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The Dimensionality and Complexity of CSR Discursive Communities: A Structural Split Between Tourism Industry and Hospitality Labor

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Abstract
Corporate social responsibility (CSR) discourse is central to sustainability and entrepreneurship, yet its evolution, structural complexity, and dimensionality within tourism and entrepreneurship remain insufficiently understood. Because CSR discourse is heterogeneous, this study uses complex-network analysis of X posts from 2008 to 2023 to map its structure and evolution, identify discursive communities, and compare their dimensionality and complexity. Results reveal a pronounced "business versus labor" split. The '*tourism industry*' emerged as a central, sophisticated driver comparable to '*business & social innovation*' and '*entrepreneurship dialogues*', whereas '*hospitality & tourism occupations*' remained marginalized, reactive, and weak in structural memory. This divide occurs within a scale-free, stable network driven by preferential attachment, with tourism operating as a dynamic strategic engine while hospitality labor remains a flat, scattered discourse, highlighting industry-workforce misalignment and threatening sustainable development goals (SDGs). Network-based structural analysis also complements conventional content-focused discourse research by revealing latent organization, persistence, and scaling within a discursive system.

Keywords: Complexity, fractal dimension, multifractal analysis, complex networks, discourse analysis, corporate social responsibility (CSR)

Introduction

The hospitality and tourism literature documents complex relationships between entrepreneurship and sustainability (Khalilzadeh et al., 2025). In the context of sustainability and the Sustainable Development Goals (SDGs), corporate social responsibility (CSR) discourse analysis serves as a critical diagnostic tool for understanding social transformation, environmental protection, and sustainable practices (Dobers & Springett, 2010; Li et al., 2026) while also uncovering gaps between rhetoric and reality/performance (Font et al., 2012; Mihalic, 2016). In addition, CSR discourse is critical to entrepreneurship, as it defines the relationship between business and society (Berdar et al., 2023; Fyke et al., 2016) and determines the success of social innovation (Berdar et

al., 2023). Although these studies establish the significance of CSR discourse, understanding what is communicated does not necessarily explain how its constituent ideas become organized, interconnected, and sustained. The structure through which discourse develops must therefore be investigated alongside its content (Gerlach et al., 2018; Radicioni et al., 2021). Yet, our knowledge of the evolution, growth, structural complexity, and dimensionality of CSR discourse within tourism and entrepreneurship domains remains limited (Khalilzadeh et al., 2025).

From a complex adaptive systems (CAS) perspective, discourse is not merely an accumulation of independent statements, but an evolving system whose macroscopic properties emerge from interactions among its constituent elements. Complex adaptive systems are characterized by interactions that can produce collective patterns not readily inferred from their individual components (Holland, 1992; Strogatz, 2001). In an online discourse system, posts introduce, reproduce, and recombine concepts, creating connections among terms and gradually shaping the organization of the broader discourse. Repeated interactions can reinforce established patterns, while the introduction and recombination of concepts can modify existing configurations. Consequently, the discourse may simultaneously exhibit structural stability and ongoing change. This perspective shifts attention from isolated messages to the relational processes through which ideas acquire structural prominence, become interconnected, persist, or remain peripheral.

Moreover, CSR functions as a critical tool among stakeholders and is employed by different groups, with varying power relations, for diverse purposes. Consequently, CSR discourse is far from a homogeneous communication ecosystem (Amaeshi et al., 2013). Instead, it should be understood as a semantically heterogeneous communication environment in which multiple vocabularies persist (Monfort et al., 2019). Therefore, rather than studying CSR discourse only as a whole, its distinct discursive communities should also be examined to account for the different thematic realms within the system.

Network science provides a theoretical and analytical means of connecting these different levels of discourse organization. Complex networks may exhibit highly uneven distributions of connectivity, with a relatively small number of nodes becoming disproportionately prominent through mechanisms such as preferential attachment (Barabási & Albert, 1999). At an intermediate level between individual nodes and the entire system, networks may also contain communities characterized by stronger internal connectivity relative to their connections with the rest of the network (Newman, 2006). In textual networks, relationships between documents and terms can provide a basis for identifying such communities and uncovering the latent organization of a discourse (Gerlach et al., 2018). Importantly, discursive communities identified through these relationships represent structural and thematic subdivisions of the observed discourse, not necessarily distinct groups of stakeholders. Their identification therefore raises questions that extend beyond thematic classification: how do these communities differ in their internal organization, how do those differences evolve, and to what extent do their structural properties resemble those of the broader system?

This distinction is particularly consequential in tourism, where sustainability depends on interactions among businesses, policymakers, local communities, and other stakeholders whose interests and priorities may diverge (Font & Lynes, 2018; Waligo et al., 2013). Without understanding how CSR discourse is organized across its thematic communities, differences in the prominence and interconnections of sustainability-related concerns may remain obscured, limiting our understanding of which issues dominate the discourse and which receive comparatively little attention. Investigating the structural organization of these communities is therefore important not

only for advancing theoretical understanding of CSR discourse but also for identifying potentially overlooked sustainability concerns and informing stakeholder discussions in tourism.

Previous research has established an empirical foundation for studying CSR discourse through the CAS framework. Khalilzadeh et al. (2025) examined tourism- and entrepreneurship-related CSR discourse on X, identifying its constituent discursive communities and investigating the network's topology, evolutionary patterns, preferential attachment, fractal dimensionality, and other structural properties. Their findings demonstrate that CSR discourse exhibits complex-network characteristics and that its constituent communities occupy different structural positions within the broader system. However, identifying these communities and characterizing their structural properties does not fully explain how their complexity is distributed across scales or how their structural characteristics evolve over time. In particular, the extent to which individual communities differ in multifractal heterogeneity, persistent memory, and the scaling of structural complexity remains insufficiently examined. These distinctions are important because communities embedded within the same discourse system need not exhibit identical structural dynamics or evolutionary trajectories.

Tourism sustainability scholarship reveals a further tension between the importance attributed to CSR objectives and the attention those objectives receive in discourse. Mihalic (2016) distinguishes sustainability as a guiding concept from responsibility as its enactment, while Font et al. (2012) document discrepancies between CSR disclosures and performance among international hotel groups. Although these studies illuminate the relationship between stated commitments and implementation, they do not establish how sustainability priorities are positioned relative to one another within an evolving discourse network. From a CAS perspective, the presence of an issue in public communication does not necessarily confer structural centrality: some themes may be repeatedly reinforced through their connections to established concepts, whereas others remain comparatively peripheral. The distinction between substantive importance and discursive prominence therefore poses an additional question for tourism research: which dimensions of sustainability become embedded in the structure of CSR discourse, and which struggle to acquire comparable prominence?

An especially consequential instance concerns the relationship between tourism as an industry and hospitality work. Baum et al. (2016) identify the relative neglect of workforce and employment considerations within sustainable-tourism narratives, notwithstanding their relevance to sustainable development. Khalilzadeh et al. (2025) subsequently identify tourism-industry and hospitality-occupation communities within a common CSR discourse network and characterize their differing structural positions. What remains less understood is whether their divergence also extends to the distribution of structural heterogeneity, the temporal persistence of complexity, and the rates at which dimensionality and complexity change. These are not merely alternative descriptions of community prominence: they address whether thematically distinct components of the same discourse exhibit different structural dynamics. Although such differences cannot establish disparities in actual sustainability performance, they may reveal how unevenly sustainability-related concerns become structurally established and sustained within public CSR communication.

A more comprehensive understanding of discursive communities therefore requires examining several complementary properties rather than relying on network size, connectivity, or a single measure of complexity. Fractal dimensionality characterizes aspects of a network's geometric organization, while multifractal analysis extends this perspective by examining how

scaling properties vary across different structural moments (Xiao et al., 2021). Statistical structural complexity provides a complementary perspective by capturing the relationship between order and disorder within a system (Monteiro, 2025). Temporal memory, in turn, concerns the persistence of statistical dependence across time, distinguishing longer-term structural dependence from short-lived fluctuations (Pipiras & Taqqu, 2017). Finally, scaling analysis examines how structural properties change as a system evolves, allowing differences in the rates of dimensional and complexity growth to be evaluated. Together, these approaches offer a more differentiated account of the structural organization and evolution of discursive communities than any single measure can provide.

Accordingly, grounded in the CAS framework and complex-network science, the present study extends existing structural investigations of CSR discourse by examining and comparing the dimensionality, multifractal heterogeneity, statistical structural complexity, temporal memory, and scaling behavior of its constituent discursive communities. Particular attention is given to the contrasting structural positions and evolutionary dynamics of tourism-industry and hospitality-occupation discourse within the broader CSR system of tourism and entrepreneurship. By moving beyond the characterization of the aggregate discourse and static community properties, the study seeks to deepen our understanding of how structurally distinct thematic communities develop, persist, and evolve within a shared complex discourse system.

