

**Discrepancies between Rhetoric and Reality: An Analysis of Sustainable
Development Goals (SDGs) Topics in UN General Debate (UNGD)
Speeches and their Practical Implementation**

Connected Politics

Spring Term 2025

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Abstract

United Nations General Debate (UNGD) speeches offer valuable insights on how states articulate their preferences and prioritize global and domestic issues. Yet, there has been no analysis of which Sustainable Development Goals (SDGs) have been addressed in these speeches, nor whether rhetorical emphasis aligns with actual implementation. Our study fills that gap by analyzing all UNGD speeches from 2008 to 2023, using a fine-tuned BERT-based deep learning model to classify mentions of individual SDGs. We then group the proportions of these mentions into six thematic clusters. To assess the relationship between rhetoric and performance, we correlate these clusters with SDG Implementation Index scores (2015–2023). Our analysis shows that Sustainable Growth (SDGs 8, 9, and 16) is the most frequently mentioned cluster. However, regression analysis reveals no significant relationship between rhetorical emphasis and implementation performance. While the speeches provide valuable insights into global rhetorical trends, they fall short of reflecting implementation realities. Future research should combine quantitative text analysis with qualitative national-level analysis to better understand the political, institutional, and socio-economic factors affecting the relationship between rhetoric and implementation.

1. Introduction

Since 1946, the United Nations General Debate (UNGD) has served as a central platform where all member states deliver annual statements to the General Assembly. This forum provides states with a unique opportunity to articulate their positions on a range of global issues, justify foreign policies, critique international actors, and engage in symbolic diplomatic communication. Therefore, the UNGD speeches reflect not only strategic messaging but also national priorities and identity on the world stage (Baturu, Dasandi & Mikhalyov, 2017; Jankin, Baturu & Dasandi, 2024; Simmons & Shaffer, 2024).

UNGD speeches have thus been widely used to explore a broad range of topics—from state priorities to shifts in global norms—and have consequently become a prominent source in political science and communication studies (Baturu, Dasandi & Mikhalyov, 2017; Jankin, Baturu & Dasandi, 2024; Mitrani, Adams & Noy, 2022).

However, to date, no study has systematically examined how the Sustainable Development Goals (SDGs) have been mentioned in these speeches. This is a critical gap in the literature, given the central role of the SDGs in shaping global development policy since their adoption in 2015 as part of the 2030 Agenda. Our study aims to address this gap by asking: Which SDG topics are mentioned in UNGD speeches, and how do the mentioned topics differ from the SDG topics prioritized in national implementation? By addressing this question, we aim to move beyond a descriptive analysis of SDG topic mentions and examine the extent to which rhetorical commitments reflect actual implementation.

To answer our research question, we examine all UNGD speeches delivered between 2008 and 2023, capturing both the period before and after the adoption of the 2030 Agenda for Sustainable Development in 2015. Using a fine-tuned BERT-based deep learning model, we assess the extent to which grouped SDG categories are mentioned in these speeches.

To enrich our analysis, we incorporate two additional datasets. First, we use the SDG Index (Sachs et al., 2023) to obtain each country's average SDG implementation score between 2015 and 2023 and to examine the correlation between rhetorical emphasis and actual implementation. Additionally, we draw on the World Bank's GDP ranking based on Purchasing Power Parity (PPP) (World Bank, 2024) to explore the relationship between implementation scores and economic performance.

Our analysis reveals a clear prevalence of the *Sustainable Growth* topic—comprising SDGs 8, 9, and 16—in the grouped SDG mentions across all countries. However, when disaggregated by sub-region, there is some variation in the second most frequently mentioned group, reflecting regional differences in rhetorical focus. Despite these patterns, statistical inference indicates no significant relationship between the frequency of grouped SDG mentions in speeches and their corresponding implementation scores. This suggests that rhetorical emphasis in the UNGD speeches does not necessarily reflect actual progress on the ground.

The structure of our paper is as follows. Following this introduction, we provide a review of the existing literature on the use of UNGD speeches in social science research. We then situate our study within the broader discourse on the SDGs. The subsequent section outlines our data collection and methodological approach, including a detailed discussion of the BERT-based model, the supplementary datasets, and their limitations. This is followed by our analysis and discussion of the findings.

2. UNGD Speeches: A Review and Research Gap

Since the founding of the United Nations in 1945, the UNGD is part of the General Assembly session and has been held at the beginning of each regular session in September since 1946. The UNGD allows all states, regardless of size, wealth, or regime type, to deliver a statement of their choice at a global stage. Although the UN Secretary-General may suggest a theme for the session, member states are not bound by it and may instead choose to address any topic of their preference (Baturo, Dasandi & Mikhalyov, 2017; Jankin, Baturo & Dasandi, 2024; Simmons & Shaffer, 2024).

Empirical research has shown that states strategically use UNGD speeches to perform a range of functions: to position themselves within the international system, justify their foreign policy stances, or critique other states, international organizations, or even the UN itself (Jankin, Baturo & Dasandi, 2024; Baturo & Gray, 2024).

UN General Debate (UNGD) speeches are of scholarly significance for several reasons (Jankin, Baturo & Dasandi, 2024). First, the UNGD archive offers a valuable corpus of longitudinal textual data, comprising continuous speeches from all UN member states since 1946. These speeches are systematically archived and structured, making them suitable for rigorous scholarly analysis. Second, unlike voting records that merely reflect the outcomes of state

preferences, UNGD speeches provide insight into the justifications behind these preferences. These rhetorical narratives not only articulate policy positions but also reveal how states attempt to persuade others and shape global norms. Third, the UNGD's non-binding and unconstrained format distinguishes it from other UN procedures. Since it carries no direct legal or policy-making consequences, it offers states a relatively free space to articulate their views, strategies, and identities on the international stage.

As a result, UNGD speeches have been extensively studied in relation to state preferences (Baturu, Dasandi & Mikhaylov, 2017; Chelotti, Dasandi & Mikhaylov, 2022), the influence of domestic political factors such as party ideology and regime type (Finke, 2023; Baturu & Tolstrup, 2024), and the discursive-emotional dimensions of diplomacy (Bleiker & Hutchison, 2014; Holmes, 2015; Risse, 2000).

A key debate within the literature concerns the credibility of UNGD speeches as indicators of actual and real policy preferences. Some scholars argue that these speeches are “cheap talk,” due to their non-binding nature and lack of institutional enforcement mechanisms. States may use the platform for strategic signaling rather than disclosing sincere policy commitments (Baturu, Dasandi & Mikhaylov, 2017; Baturu & Tolstrup, 2024; Smith, 2006). Conversely, others maintain that these speeches represent states' foreign policy preferences and priorities (Jankin, Baturu & Dasandi, 2024; Simmons & Shaffer, 2024).

Despite the growing use of UNGD speeches in political science, no existing study has systematically investigated which SDGs are mentioned in these statements and how this rhetorical emphasis aligns with actual implementation. One recent study does touch on the topic, applying a Keyword-Assisted Topic Modeling approach to analyze the entire UNGD corpus from 1946 to 2023 (Jankin, Baturu & Dasandi, 2024). However, the treatment of SDGs content in that study is limited to a basic temporal distribution of SDG mentions, and the focus remains on showcasing the newly compiled UNGD dataset, rather than providing an in-depth analysis of SDG discourse.

This constitutes a significant gap in the literature, given the centrality of the SDGs to contemporary international development and environmental discourse. Our study fills this gap by conducting a quantitative text analysis of which grouped SDG categories are referenced in UNGD speeches, and by examining the relationship between rhetorical emphasis and the actual implementation of the grouped SDG categories at the national level. Specifically, we ask:

Which SDG topics are mentioned in UNGD speeches, and how do the mentioned topics differ from the SDG topics prioritized in national implementation?

By conducting text analysis of UNGD speeches and panel regression analysis, our project contributes to both theoretical debates about the nature of political discourse at the UN and empirical assessments of the global development agenda. We assume that a discrepancy exists between the SDGs that are rhetorically emphasized and those that are actively implemented.

