

# GEOGRAPHICAL AND ECONOMIC DRIVERS OF GLOBAL UNIVERSITY ESG SCORES

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UDC: 33:378:911:502/504  
DOI: <https://doi.org/10.15291/cores.4846>  
CoReS 1, 1 (2025): 26-49  
Original Scientific Paper  
Submission received: 21 June 2025  
Revised: 8 December 2025  
Accepted: 14 December 2025  
Published: 16 July 2026

## ABSTRACT

**Purpose:** This study investigates the geographical and economic drivers shaping global university Environmental, Social, and Governance (ESG) performance.

**Approach/methodology/design:** Utilizing a comparative exploratory design, the research analyzes composite scores from the QS Sustainability ranking across diverse economic contexts by adapting a standardized ESG classification framework from the Refinitiv Eikon database alongside comparative descriptive statistics to effectively address sample heterogeneity and regional structural disparities.

**Findings:** The findings reveal that while higher education institutions in Advanced Economies consistently lead in Social and Governance dimensions, Environmental Research represents a universal strength across all economic tiers, including Emerging Market Economies. Conversely, campus operational sustainability and environmental education lag globally, uncovering a key disconnect between academic climate expertise and internal operational execution.

## KEYWORDS:

ESG scores, Higher Education Institutions, macroeconomic drivers, QS rankings, university sustainability

## AUTHOR'S NOTE:

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

**Acknowledgements:** The author of this study wishes to express his gratefulness to Quacquarelli Symonds Limited for its authorization for the utilization of the QS World University Rankings: The 2025 Sustainability Database which is a compendium of relevant data, indispensable for the realization of this scientific paper.

**Data Availability:** Data are available from the corresponding author upon reasonable request.

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**Research limitations/implications:** An acknowledged limitation of this research is its reliance on a single ranking system and descriptive methodology, which precludes establishing direct causal mechanisms.

**Practical implications:** Practically, these findings provide university administrators with a clear benchmarking tool to reallocate strategic resources from purely academic output toward campus decarbonization and comprehensive curriculum integration.

**Social implications:** Socially, the study emphasizes the urgent need for international rating agencies to develop context-specific metrics that account for national economic disparities, ensuring that localized sustainability efforts in developing regions are fairly evaluated against global standards.

**Originality/value:** The originality of this work lies in pioneering the application of corporate ESG classification models to higher education rankings, establishing a novel macro-level framework to map global sustainability performance across diverse socio-economic landscapes.

## 1 INTRODUCTION

The sustainable development of the global economy and society is increasingly dependent on the implementation of environmental, social, and governance (ESG) principles. While ESG factors have traditionally been analysed through the prism of corporate performance and investor relations (Fleming et al., 2013; Mardini, 2022), their relevance has expanded significantly into the higher education sector. Universities, as institutions responsible for the creation and dissemination of knowledge, are increasingly expected to align their operations with the efforts to combat climate change and with the broader Sustainable Development Goals (SDGs). Consequently, measuring and reporting levels of commitment to sustainability has become imperative for higher education institutions worldwide.

Despite the growing importance of university sustainability, the existing literature has predominantly focused on specific geographical areas or individual case studies. For example, recent studies have examined emergent ESG reporting in Chinese higher education institutions (Mo et al., 2023), the relevance of ESG education in Kazakhstani graduate programmes (Nurillayev, 2025), and the integration of the SDGs into the strategies of Spanish universities (Blasco et al., 2020). Other research has explored the conditions for integrating the ESG agenda into Russian educational activities (Akopyants et al., 2024) and the inclusion of ESG issues in the strategic plans of Italian public universities (Garlatti et al., 2025). Although these studies provide valuable insights, there remains a significant gap in understanding how university ESG performance varies on a global scale and which macro level factors drive these differences.

To address this gap, this study conducts a comprehensive global analysis of university sustainability scores, examining how geographical location and levels of economic development influence ESG performance. Specifically, it draws on the QS World University Rankings: Sustainability 2025 database, covering a sample of 1,735 universities from 104 countries across five continents. By categorising these countries according to the International Monetary Fund's (IMF) classification system advanced economies, emerging market economies, and low-income developing countries this study aims to provide a nuanced comparative perspective

that goes beyond descriptive benchmarking.

The primary objective of this study is to identify the geographical and economic drivers of global university ESG scores. To achieve this, the research is guided by the following specific research questions:

1. How do university ESG scores (overall, social, governance, and environmental) differ across continents?
2. To what extent does the economic development level of a country (advanced, emerging, or low-income) influence the ESG performance of its universities?
3. Which specific ESG dimensions (e.g., Environmental Research, Governance) demonstrate the strongest performance across different economic and geographical contexts?

By addressing these questions, this study makes a twofold contribution to the literature. Empirically, it provides the first global mapping of university ESG scores categorised by IMF economic groupings, offering a robust comparative analysis of 1,735 institutions. Theoretically and practically, it moves beyond descriptive statistics to highlight how macro-economic contexts shape sustainability priorities in higher education, offering valuable insights for policymakers, university managers, and stakeholders involved in designing sustainability metrics and strategic planning.

## **2 LITERATURE REVIEW: UNIVERSITY SUSTAINABILITY SCORE**

The integration of ESG principles into higher education has received increasing academic attention, reflecting a shift from corporate-centric ESG research to a broader institutional focus. The literature on university sustainability can be broadly categorised into three main streams: the integration of ESG into educational and strategic frameworks, the role of collaboration and internationalisation, and the assessment of university sustainability through rankings and scores.

