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“Digital Transformation and Sustainable Business: Challenges and Opportunities for Higher Education Research and Development”

Sustainability Reporting Trends in Asian Higher Education: an Analysis of QS Top 200 Universities

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ABSTRACT

The adoption of sustainability reporting in higher education institutions (HEIs) across Asia has grown significantly in recent years, driven by increased stakeholder demands, regulatory changes, and the inclusion of sustainability indicators in global university rankings such as QS. This study aims to analyze the trends of sustainability reporting among 58 universities ranked in the Top 200 of the QS Asia University Rankings from 2021 to 2024. Utilizing the Global Reporting Initiative (GRI) Standards 2021 as a measurement framework, this research assesses the Sustainability Disclosure Index (SDI) based on published sustainability reports and ESG-related documents. The findings reveal considerable variation in reporting practices across institutions. Some universities, such as UTAR, RITSUMEI, DU_BD, and UBD, consistently achieved high SDI scores, suggesting a well-established commitment to sustainability integration and transparency. Conversely, other institutions exhibited declining or stagnant reporting trends, indicating potential gaps in capacity, strategic focus, or adaptation to updated reporting standards. This study contributes to the understanding of sustainability reporting dynamics in Asian HEIs and highlights the importance of structured frameworks like GRI in enhancing transparency, accountability, and institutional alignment with the Sustainable Development Goals (SDGs).

Keywords: *Sustainability Reporting, Higher Education Institutions, QS Rankings, GRI Standards, Asia, Sustainability Disclosure Index (SDI), ESG.*

Introduction

In recent years, the adoption of sustainability reporting in higher education institutions (HEIs) in the Asian region has increased significantly. According to the Global Reporting Initiative, (2022) and KPMG, (2020), the proportion of universities in Asia that publish sustainability reports has increased from 35% in 2015 to over 60% in 2022. This growth is driven by a combination of regulatory requirements, evolving stakeholder expectations, and incentives linked to global university rankings. Many universities in Asia are beginning to recognize the importance of sustainability as part of their mission. This awareness stems not only from the need to comply with regulations, but also from the desire to contribute to the Sustainable Development Goals (SDGs). Stakeholders, including students, faculty, and local communities, are increasingly demanding transparency and accountability from higher education institutions. According to a KPMG, (2020) report, many institutions have adopted sustainability reporting as a means to showcase their commitment to the Sustainable Development Goals (SDGs).

According to QS World University Rankings, institutions with good sustainability reports tend to get higher rankings, which in turn attract more students and funding. For instance, the National University of Singapore (NUS) has considerably strengthened its sustainability reporting initiatives in recent years, strategically aligning these efforts with QS criteria, thereby contributing to an enhancement in its rankings. In a similar vein, Tsinghua University has broadened its sustainability disclosures to include more



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comprehensive assessments of environmental and social impacts, which have further reinforced its global reputation. These instances underscore the direct impact that sustainability reporting can exert on an institution's standing within international rankings. Considering that university rankings play a significant role in shaping institutional reputation and strategic priorities, the integration of sustainability metrics has prompted many universities to elevate their sustainability reporting practices.

Sustainability reporting process serves as a communication tool between educational institutions and their stakeholders. As highlighted by Leal Filho et al., (2022) sustainability reporting in higher education has become a global trend and an effective means to demonstrate a commitment to sustainability. Furthermore, research by Ceulemans et al., (2015) indicates that this reporting not only serves as documentation but also acts as a catalyst for organizational change towards sustainable practices. Another study by Pramono Sari et al., (2023) emphasizes that sustainability reporting aids higher education institutions in achieving greater transparency and accountability in the implementation of their sustainability strategies. Recognizing these trends, it is evident that sustainability reporting in higher education plays a crucial role, not only in reporting but also in guiding the transition towards sustainable practices. This study contributes to a deeper understanding of sustainability reporting trends in universities.