Methodology

Discourse structural analysis has a long history in the linguistic network literature (Barthes & Duisit, 1975; Mehler et al., 2016). Building on this tradition, network science provides a systematic approach for mapping the complex, often latent, structures and interactions within discourse systems. From a system-level perspective, this approach can identify emergent properties, uncover generative mechanisms, trace discursive shifts like regime changes and phase transitions, and track the evolution of overall structure and configuration, thereby deepening our understanding of language use.

To operationalize this structural perspective, this study proposed and tested an approach that synthesizes document–term matrices with hierarchical multipartite graphs using a lexical–frame–actor framework. This framework enables the evaluation of the morphology, in its biological sense, and anatomy of a wide range of discourse networks (Khalilzadeh et al., 2025). Within this approach, the conceptual boundary of a discourse is defined by the subject around which it forms, whereas its temporal boundary is determined by the timing and sequence of actor activity (Khalilzadeh et al., 2025).

The X platform (previously known as Twitter) was selected as one of the most influential social media platforms in CSR discourse (Khalilzadeh et al., 2025). The CSR hashtag, in its original form and abbreviation, was used to select posts. To retrieve relevant posts, the search strategy employed the intersection of CSR hashtags with the union of entrepreneurship and tourism keywords. Because CSR was the common thread across all posts, it was removed from the database before the analysis. The temporal boundary of the system spanned 750 weeks between 2008 and 2023, during which the system was active for 725 weeks. A total of 15,772 posts from 4,993 unique handles were selected, yielding 19,734 unique terms after tokenization, normalization, stop-word removal, and stemming. Figure 1 shows the time series of tweets/posts and stemmed unique terms per week over the study's 750 weeks. The time series shows the system's segregated slices.

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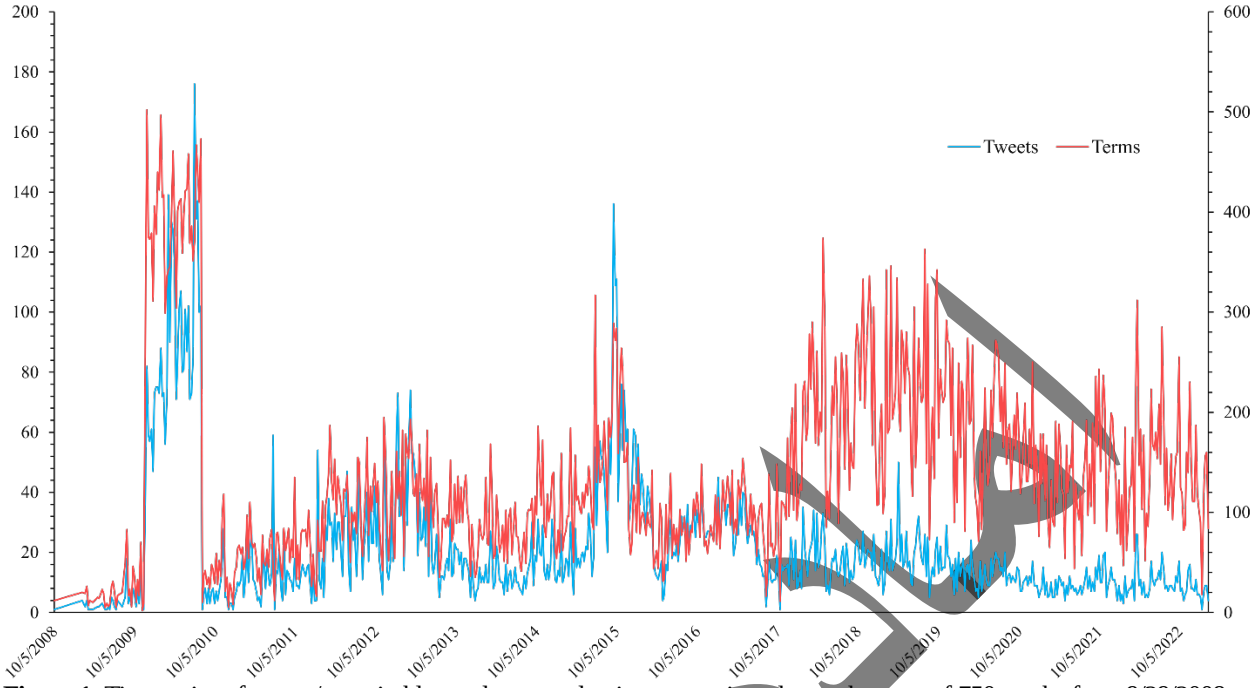


Figure 1. Time series of tweets/posts in blue and stemmed unique terms in red over the span of 750 weeks from 9/29/2008 to 2/12/2023. The left vertical axis represents the number of tweets/posts, and the right vertical axis represents the number of stemmed unique terms. Both time series are based on the system's segregated slicing and represent weekly frequencies, not aggregated values.

The resulting discourse network consisted of an agent/actor layer representing individuals and organizations, a middle layer of frames represented by tweets/posts, and a lexical layer modeled as a projected term co-occurrence graph (Figure 2). Because the analysis focused on discursive communities, the middle (bipartite/two-mode) layer was examined first to assess overall discourse morphology, identify communities, and evaluate the role of hospitality and tourism within the broader CSR discourse of entrepreneurship and tourism.

For the morphological analysis, a tripartite graph of X handles posting tourism- and entrepreneurship-related content was constructed using the CSR hashtag. Weekly network snapshots were generated using aggregated and segregated slicing to examine degree distribution (Alstott et al., 2014; Gillespie, 2015), node fitness, preferential attachment (Pham et al., 2016), and temporal dynamics (Khalilzadeh et al., 2025). Across both slicing methods, five measures were analyzed: graph order, graph size, power-law degree exponent, LMC statistical complexity (C_{LMC}) (Monteiro, 2025), and fractal dimension estimated via the correlation dimension (d_C) (Moore et al., 2023). Aggregated slicing was used to assess scaling behavior, whereas segregated slicing was used to evaluate long-range dependence (Davidson & Rambaccussing, 2015; Pipiras & Taqqu, 2017). Additionally, multifractal analysis (Xiao et al., 2021) was conducted across eight two-year intervals (104 weeks each, with the first and last phases being shorter) to examine structural evolution, self-similarity, and configurational complexity.

For the main analysis, modularity analysis (Blondel et al., 2008; Newman, 2006) was used to identify discursive communities. These communities were then compared across multiple measures to evaluate the role of hospitality and tourism. Community dimensionality was assessed using multifractal analysis via the sandbox algorithm, information dimension (Ramirez-Arellano et al., 2021), and correlation dimension. To examine scaling behavior and the evolution of discourse complexity, C_{LMC} and d_C were analyzed over time. C_{LMC} captures the balance between

order and disorder (i.e., statistical structure complexity), whereas d_C measures connection density, self-similarity, and fractal geometry (i.e., geometric structure complexity).

Results

The morphology analysis reveals a structurally heterogeneous and temporally stable network characterized by multiple scaling regimes, preferential-attachment dynamics, and persistent memory effects. The bipartite layer exhibits strong multifractality, reflected in a large generalized dimension range $\Delta D(q)$ = 5.219 and a broad multifractal spectrum $w_{f(\alpha)}$ = 5.172, indicating substantial structural heterogeneity. The spectrum is asymmetrically skewed toward clump structure ($f(\alpha)_{asymmetry}$ = 0.953), consistent with a preferential attachment growth mechanism. Degree distribution analysis corroborates this pattern, revealing a fat-tailed distribution characterized by a power-law exponent of γ = 2.15 and an attachment exponent of α = 1.086 [95% CI: 1.054 – 1.119]. The attachment exponent indicates weak but statistically significant superlinear scaling, shifting the system from a scale-free regime to a hub-and-spoke regime. The power-law exponent is also in close proximity to 2, indicating a lack of control over the entire system (Liu et al., 2011). As shown in Figure 2, the network's structural configuration remains stable over time, with deviations confined to the initial developmental time slices. Long-memory analysis of segregated slices shows a strong persistent memory effect in C_{LMC} ($d \geq 0.35$, H = 0.71 – 0.85) and a moderate effect in d_C ($d \geq 0.18$, H = 0.75 – 0.89). Results for graph order and size are inconclusive, and the power-law exponent shows no evidence of persistent memory. Macroscopic morphology results are summarized in Figure 2.

