Visual Communication; Sustainability Disclosure.*

FIRST: INTRODUCTION

lerated incorporation of artificial intelligence (AI) into educational and organizational contexts has transformed In today's world, sustainability reports serve as a "global language" through which organizations communicate with their social and economic environment. This is driven by the growing interest in environmental, social, and governance (ESG) standards. The focus has shifted from simply "what" companies disclose to "how" this disclosure is presented to ensure the highest levels of credibility (Hahn & Kühnen , 2013). Trust, as an intangible capital, is not built solely through cold numbers but through the ability of that data to penetrate the perception of

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stakeholders and meet their sensory and intellectual aspirations, which is lacking in traditional reports that suffer from a gap in emotional connection (Connelly et al., 2011).

However, corporate communication faces a growing gap due to the rigidity of reporting templates, raising fundamental questions about the extent to which information design can influence recipient behavior. This is where Kansei Engineering emerges as a revolutionary approach combining technology and design psychology; it is a methodology that aims to translate human emotions (Kansei) and emotional responses into tangible elements within the structure of a product or report (Nagamachi , 2011). Applying this approach to sustainability reporting represents a shift from "routine disclosure" to "strategic emotional disclosure," primarily aimed at enhancing stakeholder trust by creating a reading experience characterized by transparency and deep psychological engagement (Schutte et al., 2004).

Second: Previous Studies

“Hameed et al. (2023) conducted a study aimed at measuring the performance of social sustainability reports using the Kansei Engineering approach. The study started from the problem that traditional reports lack the emotional aspect that connects the organization with stakeholders. The researchers used an analytical methodology to identify the “Kansei Words” associated with social responsibility, and the results showed that incorporating the emotional preferences of stakeholders into the design of reports reduces the expectations gap, which enhances the reliability of the disclosed data and makes it more responsive to the psychological and social needs of the community.”

The study (Luo et al., 2022) investigated how visual and informational design based on Kansi architecture enhances user trust across digital platforms. Although the study focused on user interfaces, it provided a theoretical framework that can be applied to e-sustainability reports, as it proved that design elements that evoke feelings of 'safety' and 'transparency' necessarily lead to increased stakeholder trust in the presented content. The study recommended the need for reports to move from dry digital narrative to visual narrative that addresses the senses of stakeholders (sensory branding).”

A study by Markus et al., 2025, confirmed this. The study highlighted the crucial role of Kansei engineering in developing sustainable services that offer innovative solutions, reducing the discrepancy between what the company advertises and what the customer perceives. It concluded that identifying attractive service attributes based on 'Kansei Satisfaction ' helps prioritize what matters to stakeholders, transforming sustainability reports from tools for legal compliance into tools for building strong emotional connections that foster trust and credibility.

(JOSI, 2024) also sought The study analyzed the evolution of Kansi engineering research, noting that 85% of previous studies focused on tangible products, creating a research gap in how this methodology can be applied to services and information (such as sustainability reports). The study called for the development of new design visualization techniques that go beyond 3D images to include "word engineering" in corporate reports, emphasizing that integrating Kansi words into non-financial disclosures is a modern strategy to ensure a positive and sustainable stakeholder response. "And the PwC report (2024) indicated Regarding sustainability indicators, the "tone from the top" in reports sends strong signals to investors about an organization's core values. In conjunction with Kansi engineering principles, complementary studies have shown that reports balancing hard disclosure with qualitative emotional elements are successful in reducing stakeholder concerns about "greenwashing." Using visual and expressive language that resonates with investor and community expectations leads to improved disclosure quality and increased credibility. The study (Zhao et al., 2024) investigated In exploring how Kansi engineering can drive innovation in sustainable materials, the study demonstrated that the 'psychological perception' of materials and data directly impacts user evaluation of an organization. It concluded that incorporating Kansi as a value proposition into sustainability reporting differentiates an organization from its competitors, transforming reports from mere 'dry data' into a seamless 'user experience' that enhances stakeholder confidence in the company's environmental and social commitment.

Third: Theoretical Framework: The role of Kansi engineering in enhancing stakeholder confidence

Sustainability reports are the most prominent communication tool between an organization and its stakeholders, but the biggest challenge lies in the "trust gap" resulting from data complexity or dry information presentation. Kansei Engineering emerges as a technological and psychological approach that aims to tailor these reports to

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align with users' emotional and cognitive perceptions, transforming them from mere numerical documents into strategic trust-building tools (Nagamachi , 2011; Markus et al., 2024).