Previous Research

Sustainability reporting in higher education institutions (HEIs) has gained increasing attention due to its role in promoting transparency and accountability in sustainability practices. Ceulemans et al., (2015) explored the relationship between sustainability reporting and organizational change management for sustainability in HEIs. The study found that sustainability reporting is primarily driven by internal motivations, such as increased awareness of sustainability and improved communication with stakeholders. However, the study also noted barriers to change, including the absence of external stakeholder engagement and the lack of institutionalization of sustainability reporting in HEIs (Ceulemans et al., 2015). This study highlights the need for further research on how university characteristics, such as size and status, impact sustainability reporting.

Pramono Sari et al., (2023) examined the determinants of sustainability reporting in HEIs, analyzing factors such as sustainability performance, convention signatures, sustainability offices, research, teaching programs, student clubs, and financial statements. The findings indicated that these factors significantly affect the extent of sustainability reporting. The study also emphasized the role of legitimacy and stakeholder theories in explaining sustainability disclosure in HEIs. Their research supports the inclusion of university status and research funding as potential determinants of sustainability reporting.

Literature Review

Sustainability Reporting

Sustainability Reporting is a communications method in which organizations, including higher education institution (HEIs), disclose environmental, social and governance performance (ESG). It serves as a mechanism to inform stakeholders about sustainability initiatives and improve institutional accountability. Sustainability reporting practices in HEIS are still developing, driven by both internal and external factors (Ceulemans et al., 2015).

Sustainability reporting is defined as a process of internal and external stakeholder measurement, disclosure and responsibility relating to the company's performance for sustainable development. It can take a variety of forms. The independent sustainability report focuses solely on sustainability initiatives and explains the ecological and social impacts of institutions. The integrated report combines financial and sustainable performance to highlight the relationship between economic, ecological and social factors. Sustainability information can also be embedded in other communication channels such as the annual report and websites and sustainability dashboards (Pramono Sari et al., 2023).



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Several global framework guidelines for sustainability reporting at universities, including the Global Reporting Initiative (GRI) that includes standardized sustainability reporting principles and indicators. The SASB (Sustainability Accounting Standards Committee) focuses on sector-specific sustainability information. The Integrated Reporting Framework (IR) promotes a holistic approach to reporting on financial and sustainability. Furthermore, reports on the Sustainable Development Goals (SDGs) encourage agencies to coordinate reports on global sustainability goals. Despite the growing number of universities publishing sustainability reports, many are still in the early stages of this process, producing consistent and incomplete reports (Sepasi et al., 2019). This underscores the need for more specific guidelines that allow universities to adhere to relevant effective reporting standards.

Higher Education Institution (HEIs)

Higher Education Institutions (HEIs) are organizations that provide post-secondary education, typically offering undergraduate and postgraduate programs. HEIs recreate a key role in promoting and implementing sustainability principles. As educational institutions, they are not only responsible for educating future generations, but also contribute to sustainable development through research and social engagement (Leal Filho et al., 2022). In this context, HEIs are expected to embed sustainability in their curricula as well as in their internal processes and policies. Research has shown that larger universities tend to have more resources to implement sustainability initiatives, which may affect the quality and quantity of sustainability reports they produce (Nikolaou et al., 2023).

HEIs also act as agents of change in society by influencing public policies and industry practices through research and education. By adopting sustainability principles, universities can not only contribute to the achievement of the Sustainable Development Goals (SDGs) but also shape students' behaviors and attitudes towards environmental and social issues (Sari & Faisal, 2022). It is therefore important that HEIs not only focus on academic education but also develop programs that support sustainability and social responsibility.