3. The 2030 Agenda: Tracing the Development and Scholarly Engagement with the SDGs

The 2030 Agenda for Sustainable Development, adopted by the United Nations in 2015, introduced 17 SDGs, 169 targets, and 231 indicators, aiming to address global challenges such as poverty, health, education, and environmental sustainability (United Nations General Assembly, 2015).

Unlike the Millennium Development Goals (MDGs), the SDGs are universal, applying to all countries regardless of development status. Although the SDGs are not legally binding, they serve as a global framework for governments and societal actors to align their policies with a shared vision of sustainability (Forestier & Kim, 2020; Meilland & Lecocq, 2024; Morita, Okitasari & Masuda, 2020)

Since the adoption of the SDGs, they have significantly shaped national developmental policy agendas (Nilsson et al., 2022). Countries have responded with varying levels of commitment, often integrating SDGs into national policies and creating institutional mechanisms for implementation. However, progress remains uneven, with high-income countries generally more advanced in addressing goal interlinkages than low-income nations (Allen, Metternich & Wiedmann 2018; Nilsson et al., 2022).

Scholarly interest in the SDGs has grown rapidly, with research focusing on their influence on national policymaking (Allen, Metternich & Wiedmann 2018; Hickmann et al., 2024; Nilsson et al., 2022), and the role of international organizations in promoting their progress (Cheng et al., 2021; Forestier & Kim, 2020; Hickmann et al., 2024).

Existing research shows that many governments focus on SDGs that align closely with their pre-existing development plans, highlighting the framework's limited ability to drive comprehensive sustainable development (Forestier & Kim, 2020). This tendency often

reinforces a neoliberal emphasis on economic growth as the primary tool for poverty reduction, leading to disproportionate attention and resources being allocated to growth-related goals (Forestier & Kim, 2020; Hickmann et al., 2024). As such, this selective engagement may undermine the transformative promise of the SDGs (Forestier & Kim, 2020).

International organizations also play a key role in shaping SDG implementation through financial support, particularly in low-income countries that rely on external funding. While such support can help align national priorities with the SDG agenda (Bogers et al., 2022; Horn & Grugel, 2018), these organizations often promote their own strategic interests, which may not always reflect those of recipient states (Hickmann et al., 2024; Horn & Grugel, 2018; Novovic, 2021).

Despite this growing body of research, a key gap remains: no study has systematically examined which grouped SDG categories are emphasized in international fora, particularly in UNGD speeches. Our study addresses this gap by identifying the SDG topics most frequently referenced in these speeches and analyzing how rhetorical emphasis compares to actual implementation efforts at the national level.

4. Methodology

To address our research question, we use the following datasets in a structured, multi-step approach:

4.1. SDG Classification Model

We use a Natural Language Processing (NLP) model developed by Abdul-Manan Sadick from Deakin University to classify text related to the SDGs. This model is based on a fine-tuned version of the BERT-base-uncased model and was trained on the publicly available OSDG Community Dataset (OSDG-CD) (Sadick, 2023).

The training data consisted of 31,603 texts evaluated by volunteers on the OSDG Community Platform, who assessed each text's relevance to specific SDGs. Based on their background knowledge, volunteers either accepted or rejected suggested labels. To ensure quality, each text was reviewed by up to nine volunteers, with a minimum of three validations per text in the public release (Sadick, 2023).

We applied this model to 3,092 UNGD speeches from 2008 to 2023, generating scores that represent the relative frequency of mentions of the first 16 SDGs in each speech. The output probabilities sum to 1, indicating the proportional weight of each SDG in each speech. SDG 17 (Partnerships for the Goals) was excluded from the analysis, as it was not included in the training data of the original model.

To enhance the accuracy of our analysis, we introduced an additional category for non-SDG content by ensembling a second model. The second model was also based on BERT-base-uncased and kept the same tokenizer as the original SDG-BERT model, but added another layer of confidence by subsetting the original training set, keeping 28,724 texts with an agreement score above 50% and adding a synthetic sample of 3,500 texts non-related to SDG topics, training with 32,224 texts. The refined model demonstrates strong performance, achieving an average weighted accuracy of 88%, with the lowest performance being 65% for SDG 8 (Decent Work and Economic Growth) —a reasonable result given the thematic overlap among certain SDGs (see table 1). This model is used to analyze SDG mentions in the UNGD.

Table 1. Model V2. Classification Report by SDG Category

SDG Category	Precision	Recall	F1-score	Support
SDG 0 - No SDG related Content	1.00	1.00	1.00	350
SDG 1 - No Poverty	0.85	0.81	0.83	161
SDG 2 - Zero Hunger	0.82	0.80	0.81	124
SDG 3 - Good Health and Wellbeing	0.95	0.95	0.95	208
SDG 4 - Quality Education	0.94	0.92	0.93	286
SDG 5 - Gender Equality	0.92	0.89	0.91	327
SDG 6 - Clean Water and Sanitation	0.93	0.87	0.90	165
SDG 7 - Affordable and Clean Energy	0.93	0.87	0.90	231
SDG 8 - Decent Work and Economic Growth	0.65	0.73	0.69	100
SDG 9 - Industry, Innovation and Infrastructure	0.85	0.95	0.90	192
SDG 10 - Reduced Inequalities	0.81	0.76	0.78	129
SDG 11 - Sustainable Cities and Communities	0.83	0.89	0.86	149
SDG 12 - Responsible Consumption and Production	0.82	0.94	0.88	70
SDG 13 - Climate Action	0.87	0.88	0.87	146
SDG 14 - Life Below Water	0.94	0.94	0.94	89
SDG 15 - Life on Land	0.87	0.89	0.88	166
SDG 16 - Peace, Justice and Strong Institutions	0.98	0.99	0.98	330
Accuracy	-	-	0.90	3223
Macro avg	0.88	0.89	0.88	3223
Weighted avg	0.91	0.90	0.90	3223

Additionally, when applying our classification model to the UNGD speeches, we observe a notable increase in health-related topics during the COVID-19 pandemic, particularly in 2020. This pattern aligns with global events and serves as a face validity check, suggesting that the model plausibly captures real-world rhetorical shifts (see Appendix 1).

4.2. SDG Index (2015 – 2023)

SDG index (2015 – 2023) offers an annual assessment of progress towards the SDGs across all 193 UN member states. Countries are ranked based on their overall performance score, which reflects cumulative progress towards achieving all 17 SDGs (Sachs et al., 2023). Scores are shown on a scale from 0 to 100 and reflect the percentage of progress made toward the best performance (Sachs et al., 2023). The SDG Index thus acts as a comprehensive metric for assessing each country's relative distance to SDG targets using the most recent data available.

To reduce bias due to missing data, countries with more than 20% of indicator data missing are not assigned an overall score or rank. Consequently, the number of countries covered by the index may vary from year to year (Sachs et al., 2023).

The index data comes from a combination of official and non-official sources. Roughly two-thirds of the data are drawn from major international organizations such as the World Bank, WHO, UNICEF, etc., which apply rigorous validation procedures. The remaining one-third of the data originated from less conventional sources, including household surveys, for example, Gallup World Poll, and civil society organizations (e.g., Oxfam, Reporters Without Borders, etc.) (Sachs et al., 2023).

It is important to note that, due to periodic changes in indicators and methodological refinements, SDG Index scores and rankings are not directly comparable across different editions (Sachs et al., 2023). For this reason, we refrain from conducting longitudinal comparisons of the index scores. Instead, our analysis focuses on comparing the SDG implementation scores with the rhetorical commitments expressed in UNGD speeches between 2015 and 2023.

To investigate the gap between discourse and action, we employ gap analysis and panel regression, providing a systematic approach to identifying patterns of alignment—or misalignment—between what states express in international forums and what they implement

in practice. Finally, since our SDG classification model focuses exclusively on SDGs 1 through 16, we exclude SDG 17 (Partnerships for the Goals) from our analysis.

4.3. GDP Rankings Based on Purchasing Power Parity (PPP) of 2023

We also draw on the World Bank's "GDP Ranking, PPP-based" dataset of 2023. This dataset provides country-level rankings of Gross Domestic Product (GDP) adjusted for Purchasing Power Parity (PPP), which accounts for price level differences across countries and enables more accurate international economic comparisons (World Bank, 2024).