A significant portion of the literature emphasises the need to embed ESG principles into the core activities of universities. Akopyants et al. (2024)

highlight the specific conditions necessary for integrating the ESG agenda into the educational activities of Russian higher education institutions, stressing the importance of a holistic approach to all ESG criteria. Similarly, Verna et al. (2025) advocate the establishment of an “ESG culture” within higher education through an interdisciplinary approach that encompasses all educational processes. However, the practical implementation of these principles often reveals imbalances. Garlatti et al. (2025), in their analysis of the strategic plans of Italian public universities, found that institutions predominantly incorporate social performance measures while frequently omitting environmental and governance dimensions. This suggests that public management policies and pre-existing institutional agreements heavily mediate the extent of sustainability integration. To address such gaps, targeted educational initiatives are crucial. Chan et al. (2022) discuss the importance of professional training programmes on carbon emission reduction and C-ESG sustainable development strategies, while Sung et al. (2024) demonstrate that environmental and governance domains are of primary importance in the educational demand for ESG awareness among university faculty.

The achievement of ESG goals in universities is closely linked to external collaborations and institutional visibility. Puzzonia (2018) argues for the need for collaboration between universities, businesses, and public entities to promote innovation and local development, noting that technological evolution means companies to increasingly source R&D from universities. Furthermore, internationalisation plays a critical role in advancing a university’s sustainability agenda. Scott et al. (2006) and Gallego-Álvarez et al. (2011) regard internationalisation as essential for improving institutional image, requiring structural and cultural adaptations that make universities more visible and attractive to foreign students. Wright (2009) adds that universities attractive to international students often possess advanced structural organizations that positively affect their contribution to the SDGs. Financial resources also shape sustainability commitment. Blasco et al. (2020) found that Spanish universities receiving greater regional funding for sustainability goals demonstrate a stronger commitment to achieving the SDGs.

As universities recognize their global responsibility, the development of robust assessment systems has become imperative. Fabio et al. (2023)

conducted a content analysis of university sustainability reports, revealing how the perception and disclosure of ESG criteria affect university performance. To standardise these assessments, researchers increasingly rely on established rankings and databases. While corporate ESG studies frequently use databases such as Refinitiv (Duque-Grisales & Aguilera-Caracuel, 2021; Bodhanwala & Bodhanwala, 2022; Giannopoulos et al., 2022; Teti et al., 2023; Tong et al., 2024; Glova et al., 2025), university focused research has turned to specialised academic rankings. Blasco et al. (2020) and Pérez-Esparrells et al. (2018) used the Times Higher Education Impact Rankings. More recently, Zhutiaeva et al. (2023) provided a systematic overview of ESG ratings, proposing classifications to help universities integrate sustainable development principles more effectively. Despite these advances, existing studies have largely evaluated ESG scores within limited regional contexts or without accounting for the broader macroeconomic environment. This study addresses this limitation by employing the QS World University Rankings: Sustainability 2025 metric to evaluate ESG performance globally, and uniquely categorising institutions by IMF economic groupings to provide a comprehensive understanding of how geographical and economic drivers shape university sustainability.

### **3 SAMPLE AND METHODOLOGY**

This section outlines the data collection process, sample characteristics, and the analytical framework used in this study. The methodology is designed to provide a comprehensive, exploratory comparative analysis of university sustainability scores across different geographical and economic contexts.

#### **3.1 DATA SOURCES AND DATA HANDLING**

To ensure a robust global analysis, this study integrates data from three primary sources: the QS World University Rankings: Sustainability 2025, the International Monetary Fund (IMF) World Economic Outlook database (October 2024), and the Refinitiv ESG scoring framework. The data

collection and preparation process followed a systematic, step-by-step approach:

**Initial data extraction:** The initial dataset was extracted from the QS World University Rankings: Sustainability 2025, which evaluates universities based on their environmental, social, and governance (ESG) commitments.

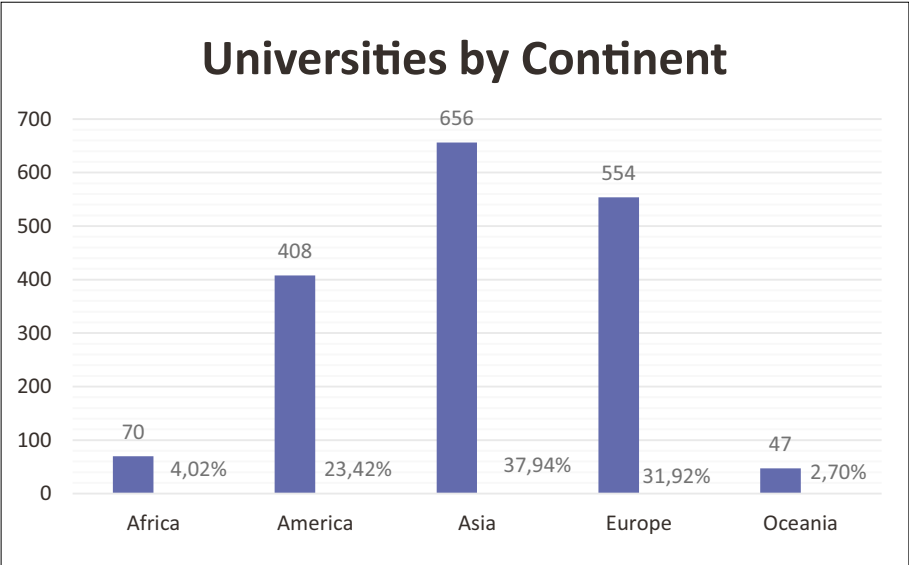
**Data cleaning and inclusion criteria:** To ensure comparability, only universities with complete data across all primary ESG dimensions (Social, Governance, Environmental, Environmental Sustainability, Environmental Education, and Environmental Research) were included. Institutions with missing values in any of these core metrics were excluded from the final sample.