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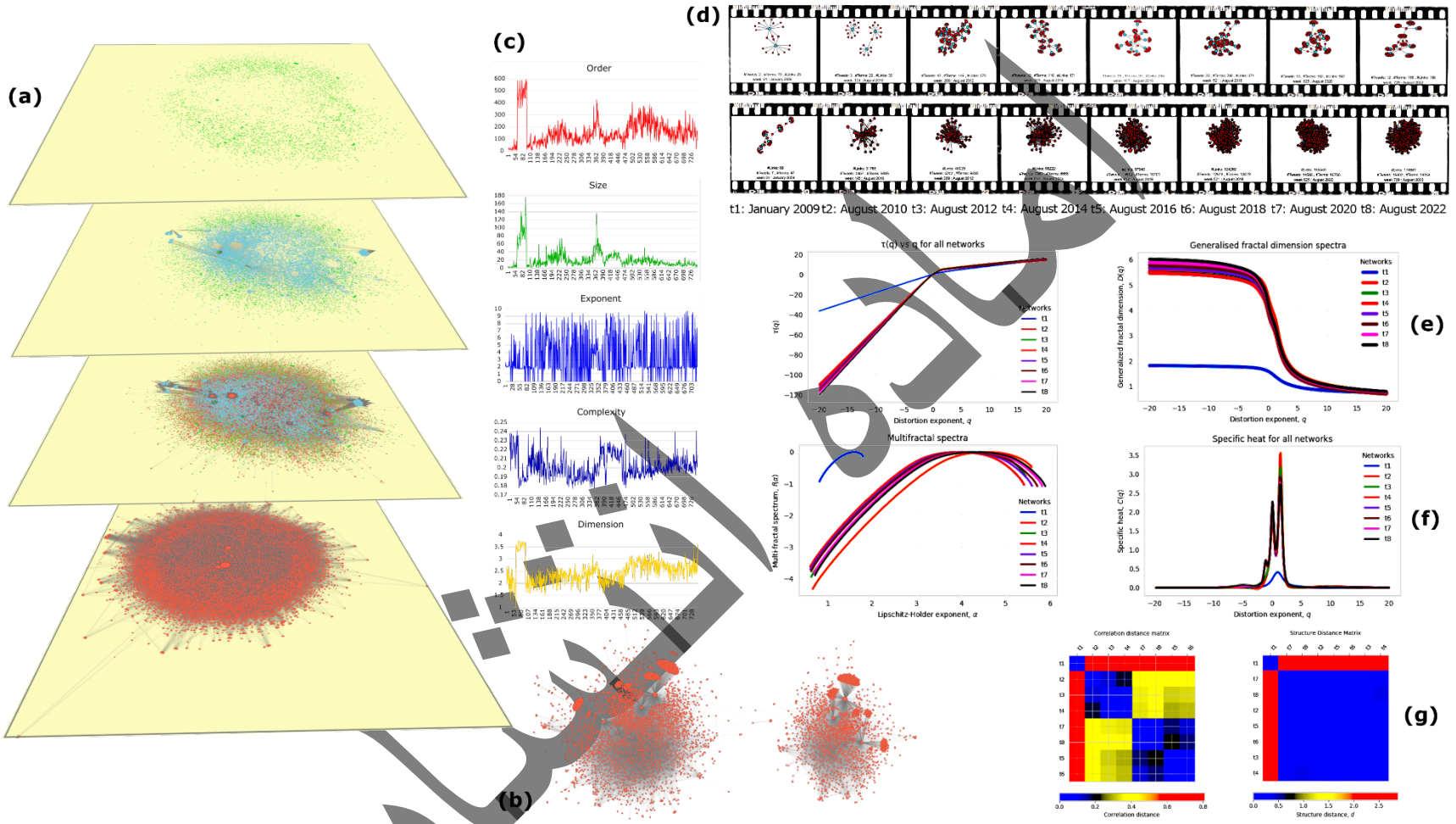


Figure 2. The analysis was conducted on a tripartite graph from the X platform comprising 4,993 handles, 15,772 posts, and 19,734 unique reduced terms (after text normalization and stemming) over approximately 15 years (750 weeks). The network was examined across three representations: the full tripartite graph, a bipartite post–term graph, and a projected unipartite term co-occurrence graph. For clarity, this figure reports only results from the bipartite post–term analysis. (**a**) Multipartite layers from top (actors/agents) to bottom (terms): actors in green, posts in blue, and terms in red. (**b**) At the lexical level, the backbone of the term graph can be extracted—depending on graph density—at different significance thresholds (5% on the left; 1% on the right). (**c**) Five graph measures (order, size, power-law exponent, structural complexity, and correlation dimension) are evaluated under segregated slicing. (**d**) Two slicing methods for time-series analysis: segregated slicing (top) and aggregated slicing (bottom). (**e–g**) Multifractal analysis over eight time intervals derived from (d): (**e**) global fractal dimension (right) and evidence of multifractality (left); (**f**) specific heat for regime-change assessment (right) and multifractal spectra of local

singularity (left); (**g**) distance matrices: structural distance (right) to assess self-similarity across configurations, and correlation distance (left) to evaluate structural similarity among configurations.

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Modularity analysis (resolution = 1.315, modularity = 0.407, modularity with resolution = 0.585) identified 16 discursive communities and revealed contrasting structural positions for tourism and hospitality labor. '*Tourism industry*' was among six primary driving communities, whereas '*hospitality & tourism occupations*' was among ten subordinate communities (Figure 3). The six primary drivers '*business & social innovation*', '*women empowerment*', '*awards & educational foundations*', '*entrepreneurship dialogues*', '*tourism industry*', and '*sustainable collaborations*'. The ten subordinate communities were '*hospitality & tourism occupations*', '*SDGs think-tanks*', '*money talks*', '*employment & ESGs*', '*partnership governance*', '*twitter sociopetal*', '*supportive management*', '*competition schools*', '*academic environment*', and '*training & capacity building*' (Figure 3). These 16 communities were named after the most frequent keywords within them by giving more weight to higher-frequency keywords. As shown in Figure 4, '*business & social innovation*', '*entrepreneurship dialogues*', and '*tourism industry*' show the strongest structural resemblance, with correlation distances ≤ 0.462, and are the most distinct from other communities. Geometrically, the same three communities again form the tightest cluster, with a structural distance ≤ 0.742, indicating a shared underlying configuration and similar fractal structure. '*Women empowerment*', '*awards & educational foundations*', and '*sustainable collaborations*' form a second cluster, while the remaining ten communities constitute a third cluster characterized by similar geometric discourse structures (Figure 4).

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Color Code	Label	Color Code	Label
	SDGs Think-Tanks		Women Empowerment
	Money Talks		Awards & Educational Foundations
	Employment & ESGs		Competition Schools
	Partnership Governance		Academic Environemnt
	Hospitality & Tourism Occupations		Entrepreneurship Dialogues
	Twitter Sociopetal		Tourism Industry
	Business & Social Innovation		Sustainable Collaborations
	Supportive Management		Training & Capacity Building

Figure 3. Modularity analysis with a resolution parameter of 1.32 and modularity quality $Q = 0.41$ identified 16 classes (discursive communities). Order $|V| = 35{,}506$, #Posts = 15,772, #Terms = 19,734, Size (#links) $|E| = 178{,}180$, #Within Links $|E_W| = 99{,}043$ (56%), #Between Links $|E_B| = 79{,}137$ (44%), Density $\delta = 0.0003$, Term/Post Ratio = 1.25, Diameter $d_{max} = 11$, Average Distance $\bar{d} = 3.79$, Degree Centralization $C_k = 0.32$, Average Degree $\langle k \rangle = 10.04$, Assortativity $r = -0.09$, Maximum Entropy $S_k^{max} = 18.4$, Entropy $S_k = 13.27$ (72.1%), Negentropy $S_k^- = 5.18$ (28.2%), Maximum Energy $E_G^{max} = 112{,}485.2$, Energy $E_G = 132.46$, Complexity $C_{LMC} = 68.67$ (81.2%), Degree Distribution $P(k) = 63.7k^{-2.15}$, Lognormal is not statistically different from power-law, Power-law Exponent $\gamma = 2.15$, Attachment Exponent $\alpha = 1.09$, Correlation Dimension $d_C = 3.41$ ($R^2 = 0.920$), Box-covering Dimension $d_B = 4.61$ ($R^2 = 0.868$), Information Dimension $d_I = 4.02$ ($R^2 = 0.894$), Range of Fractality $\Delta D(q) = 5.22$, Multifractal spectrum range $f(\alpha)_w = 5.17$, Multifractal Spectrum Asymmetry $f(\alpha)_{asymmetry} = 0.95$.