While not central to our main research question, the inclusion of GDP (PPP-based) data allows us to consider how economic capacity may relate to the level of SDG implementation. By comparing GDP data with SDG Index scores, we aim to explore potential correlations between economic performance and sustainability outcomes across different regions and countries.

Our analysis begins with a descriptive examination of the distribution of SDG topics over time and across regions. We then analyze the relationship between topic mentions and implementation through a combination of gap analysis and regression modeling to better capture the alignment between rhetorical attention and actual progress.

5. Findings and Discussions

For our analysis, we grouped the individual SDGs into seven categories, as our analytical level focuses on thematic groupings rather than on individual SDGs. Six thematic groups adapted from the Abundant Earth Foundation's classification (Abundant Earth Foundation, n.d.), plus an additional category for topics unrelated to any specific SDG, "No SDG Related-Topics", as illustrated in Table 2. Additionally, as previously mentioned, SDG 17 was excluded from our analysis since it was not part of the training set for our SDG classification model.

Table 2: SDG Topics Groups

Group	SDG Numbers	SDG Titles
No SDG Related-Topics	(N/A)	(N/A)
Reducing Overall Inequality	1, 2 & 10	No Poverty; Zero Hunger; Reduced Inequalities

Access to Safe Conditions	3, 6 & 7	Good Health and Well-being; Clean Water and Sanitation; Affordable and Clean Energy
Sustainable Growth	8, 9 & 16	Decent Work and Economic Growth; Industry, Innovation and Infrastructure; Peace, Justice and Strong Institutions
Equality Through Education	4 & 5	Quality Education; Gender Equality
Sustainable Partnerships	11, 12 & 17	Sustainable Cities and Communities; Responsible Consumption and Production; Partnerships for the Goals
Holistic Climate Change	13, 14 & 15	Climate Action; Life Below Water; Life on Land

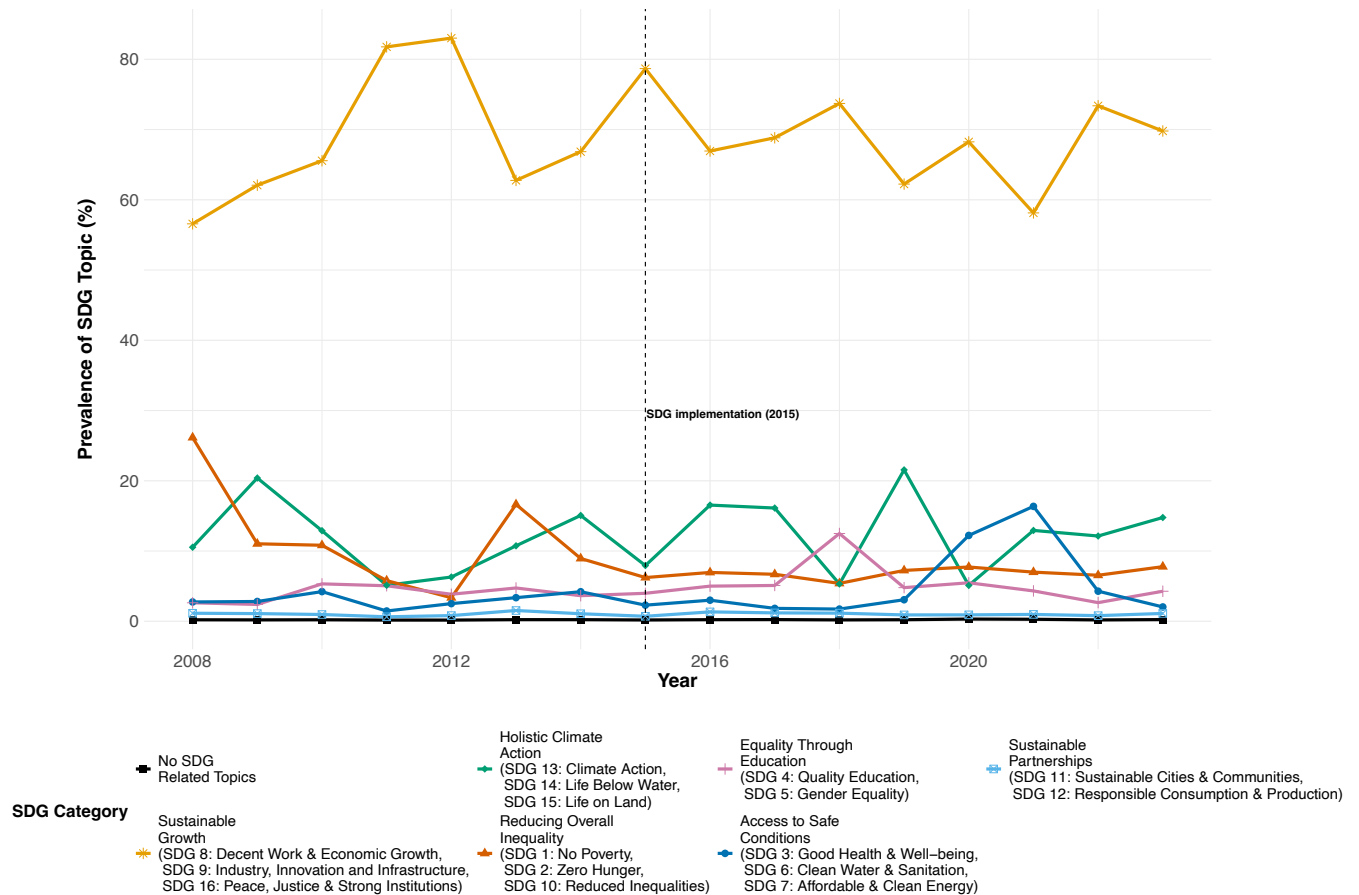
5.1. Mapping SDG Topics Across Time, Regions & Economies

Figure 1 illustrates how various SDGs topics are addressed in speeches delivered at the UNGD speeches, with particular attention to trends before and after the adoption of the SDGs in 2015. The *Sustainable Growth* category emerges as the most frequently discussed topic. This prominence can largely be attributed to SDG 16, which focuses on promoting peace, justice, and strong institutions. Specifically, it targets issues such as reducing violence, promoting the rule of law, combating corruption in all its forms, and developing effective, accountable, and transparent institutions at all levels (United Nations General Assembly, 2015). These are politically sensitive and salient issues that have attracted significant attention before and after 2015, making SDG 16 one of the most commonly referenced goals in UNGD speeches. This trend is further confirmed by *Figure 3*, which shows that SDG 16 was the most frequently mentioned SDG in 2023.

Environmental concerns, represented by *Holistic Climate Action* (SDGs 13, 14 & 15), have gained more attention since 2015 but remain comparatively underemphasized. Their mentions account for less than a quarter of those in the *Sustainable Growth* category. Notably, there was a significant decline in climate-related references in 2020, likely a result of the COVID-19 pandemic, which shifted governments' priorities toward health, economic recovery, and

political stability. This pattern highlights how global crises can temporarily derail attention from long-term sustainability goals.

Figure 1. Trends in SDG Topic Mentions in UN General Debate Speeches between 2008 and 2023



Underrepresented categories, including *Reducing Overall Inequality*, *Equality Through Education*, *Sustainable Partnerships*, and *Access to Safe Conditions*, consistently receive lower levels of attention. This imbalance suggests enduring gaps in global prioritization, raising concerns about whether all pillars of sustainable development are being addressed equally in international discourse.

Regional variation in SDG topic mentions offers further insight into global differences in development priorities. As illustrated in *Figure 2*¹ (also presented as a bar plot with percentages in Appendix 2), mentions of *Holistic Climate Action* are most prominent in Europe, North America, Australia, and New Zealand. In contrast, *Reducing Overall Inequality*—which includes goals such as No Poverty (SDG 1), Zero Hunger (SDG 2), and Reduced Inequality (SDG 10)—features more prominently in less developed regions, for example, Northern and Sub-Saharan Africa, and Western Asia. In these regions, issues of poverty and reducing inequality remain urgent priorities.