**Economic classification matching:** Each university was mapped to its respective country. These countries were then cross-referenced with the IMF database to assign an economic grouping. Countries for which IMF economic classification data were unavailable (e.g., Cuba, Dominican Republic, Palestine, Syrian Arab Republic) were retained in the geographical analysis but excluded from the specific economic grouping comparisons.

### 3.2 SAMPLE CHARACTERISTICS

Following the data handling procedures, the final sample comprises of 1,735 universities from 104 countries across five continents. As shown in Graph 1, Asia has the highest representation, with 656 universities (37.94% of the total). Europe follows with 554 universities (31.92%), and the Americas with 408 universities (23.42%). Africa and Oceania have smaller representations, with 70 (4.02%) and 47 (2.70%) universities, respectively. Therefore, the continents with the highest concentration of universities in the sample are Asia, Europe and America.

In line with the object of study, a more detailed classification is presented to enable a comprehensive analysis of universities worldwide. The sample is therefore classified by continent, country, and Economy Groupings, in accordance with the International Monetary Fund's classification of countries by income level. Table 1 shows sample classification that differs from previous evidence in this type of study. According to the Inter-



**GRAPH. 1** Sampling distribution across universities by continent (Source: Own elaboration based on QS World University Rankings: Sustainability 2025)

national Monetary Fund (October 2024), the classification of universities' countries' economies is as follows: advanced economies, emerging market economies, and low-income developing countries.

Table 1 is divided into different panels for the classification and study of the sample. Thus, Panel A presents 70 universities from 14 countries across the African continent, comprising the following countries: Algeria, Botswana, Egypt, Ethiopia, Ghana, Kenya, Morocco, Nigeria, Senegal, South Africa, Tanzania, Tunisia, Uganda, and Zimbabwe. Within this group of countries, Egypt stands out with 26 universities (37.14%) and South Africa with 13 universities (18.57%). Regarding classification by Economy Groupings, there are no universities in advanced economies, while 78.57% (55 universities on this economic group) correspond to universities in emerging market countries, and 21.43% are universities in low-income developing countries. Consequently, the present analysis indicates that a significant proportion of universities in Africa are located in nations that are classified as emerging markets and low-income developing countries.

Panel B presents 408 universities from 19 countries across the Ameri-

can continent,: Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Ecuador, the Dominican Republic, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Puerto Rico, the United States, Uruguay, and Venezuela. Within this group of countries, the United States stands out with 238 universities (58.33%) and Brazil with 42 universities (10.29%). This ranking shows a significant difference in the number of universities between the first and second countries. By economic group, 66.42% of universities are in advanced economies (271 in Canada, Puerto Rico and the United States), while 32.84% (134 universities on this economic group) correspond to universities in countries with emerging markets, and 0.25% are located in low-income developing countries. Therefore, most universities are concentrated in countries with advanced economies and emerging markets. There are two countries, Cuba and the Dominican Republic, for which this economic information is not available.

Panel C presents 656 universities from 37 economies across Asia, comprising the following countries: Azerbaijan, Bahrain, Bangladesh, Brunei Darussalam, China (Mainland), Cyprus, Hong Kong SAR China, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Macao SAR China, Malaysia, Nepal, Oman, Pakistan, Palestine, Philippines, Qatar, Republic of Korea, Saudi Arabia, Singapore, Sri Lanka, Syrian Arab Republic, Taiwan, Thailand, Türkiye, United Arab Emirates, Uzbekistan and Viet Nam. In this group of countries, China<sup>2</sup> stands out with 114 universities (17.38%) and India with 78 universities (11.89%). This ranking shows a significant difference because the number of universities is more evenly distributed across countries. In terms of classification by economic group, 23.48% of universities are in advanced economies (154 universities in this economic group), while 72.10% (473 universities in this economic group) correspond to universities in countries with emerging markets. A further 3.66% of universities are in low-income developing countries. Therefore, most universities are concentrated in countries with emerging markets. There are two countries, Palestine and the Syrian Arab Republic, for which this economic information is not available.

<sup>2</sup> The author respects the analysis carried out in a differentiated way on the Asian continent by the QS World University Rankings database of China, where Hong Kong SAR China and Macao SAR China are part of China.

Panel D presents 554 universities from 33 countries in Europe, comprising the following countries: Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine and the United Kingdom. Within this group of countries, the United Kingdom stands out with 96 universities (17.33%) and France with 60 universities (10.83%). This ranking shows a significant difference in the number of universities between the first and second countries. In terms of classification by economic group, 82.49% of universities are in advanced economies (457 universities in this economic group), while 17.51% (97 universities in this economic group) are in countries with emerging markets, and 0.00% are in low-income developing countries. Therefore, most universities are concentrated in countries with advanced economies and emerging markets. There are no countries for which economic information is not available.

Panel E presents 47 universities from three countries in Oceania: Australia, Fiji and New Zealand. Within this group of countries, Australia stands out with 38 universities (80.85%) followed by New Zealand with 8 universities (17.02%). Regarding classification by Economy Groupings, there are universities in advanced economies 97.87% (46 universities in Australia and New Zealand), while 2.13% (1 university in Fiji on this economic group) is in an emerging market country. There are no universities in low-income developing countries (0.00%). Therefore, most universities are concentrated in countries with advanced economies.