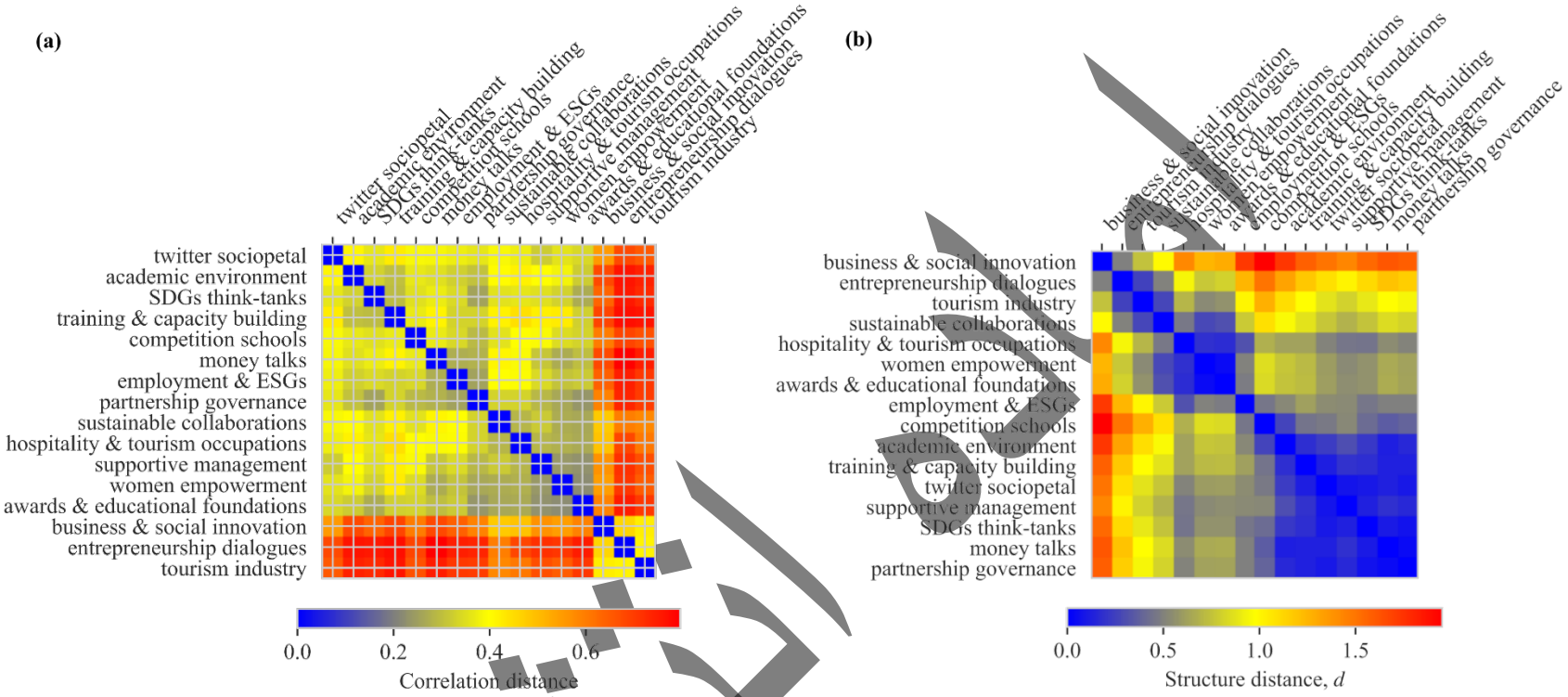


Figure 4. Similarity (distance) analysis of discursive communities: (**a**) Correlation distance (left), which captures similarity in how edge-level metrics **co-vary** across networks. According to the results, the patterns among '*business & social innovation*', '*entrepreneurship dialogues*', and '*tourism industry*' are very similar to one another but significantly different from the rest of the discursive classes. (**b**) Structural distance (right), which focuses on the underlying network-generating mechanisms, connection patterns, degree of self-similarity, and structural similarity based on the generalized fractal-dimension function. According to the results, the patterns are divided into three overlapping clusters of discursive communities. The smaller cluster includes the three main discursive communities mentioned above plus '*sustainable collaborations*'. Within this cluster, '*business & social innovation*' is the most distinct relative to the other three communities, and '*sustainable collaborations*' is shared with the second cluster. The second cluster encompasses three of the largest discursive communities, in addition to the four communities from the first cluster: '*hospitality & tourism occupations*', '*women empowerment*', and '*awards & educational foundations*'. The third and largest cluster comprises the nine remaining discursive communities. '*Employment & ESGs*' is shared between the third and second clusters. Within the third cluster, '*competition schools*' and '*employment & ESGs*' are the most distinct relative to the other communities in that cluster.

For the subsequent analyses, 'hospitality & tourism occupations' was added to the six primary driving communities, with these seven communities hereafter referred to as the core communities. Among them, the strongest multifractality is observed in '*business & social innovation*' ($\Delta D(q)$ = 4.475), '*entrepreneurship dialogues*' ($\Delta D(q)$ = 4.115), and '*tourism industry*' ($\Delta D(q)$ = 3.829), whereas '*hospitality & tourism occupations*' ($\Delta D(q)$ = 2.440) exhibits the weakest multifractality. Based on local maxima in the specific-heat function *C(q)*, '*hospitality & tourism occupations*', '*business & social innovation*', and '*women empowerment*' exhibit three phase transitions, whereas the remaining driving communities exhibit four. Phase-transition patterns cluster '*hospitality & tourism occupations*', '*women empowerment*', and '*awards & educational foundations*' as the most similar, with the remaining communities forming a separate cluster. All communities show left-skewed asymmetry toward a clump structure, with the strongest asymmetry observed in '*business & social innovation*' ($f(\alpha)_{asymmetry}$ = 0.934) and '*sustainable collaborations*' ($f(\alpha)_{asymmetry}$ = 0.848), and the weakest in '*tourism industry*' ($f(\alpha)_{asymmetry}$ = 0.382). Notably, the same three central communities, '*business & social innovation*' ($w_{f(\alpha)}$ = 4.558), '*entrepreneurship dialogues*' ($w_{f(\alpha)}$ = 4.136), and '*tourism industry*' ($w_{f(\alpha)}$ = 3.790), also exhibit the greatest heterogeneity. Figure 5 summarizes the multifractal analysis findings.