1-Basic principles of Kansi geometry

This methodology relies on linking the "intangible" (feelings) with the "tangible" (design elements) through the following points (Schütte, S. (2005)):

- Easy to understand :This dimension within the framework of Kansi architecture refers to "cognitive content architecture." It emphasizes (Hameed et al., 2023) simplifying complex information related to environment and governance. It reduces the mental effort of stakeholders. When consistent visual language and information structure are used, the user's understanding of the organization's true impact increases, reducing information ambiguity.
- Emotional comfort : Kansi Engineering focuses on creating a positive "emotional resonance." According to a study by Luo et al. (2022), a sense of security and reassurance arises when stakeholders perceive a sincere and unpretentious tone in the disclosure. Emotional comfort means that the report addresses stakeholders' values and concerns, fostering a feeling that the organization is a responsible partner, not merely a profit-driven entity.
- visual appeal : The appeal here isn't limited to aesthetics; it's also a tool for conveying professionalism. A study has shown... (Zhao et al., 2024) Visual design (graphics, colors, fonts) analyzed according to Canci's criteria directly affects the qualitative perception of information. Visual appeal acts as a primary "quality indicator" that encourages stakeholders to trust the report's content.

2- Stakeholder confidence in sustainability reports

The trust of stakeholders the cornerstone of the effectiveness of sustainability reports is trust; without this trust, reports turn from a strategic communication tool into mere marketing documents accused of "greenwashing ". Here is an analysis of how this trust is built and the factors that influence it:

First: Pillars of Building Trust in Sustainability Reports

Accounting and management literature (e.g., Hodge et al., 2009; Cho et al., 2015) emphasizes that establishing sustainable relationships with stakeholders depends largely on the quality of non-financial disclosure. This relationship is built upon three interconnected pillars:

1. Transparency as a Procedural Approach

Transparency in sustainability reporting reflects an organization's commitment to providing comprehensive disclosure of its environmental, social, and governance (ESG) performance. However, transparency is not limited to reporting positive achievements; rather, it requires adopting the principle of balanced reporting, which includes presenting challenges, limitations, and areas of failure alongside successes. Such an approach reduces information asymmetry between management and stakeholders and strengthens stakeholders' ability to evaluate corporate performance objectively.

2. Credibility as an Essential Attribute

Credibility represents a fundamental characteristic of reliable sustainability reports and is primarily enhanced through verification and assurance processes. From the stakeholders' perspective, the existence of external assurance by an independent third party increases confidence in the accuracy and reliability of disclosed information. According to Simnett et al. (2009), credibility provides sustainability reports with institutional legitimacy, transforming them from voluntary communication tools into reliable, measurable, and comparable sources of information.

3. Stakeholder Satisfaction as a Strategic Outcome

Stakeholder satisfaction represents the ultimate outcome of high-quality sustainability disclosure. When stakeholders—including investors, employees, customers, and local communities—perceive sustainability reports as transparent and credible, concerns regarding greenwashing practices are reduced. This enhanced acceptance contributes to building reputational capital, which positively influences customer loyalty, investor confidence, and the organization's long-term competitive position.

Second: Confidence-Building Mechanisms (Technical Perspective)

According to Simnett et al. (2009), several technical mechanisms contribute to strengthening trust in sustainability reports:

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1. External Verification

External assurance involves the review and evaluation of sustainability reports by an independent and reputable third party, such as international auditing firms. This process enhances the reliability of disclosed information by verifying the accuracy, completeness, and consistency of reported sustainability data.

2. Adoption of International Sustainability Standards

The application of internationally recognized reporting frameworks enhances comparability and reliability. Examples include:

- Global Reporting Initiative (GRI) standards.
- Sustainability Accounting Standards Board (SASB) standards.
- European Sustainability Reporting Standards (ESRS).

3. Effective Governance

Trust is also strengthened through transparent governance practices, particularly by clarifying the role of the board of directors in supervising sustainability-related issues and integrating ESG considerations into strategic decision-making processes.