**TABLE 1** Sample distribution across continents, countries, universities and Economy Groupings.

**Panel A Continent in the Sample: Africa**

| Country  | Universities | %      | AE | % | EME | %   | LIDE | %   | n/d | % |
|----------|--------------|--------|----|---|-----|-----|------|-----|-----|---|
| Algeria  | 2            | 2.86%  |    |   | 2   | 4%  |      |     |     |   |
| Botswana | 1            | 1.43%  |    |   | 1   | 2%  |      |     |     |   |
| Egypt    | 26           | 37.14% |    |   | 26  | 47% |      |     |     |   |
| Ethiopia | 1            | 1.43%  |    |   |     |     | 1    | 7%  |     |   |
| Ghana    | 4            | 5.71%  |    |   |     |     | 4    | 27% |     |   |
| Kenya    | 1            | 1.43%  |    |   |     |     | 1    | 7%  |     |   |

| Country      | Universities | %      | AE | % | EME | %   | LIDE | %    | n/d | %  |
|--------------|--------------|--------|----|---|-----|-----|------|------|-----|----|
| Morocco      | 6            | 8.57%  |    |   | 6   | 11% |      |      |     |    |
| Nigeria      | 5            | 7.14%  |    |   |     |     | 5    | 33%  |     |    |
| Senegal      | 1            | 1.43%  |    |   |     |     | 1    | 7%   |     |    |
| South Africa | 13           | 18.57% |    |   | 13  | 24% |      |      |     |    |
| Tanzania     | 1            | 1.43%  |    |   |     |     | 1    | 7%   |     |    |
| Tunisia      | 7            | 10.00% |    |   | 7   | 13% |      |      |     |    |
| Uganda       | 1            | 1.43%  |    |   |     |     | 1    | 7%   |     |    |
| Zimbabwe     | 1            | 1.43%  |    |   |     |     | 1    | 7%   |     |    |
| Total        | 70           | 100%   |    |   | 55  |     | 15   | 100% | 0   | 0% |

**Panel B Continent in the Sample: America**

| Country            | Universities | %      | AE  | %     | EME | %   | LIDC | % | n/d | %   |
|--------------------|--------------|--------|-----|-------|-----|-----|------|---|-----|-----|
| Argentina          | 11           | 2.70%  |     |       | 11  | 8%  |      |   |     |     |
| Brazil             | 42           | 10.29% |     |       | 42  | 31% |      |   |     |     |
| Canada             | 32           | 7.84%  | 32  | 12%   |     |     |      |   |     |     |
| Chile              | 21           | 5.15%  |     |       | 21  | 16% |      |   |     |     |
| Colombia           | 14           | 3.43%  |     |       | 14  | 10% |      |   |     |     |
| Costa Rica         | 1            | 0.25%  |     |       | 1   | 1%  |      |   |     |     |
| Cuba               | 1            | 0.25%  |     |       |     |     |      |   | 1   | 50% |
| Ecuador            | 9            | 2.21%  |     |       | 9   | 7%  |      |   |     |     |
| Dominican Republic | 1            | 0.25%  |     |       |     |     |      |   | 1   | 50% |
| Honduras           | 1            | 0.25%  |     |       |     |     |      |   |     |     |
| Jamaica            | 1            | 0.25%  |     |       | 1   | 1%  |      |   |     |     |
| Mexico             | 19           | 4.66%  |     |       | 19  | 14% |      |   |     |     |
| Panama             | 2            | 0.49%  |     |       | 2   | 1%  |      |   |     |     |
| Paraguay           | 1            | 0.25%  |     |       | 1   | 1%  |      |   |     |     |
| Peru               | 10           | 2.45%  |     |       | 10  | 7%  |      |   |     |     |
| Puerto Rico        | 1            | 0.25%  | 1   | 0.37% |     |     |      |   |     |     |
| United States      | 238          | 58.33% | 238 | 88%   |     |     |      |   |     |     |

| Country      | Universities | %           | AE         | %           | EME        | %           | LIDC     | %           | n/d      | %           |
|--------------|--------------|-------------|------------|-------------|------------|-------------|----------|-------------|----------|-------------|
| Uruguay      | 1            | 0.25%       |            |             | 1          | 1%          |          |             |          |             |
| Venezuela    | 2            | 0.49%       |            |             | 2          | 1%          |          |             |          |             |
| <b>Total</b> | <b>408</b>   | <b>100%</b> | <b>271</b> | <b>100%</b> | <b>134</b> | <b>100%</b> | <b>1</b> | <b>100%</b> | <b>2</b> | <b>100%</b> |