This regional variation in SDG topics emphasis aligns with existing research, which shows that many governments tend to prioritize SDGs that are already aligned with their national development agendas—highlighting the framework’s limited capacity to drive transformative or comprehensive change (Allen et al., 2018; Forestier & Kim, 2020; Nilsson et al., 2022).

To understand how a country’s economic status might impact the emphasis placed on different SDGs in its UNGD speeches, we examined the relationship between SDG topic mentions and national income levels. This analysis is presented in *Figure 3*, which plots each country’s most frequently mentioned SDG topic against its GDP per capita, measured in Purchasing Power Parity (PPP) in 2023.

The results indicate that lower-income countries tend to prioritize SDG topics related to education and inequality reduction, reflecting persistent developmental challenges in these areas. In contrast, higher-income countries more frequently emphasize environmental goals, particularly climate action, indicating a shift toward post-materialist concerns among wealthier nations. Moreover, *Sustainable Growth* is referenced across the full spectrum of income levels, underscoring its perceived universal importance for governance and institutional stability.

¹ *Figure 2* presents the percentage distribution of SDG mentions across global sub-regions in UNGD speeches since 2015, excluding the categories *Sustainable Growth* and *Non-SDG-Related Topics*. *Sustainable Growth* was omitted due to its disproportionately high frequency, which would otherwise distort the relative visibility of other categories, as demonstrated in *Figure 1*. Each subplot represents a specific sub-region and tracks the relative prominence of SDG categories over time. We used the [United Nations Statistics Division \(UNSD\)](#) classification to group countries and territories into geographical regions.

Figure 2. Average SDG Category Mentions by Subregion

UNGD Speeches (2015 - 2023)
Note: Sustainable Growth and Non-SDG Topics Excluded

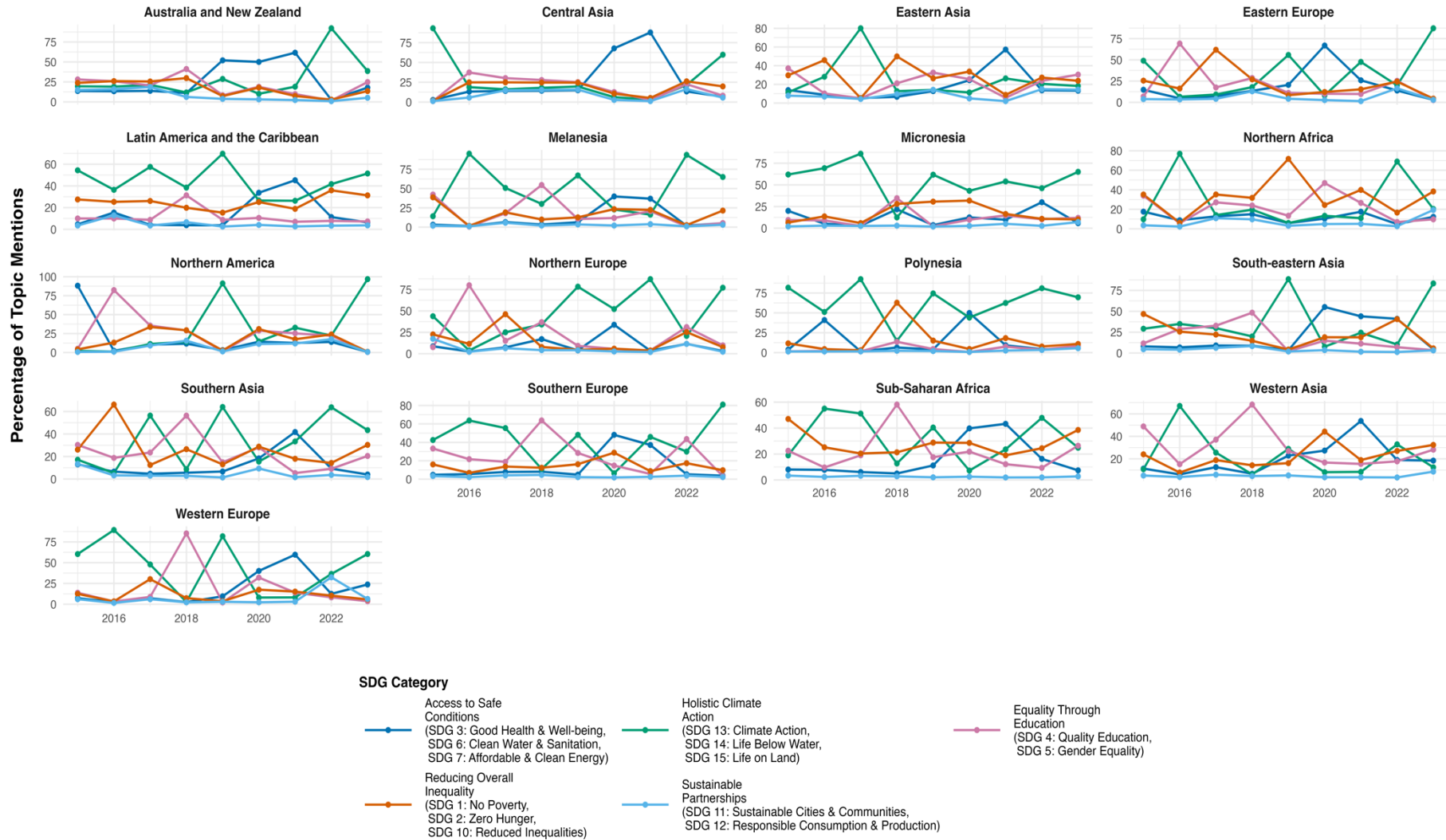
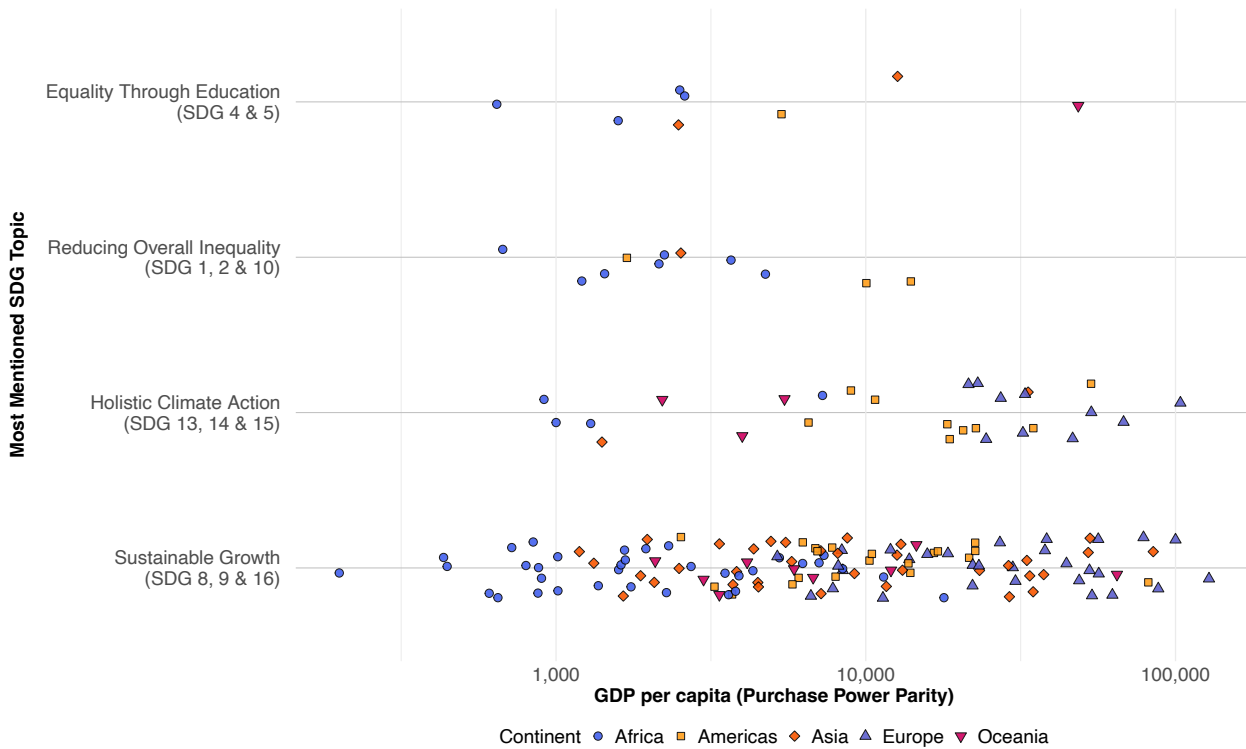