Third: The Trust Gap and the Risk of Greenwashing

Lyon and Montgomery (2015) highlight that a trust gap emerges when organizations exaggerate or misrepresent their environmental and social contributions. Such practices create skepticism among stakeholders and may result in several negative consequences, including:

- Loss of market value when misleading sustainability claims are discovered.
- Increased regulatory monitoring, legal pressures, and financial penalties.
- Reduced willingness of investors to support organizations that fail to demonstrate genuine commitment to environmental, social, and governance principles.

Therefore, avoiding greenwashing and ensuring authentic sustainability communication are essential factors for maintaining stakeholder confidence.

Fourth: The Relationship Between Stakeholder Trust and Organizational Performance

The relationship between stakeholder trust and organizational performance is direct and complementary. Trust functions as a strategic resource that contributes to reducing costs and enhancing organizational value. According to Dhaliwal et al. (2011), credible sustainability disclosure reduces investors' perception of risk, which contributes to lowering the cost of capital and improving access to sustainable financing opportunities.

Operationally, stakeholder trust enhances employee engagement, stimulates innovation, improves productivity, and reduces employee turnover costs. From the customer perspective, confidence in an organization's environmental and social commitments strengthens customer loyalty and expands market share, leading to improved financial performance.

Furthermore, trust among local communities and regulatory authorities provides organizations with a social license to operate, protecting them from unexpected disruptions, reputational damage, and regulatory penalties resulting from credibility deficiencies.

Fifth: Study Methodology

1. Research Problem

Despite the increasing adoption of sustainability reporting practices based on international standards such as GRI, a significant trust gap continues to exist between organizations and their stakeholders. The main challenge is that many sustainability reports remain highly technical documents that focus primarily on quantitative disclosure while lacking emotional and cognitive engagement with stakeholders. Consequently, these reports may be perceived as communication instruments for reputation management rather than genuine tools for accountability, increasing concerns about greenwashing.

Therefore, the research problem can be formulated through the following main question:

"How can integrating Kansei Engineering tools into sustainability reporting design contribute to transforming stakeholders' emotional perceptions into measurable corporate trust?"

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2. Significance of the Study Scientific Importance

The scientific significance of this study lies in developing an interdisciplinary theoretical framework that integrates Kansei Engineering, as a science concerned with measuring and translating human emotions and perceptions, with sustainability accounting and reporting. This integration contributes to expanding the academic literature by proposing an innovative approach for improving corporate communication and stakeholder engagement.

Practical Importance

The practical significance of the study is represented in providing sustainability managers, accountants, and report designers with a scientific methodology based on Kansei Engineering. This approach enables organizations to understand stakeholders' psychological and emotional expectations and align sustainability report design with their preferences, thereby enhancing report credibility, corporate reputation, investor confidence, and long-term organizational value.

3. Research Hypotheses

Based on the theoretical framework of the study, the following hypotheses can be formulated:
The First Main Hypothesis:
H1: There is a statistically significant correlation between Kansei Engineering design elements (ease of understanding, emotional comfort, and visual appeal) and stakeholders' trust in sustainability reports through credibility.
H2: There is a statistically significant correlation between Kansei Engineering design elements (ease of understanding, emotional comfort, and visual appeal) and stakeholders' trust in sustainability reports through transparency.

The Second Main Hypothesis:

H3: Kansei Engineering design elements (ease of understanding, emotional comfort, and visual appeal) have a statistically significant effect on stakeholder trust in sustainability reports through credibility.
H4: Kansei Engineering design elements (ease of understanding, emotional comfort, and visual appeal) have a statistically significant effect on stakeholder trust in sustainability reports through transparency.

4. Research Methodology

The study adopts a descriptive-analytical approach supported by an experimental approach based on Kansei Engineering methodology.
The Kansei Survey, which is based on the Semantic Differential Scale, is used to measure stakeholders' emotional impressions and perceptions toward different sustainability reporting models.
Research Population:
The study population is represented by sustainability report stakeholders, including:

- Financial analysts.
- Investors. Sustainability experts. Statistical Tools:

The study uses appropriate statistical methods to analyze the collected data, including:

- Descriptive statistics.
- Reliability analysis (Cronbach's Alpha).
- Correlation analysis.
- Regression analysis to test the impact relationships between study variables.
- Other statistical tests according to the requirements of hypothesis testing.