**Panel C Continent in the Sample: Asia**

| Country                    | Universities | %      | AE | %   | EME | %   | LIDE | %     | n/d | % |
|----------------------------|--------------|--------|----|-----|-----|-----|------|-------|-----|---|
| Azerbaijan                 | 7            | 1.07%  |    |     | 7   | 1%  |      |       |     |   |
| Bahrain                    | 3            | 0.46%  |    |     | 3   | 1%  |      |       |     |   |
| Bangladesh                 | 15           | 2.29%  |    |     |     |     | 15   | 1.00% |     |   |
| Brunei Darussalam          | 2            | 0.30%  |    |     | 2   | 0%  |      |       |     |   |
| China (Mainland)           | 114          | 17.38% |    |     | 114 | 24% |      |       |     |   |
| Cyprus                     | 3            | 0.46%  | 3  | 2%  |     |     |      |       |     |   |
| Hong Kong SAR. China       | 9            | 1.37%  | 9  | 6%  |     |     |      |       |     |   |
| India                      | 78           | 11.89% |    |     | 78  | 16% |      |       |     |   |
| Indonesia                  | 34           | 5.18%  |    |     | 34  | 7%  |      |       |     |   |
| Iran (Islamic Republic of) | 15           | 2.29%  |    |     | 15  | 3%  |      |       |     |   |
| Iraq                       | 8            | 1.22%  |    |     | 8   | 2%  |      |       |     |   |
| Israel                     | 7            | 1.07%  | 7  | 5%  |     |     |      |       |     |   |
| Japan                      | 44           | 6.71%  | 44 | 29% |     |     |      |       |     |   |
| Jordan                     | 11           | 1.68%  |    |     | 11  | 2%  |      |       |     |   |
| Kazakhstan                 | 17           | 2.59%  |    |     | 17  | 4%  |      |       |     |   |
| Kuwait                     | 3            | 0.46%  |    |     | 3   | 1%  |      |       |     |   |
| Kyrgyzstan                 | 1            | 0.15%  |    |     |     |     | 1    | 4%    |     |   |
| Lebanon                    | 7            | 1.07%  |    |     | 7   | 1%  |      |       |     |   |
| Macao SAR. China           | 2            | 0.30%  | 2  | 1%  |     |     |      |       |     |   |
| Malaysia                   | 29           | 4.42%  |    |     | 29  | 6%  |      |       |     |   |
| Nepal                      | 1            | 0.15%  |    |     |     |     | 1    | 4%    |     |   |
| Oman                       | 3            | 0.46%  |    |     | 3   | 1%  |      |       |     |   |

| Country              | Universities | %           | AE         | %           | EME        | %           | LIDE      | %          | n/d      | %           |
|----------------------|--------------|-------------|------------|-------------|------------|-------------|-----------|------------|----------|-------------|
| Pakistan             | 29           | 4.42%       |            |             | 29         | 6%          |           |            |          |             |
| Palestine            | 4            | 0.61%       |            |             |            |             |           |            | 4        | 80%         |
| Philippines          | 5            | 0.76%       |            |             | 5          | 1%          |           |            |          |             |
| Qatar                | 2            | 0.30%       |            |             | 2          | 0%          |           |            |          |             |
| Republic of Korea    | 45           | 6.86%       | 45         | 29%         |            |             |           |            |          |             |
| Saudi Arabia         | 28           | 4.27%       |            |             | 28         | 6%          |           |            |          |             |
| Singapore            | 4            | 0.61%       | 4          | 3%          |            |             |           |            |          |             |
| Sri Lanka            | 4            | 0.61%       |            |             | 4          | 1%          |           |            |          |             |
| Syrian Arab Republic | 1            | 0.15%       |            |             |            |             |           |            | 1        | 20%         |
| Taiwan               | 40           | 6.10%       | 40         | 26%         |            |             |           |            |          |             |
| Thailand             | 18           | 2.74%       |            |             | 18         | 4%          |           |            |          |             |
| Türkiye              | 36           | 5.49%       |            |             | 36         | 8%          |           |            |          |             |
| United Arab Emirates | 10           | 1.52%       |            |             | 10         | 2%          |           |            |          |             |
| Uzbekistan           | 7            | 1.07%       |            |             |            |             | 7         | 29%        |          |             |
| Viet Nam             | 10           | 1.52%       |            |             | 10         | 2%          |           |            |          |             |
| <b>Total</b>         | <b>656</b>   | <b>100%</b> | <b>154</b> | <b>100%</b> | <b>473</b> | <b>100%</b> | <b>24</b> | <b>38%</b> | <b>5</b> | <b>100%</b> |

**Panel D Continent in the Sample: Europe**

| Country  | Universities | %      | AE | %   | EME | %  | LIDC | % | n/d | % |
|----------|--------------|--------|----|-----|-----|----|------|---|-----|---|
| Austria  | 12           | 2.17%  | 12 | 3%  |     |    |      |   |     |   |
| Belgium  | 10           | 1.81%  | 10 | 2%  |     |    |      |   |     |   |
| Bulgaria | 2            | 0.36%  |    |     | 2   | 2% |      |   |     |   |
| Croatia  | 3            | 0.54%  | 3  | 1%  |     |    |      |   |     |   |
| Czechia  | 12           | 2.17%  | 12 | 3%  |     |    |      |   |     |   |
| Denmark  | 6            | 1.08%  | 6  | 1%  |     |    |      |   |     |   |
| Estonia  | 4            | 0.72%  | 4  | 1%  |     |    |      |   |     |   |
| Finland  | 10           | 1.81%  | 10 | 2%  |     |    |      |   |     |   |
| France   | 60           | 10.83% | 60 | 13% |     |    |      |   |     |   |
| Germany  | 50           | 9.03%  | 50 | 11% |     |    |      |   |     |   |