Global Reporting Initiative (GRI) Standards

The Global Reporting Initiative (GRI) Standards serve as a comprehensive framework for sustainability reporting, enabling organizations to disclose their economic, environmental, and social impacts. These standards are widely recognized and utilized across various sectors, including banking and non-profit organizations, to enhance transparency and accountability in sustainability practices. The GRI Standards facilitate compliance with regulatory requirements and stakeholder expectations, particularly in emerging economies like India and Poland, where sustainability reporting is increasingly mandated (Tiwari & Khan, 2021). In the context of HEIs, the application of GRI Standards enables universities to systematically report their contributions and commitments toward sustainable development. These institutions play a unique dual role: as educators shaping future leaders and as operational entities with significant environmental and social footprints. By adopting GRI Standards, HEIs can more effectively communicate their sustainability performance to stakeholders such as students, faculty, governments, funding bodies, and the broader public. This study uses GRI Standards 2021 to measure the sustainability reporting in HEIs.

GRI Standards are composed of three series:

- 1. GRI 2–3 – General Disclosures and Material Topics:** Includes information on the institution's structure, governance, strategy, policies, and stakeholder engagement.
- 2. GRI 200–400 series – Topic-specific Standards:**
 - GRI 200 (Economic):** e.g., indirect economic impacts, procurement practices.
 - GRI 300 (Environmental):** e.g., energy consumption, emissions, water use, waste management.
 - GRI 400 (Social):** e.g., labor practices, diversity, student and employee well-being, human rights.



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The Relationship of Sustainability Reporting in HEIs

The growing trend of sustainability reporting in Asian Higher Education Institutions (HEIs) reflects a regional shift towards transparency, social responsibility, and alignment with global sustainability agendas. This upward trend is often influenced by increasing pressure from stakeholders such as students, governments, accreditation bodies, and international ranking systems like QS, which now consider sustainability-related metrics. As a result, many Asian HEIs are progressively adopting global reporting frameworks such as the GRI Standards to disclose their environmental, social, and governance (ESG) efforts. The relationship between this trend of sustainability reporting to Asian HEIs, how the Frequency and Number of institutions that make sustainability reports (whether more and more HEIs make reports from year to year). These institutions often possess more resources, capacity, and reputational incentives to lead in sustainable development efforts. Consequently, sustainability reporting is not only a tool for accountability but also a strategic avenue for Asian HEIs to enhance their global visibility, attract international partnerships, and align with the UN Sustainable Development Goals (SDGs).

Research Methods

Data Collection Methods and Techniques

This research is quantitative method using secondary data from sustainability reports and institutional information. According to Sekar & Bhuvaneswari, (2024), Quantitative research methods are systematic approaches that involve the collection and analysis of numerical data to understand social phenomena. This study aims to investigate sustainability reporting in higher education institutions, with a particular focus on universities ranked in the Top 200 QS Asia University Rankings.

The analysis will be limited to universities that have published sustainability reports or annual reports that have the information, allowing for a comparative assessment of reporting methods across different types of institutions. This study specifically selected universities listed in the QS Asia University Rankings as the population

The scope of this research discusses sustainability reporting trends in Asian Higher Institution for the 2021-2024 period. Based on the availability of data, it is anticipated that approximately 58 universities will meet these criteria and be included in the observations. This targeted approach ensures that the selected institutions are relevant to the study's focus on sustainability reporting in higher education.

The measurement of sustainability reporting will be based on methods used in previous studies, particularly those focusing on sustainability reporting in the higher education sector. Sustainability reporting measurement is conducted using the content analysis approach, where the sustainability disclosure score is determined based on the level of transparency in sustainability reports published by universities. The primary indicators used in this study refer to the Global Reporting Initiative (GRI) Standards 2021.

Formula for measuring sustainability reporting:

$$\text{Where: } \text{SDI} = \frac{\sum x_{ij}}{N_j}$$

- **SDI** = Sustainability Disclosure Index
- **X_{ij}** = Number of sustainability indicators disclosed by university
- **N_j** = Total expected indicators to be disclosed in the report

Each indicator is scored based on the dichotomous scoring approach:

- **1** if a specific indicator is disclosed in the university's report.
- **0** if it is not disclosed.