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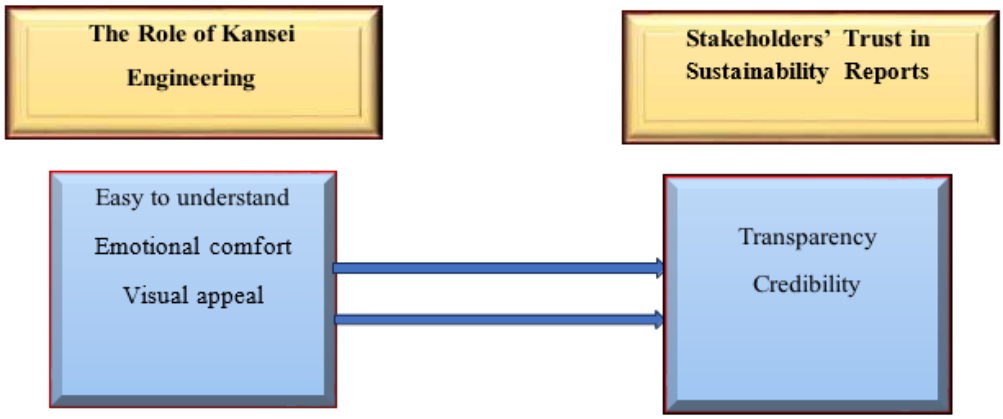
RESEARCH MODEL



DATA ANALYSIS AND RESULTS

5.1 Data Collection

The primary data source for this study was obtained directly from banks operating within the Kurdistan Region of Iraq. A structured, closed-ended questionnaire was designed and utilized as the principal data collection instrument to examine the extent of the role of Kansei engineering in stakeholders' trust in sustainability reports. The questionnaire focused on ease of understanding, emotional comfort, visual appeal stakeholders' trust in sustainability reports in Transparency and credibility.

The survey was personally, transparency, distributed to seventy selected induappeal, andstrial firms located in the governorates of Duhok, Erbil, and Sulaymaniyah. Out of 160 distributed questionnaires, 152 were correctly completed and returned, representing an effective response rate of approximately 95%. The selected enterprises represented a diverse range of industries, including food and beverage manufacturing, detergent and soap production, cement, packaging, plastic material, and chemicals. The collected data were statistically analyzed using the Statistical Package for the Social Sciences (SPSS) software to ensure accuracy, reliability, and robust interpretation of findings.

5.2 Autocorrelation Problem

Autocorrelation occurs when the error terms in a regression model are correlated, meaning that the value of the studied variable at time t is influenced by its value at time t−1t-1t−1 or t+1t+1t+1. This issue is particularly common in time series data, where observations may depend on preceding or subsequent values. The Durbin-Watson (D.W.) test is commonly used to detect autocorrelation, with values ranging from 0 to 4; a D.W. value near 2 indicates no autocorrelation.

As presented in Tables (3 and 5), the calculated D.W. values are 1.918 and 2.087, respectively, which are sufficiently close to 2. This confirms that there is no autocorrelation problem in the multiple linear regression model applied in this study.

5.3 Multicollinearity Problem

Multicollinearity arises when there is a perfect or a high degree of linear correlation between two or more independent variables. To detect this issue, the Variance Inflation Factor (VIF) is commonly used, and is calculated using the formula:

$$VIF = 1 / Tolerance$$

According to the standard guideline, a Variance Inflation Factor (VIF) value exceeding 10 for any independent variable indicates potential multicollinearity. As presented in Tables 3 and 5, the VIF values for the independent variables are as follows: Advanced Analytics and Reporting = 2.091, Interactive Dashboards = 2.475, Automated

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Data Refresh = 2.176, and Alerts and Notifications = 2.009. Since all VIF values are well below the threshold of 10, it can be concluded that multicollinearity is not a concern in the multiple linear regression model employed in this study.

5.4 Reliability Analysis Using Cronbach's Alpha

To verify the reliability of the research instrument, Cronbach's Alpha was used as one of the most widely adopted statistical indicators for measuring the internal consistency among the items of the scale. This analysis is essential to ensure that the questionnaire items coherently and consistently measure the intended constructs.

The table below presents the Cronbach's Alpha values if each dimension were deleted individually, in addition to the overall alpha coefficient for all 30 items combined:

The reliability of the measurement instrument was assessed using Cronbach's alpha coefficient to evaluate the internal consistency of the study variables.