Figure 3. Most Mentioned SDG Topic vs GDP per capita (PPP) in 2023

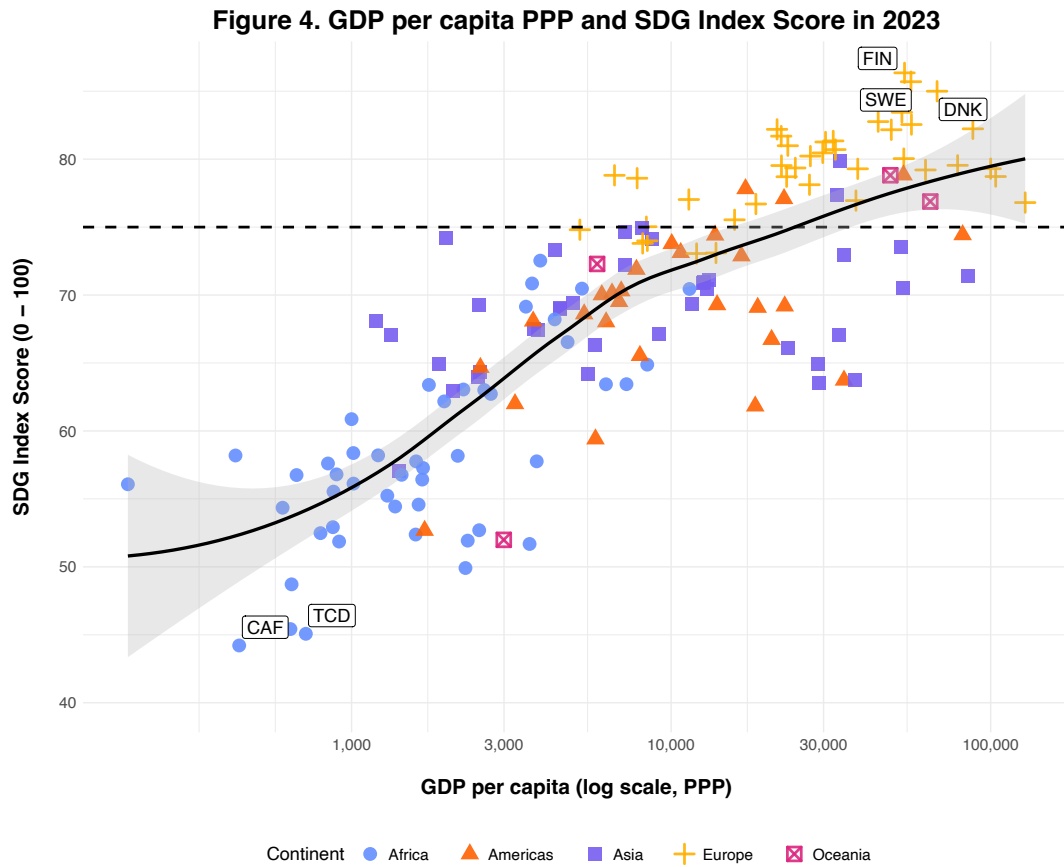
Note: PPP is displayed on a log10 scale



To assess how economic capacity translates into actual progress toward sustainable development, *Figure 4* compares countries' GDP per capita (PPP) with their SDG Index scores in 2023. Countries such as Finland and Sweden, with overall implementation scores of 86.4% and 85.7%, respectively, demonstrate how strong economic performance combined with robust institutions can drive effective SDG implementation. In contrast, Chad and Somalia, with scores of 45.1% and 45.4%, face significant challenges, reflecting deeper structural limitations. This finding aligns with existing literature, which emphasizes the particular difficulties faced by low-income countries and underscores the critical need for international financial support to enable them to meet the targets of the 2030 Agenda (Bogers et al., 2022; Horn & Grugel, 2018).

Nevertheless, high economic capacity does not always correspond with strong SDG performance. For example, the United States and Singapore, despite their high GDP, achieve SDG Index scores below 75%. One possible explanation lies in the voluntary and non-binding nature of the SDG framework, which serves as a global guide rather than a legally enforceable set of obligations. As a result, countries are not formally required to meet specific implementation targets on a yearly basis. Progress often depends on factors such as political

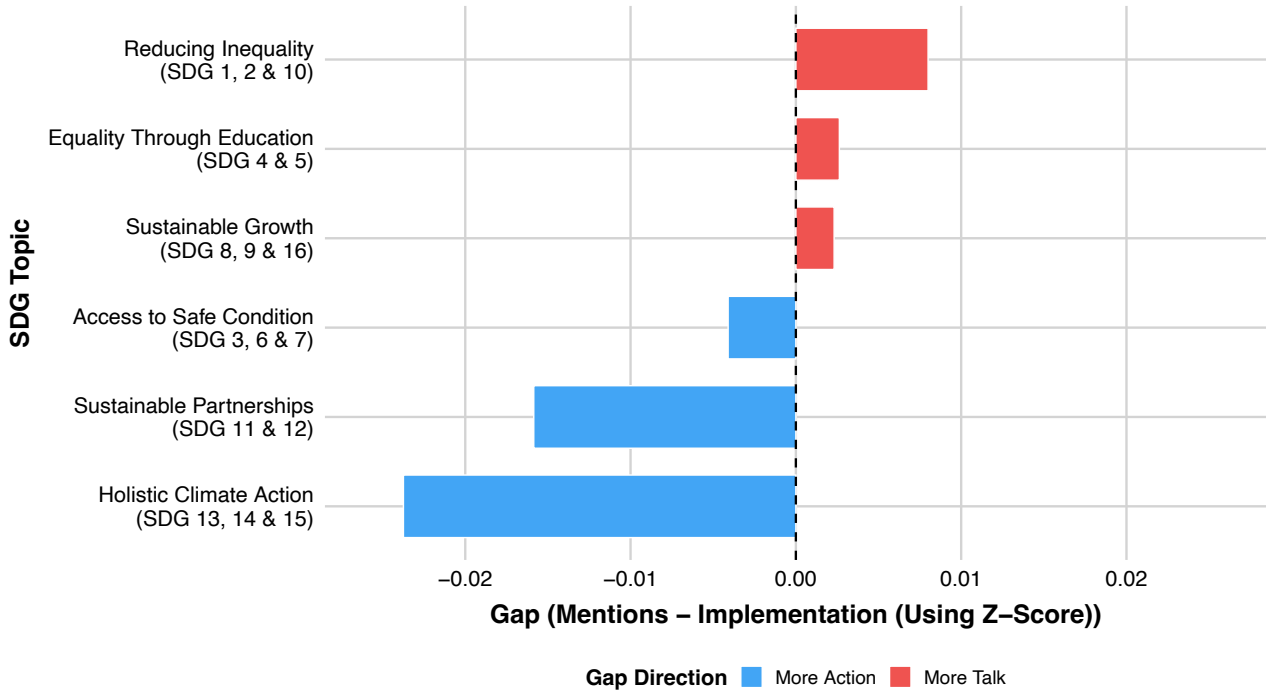
commitment, institutional coordination, and the degree to which SDG priorities are integrated into national policy agendas (Forestier & Kim, 2020; Meilland & Lecocq, 2024; Morita, Okitasari & Masuda, 2020).