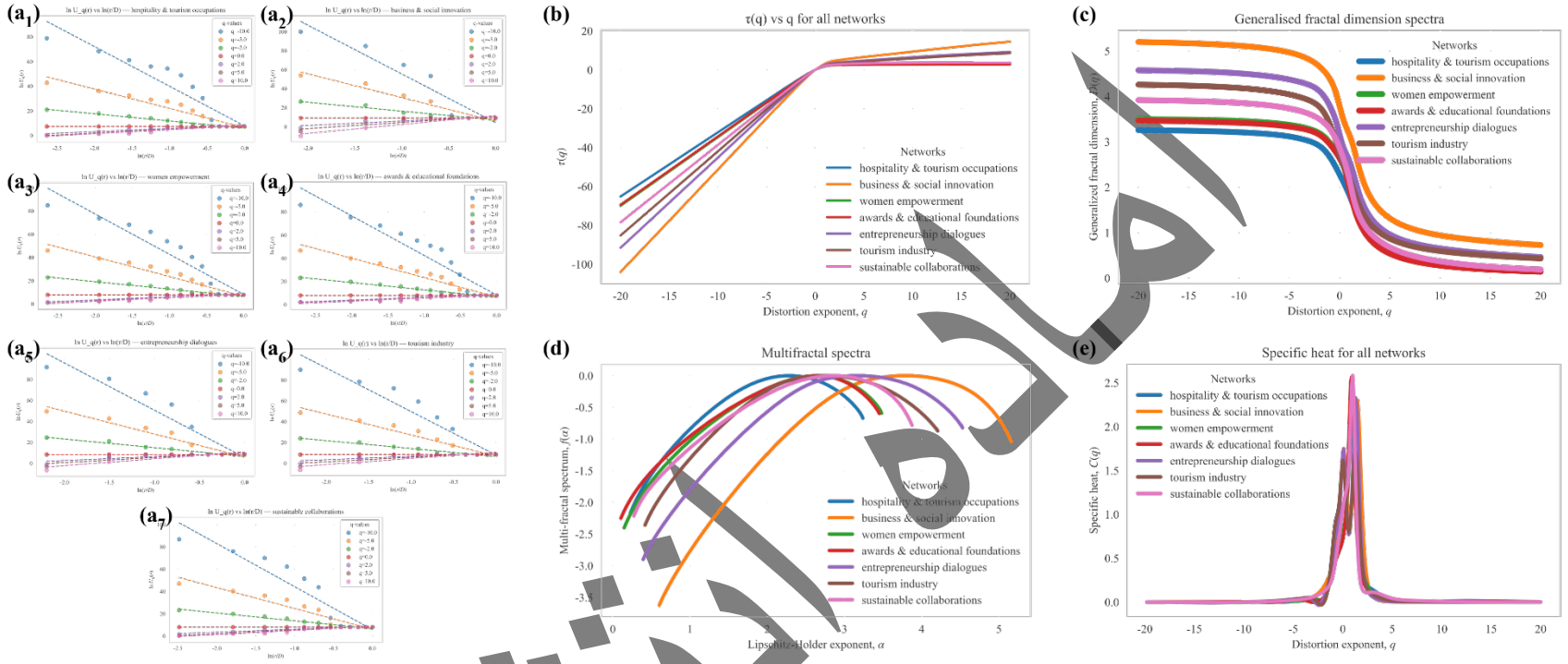


Figure 5. Multifractal analysis of the seven largest discursive communities: (**a**) Panels a_1 to a_7 show the linear fits to the log-log plot for different orders of the structural moment ($-10 < q < 10$), with the natural logarithm of the normalized scale (aka distortion exponent on the x-axis) plotted against the natural logarithm of the partition function (y-axis). The panels are arranged as follows: first row from the top: '*hospitality & tourism occupations*' on the left and '*business & social innovation*' on the right; second row from the top: '*women empowerment*' on the left and '*awards & educational foundations*' on the right; second row from the bottom: '*entrepreneurship dialogues*' on the left and '*tourism industry*' on the right; bottom row: '*sustainable collaborations*'. Across all communities, for $q > -5$ an acceptable fit was observed, indicating fractal behavior. This result is also supported by the R^2 fit indices, as well as by the ratio of root mean square error (RMSE) for the power-law fit over the RMSE for the exponential fit. (**b**) The figure shows the distortion exponent (q) vs. the mass exponent $\tau(q)$, confirming a multifractal structure for all seven discursive communities. (**c**) The figure displays generalized fractal dimension spectra, highlighting the range of multifractality across the seven communities. '*business & social innovation*' ($\Delta D(q) = 4.475$) exhibits the widest range, followed by '*entrepreneurship dialogues*' ($\Delta D(q) = 4.115$), and '*tourism industry*' ($\Delta D(q) = 3.829$). (**d**) The figure demonstrates multifractal spectra of the Lipschitz-Holder exponent (α) vs. the multifractal spectrum ($f(\alpha)$) for each network. Spectrum width reflects network heterogeneity and diversity, with '*business & social innovation*' ($f(\alpha)_w = 4.558$), '*entrepreneurship dialogues*' ($f(\alpha)_w = 4.136$), and '*tourism industry*' ($f(\alpha)_w = 3.790$) showing the highest levels of heterogeneity. Furthermore, while '*business & social innovation*' ($f(\alpha)_{asymmetry} = 0.934$), '*sustainable collaborations*' ($f(\alpha)_{asymmetry} = 0.848$), and '*entrepreneurship dialogues*' ($f(\alpha)_{asymmetry} = 0.817$), are the most asymmetric structures, indicating relatively strong clump structure governed by preferential attachment, '*tourism industry*' ($f(\alpha)_{asymmetry} = 0.382$) is the most symmetric/balanced structure, exhibiting a combination of clump and thorn structures, with clump structure slightly more dominant. (**e**) The figure shows the local maxima of the specific heat phase transition ($C(q)$) for all seven networks. According to the results, '*hospitality & tourism occupations*', '*women empowerment*' and '*business & social innovation*' communities experienced three phase transitions, whereas the remaining four communities underwent four phase transitions. Nevertheless, the intensity and abruptness of phase transitions are relatively low and similar for '*hospitality & tourism occupations*', '*women empowerment*', and '*awards & educational foundations*', compared with the other four communities, which exhibit more intense and abrupt changes.

Fractal-dimension estimates further distinguish the structural positions of '*tourism industry*' and '*hospitality & tourism occupations*'. The correlation (d_C) and information (d_I) dimension estimates are broadly consistent. The highest correlation dimensions are observed for '*entrepreneurship dialogues*' (d_C = 6.203), '*business & social innovation*' (d_C = 6.030), and '*tourism industry*' (d_C = 5.721), while the highest information dimensions occur for '*business & social innovation*' (d_I = 4.303), '*entrepreneurship dialogues*' (d_I = 4.042), and '*women empowerment*' (d_I = 3.974). In contrast, '*hospitality & tourism occupations*' (d_C = 3.169, d_I = 2.883) exhibits the lowest fractal dimension among the seven communities. With the fractal dimension capturing a system's geometrical complexity, C_{LMC} captures its statistical structure complexity, with '*tourism industry*' ($C_{LMC}^{N} = 0.555$), '*entrepreneurship dialogues*' ($C_{LMC}^{N} = 0.524$), and '*business & social innovation*' ($C_{LMC}^{N} = 0.410$) exhibiting the highest levels among the seven communities.

The interaction-index ($\bar{\imath}$) furthermore reveals that '*business & social innovation*' ($\bar{\imath}$ = 1.003) is the only extensive network. However, the two-parameter fractional Tsallis information dimension ($d_{T_q^{\alpha,\beta}}$) indicates that all seven communities are sub-extensive. Among them, '*entrepreneurship dialogues*' ($\bar{\imath}$ = 3.156), '*hospitality & tourism occupations*' ($\bar{\imath}$ = 2.991), and '*awards & educational foundations*' ($\bar{\imath}$ = 2.769) exhibit the highest global connectivity within their discourses, while the remaining three communities fall between these and the sole extensive community, '*business & social innovation*'.

Persistent-memory analysis reveals generally stronger memory effects in C_{LMC} than in d_C, with persistence varying across communities and measures. These effects were evaluated using fractional integration (d) based on autoregressive fractionally integrated moving average (FARIMA/ARFIMA) and Hurst exponent (H) estimation via rescaled range (R/S) and fractional Gaussian noise (fGn) methods (Figure 6). For C_{LMC}, all communities exhibit long-range dependence except '*sustainable collaborations*' (d = 0.192), with the strongest effects observed in '*women empowerment*' (d = 0.349) and '*tourism industry*' (d = 0.289). For d_C, '*hospitality & tourism occupations*' (d = 0.188), '*entrepreneurship dialogues*' (d = 0.194), and '*sustainable collaborations*' (d = 0.161) show no meaningful long-memory effects. From the Hurst exponent perspective, only '*business & social innovation*' ($H_{C_{LMC}} = 0.800$, $H_{d_C} = 0.763$) and '*women empowerment*' ($H_{C_{LMC}} = 0.772$, $H_{d_C} = 0.766$) exhibit long-range dependence (Figure 6).

Finally, power-law model fitting reveals sublinear scaling across all communities for both d_C and C_{LMC}, with 'tourism industry' exhibiting the highest scaling exponent for both measures (Figure 7). For d_C, scaling ranges from '*entrepreneurship dialogues*' (β = 0.142, R^2 = 0.754) to '*tourism industry*' (β = 0.261, R^2 = 0.802), whereas for C_{LMC} it ranges from '*women empowerment*' (β = 0.307, R^2 = 0.757) to '*tourism industry*' (β = 0.611, R^2 = 0.910).