The results indicate that the overall Cronbach's alpha value reached 0.825, which exceeds the commonly accepted threshold of 0.70, suggesting that the measurement scale demonstrates a high level of internal consistency and reliability.

Furthermore, the "Cronbach's Alpha if Item Deleted" values were examined to determine whether removing any item would improve the overall reliability of the scale. The results are presented below:

Table 1 Cronbach's Alpha

Item	Cronbach's Alpha if Item Deleted
Ease of Understanding	0.802
Emotional Comfort	0.781
Visual Appeal	0.782
Credibility	0.796
Transparency	0.791

Interpretation of Results

The findings reveal that all "Alpha if Item Deleted" values are lower than the overall Cronbach's Alpha (0.825). This indicates that:

- Each item contributes positively to the internal consistency of the scale.
- Removing any item would reduce the overall reliability.
- There are no problematic or weak items that need to be eliminated

1- There is a statistically significant correlation between the elements of Kansi's design (ease of understanding, emotional comfort, and visual appeal) and Stakeholders gain confidence in sustainability reports through credibility.

Table 2: Pearson Correlation Matrix

Variables	Ease of Understanding	Emotional Comfort	Visual Appeal	Credibility
Ease of Understanding	1	0.537**	0.467**	0.426**
	Sig. (2-tailed)	—	0.000	0.000
	N	152	152	152
Emotional Comfort	0.537**	1	0.488**	0.543**
	Sig. (2-tailed)	0.000	—	0.000
	N	152	152	152
Visual Appeal	0.467**	0.488**	1	0.495**
	Sig. (2-tailed)	0.000	0.000	—

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	N	152	152	152
Credibility	0.426**	0.543**	0.495**	1
	Sig. (2-tailed)	0.000	0.000	0.000
	N	152	152	152

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

The Pearson correlation matrix demonstrates that there are statistically significant positive relationships between Kansi design elements (ease of understanding, emotional comfort, and visual appeal) and stakeholders' trust in sustainability reporting through credibility, at the 0.01 significance level (p = 0.000).

Specifically, the correlation coefficients indicate that:

- Emotional comfort shows the strongest relationship with credibility (r = 0.543), suggesting that the psychological and emotional aspects of report design play a major role in enhancing trust.
- Visual appeal also demonstrates a moderate positive relationship with credibility (r = 0.495), indicating that better graphical and visual presentation improves perceived reliability.
- Ease of understanding has a positive moderate correlation with credibility (r = 0.426), confirming that clarity and simplicity contribute to trust formation.

Furthermore, the intercorrelations among the independent variables (ranging from 0.467 to 0.537) indicate a consistent and coherent construct structure, supporting the validity of the measurement scale.

Overall, the results provide strong statistical evidence that improvements in sustainability report design significantly enhance credibility and, consequently, stakeholders' trust.

The findings lead to the rejection of the null hypothesis and acceptance of the alternative hypothesis, confirming that Kansi design elements have a statistically significant positive relationship with stakeholders' trust in sustainability reporting through credibility.

2- There is a statistically significant correlation between the elements of Kansi's design (ease of understanding, emotional comfort, and visual appeal) and the confidence of stakeholders in sustainability reporting through transparency.

Table 3: Pearson Correlation Matrix

Variables	Ease of Understanding	Emotional Comfort	Visual Appeal	Transparency
Ease of Understanding	1	0.537**	0.467**	0.431**
	Sig. (2-tailed)	—	0.000	0.000
	N	152	152	152
Emotional Comfort	0.537**	1	0.488**	0.507**
	Sig. (2-tailed)	0.000	—	0.000
	N	152	152	152
Visual Appeal	0.467**	0.488**	1	0.566**
	Sig. (2-tailed)	0.000	0.000	—
	N	152	152	152
Transparency	0.431**	0.507**	0.566**	1
	Sig. (2-tailed)	0.000	0.000	0.000
	N	152	152	152

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

The Pearson correlation results reveal statistically significant positive relationships at the 0.01 level between Kansi design elements (ease of understanding, emotional comfort, and visual appeal) and stakeholders' confidence in sustainability reporting through transparency.