5.2. Discrepancies Between SDG Rhetoric and Implementation

Figure 5 illustrates the gap between rhetorical emphasis of SDG topics in UNGD speeches and practical implementation between 2015 and 2023, using z-scores for standardization. Z-scores were applied because the measures for SDG topic mentions and implementation differ substantially; thus, standardization was necessary to enable meaningful comparisons across topics. By normalizing these differences onto a common scale, z-scores account for variations in the mean and standard deviation across indicators, ensuring that observed gaps reflect genuine relative differences rather than underlying measurement disparities.

Figure 5. Gap Between SDG Mentions and Implementation by Topic (2015 – 2023)



The plot reveals two distinct patterns. Topics such as *Reducing Inequality*, *Equality Through Education*, and *Sustainable Growth* exhibit positive gaps, suggesting that these themes receive significant rhetorical prioritization in UNGD speeches without corresponding levels of policy implementation. Conversely, *Holistic Climate Action*, *Sustainable Partnerships*, and *Access to Safe Conditions* show negative gaps, highlighting areas where countries have made more substantive progress in implementation than is reflected in their diplomatic rhetoric. Notably, the largest “more action” gap is observed for *Holistic Climate Action*, indicating a silent yet meaningful advancement on environmental goals.

However, these results should be interpreted with caution. The greater rhetorical emphasis observed in areas such as *Reducing Inequality* and *Equality Through Education* may reflect deliberate efforts by countries to highlight these critical issues and advocate for increased implementation rather than simply signaling a failure to act. Thus, rhetorical prioritization in international forums may itself represent a strategic attempt to mobilize political will and international support for addressing these pressing challenges.

To assess the effect of SDG topic mentions on subsequent implementation outcomes, we conducted a panel regression analysis (see Appendix 3 for the regression table) introducing a one-year lag between mentions and implementation scores. The lag structure reflects the

practical delay between public discourse and measurable policy outcomes, as implementation scores typically require time to be published and disseminated. For example, the implementation score for 2015 is paired with SDG topic mentions from 2016.

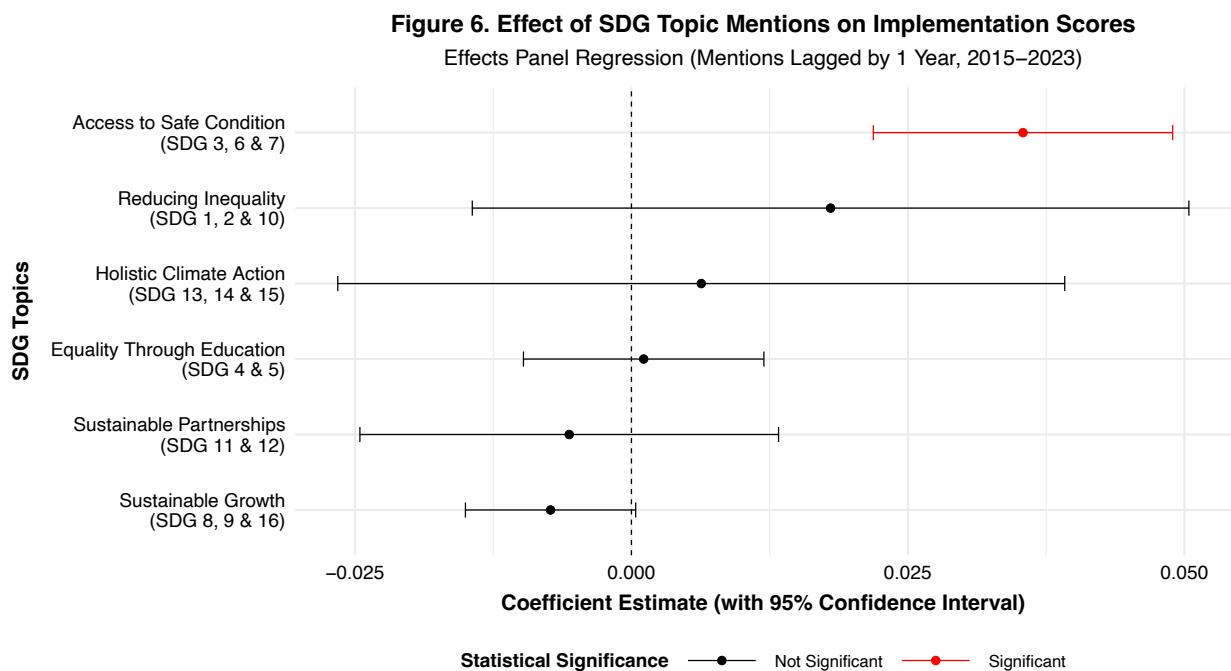


Figure 6 presents the estimated coefficients from this regression analysis, covering the period from 2015 to 2023. The results show that, except for the topic *Access to Safe Conditions*, the relationship between SDG topics mentioned and implementation scores is not statistically significant. This suggests that, in general, the frequency with which SDG topics are mentioned in UNGD speeches is not a strong predictor of subsequent implementation progress.

These findings relate to a broader critique within the literature on UNGD speeches, where some scholars have characterized them as instances of “cheap talk” — signaling rhetorical commitment without necessarily translating into concrete policy action (Baturu, Dasandi & Mikhaylov, 2017; Baturu & Tolstrup, 2024; Smith, 2006). Nevertheless, while the statistical analysis reveals no significant relationship between mentions and implementation, this should not lead to the conclusion that UNGD speeches are irrelevant to the SDG agenda. Rather, UNGD speeches offer valuable insights into how countries frame and prioritize SDG topics on the international stage. However, it remains difficult to ascertain the direction of these mentions

— whether they represent positive accounts of domestic progress or calls for greater international support and attention to unresolved challenges. Thus, while UNGD speeches provide important discursive data, they do not offer a straightforward measure of a country's trajectory of SDG implementation.

6. Conclusion

Our study investigated which SDG topics are frequently mentioned in UNGD speeches, and how these rhetorical references align—or diverge—from the actual implementation of the SDGs. To conduct our analysis, we extended an existing SDG classification model to detect references to SDG-related topics in UNGD speeches from 2008 to 2023. We complemented this with two additional datasets: (1) SDG implementation index scores for 2015-2023, and (2) GDP data based on purchasing power parity (PPP) for 2023.

One of our main findings is that the SDG cluster related to *Sustainable Growth* (SDGs 8, 9 & 16) is the most frequently mentioned set of goals in UNGD speeches. Our results align with existing literature in two key respects. First, wealthier countries tend to score higher on SDG implementation indices compared to lower-income or developing countries. Second, given the non-binding nature of the SDG framework, countries appear to prioritize and emphasize those goals that align with their national development agendas, demonstrating a pattern of selective engagement.

However, our panel regression analysis -examining the relationship between topic mentions in speeches and actual implementation scores between 2015 and 2023- found no statistically significant association across the five topic categories. This suggests that rhetorical emphasis in UNGD speeches is not a reliable predictor of real-world implementation. This raises a critical question discussed in the literature: Should UNGD speeches be regarded as “cheap talk” due to their lack of legal enforceability?

We refrain from drawing a definitive conclusion in this regard for several reasons. First, UNGD speeches serve broader diplomatic and political purposes beyond addressing the SDGs. Second, some SDGs, such as SDG 16, are inherently broad, encompassing diverse subtopics that make the depth or intent of references difficult to assess. Third, we cannot determine the directionality of mentions: whether countries highlight certain SDGs because they are making progress, or because they face challenges and seek support.

Nonetheless, we argue that UNGD speeches provide valuable insights into how SDG topics are communicated on the global stage. They reflect countries' rhetorical priorities and framing strategies, contributing to our understanding of international discourse around sustainable development.

Due to time constraints, we were unable to conduct qualitative analyses, such as national-level policy studies, which could have offered deeper insights into the local realities of SDG implementation. We believe that integrating such qualitative approaches would significantly enhance the interpretability of our findings and contribute to a more comprehensive understanding of the gap between discourse and practice in global SDG efforts.