| Country               | Universities | %           | AE         | %           | EME       | %           | LIDC     | %         | n/d      | %         |
|-----------------------|--------------|-------------|------------|-------------|-----------|-------------|----------|-----------|----------|-----------|
| Greece                | 10           | 1.81%       | 10         | 2%          |           |             |          |           |          |           |
| Hungary               | 12           | 2.17%       |            |             | 12        | 12%         |          |           |          |           |
| Iceland               | 1            | 0.18%       | 1          | 0%          |           |             |          |           |          |           |
| Ireland               | 9            | 1.62%       | 9          | 2%          |           |             |          |           |          |           |
| Italy                 | 52           | 9.39%       | 52         | 11%         |           |             |          |           |          |           |
| Latvia                | 5            | 0.90%       | 5          | 1%          |           |             |          |           |          |           |
| Lithuania             | 6            | 1.08%       | 6          | 1%          |           |             |          |           |          |           |
| Luxem-<br>bourg       | 1            | 0.18%       | 1          | 0%          |           |             |          |           |          |           |
| Malta                 | 1            | 0.18%       | 1          | 0%          |           |             |          |           |          |           |
| Nether-<br>lands      | 13           | 2.35%       | 13         | 3%          |           |             |          |           |          |           |
| Norway                | 7            | 1.26%       | 7          | 2%          |           |             |          |           |          |           |
| Poland                | 22           | 3.97%       |            |             | 22        | 23%         |          |           |          |           |
| Portugal              | 12           | 2.17%       | 12         | 3%          |           |             |          |           |          |           |
| Romania               | 10           | 1.81%       |            |             | 10        | 10%         |          |           |          |           |
| Russian<br>Federation | 32           | 5.78%       |            |             | 32        | 33%         |          |           |          |           |
| Serbia                | 2            | 0.36%       |            |             | 2         | 2%          |          |           |          |           |
| Slovakia              | 4            | 0.72%       | 4          | 1%          |           |             |          |           |          |           |
| Slovenia              | 2            | 0.36%       | 2          | 0.4%        |           |             |          |           |          |           |
| Spain                 | 44           | 7.94%       | 44         | 10%         |           |             |          |           |          |           |
| Sweden                | 16           | 2.89%       | 16         | 4%          |           |             |          |           |          |           |
| Switzer-<br>land      | 11           | 1.99%       | 11         | 2%          |           |             |          |           |          |           |
| Ukraine               | 17           | 3.07%       |            |             | 17        | 18%         |          |           |          |           |
| United<br>Kingdom     | 96           | 17.33%      | 96         | 21%         |           |             |          |           |          |           |
| <b>Total</b>          | <b>554</b>   | <b>100%</b> | <b>457</b> | <b>100%</b> | <b>97</b> | <b>100%</b> | <b>0</b> | <b>0%</b> | <b>0</b> | <b>0%</b> |

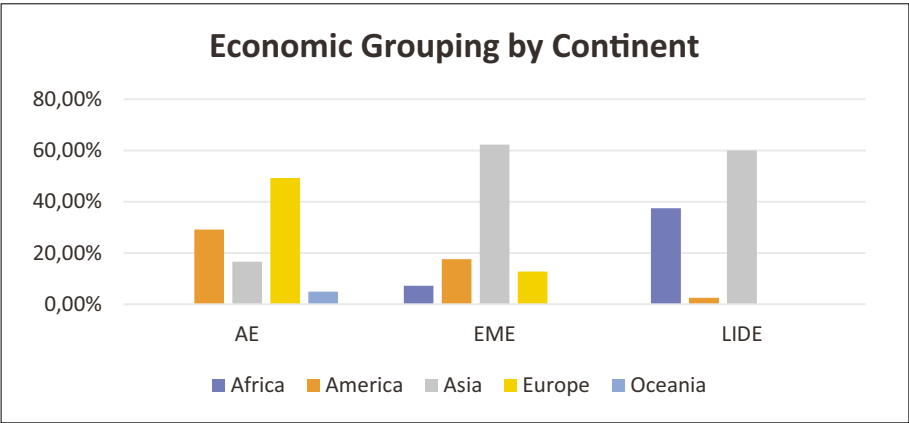
**Panel E Continent in the Sample: Oceania**

| Country   | Universities | %      | AE | %   | EME | %    | LIDC | % | n/d | % |
|-----------|--------------|--------|----|-----|-----|------|------|---|-----|---|
| Australia | 38           | 80.85% | 38 | 83% |     |      |      |   |     |   |
| Fiji      | 1            | 2.13%  |    |     | 1   | 100% |      |   |     |   |

| Country     | Universities | %      | AE | %    | EME | %    | LIDC | % | n/d | %  |
|-------------|--------------|--------|----|------|-----|------|------|---|-----|----|
| New Zealand | 8            | 17.02% | 8  | 17%  |     |      |      |   |     |    |
| Total       | 47           | 100%   | 46 | 100% | 1   | 100% | 0    |   | 0   | 0% |

As illustrated in Table 1, the number of universities in the sample is displayed, alongside their classification by continent and economic group. The acronyms AE, EME and LIDE are used to refer to advanced economies, emerging market economies and low-income developing economies, respectively. Source: Own elaboration based on QS World University Rankings: Sustainability 2025

As shown in Graph 2, the data is presented by economic grouping, categorised as follows: advanced economies (AE), emerging market economies (EME), and low-income developing economies (LIDE). These categories are identified by continent, namely Africa, America, Asia, Europe, and Oceania. It is evident that Europe has the highest number of universities in countries with advanced economies (49,25%). The second highest number of universities is found in America (29,20%), followed by Asia (16,59%) and Oceania (4,96%). The analysis indicates that Asia has the highest number of universities in countries classified as emerging market economies (62,24%). The second highest number of universities is found in America (17,63%), followed by Europe (12,76%) and Africa (7,24%), and Oceania accounts for 0,13%. Furthermore, the highest number of universities in low-income country economies is found in Asia (60%), followed by Africa (37,50%) and America (2,50%).



**GRAPH. 2** Sampling distribution across Economic Grouping by continent (Source: Own elaboration based on QS World University Rankings: Sustainability 2025)

### 3.3 METHODOLOGY AND ANALYTICAL APPROACH

The QS Sustainability ranking provides a composite score ranging from 0 to 100, derived from specific weighted indicators across three main dimensions:

1. Environmental impact: Measures institutional commitment to environmental sustainability, environmental education, and environmental research.
2. Social impact: Evaluates efforts related to equality, knowledge exchange, educational impact, employability, and health/wellbeing.
3. Governance: Assesses the transparency, ethics, and inclusivity of the university's decision-making processes.