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The correlation coefficients indicate that:

- Visual appeal has the strongest relationship with transparency (r = 0.566), suggesting that graphical and visual presentation plays a key role in enhancing perceived transparency.

- Emotional comfort also shows a strong positive relationship with transparency (r = 0.507), indicating that cognitive ease and emotional clarity contribute significantly to understanding transparent reporting.
- Ease of understanding demonstrates a moderate positive correlation with transparency (r = 0.431), confirming that simplicity and clarity improve perceived openness of information.

The intercorrelations among independent variables (0.467–0.537) confirm internal consistency and construct validity of the measurement model.

From an accounting perspective, the findings indicate that sustainability reporting transparency is not only dependent on disclosure quantity or compliance but is also strongly influenced by the design quality of information presentation. Clear, visually appealing, and emotionally comfortable reports improve users' ability to interpret financial and non-financial information, thereby increasing perceived transparency and trust in reporting systems.

The results support the alternative hypothesis and reject the null hypothesis, confirming that Kansi design elements have a statistically significant positive relationship with stakeholders' confidence in sustainability reporting through transparency.

The second main hypothesis:
1- Kansi's design elements influence sustainability reporting through ease of understanding, emotional comfort, and visual appeal, and stakeholder trust in sustainability reports is built through credibility.
Table (4): Regression Analysis of the Effect of Kansi's design elements in sustainability reporting through ease of understanding, emotional comfort, and visual appeal, in stakeholder trust in sustainability reports is built through credibility.

	stakeholder trust in sustainability reports is built through credibility					
	B0	SE	B1	T	VIF	Sig
(Constant)	0.849	0.331		2.570		.011
Ease of Understanding	0.107	0.078	0.110	1.373	1.524	.172
Emotional Comfort	0.415	0.096	0.351	4.312	1.562	.000
Visual Appeal	0.267	0.076	0.272	3.504	1.423	.001
F	29.262					
R Square	0. 372					
Adjusted R^2	0.360					
Durbin–Watson	1.701					

The multiple regression results indicate that Kansi's design elements significantly influence stakeholder trust in sustainability reporting through credibility, as the overall model is statistically significant ($F = 29.262$, $p < 0.001$). The model explains 37.2% of the variation in stakeholder trust ($R^2 = 0.372$), which reflects a moderate explanatory power.

At the individual level, emotional comfort ($\beta = 0.351$, $p < 0.001$) and visual appeal ($\beta = 0.272$, $p = 0.001$) have statistically significant positive effects on stakeholder trust. This indicates that psychological ease and visual presentation play a crucial role in enhancing perceived credibility of sustainability reports.

However, ease of understanding ($\beta = 0.110$, $p = 0.172$) does not show a statistically significant effect, suggesting that clarity alone is insufficient to influence trust when emotional and visual dimensions are present in the model. The VIF values (1.423–1.562) indicate no multicollinearity problems, and the Durbin–Watson value (1.701) confirms the absence of autocorrelation issues.

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From an accounting perspective, the results highlight that stakeholder trust in sustainability reporting is not solely driven by informational clarity but is more strongly influenced by how information is presented emotionally and visually. This implies that modern sustainability reporting must go beyond traditional disclosure requirements and incorporate design-oriented communication strategies to enhance perceived credibility and decision usefulness.
The results partially support the hypothesis. While the model as a whole is significant, only emotional comfort and visual appeal significantly influence stakeholder trust, whereas ease of understanding does not show a statistically significant effect.

Therefore, the null hypothesis is rejected at the model level but partially accepted at the variable level.

2- The elements of Kansi's design influence (ease of understanding, emotional comfort, and visual appeal) and stakeholder confidence in sustainability reporting through transparency.

Table (5): Regression Analysis of the Effect of Kansi's design elements in sustainability reporting through ease of understanding, emotional comfort, and visual appeal, in stakeholder trust in sustainability reports is built through transparency.

	stakeholder trust in sustainability reports is built through transparency					
	B0	SE	B1	T	VIF	Sig
(Constant)	0.570	0.343		1.661		0.099
Ease of Understanding	0.114	0.081	0.111	1.409	1.524	0.161
Emotional Comfort	0.324	0.100	0.258	3.240	1.562	0.001
Visual Appeal	0.404	0.079	0.388	5.098	1.423	0.000
F	32.616					
R Square	0.398					
Adjusted R^2	0.386					
Durbin–Watson	1.814					

The regression results indicate that Kansi's design elements significantly influence stakeholder confidence in sustainability reporting through transparency, as the overall model is statistically significant ($F = 32.616$, $p < 0.001$). The model explains 39.8% of the variance in stakeholder confidence ($R^2 = 0.398$), indicating a relatively strong explanatory power.