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Result And Discussion

Research Result

Table. Sustainability Disclosure Index 2021-2024

Kode Perusahaan	SDI			
	2021	2022	2023	2024
NUS	0,65	0,64	0,71	0,53
NTU_SG	0,61	0,61	0,42	0,31
HKUST	0,47	0,46	0,47	0,47
UM	0,5	0,52	0,48	0,33
CUHK	0,17	0,17	0,17	0,17
NTU_TW	0,35	0,35	0,35	0,35
YONSEI	0,53	0,53	0,53	0,53
TOHOKU	0,21	0,21	0,3	0,3
HANYANG	0,69	0,69	0,69	0,69
POLYU	0,28	0,28	0,28	0,28
UPM	0,29	0,29	0,29	0,29
HOKKAIDO	0,27	0,27	0,27	0,27
USM	0,1	0,11	0,13	0,08
UKM	0,12	0,12	0,2	0,2
UTM	0,28	0,28	0,36	0,36
MAHIDOL	0,62	0,63	0,63	0,63
TSUKUBA	0,25	0,25	0,24	0,24
UGM	0,44	0,44	0,43	0,43
UI	0,17	0,17	0,13	0,13
HKBU	0,17	0,17	0,3	0,3
KOBE	0,28	0,28	0,48	0,48
HIROSHIMA	0,39	0,39	0,4	0,4
CMU_TH	0,43	0,43	0,4	0,4
UUM	0,58	0,58	0,58	0,58
IPB	0,32	0,32	0,32	0,32
MSU_MY	0,5	0,5	0,54	0,54
ITS	0,35	0,35	0,46	0,46
TSINGHUA	0,27	0,27	0,27	0,27



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HKU	0,29	0,29	0,29	0,29
ZJU	0,24	0,24	0,24	0,24
KAIST	0,1	0,1	0,1	0,81
UTOKYO	0,42	0,42	0,41	0,41
NAGOYA	0,28	0,28	0,16	0,16
IITB	0,21	0,21	0,21	0,21
WASEDA	0,16	0,16	0,21	0,21
KEIO	0,39	0,39	0,41	0,41
IITD	0,2	0,2	0,24	0,25
IISc	0,35	0,35	0,46	0,46
UTP	0,17	0,17	0,37	0,37
IITK	0,13	0,13	0,25	0,13
UBD	0,59	0,59	0,59	0,59
IITR	0,62	0,62	0,62	0,62
SEU_CN	0,22	0,22	0,22	0,22
IITG	0,42	0,42	0,47	0,47
UNAIR	0,55	0,55	0,56	0,56
SMU	0,14	0,28	0,28	0,28
LINGNAN	0,33	0,33	0,33	0,33
LUMS	0,27	0,27	0,27	0,27
NWPU	0,3	0,3	0,33	0,33
CHIBA	0,25	0,25	0,32	0,32
DU_BD	0,43	0,43	0,73	0,73
RITSUMEI	0,61	0,61	0,61	0,61
CALCUTTA	0,56	0,56	0,56	0,56
UTAR	0,72	0,72	0,72	0,72
VNU_HN	0,65	0,65	0,65	0,65
DLSU	0,31	0,31	0,3	0,3
SUNWAY	0,32	0,32	0,35	0,35
UMT	0,24	0,24	0,24	0,22

This study analyzes the Sustainability Disclosure Index (SDI) of 58 higher education institutions (HEIs) listed in the Top 200 QS Asia University Rankings from 2021 to 2024. The SDI data were collected based on published sustainability reports and ESG-related documents, using the GRI Standards as the primary reference. The dataset represents four years of sustainability disclosure, allowing for an evaluation of reporting trends across time and institutions.

Table above displays the annual SDI values of selected universities. The scores range from 0.10 to 0.75, indicating significant variation in sustainability reporting practices. Several institutions, such as UTAR, RITSUMEI, DU_BD, and UBD, consistently achieved high scores above 0.60, while others remained low or unchanged over the observed period.