To interpret these scores systematically, this study adopts the established ESG score range classification frequently used in corporate ESG research via the Refinitiv Eikon database (Bodhanwala and Bodhanwala, 2022). The scores are divided into four distinct performance levels:

- Poor (0-25): Poor relative ESG performance and insufficient transparency.
- Satisfactory (26-50): Satisfactory relative ESG performance and moderate transparency.
- Good (51-75): Good relative ESG performance and above-average transparency.
- Excellent (76-100): Excellent relative ESG performance and a high degree of transparency.

Given the exploratory nature of this global mapping, the analytical approach relies on comparative descriptive statistics (mean, median, maximum, minimum, and standard deviation). As noted by Ariza and Gandini (2012), comparative descriptive analysis is well suited to describing diverse conditions across a large, heterogeneous sample where conventional inferential methods may be constrained by high variance and structural differences between regions. Although the absence of multivariate inferential analysis limits the ability to establish causal relationships, a limitation explicitly acknowledged in this study, the descriptive approach provides a founda-

tional benchmarking perspective that is essential for identifying macro-level geographical and economic patterns in university ESG performance.<sup>3</sup>

## 4 RESULTS AND DISCUSSION

This section presents the empirical findings of the global university ESG score analysis. To enhance clarity and focus on the most robust statistical measure, the analysis primarily reports the median scores across different geographical and economic groupings (Barber & Lyon, 1997; Rakrak, 2024). Following the results, a detailed discussion contextualises these findings within the existing literature and outlines the study’s limitations.

### 4.1 DESCRIPTIVE RESULTS AND GLOBAL PATTERNS

Table 2 presents summary statistics for the entire sample of 1,735 universities across all five continents, covering Advanced Economies (AE), Emerging Market Economies (EME), and Low-Income Developing Economies (LIDE).

**TABLE 2** Summary statistics by ESG Score, universities and economy grouping by all continent  
**Panel F: AE+EME+LIDE**

| Score                 | Social | Environ-<br>mental | Gover-<br>nance | Environmental<br>Sustainability | Environmental<br>Education | Environmental<br>Research |
|-----------------------|--------|--------------------|-----------------|---------------------------------|----------------------------|---------------------------|
| Mean                  | 57.27  | 44.69              | 53.94           | 33.78                           | 41.22                      | 60.65                     |
| Median                | 54.60  | 40.50              | 54.60           | 33.20                           | 38.60                      | 64.00                     |
| Max.                  | 100    | 100                | 100             | 100                             | 100                        | 100                       |
| Min.                  | 15.6   | 4.6                | 8.2             | 1                               | 1                          | 1.2                       |
| Standard<br>Deviation | 19.38  | 19.70              | 27.07           | 22.62                           | 25.58                      | 23.42                     |
| N                     | 1,735  | 1,735              | 1,735           | 1,735                           | 1,735                      | 1,735                     |

This table displays the summary statistics for the key variables used in the analysis. Source: Own elaboration based on QS World University Rankings: Sustainability 2025 and International Monetary Fund (October 2024)

<sup>3</sup> This study does not include the different indicators and weightings so as avoid overloading this paper, but they can be consulted on the QS World University website, in the section describing the categories, lenses and indicators mentioned in this paper, available at the link in the corresponding bibliographical reference.

Analysis of the full sample reveals that universities worldwide perform best in Environmental Research (median = 64.00), Social Impact (54.60), and Governance (54.60), all of which fall into the “Good” relative ESG performance range. Conversely, Environmental Sustainability (33.20) and Environmental Education (38.60) lag behind, falling into the “Satisfactory” range. This indicates a global trend in which universities prioritise research output and social initiatives over operational campus sustainability and dedicated environmental curricula, as further illustrated in Graph 3.

To provide a more nuanced understanding of how these scores vary by region and economic development, Table 3 presents the median ESG scores across all five continents and their respective economic groupings. This consolidated approach allows for direct cross-regional comparisons.

TABLE 3 Consolidated Median ESG Scores by Continent and Economic Grouping

| Continent | Economic Grouping | Social | Environmental | Governance | Env. Sustainability | Env. Education | Env. Research |
|-----------|-------------------|--------|---------------|------------|---------------------|----------------|---------------|
| Africa    | EME               | 43,60  | 36,20         | 47,70      | 27,10               | 37,70          | 54,60         |
|           | LIDE              | 45,20  | 34,70         | 26,30      | 22,00               | 34,70          | 45,30         |
| America   | AE                | 66,10  | 47,50         | 31,50      | 26,00               | 47,20          | 74,40         |
|           | EME               | 44,30  | 31,10         | 54,85      | 20,50               | 35,35          | 46,50         |
|           | LIDE              | 30,60  | 19,60         | 48,80      | 33,50               | 9,70           | 17,00         |
| Asia      | AE                | 52,85  | 46,80         | 75,45      | 42,95               | 43,20          | 66,55         |
|           | EME               | 45,40  | 33,90         | 52,15      | 33,20               | 26,40          | 55,75         |
|           | LIDE              | 40,60  | 28,80         | 39,20      | 33,20               | 18,50          | 45,15         |
| Europe    | AE                | 68,30  | 48,10         | 59,00      | 34,50               | 45,10          | 75,90         |
|           | EME               | 44,00  | 34,70         | 73,70      | 31,20               | 44,30          | 36,50         |
| Oceania   | AE                | 86,70  | 73,95         | 92,50      | 55,55               | 72,10          | 90,95         |
|           | EME               | 44,00  | 35,30         | 17,50      | 49,80               | 5,30           | 56,60         |