At the individual level, visual appeal has the strongest positive and statistically significant effect on transparency-based trust ($\beta = 0.388$, $p < 0.001$), followed by emotional comfort ($\beta = 0.258$, $p = 0.001$). This indicates that visual communication and emotional clarity are key determinants of perceived transparency in sustainability reporting.

However, ease of understanding ($\beta = 0.111$, $p = 0.161$) is not statistically significant, suggesting that clarity alone is insufficient to enhance perceived transparency when visual and emotional factors are considered.

The VIF values (1.423–1.562) confirm the absence of multicollinearity problems, while the Durbin–Watson statistic (1.814) indicates no autocorrelation issues in the model.

From an accounting perspective, the findings suggest that transparency in sustainability reporting is strongly influenced by how information is visually and emotionally communicated rather than simply how easily it is understood. This highlights that modern reporting frameworks should integrate design-based communication techniques to enhance transparency perception, improve information usability, and strengthen stakeholder confidence in non-financial disclosures.

The results support the overall hypothesis at the model level, confirming a statistically significant relationship between Kansi's design elements and stakeholder confidence through transparency. However, at the variable level, only emotional comfort and visual appeal are significant predictors, while ease of understanding is not statistically significant.

Therefore, the null hypothesis is rejected at the model level and partially accepted at the individual variable level.

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CONCLUSION

1- The study concludes that sustainability reporting quality is not only a function of financial accuracy but is also strongly influenced by design elements that enhance readability, emotional engagement, and visual communication. Among these, emotional comfort is the most influential factor in building credibility.

2- The study concludes that transparency in sustainability reporting is significantly enhanced by effective report design. Among the examined factors, visual appeal has the strongest influence, highlighting the importance of visual communication in strengthening transparency perceptions.

3- The study concludes that Kansi's design elements collectively influence stakeholder trust in sustainability reporting through credibility. However, emotional comfort is the most influential factor, followed by visual appeal, while ease of understanding does not independently contribute significantly in the presence of the other variables.

4- The study concludes that Kansi's design elements collectively enhance stakeholder confidence in sustainability reporting through transparency. Among these elements, visual appeal is the most influential factor, followed by emotional comfort, indicating that transparency perception is more strongly driven by visual and emotional dimensions than by cognitive simplicity alone.

RECOMMENDATIONS

1- The study recommends that companies improve the design of sustainability reports by enhancing clarity and ease of understanding, while giving greater attention to visual and cognitive elements that strengthen credibility and stakeholders' trust. It also emphasizes the importance of increasing emotional comfort and reducing complexity in information presentation through modern reporting techniques that support transparency and disclosure quality. Furthermore, it suggests integrating design principles into reporting standards and providing training for report preparers to enhance the effectiveness and reliability of sustainability reporting.

2- The study recommends that organizations enhance sustainability reporting transparency by improving the design quality of reports, particularly through better visual presentation, simplified structure, and increased emotional clarity. It further emphasizes the importance of integrating design principles into reporting frameworks and training report preparers to ensure more transparent, user-friendly, and trustworthy disclosure practices.

3- The study recommends that organizations prioritize emotional and visual aspects when designing sustainability reports, as these factors have the strongest impact on enhancing stakeholder trust. It is also recommended that companies do not rely solely on simplifying information, but instead adopt integrated reporting designs that combine emotional engagement and visual communication. Additionally, training programs should be implemented to improve report designers' capabilities in applying modern communication and design principles to strengthen credibility and improve the decision-usefulness of sustainability disclosures.

4- The study recommends that organizations focus on improving the visual and emotional design of sustainability reports to enhance transparency and stakeholder confidence. Companies should adopt advanced visual communication techniques such as infographics and structured data presentation to strengthen transparency perception. Additionally, report preparers should be trained to integrate cognitive and design-based reporting approaches, ensuring that sustainability disclosures are not only understandable but also visually engaging and emotionally accessible.

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