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Estimating the network of UN 2030 Agenda. The Community structure of the targets

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Sustainable development is a compelling need that commits society to adopt tools for implementing and managing interventions across three macro areas: social, economic, and environmental. Within this context, international programs, such as the UN 2030 Agenda, provide a roadmap for achieving sustainability. States must work towards sustainability by integrating all relevant fields, recognizing that each action has positive and negative impacts on other areas. Therefore, the 2030 Agenda is founded on a complex structure based on the relational mechanisms between the targets, with all these interdependencies represented by synergistic and conflictual meanings. The core elements of the 2030 Agenda are the 17 Sustainable Development Goals (SDGs), 169 targets, and 231 UN-IAEG-SDGs indicators. Given the hypothesized existence of a relational mechanism between the SDGs and targets, we aim to: i) estimate the network model that underlies the 2030 Agenda, ii) evaluate the synergies and trade-offs between targets, and iii) identify the priorities for interventions. Considering a n x p matrix, where the n observations are the 27 countries of the EU area and the p variables are the 2030 Agenda targets, with p»n, and using Graphical LASSO models, this work estimates the latent network structure of the 2030 Agenda targets. The resulting network is analyzed using Social Network Analysis tools, including global and local measures. Furthermore, once the partition of the target is found, they are compared to the target groups specified by the SDGs of the Agenda to observe any regularities or mixes between them. This study contributes to a relatively unexplored area of research, namely the management of interactions between the SDGs. Assessing the synergies and trade-offs between targets can be highly valuable as it can provide an accurate monitoring system to states, outlining the priorities that must be pursued over time.

Keywords

social network analysis, graphical models, SDGs, Agenda 2030, target

Topics

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