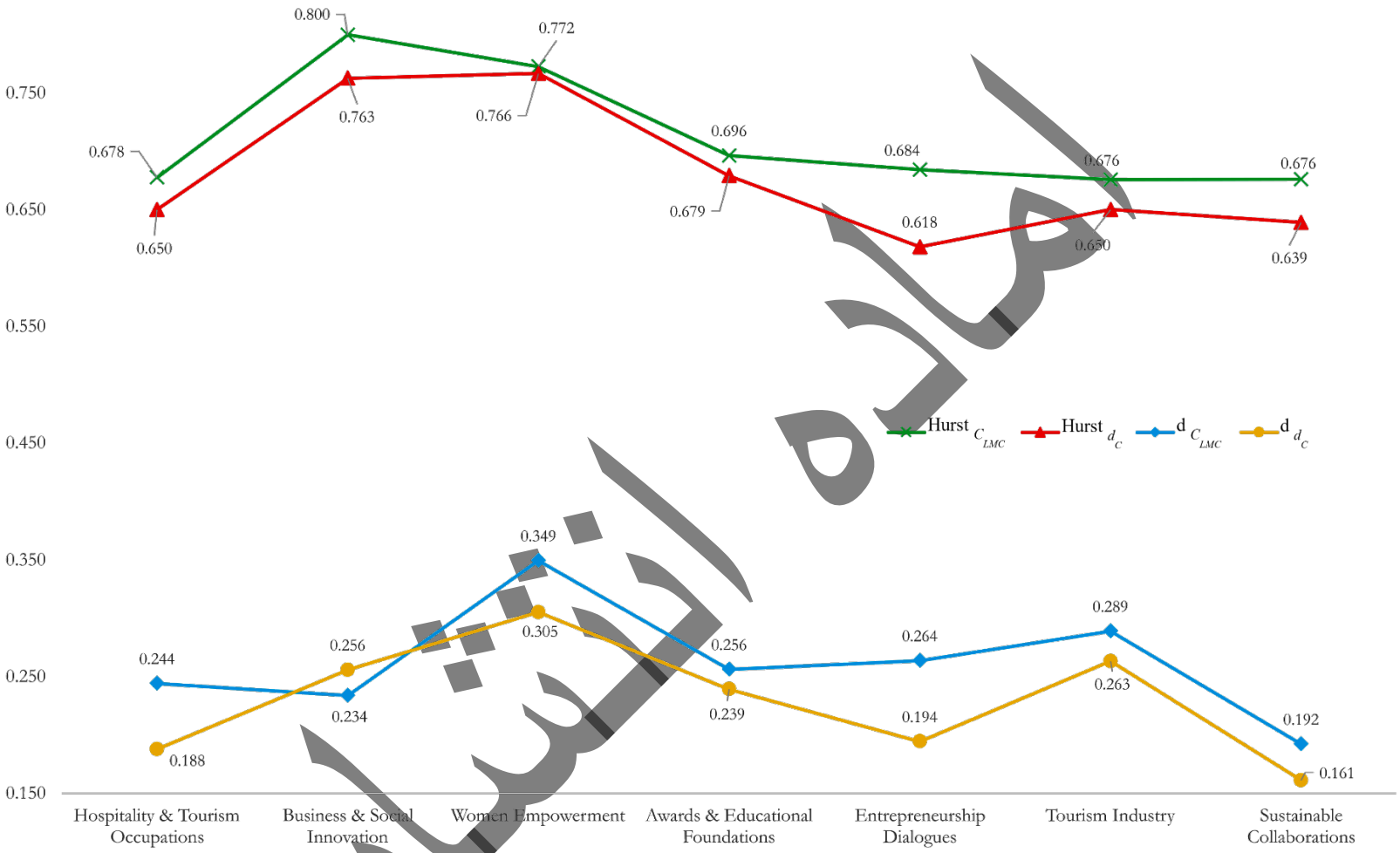


Figure 6. Long memory (aka long-range dependence, persistent memory) in C_{LMC} and fractal correlation dimension (d_C) measures for the seven core communities of the CSR discourse were estimated using two approaches: the fractional differential value (d) in autoregressive fractionally integrated moving average (ARFIMA/FARIMA) and Hurst exponent estimated via fractional Gaussian noise (fGn) and rescaled range (R/S) analysis. Broadly speaking, d_C closely follows C_{LMC} in both the Hurst exponent and d. Overall, except for '*business & social innovation*', C_{LMC} shows a slightly stronger memory effect than d_C across all other communities. One notable divergence occurs for '*entrepreneurship dialogues*': while C_{LMC} indicates a long-memory effect, d_C does not appear to be memory-dependent. Finally, whereas the communities of '*sustainable collaborations*' and '*hospitality & tourism occupations*' are not memory-persistent, '*women empowerment*' is strongly memory-persistent. The estimations for '*business & social innovation*' were unstable and uninterpretable.

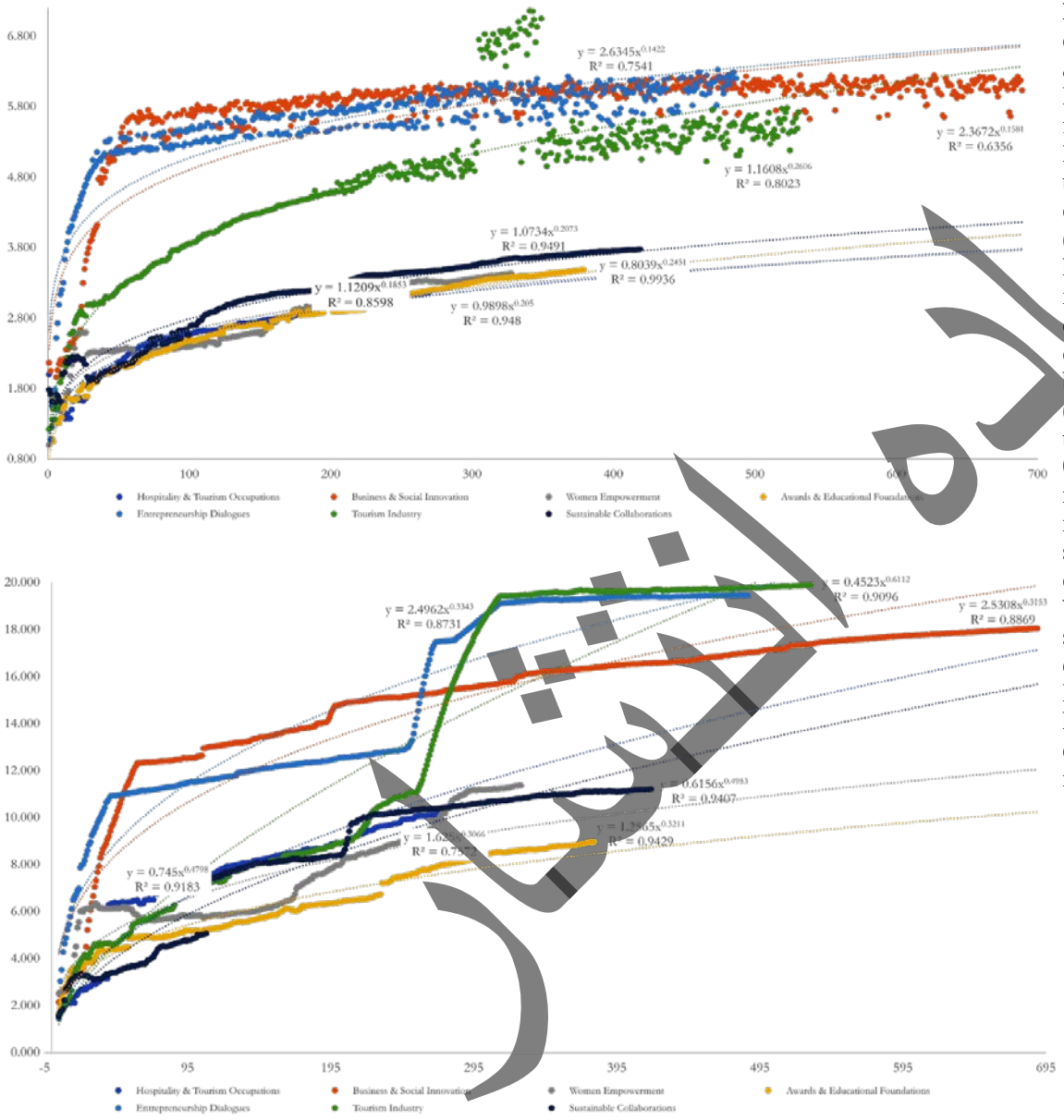


Figure 7. Scaling of the fractal dimension (measured with correlation dimension d_C) vs. time (week) – upper panel – and statistical structural complexity (C_{LMC}) vs. time (week) – lower panel. The scaling is estimated by fitting a power-law function to the d_C and C_{LMC} time-series in aggregated slicing. Both panels show pronounced sublinear scaling, suggesting the existence of economies of scale in dimension and complexity. The scaling behavior of the discourse dimension ($\beta \approx 0.15 – 0.25$) is much more efficient than that of most human-built infrastructures scaling such as urban infrastructure scaling. A similar scaling is observed in complexity scaling behavior ($\beta \approx 0.3 – 0.6$), which is even closer to urban infrastructure scaling and Kleiber's Law in biology, which relates an animal's basal metabolic rate (BMR) to its body mass following a ¾ scaling. With respect to d_C, '*Entrepreneurship Dialogues*' grows the slowest (β = 0.142), which is an indication of discursive community maturing. On the other hand, '*Tourism Industry*', another major discursive community that has already been significantly scaled, is the fastest-scaling discursive community (β = 0.261) in terms of fractal dimensionality. With respect to C_{LMC}, '*Women Empowerment*' grows the slowest; the imbalance between disorder and order in this discursive community, in favor of disorder, seems to persist longer than in other discursive communities. On the other hand, '*Tourism Industry*', which is already the most complex discursive community, is becoming more complex at a faster rate than the other communities (β = 0.611).

Discussion

The findings depict a discourse system that is neither democratic nor evenly distributed. Instead, it currently operates as a scale-free network (Barabási & Albert, 1999) generated by a preferential-attachment, or rich-get-richer, mechanism. New posts entering the conversation overwhelmingly draw on already established, commonly shared themes and high-visibility popular topics and/or viral terms (Zhu & Lerman, 2016), reinforcing the prominence of already successful concepts. However, because the attachment function is slightly superlinear, this scale-free configuration is unlikely to persist indefinitely. The system is gradually pushed toward a hub-and-spoke structure in which a very small number of concepts/terms and keywords dominate the discourse, reflecting a winner-takes-all mechanism (Barabási & Pósfai, 2016). Consistent with this emerging configuration, despite the absence of clustering in the model, which is a design feature, the average path length is extremely short, reflecting the ultra-small-world property of scale-free graphs with a power-law exponent between 2 and 3. As hub dominance intensifies, the average distance is expected to continue shrinking, allowing a few highly popular keywords to become superconcepts (Barabási & Pósfai, 2016). Consequently, the CSR discourse landscape on X (Twitter) is highly heterogeneous and varies across contexts.

The discourse also matured rapidly, a pattern that becomes clearer when its temporal behavior is examined (Lorenz-Spreen et al., 2019; Myers & Leskovec, 2014). After an initial "birth" phase, the fundamental rules governing community interaction stabilized and did not fluctuate substantially over a 15-year period. Although the edge patterns and wiring mechanism showed one or two transitions during the evolution of the discourse, its structural self-similarity and geometric dimension showed almost no change after the discourse became about two years old. Fractal-dimension estimates further suggest that the discourse system has a strong space-filling property, well above that of a solid three-dimensional object, and primarily occupies between four- and five-dimensional space. In other words, CSR discourse is rapidly invading the conceptual space of entrepreneurship and tourism dialogues. The system also exhibits strong multifractality across a relatively wide range.