7. Bibliography

1. Abundant Earth Foundation. (n.d.). *Categorize SDGs by Groups for More Impact*. <https://abundantearthfoundation.org/categorize-sdgs-by-groups-for-more-impact/>
2. Allen, C., Metternicht, G., & Wiedmann, T. (2018). Initial Progress in Implementing the Sustainable Development Goals (SDGs): A Review of Evidence from Countries. *Sustainability Science*, 13, 14531467. <https://doi.org/10.1007/s11625-018-0572-3>
3. Baturo, A., Dasandi, N., & Mikhaylov, S. J. (2017). Understanding State Preferences with Text As Data: Introducing the UN General Debate Corpus. *Research and Politics*. 1-9. <https://doi.org/10.1177/2053168017712821>
4. Baturo, A., & Gray, J. (2024). Leaders in the United Nations General Assembly: Revitalization or politicization? *The Review of International Organizations*, 19, 721–752. <https://doi.org/10.1007/s11558-023-09524-1>
5. Baturo, A. & Tolstrup, J. (2024). Strategic Communication in Dictatorships: Performance, Patriotism, and Intimidation. *Journal of Politics* 86(2): 582–596. <https://doi.org/10.1086/726945>
6. Bleiker, R. & Hutchison, E. (2014). Theorizing Emotions in World Politics. *International Theory* 6(3): 491–514. <https://doi.org/10.1017/S1752971914000232>
7. Bogers, M., Biermann, F., Kalfagianni, A., Kim, R., Treep, J. & Vos, M. (2022). The Impact of the Sustainable Development Goals on a Network of 276 International Organizations. *Global Environmental Change*, 76(102567). <https://doi.org/10.1016/j.gloenvcha.2022.102567>
8. Cheng, Y., Liu, H., Wang, S., Cui, X. & Li, Q. (2021). Global Action on SDGs: Policy Review and Outlook in a Post-Pandemic Era. *Sustainability*, 13(11), 6461. <https://doi.org/10.3390/su13116461>
9. Chelotti, N., Dasandi, N., & Mikhaylov, S. J. (2022). Do Intergovernmental Organizations have a Socialization Effect on Member State Preferences? Evidence from the UN General Debate. *International Studies Quarterly*, 66. <https://doi.org/10.1093/isq/sqab069>
10. Finke, D. (2023). Party Ideologies and UN Debates. *Party Politics* 29(2): 281–293. <https://doi.org/10.1177/13540688221074494>
11. Forestier, O., & Kim, R. E. (2020). Cherry-Picking the Sustainable Development Goals: Goal Prioritization by National Governments and Implications for Global Governance. *Sustainable Development*, 28(5), 1269-1278. <https://doi.org/10.1002/sd.2082>

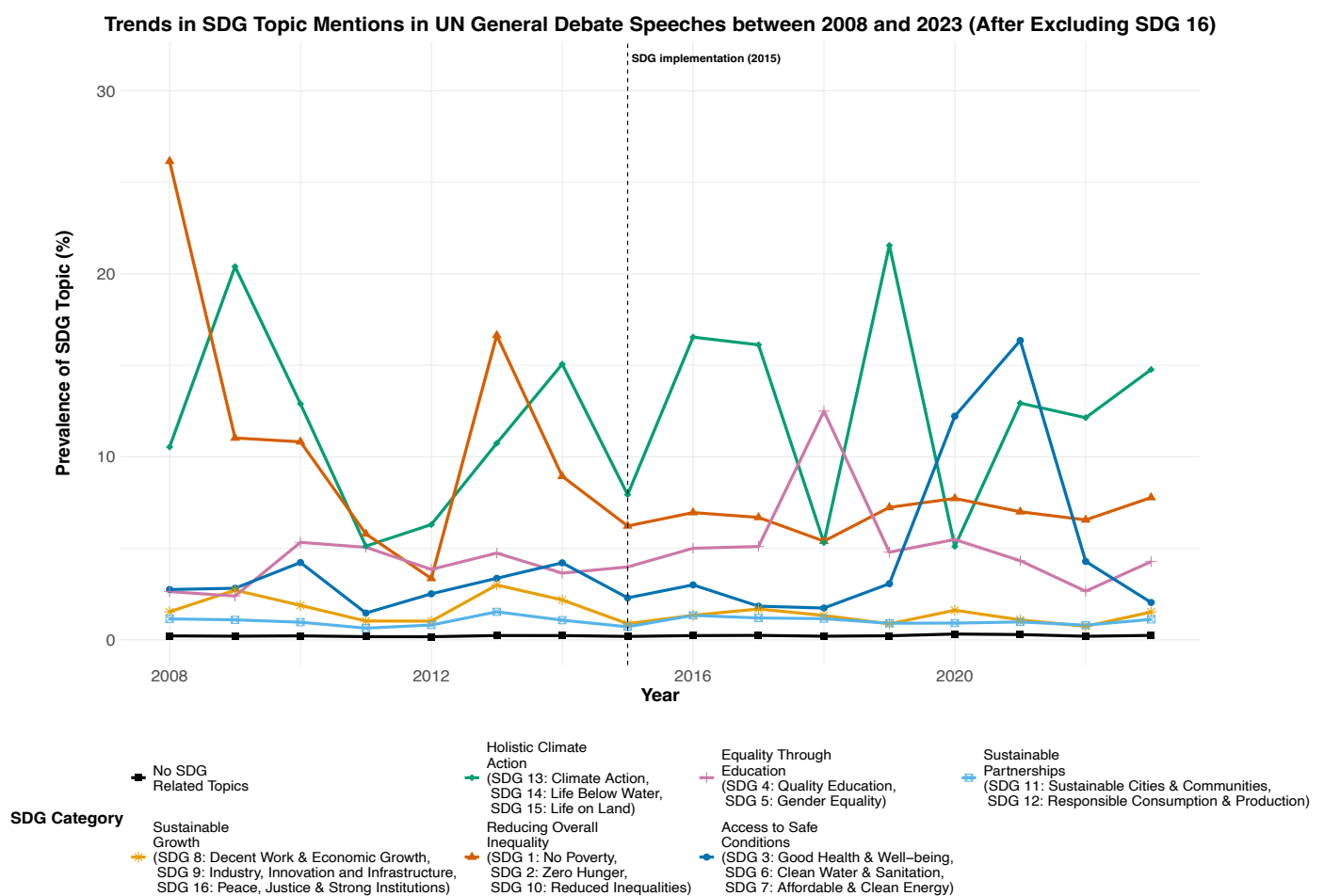
12. Hickmann, T., et al. (2024). Scoping Article: Research Frontiers on the Governance of the Sustainable Development Goals. *Global Sustainability* 7(e7), 1-12. <https://doi.org/10.1017/sus.2024.4>
13. Holmes, M. (2015). Believing this and Alieving that: Theorizing Affect and Intuitions in International Politics. *International Studies Quarterly* 59(4): 706–720. <https://www.jstor.org/stable/43869054>
14. Horn, P., & Grugel, J. (2018). The SDGs in Middle-Income Countries: Setting or Serving Domestic Development Agendas? Evidence from Ecuador. *World Development*, 109, 73–84. <https://doi.org/10.1016/j.worlddev.2018.04.005>
15. Jankin, S., Bautro, A. & Dasandi, N. (2024). Words to Unite Nations: The Complete United National General Debate Corpus, 1946 - Present. *Journal of Peace Research*, 1-13. <https://doi.org/10.1177/00223433241275335>
16. Meilland, A., & Lecocq, F. (2024). Mapping National Development Priorities under the Sustainable Development Goals Framework: A Systematic Analysis. *Sustainability Science*, 19. 75-88. <https://doi.org/10.1007/s11625-023-01377-2>
17. Mitrani, M., Adams, T., & Noy, I. (2022). Can We Algorithmize Politics? The Promise and Perils of Computerized Text Analysis in Political Research. *Perspectives on Politics*, 21(1), 161–173. <https://doi.org/10.1017/S1049096522000464>
18. Morita, K., Okitasari, M., & Masuda, H. (2020). Analysis of National and Local Governance Systems to Achieve the Sustainable Development Goals: Case studies of Japan and Indonesia. *Sustainability Science*, 15. 179-202. <https://doi.org/10.1007/s11625-019-00739-z>
19. Nilsson, M., et al. (2022). Interlinkages, Integration and Coherence. In F. Biermann, T. Hickmann, & C. A. Sénit (Eds.), *The Political Impact of the Sustainable Development Goals: Transforming Governance through Global Goals?* (pp. 92–115). Cambridge University Press. <https://doi.org/10.1017/9781009082945>
20. Novovic, G. (2021). Can Agenda 2030 Bring about “Localization”? Policy Limitations of Agenda 2030 in the Broader Global Governance System. *Development Policy Review*, 40, <https://doi.org/10.1111/dpr.12587>
21. Risse, T. (2000). ‘Let’s argue!’: Communicative Action in World Politics. *International Organization* 54(1): 1–39. <https://doi.org/10.1162/002081800551109>
22. Sachs, J. D., Lafortune, G., Fuller, G., & Drumm, E. (2023). *Sustainable development report 2023: Implementing the SDG stimulus*. Cambridge University Press. <https://www.sdgindex.org>