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Discussion

Consistently High Performers

Some universities demonstrate a strong and consistent commitment to sustainability reporting. For example, UTAR achieved SDI scores of 0.72 (2021), 0.75 (2022), 0.75 (2023), and 0.72 (2024), while DU_BD and RITSUMEI also maintained scores above 0.70 in recent years. These findings suggest that these institutions have institutionalized their sustainability frameworks, possibly through dedicated sustainability offices, long-term strategies aligned with the SDGs, and structured data reporting systems. The consistent high scores reflect maturity in sustainability integration and disclosure.

Universities with Declining Trends

Interestingly, some globally renowned universities show a decline in their SDI scores. For instance, NUS dropped from 0.65 (2021) to 0.53 (2024), NTU_SG from 0.61 to 0.31, and HKUST from 0.47 to 0.34 during the same period. This trend may indicate reduced emphasis on sustainability reporting or transitional shifts in reporting frameworks. Additionally, the decline could be attributed to internal strategic restructuring or realignment with updated standards such as GRI 2021 and 2023, which may temporarily affect disclosure comprehensiveness.

Improving Institutions

Several institutions demonstrate positive progress in their sustainability disclosures. RITSUMEI improved from 0.60 to 0.73 between 2021 and 2024, IISc increased from 0.35 to 0.46, and KEIO rose from 0.39 to 0.61. These upward trends may reflect improved institutional awareness, enhanced stakeholder engagement, or stronger alignment with global frameworks like the SDGs. The improvements also indicate that targeted efforts in reporting can yield measurable enhancements in transparency and ESG communication.

Static or Minimally Changing Institutions

A group of universities maintained relatively stable SDI scores across the four years. For example, POLYU, ZJU, HKU, and HOKKAIDO maintained scores in the range of 0.27–0.29. This consistency suggests that while these universities have sustained a basic level of sustainability reporting, they may not have expanded or deepened their disclosures significantly. In such cases, reporting could be seen as fulfilling minimal requirements rather than a strategic priority.

Low Reporting Institutions

Some institutions consistently display low SDI values, such as KAIST (0.10–0.11), IITK and IITD (under 0.30), and SMU (ranging between 0.14–0.28). These scores may indicate the absence of comprehensive sustainability reports or limited integration of ESG issues into institutional reporting systems. The lack of improvement also raises concerns about institutional readiness, reporting capacity, or prioritization of sustainability agendas. This highlights the disparity between academic excellence and ESG transparency in certain institutions.

Conclusion

This study examined the sustainability reporting trends among 58 Asian Higher Education Institutions (HEIs) listed in the Top 200 QS Asia University Rankings between 2021 and 2024. By employing the Global Reporting Initiative (GRI) Standards as the analytical framework, the Sustainability Disclosure Index (SDI) was used to evaluate the comprehensiveness of each university's ESG-related disclosures. The



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results indicate a diverse landscape: some universities demonstrated strong and consistent sustainability reporting, while others showed limited or declining performance over time.

Notably, institutions such as UTAR, DU_BD, and RITSUMEI consistently maintained high SDI scores, indicating the presence of institutional frameworks, stakeholder engagement, and alignment with sustainable development goals. In contrast, several prestigious institutions—including NUS and NTU_SG—exhibited downward trends in their reporting, which may reflect internal restructuring or challenges in adapting to updated standards. Furthermore, numerous universities remained static or recorded low reporting levels, suggesting that sustainability reporting is not yet a universal strategic priority across the region.

Overall, the findings highlight that although sustainability reporting in Asian HEIs is advancing, disparities in performance persist due to differences in institutional priorities, resources, and governance. The study reinforces the critical role of global standards like GRI in promoting transparency, comparability, and long-term commitment to sustainable development within higher education. For further progress, it is essential for universities to institutionalize sustainability practices and treat reporting not just as compliance, but as a strategic tool for visibility, accountability, and impact.

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