Despite this stable overall structure, incremental additions to the discourse show no persistent geometric pattern; geometric structural complexity is therefore more event-driven. What is discussed in a given week determines the dimension of the new addition to the discourse system. However, because the discourse structure is saturated, new additions, regardless of their variation, do not influence its overall structure and dimensionality. Statistical structural complexity behaves differently: it exhibits long-range dependence, indicating that the conversation’s complexity is path-dependent. When the discourse becomes highly complex and disordered in a given week, that structural state influences subsequent weeks, meaning the narrative effectively “builds” on itself (Gleeson et al., 2016; Jagodnik et al., 2024). By contrast, like the dimensionality and structure of the system, hub dominance resets or fluctuates in response to immediate events rather than being strictly tied to past states. Taken together, these dynamics make it exceedingly difficult to introduce a new subject that is not already central to the discourse (Sydow et al., 2009).

As a result of the scale-free and fractal structure described above, a clear hierarchical community pattern emerges within the system. Each discursive community forms around a major idea, topic, term, or concept that functions as its hub, producing a self-similar structure that also resembles the broader discourse system. A total of 16 discursive communities were identified. Six emerged as primary drivers and ten as subordinate communities; for subsequent comparative analyses, ‘hospitality & tourism occupations’ was added to the six primary drivers, yielding seven

core communities. This hierarchical organization provides the basis for examining how hospitality and tourism are positioned within the broader CSR discourse system.

Among the seven core communities, '*tourism industry*' occupies a markedly different structural position from '*hospitality & tourism occupations*'. Together with '*entrepreneurship dialogues*' and '*business & social innovation*', '*tourism industry*' forms part of a structurally dominant triad at the heart of CSR discourse, whereas '*hospitality & tourism occupations*' lies closer to the overlap between the main driving communities and the marginalized subordinate communities.

The wiring mechanisms of '*tourism industry*', '*entrepreneurship dialogues*', and '*business & social innovation*' differ substantially from those of the other core communities. Although all seven communities exhibit truncated power-law degree distributions, these three are the only communities with a term-to-tweet ratio below 1, indicating greater lexical convergence and reuse of a shared vocabulary among discourse contributors. They are also the largest communities, with substantially more nodes and links than the others, and contribute a disproportionately large share of within-community connectivity relative to their order. Together, these properties place them at the heart of the discussion, forming a ***hotbed*** of CSR discourse.

Their dimensional and structural relationships are more complex than their wiring mechanisms alone suggest. '*Business & social innovation*' forms a relatively distinct cluster but shows strong similarities to '*entrepreneurship dialogues*', which also shares similarities with '*tourism industry*' and '*sustainable collaborations*'. '*Tourism industry*' and '*sustainable collaborations*', in turn, overlap with a broader cluster that includes '*hospitality & tourism occupations*', '*women empowerment*', and '*awards & educational foundations*'. Overall, '*business & social innovation*' and '*entrepreneurship dialogues*' to a greater extent, and '*tourism industry*' to a lesser extent, form the ***bedrock*** of CSR discourse.

The findings therefore suggest that the tourism industry has integrated into the central nervous system of CSR discourse and become part of its core triad. This structural position suggests that tourism stakeholders have adopted language, habits, and strategic orientations similar to those of the broader business world. By contrast, the position of '*hospitality & tourism occupations*' may reflect a disconnect between the tourism business and the hospitality workforce. Discussions of jobs, employment, and specific hospitality roles remain peripheral, suggesting that within the digital CSR landscape, corporate strategy overshadows the human and labor dimensions of hospitality (Baum et al., 2016; Farrington et al., 2017).

Like the discourse system as a whole, all seven core communities exhibit multifractal behavior. The strongest multifractality occurs in '*business & social innovation*', '*entrepreneurship dialogues*', and '*tourism industry*', indicating that different topics within these communities scale in different ways. This pattern is consistent with greater polyphony and multivocality, although this interpretation warrants further investigation at the actor level. Notably, tourism appears at both ends of this spectrum: '*tourism industry*' lies among the more polyphonic communities, whereas '*hospitality & tourism occupations*', which has the smallest generalized-dimension range, lies toward the monophonic end. The '*tourism industry*' discourse is therefore intellectually rich and diverse, encompassing a wide array of topics, stakeholders, and perspectives and mirroring the complexity of the broader business world. By contrast, the hospitality workforce conversation more closely resembles a less-developed social-advocacy discourse than a corporate-strategy discourse. The peripheral position of topical communities such as ESG and SDGs further reflects this pattern.

The structural contrast is also evident in how these communities occupy and scale within the discourse space. '*Tourism industry*' constitutes a dense, multilayered topic that "fills the space" of discussion (Leskovec et al., 2005) across a broad range of subtopics. In contrast, '*hospitality & tourism occupations*' is conceptually thin: the conversation remains at a relatively surface level and lacks the depth and branching of ideas found in the other major communities. Given its small size and low complexity, '*hospitality & tourism occupations*' is arguably the flattest and most monophonic community, characterized by low local density and cohesion but relatively redundant connections. Its connection density and structural patterns therefore change as the system scales up. By comparison, '*business & social innovation*' is a large, integrated subsystem that maintains its form, patterns, and connection density as it scales. This suggests that business and social innovation topics can scale more readily within the CSR discourse landscape, whereas hospitality and tourism occupational topics struggle to grow and capture attention.

Structurally, '*tourism industry*' differs from the broader entrepreneurship and business discourse. Although all are centralized and heterogeneous, the broader entrepreneurship and business discourse is highly asymmetric, whereas tourism is comparatively balanced and symmetric. This combination positions the tourism sector to expand and exert greater influence across discursive communities over time.

The three major communities forming the backbone of CSR discourse each underwent two major structural phase transitions, but the character of those transitions differed substantially. '*Business & social innovation*' and '*entrepreneurship dialogues*' exhibited asymmetrical transitions in the magnitude of structural reorganization, with both transitions occurring within positive distortion-exponent regimes, indicating the predominance of high-probability structural configurations. '*Tourism industry*', by contrast, exhibited two transitions of comparable magnitude but within distinctly different distortion regimes. One transition occurred near a zero distortion exponent, suggesting comparatively probability-neutral reorganization of the broader network structure, whereas the positive distortion-exponent transition was more strongly associated with dominant structural configurations. Tourism therefore underwent two equally pronounced but qualitatively distinct modes of structural reorganization. Consequently, its structure comprises two distinct regimes interwoven within a single community, contributing to greater structural complexity than that observed in the other major social and business communities. This geometric structural property is also supported by the statistical structural complexity of the tourism industry.

The structural dimension and statistical complexity of the discursive communities both exhibit sublinear scaling, although complexity scales faster than structural dimension. Structural dimension scales at $\beta = 0.15–0.25$, indicating substantial economies of scale and a pattern also observed in urban infrastructure (Bettencourt et al., 2007), but here at a substantially stronger level. This scaling suggests that structural dimension grows much more slowly than time unfolds, reflecting a strong capacity to fill existing gaps as the system expands during its early stages of development.

Among the CSR discursive communities, '*tourism industry*' shows the greatest capacity to grow in both structural dimension and statistical complexity. Its structural dimension grows with an approximately quarter-power exponent, whereas its statistical complexity grows with an exponent just below two-thirds. The latter resembles the broader sublinear allometric scaling observed between metabolic rate and animal mass, although it should not be interpreted as equivalent to Kleiber's three-quarter power law (Ballesteros et al., 2018). Thus, the structural dimension and complexity of '*tourism industry*' not only scale faster than those of any other CSR discursive community, but also combine a structural scaling pattern characteristic of human-built

systems with a complexity scaling pattern that approaches a prominent empirical regularity observed in nature.

Memory patterns further distinguish '*tourism industry*' from '*hospitality & tourism occupations*'. Across the dimensionality and complexity measures, '*tourism industry*' exhibits a moderate long-memory effect, with memory as strong as or stronger than '*entrepreneurship dialogues*' but weaker than '*women empowerment*'. By contrast, '*hospitality & tourism occupations*', along with '*sustainable collaborations*', is among the most event-driven communities and is therefore more reactive to immediately introduced topics. This difference means that tourism-industry topics show more prolonged patterns of bursts and quiet periods, whereas hospitality work-related topics and issues are comparatively brief and transient.

The remaining communities show additional variation in their temporal behavior. '*Women empowerment*' exhibits strong path dependence, indicating persistent attention to women-empowerment-related discourse over time. '*Entrepreneurship dialogues*' is the only community with a large gap between its statistical structural complexity and geometric complexity. From an information-theoretic perspective, it shows moderate long-range dependence in statistical complexity, while its geometric complexity remains near the boundary of event-driven reactive discourse. In other words, newly added concepts and posts do not influence immediately subsequent concepts and posts in terms of words used and connection structure, but the balance or imbalance of their connections persists across immediate temporal neighbors. Estimates for '*business & social innovation*' were unstable and did not yield a clear interpretation.

The structural disconnect between the central position of '*tourism industry*' and the peripheral position of '*hospitality & tourism occupations*' suggests several practical strategies for strengthening the contribution of hospitality occupations to the broader CSR conversation. Within hospitality businesses and enterprises, management should avoid treating CSR as a corporate boardroom topic detached from workforce realities. CSR initiatives should be communicated using the more sophisticated language of social innovation, with greater emphasis on equity, equality, inclusion, and diversity, rather than remaining confined to the reactive language of employment, compensation, and basic necessities. Integrating the hospitality workforce into the broader strategic conversation can reduce its alienation from entrepreneurship and CSR discourse (Ma & Bentley, 2022).