23. Sadick, A. M. (2023). *SDG-Classification-Bert* [Source code]. GitHub. <https://github.com/sadickam/sdg-classification-bert>
24. Simmons, B. A., & Shaffer, R. (2024). Border Anxiety in International Discourse. *American Journal of Political Science*, 66(4), 1081–1098. <https://doi.org/10.1111/ajps.12791>
25. Smith, C. (2006). *Politics and Process at the United Nations: The Global Dance*. Boulder, CO: Lynne Rienner.
26. United Nations General Assembly. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development* (A/RES/70/1). <https://docs.un.org/en/A/RES/70/1>
27. World Bank. (2024). *GDP ranking, PPP based*. World Bank Data Catalog. <https://datacatalog.worldbank.org/search/dataset/0038129/GDP-ranking--PPP-based>

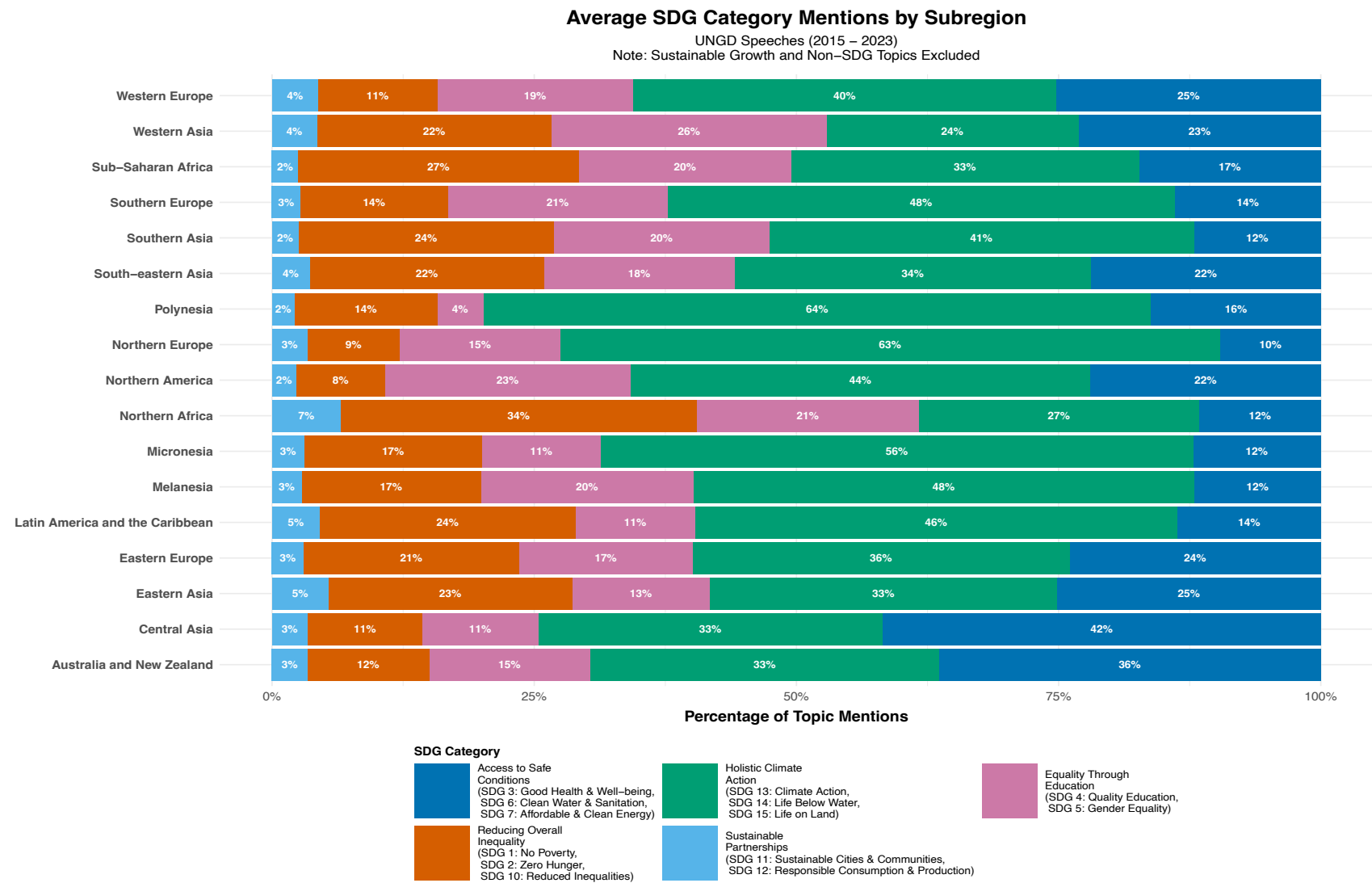
8. Appendices

8.1. Appendix 1

This figure presents the prevalence of SDG topic mentions in UN General Debate speeches over time, excluding SDG 16. While SDG 16 (“Peace, Justice, and Strong Institutions”) is substantively important, its broad relevance tends to dominate the distribution, potentially obscuring variation in other SDG categories. Removing SDG 16 reveals clearer dynamics across the remaining themes. In particular, there is a noticeable rise in climate-related mentions (SDGs 13 & 15) in recent years and a distinct peak in health-related SDGs (3, 6 & 7) during the COVID-19 pandemic. These patterns demonstrate the responsiveness of UN discourse to global crises and provide face validity for our SDG classification model. This supplementary analysis serves as a robustness check for our model, showing that it captures meaningful variation and aligns well with real-world developments.



8.2. Appendix 2



8.3. Appendix 3

Appendix 2. Panel Regression Results: Effect of SDG Mentions on Implementation

Dependent Variable: Implementation Scores						
Lagged Mentions	Reducing Inequality (SDG 1, 2 & 10)	Access to Safe Conditions (SDG 3, 6, & 7)	Sustainable Growth (SDG 8, 9 & 16)	Equality Through Education (SDG 4 & 5)	Sustainable Partnerships (SDG 11& 12)	Holistic Climate Action (SDG 13, 14 &15)
Lagged Reducing Inequality (SDG 1, 2 & 10)	0.006 (0.017)					
Lagged Access to Safe Condition (SDG 3, 6 & 7)		0.035*** (0.007)				
Lagged Sustainable Growth (SDG 8, 9 & 16)			-0.007* (0.004)			
Lagged Equality Through Education (SDG 4 & 5)				-0.006 (0.010)		
Lagged Sustainable Partnerships (SDG 11 & 12)					0.018 (0.017)	
Lagged Holistic Climate Action (SDG 13, 14 & 15)						0.001 (0.006)
Observations	1,167	1,311	1,311	1,311	1,311	1,002
R2	0.0001	0.022	0.003	0.0003	0.001	0.00005
Adjusted R2	-0.145	-0.120	-0.143	-0.146	-0.145	-0.145
F Statistic	0.142 (df = 1; 1018)	26.294*** (df = 1; 1143)	3.466* (df = 1; 1143)	0.339 (df = 1; 1143)	1.187 (df = 1; 1143)	0.040 (df = 1; 874)

Note: * p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in parentheses.