Source: Own elaboration based on QS World University Rankings: Sustainability 2025 and International Monetary Fund (October 2024)

Several distinct patterns emerge from Table 3. First, Advanced Economies (AE) consistently outperform Emerging Market Economies (EME) and Low-Income Developing Economies (LIDE) across almost all dimensions, particularly in Oceania, Europe, and the Americas. Oceania’s AE

universities demonstrate “Excellent” performance across the Social, Governance, and Environmental Research dimensions. Second, Environmental Research is a notable strength across diverse economic contexts. Even in EME regions in Africa (54.60) and Asia (55.75), Environmental Research scores reach the “Good” performance tier. This suggests that research output is a universally prioritised metric, regardless of a country’s overall economic wealth. Third, Governance scores exhibit significant regional variation. While AE universities in Oceania (92.50) and Asia (75.45) excel in governance transparency, AE universities in the Americas score surprisingly low (31.50). Conversely, EME universities in Europe (73.30) and the Americas (54.85) show robust governance frameworks, outperforming their AE counterparts in the Americas.

## 4.2 DISCUSSION

The findings of this study advance understanding of university sustainability by highlighting how macroeconomic and geographical factors shape ESG performance. The consistent outperformance of Advanced Economies (AE) in the Social and Governance dimensions aligns with the literature emphasising the role of financial resources and internationalisation. As Blasco et al. (2020) noted, greater financial support is highly relevant for achieving sustainability goals. AE universities are likely to possess the structural organization and capital required to implement comprehensive ESG reporting and attract international talent (Wright, 2009; Gallego-Álvarez et al., 2011).

However, the surprising strength of Emerging Market Economies (EME) in Environmental Research achieving “Good” scores in Africa and Asia suggests that research capacity is not exclusively tied to national wealth. This may be driven by targeted international grants, global research collaborations, or urgent regional climate challenges that necessitate localised environmental studies. This finding extends the observations of Mo et al. (2023) regarding the emergent, yet highly focused, ESG reporting in developing regions such as China.

Furthermore, the relatively low scores in Environmental Sustainability (campus operations) and Environmental Education across most regions, including many AEs, corroborate the findings of Garlatti et al. (2025).

Their study of Italian universities found a predominant focus on social measures while environmental dimensions were often omitted from strategic plans. The global findings suggest this is a widespread phenomenon: universities are adept at producing environmental research but struggle to integrate sustainability into their own campus operations and core curricula (Verna et al., 2025).

Taken together, these findings provide direct answers to the three research questions posed in this study. Regarding RQ1 (differences across continents), the results confirm that Oceania and Europe consistently achieve the highest ESG scores, while Africa and LIDE regions in Asia lag behind across most dimensions. Regarding RQ2 (influence of economic development), Advanced Economies systematically outperform EME and LIDE groupings in Social and Governance dimensions, although the gap narrows considerably in Environmental Research. Regarding RQ3 (strongest ESG dimensions), Environmental Research emerges as the universally strongest dimension across all economic and geographical contexts, while Environmental Sustainability and Environmental Education represent the most persistent global weaknesses.

## 5 CONCLUSIONS

This study set out to explore the geographical and economic drivers of global university ESG scores, using the QS World University Rankings: Sustainability 2025 and IMF economic classifications. The findings reveal a complex landscape in which macroeconomic development significantly influences sustainability performance yet does not determine it entirely. The most notable takeaway is the universal prioritisation of Environmental Research. Whether a university is in an Advanced Economy (AE) or a Low-Income Developing Economy (LIDE), research output remains the strongest pillar of ESG performance. However, this strength is often accompanied with a concerning weakness in Environmental Sustainability (campus operations) and Environmental Education. This discrepancy suggests that while universities excel at studying climate change, they struggle to implement sustainable practices within their own institutions

and curricula. Furthermore, the results highlight a clear “governance and social premium” associated with Advanced Economies, particularly in Oceania and Europe. These institutions leverage their financial and structural advantages to establish robust transparency and social impact frameworks. Conversely, Emerging Market Economies (EME) demonstrate surprising resilience, often outperforming expectations in specific dimensions, indicating that targeted sustainability strategies can yield significant results even in resource-constrained environments.

For university administrators and policymakers, these findings emphasize the need for a more holistic approach to ESG integration. Strategic investments must move beyond simply funding environmental research to actively decarbonising campus operations and embedding sustainability across all educational programmes. Additionally, international ranking agencies should take into account the structural disadvantages faced by LIDE universities and consider developing context-specific metrics that capture localised sustainability efforts rather than focusing solely on global research output.

While this study provides a foundational global mapping, several limitations must be acknowledged. Reliance on a single ranking system (QS Sustainability) means the results are subject to its specific methodological weightings. Furthermore, the analytical approach is fundamentally descriptive. Although appropriate for an exploratory overview, the absence of multivariate inferential statistics prevents the establishment of causal relationships. Finally, there is a potential bias in data availability, as universities in LIDE regions are under-represented in global rankings. Future research should employ inferential modelling to control for confounding variables such as national regulatory frameworks and cultural attitudes, to explore the specific institutional mechanisms driving ESG success across different economic contexts.

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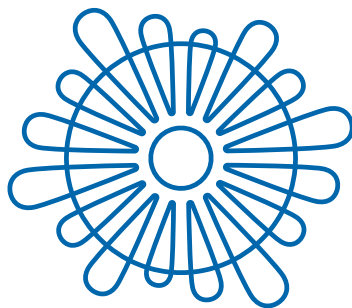


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