At the same time, the structural strength of the '*tourism industry*' discourse presents a different strategic opportunity. Hospitality and tourism businesses and organizations should not simply mimic general business trends; instead, they should position themselves as pioneers. The sector has already developed a rich, increasingly mature, and intellectually diverse CSR ecosystem, with corporate environmental and social responsibility receiving particularly strong attention relative to other business sectors (Legendre et al., 2024; Madanaguli et al., 2022; Peng et al., 2023). Marketing teams can leverage this sophistication in their promotion strategies to attract value-driven investors and consumers who care about sustainability and diversity, equity, and inclusion (DEI).

Because topics that are already peripheral to the discourse face structural disadvantages in gaining sustained visibility, purely organic campaigns centered on such topics may struggle to establish prominence within the current CSR discourse. A more effective strategy is to connect new ideas and emerging issues to existing hot topics and superconcepts circulating among practitioners and academics, thereby gradually building new topical hubs (Burt, 2004; Watts & Dodds, 2007). In addition, consistent posting patterns and recurring themes across hospitality and tourism discursive communities can help establish path dependence and strengthen persistent

memory for hospitality- and tourism-related concerns within the CSR discourse system. Such persistence can make these discussions more robust and help issues remain salient for longer (Gleeson et al., 2016; Jagodnik et al., 2024).

Conclusion

The necessity of the current study is well established in the network science literature of form shaping/dictating the function (Strogatz, 2001). Without dwelling on the philosophical debate of form following function (Sullivan, 1896) vs. form shaping function, it is possible to establish the importance of structure in any system, including abstract systems such as a discourse system. The structural configuration of a system constrains and influences the processes that can unfold within it. As Strogatz (2001, p. 268) observed, "structure always affects function". This study attempted to investigate business discourse at a structural level and, more precisely, at the dimensional and structural complexity level. The outcome helps us to understand how discourse and discursive communities are born, evolve, and become our way of making meaning in our business practices. Discourse is not an ordered and organized propaganda tool, as is often depicted in literature (Peters & Jandrić, 2018); rather, it truly reflects our societies; it is chaotic and relatively uncontrollable, showing its own behavior and memory, with no single organization being able to direct it. Nevertheless, the power play and struggle to shape the discourse remain ongoing efforts by all players, as the results also suggest (Peters & Jandrić, 2018). This finding has significant repercussions for the literature on CSR as a public relations (PR) tool (Colleoni, 2013; Paliwoda-Matiolanska et al., 2020).

A hierarchical multipartite graph approach for analyzing discourse on the X platform has been shown to be valuable for modeling and studying unstructured textual data. Considering that the approach has a high level of abstraction with maximal extension, it is possible to assume it as a universal approach with strong potential to [concept] travel, applicable to various forms of textual data (Osigweh, 1989; Sartori, 1970). The principal concern with employing a hierarchical multipartite graph approach is the intension, which is vague and can assume any state from low to high. A high level of intension, given the abstraction and extension levels discussed above, can result in concept stretching rather than traveling. By finding the right frame/window for the text units that appear together, it is possible to minimize the intension and avoid [concept] stretching (Osigweh, 1989; Sartori, 1970). Nevertheless, given that the frame/window in the current study is posts (formerly known as tweets), which are a well-defined part of the X platform mechanism, we can assume the intension is low. Future studies using textual sources with an obscure frame/window definition should be cognizant of vague intension and its potential pitfalls in concept traveling.

The greatest benefit of a hierarchical multipartite graph approach is that it includes discourse content, organization (framing), and sources in a single model, enabling simultaneous analysis of various forms of relationships. In the current study, however, only the bipartite model analyses are reported as a demonstration, and the lowest-order projected layers and the highest-order actor layer were not included in the analysis.

The findings show that CSR discourse in entrepreneurship and tourism is not an open or evenly distributed conversation; rather, it behaves as a scale-free, hierarchical, winner-takes-all system. While different discursive communities show various levels of structural memory, and some are event-driven while others are path-dependent, the aggregate outcome of these communities interacting with each other results in a system with strong structural persistent memory. In other words, discussion topics can be fundamental or reflective in a discourse, but the discourse itself demonstrates long-range dependence. As a result of the structure, behavior, and

memory explained above, attention within CSR discourse is structurally cumulative. This finding, along with self-similar hierarchical community structure, leads to an essential understanding of the discourse reality: What institutions formally define as central to contemporary CSR is not necessarily what becomes structurally central in social discourse. It should also be noted that these [un]favorable patterns are hard to change, as the findings indicate that CSR discourse is dynamically active but structurally mature, meaning events can rearrange activity within the system more easily than transform the system's architecture. Concepts such as ESG and SDG being pushed to the discourse periphery, and women's empowerment becoming part of the discourse core, follow the same mechanism explained above but have opposite implications and outcomes. The positioning of these concepts is not necessarily related to the age of discursive communities, as women's empowerment is much younger than the SDGs but slightly older than ESG.

Regarding the role of tourism in global entrepreneurship CSR discourse, the findings suggest that tourism has entered the strategic core of CSR discourse, but hospitality workers have not entered that core with it. Tourism appears to constitute a uniquely adaptive and scalable discursive subsystem whose complexity increases substantially faster than its structural dimensionality.

This study has several limitations that warrant acknowledgment. First, the analysis is based exclusively on data from the X platform and a keyword- and hashtag-bounded sampling strategy; therefore, the findings should not be assumed to represent CSR discourse across other platforms or communication contexts. Second, the actor layer was not analyzed, and the labeling of discursive communities necessarily involved interpretive judgment. In addition, long-memory and multifractal estimates may vary depending on methodological and parameter choices, and only a subset of the identified communities was examined in depth. Future research can address these limitations by incorporating multiple platforms, examining actor-level dynamics, testing alternative analytical specifications, and extending detailed analysis to a broader set of discursive communities.

Disclosure

AI was used for language and text editing and proofreading. However, the author checked the entire manuscript for any alteration in meaning, content, and citations, and takes full responsibility for the content and its accuracy.

Appendix A: *Top keywords in each discursive community, sorted by degree centrality. Keywords are stemmed forms of the terms*

SDGs Think-Tanks	Money Talks	Employment & ESGs	Partnership Governance
join (361)	fund (335)	employ (189)	promot (302)
confer (289)	get (222)	esg (134)	issu (180)

asia (240)	minist (103)	founder (101)	govern (147)
call (211)	main (96)	particip (84)	partnership (129)
visit (181)	effect (95)	board (75)	well (127)
sdgs (177)	beyond (86)	inclus (75)	key (116)
welcom (153)	view (85)	novemb (50)	polici (105)
session (139)	tax (81)	add (42)	state (100)
design (134)	direct (73)	urg (42)	includ (100)
paper (127)	rate (64)	smallbusi (40)	organi (89)

Hospitality & Tourism Occupations	Twitter Sociopetal	Business & Social Innovation	Supportive Management
travel (728)	learn (268)	social (6623)	support (570)
job (486)	follow (214)	busi (1591)	us (448)
global (426)	thank (211)	respon (1131)	manag (369)
hotel (303)	latest (137)	new (1041)	help (321)
post (257)	account (125)	corpor (896)	group (197)
career (184)	twitter (111)	socent (826)	creation (105)
hrm (150)	etc (110)	entrepreneur (678)	across (94)
appli (141)	volunt (107)	can (535)	understand (85)
grad (124)	produc (91)	innov (513)	encourag (80)
solut (121)	microfin (82)	compani (504)	consult (76)

Women Empowerment	Awards & Educational Foundations	Competition Schools	Academic Environment
develop (751)	award (467)	school (246)	environ (328)
program (501)	india (397)	competit (103)	focus (293)
initi (382)	project (349)	run (64)	educat (188)
now (338)	foundat (251)	embrac (53)	area (102)
women (336)	event (203)	ask (42)	proud (83)
educ (229)	best (174)	town (39)	month (79)
live (228)	internat (151)	cape (29)	donat (69)
skill (215)	practic (141)	applicat (23)	sap (47)
network (187)	nation (140)	fashion (18)	three (46)
academi (164)	mba (132)	nepal (13)	everi (46)

Entrepreneurship Dialogues	Tourism Industry	Sustainable Collaborations	Training & Capacity Building
entrepreneurship (11246)	tourism (5074)	sustain (2486)	train (250)
socialentrepreneurship (729)	communiti (994)	green (409)	launch (238)
method (679)	local (803)	make (380)	forum (195)
mode (676)	cour (792)	partner (251)	better (132)
ngo (577)	boost (766)	one (198)	right (118)
socialbusi (469)	member (753)	check (143)	countri (100)
youth (375)	sponsor (748)	plea (135)	initiat (94)
philanthropi (373)	awar (720)	gt (122)	excellenc (82)
day (302)	enrol (646)	unwto (116)	csr_rt (78)
ceo (276)	industri (416)	toward (108)	annual (65)

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