Monitoring SDGs is both a key challenge and an opportunity for all stakeholders involved in the implementation of the Agenda 2030, to obtain robust assessments and tailored policy implications at all levels. Despite the robustness of the SDG Index (Sachs et al., 2017), a key issue dealing with the integrated nature of the SDGs still needs to be properly tackled: to take into account the trade-offs and synergies among goals, as well as among the three dimensions of sustainable development, i.e. the economic, social and environmental.

In order to address this issue, our aim is to enhance the SDG Index by introducing a new method of aggregation based on an innovative class of indexes: the Multidimensional Synthesis of Indicators (MSI) (Biggeri and Mauro, 2018). The aggregation method of the SDG Index is based on the arithmetic mean that induces perfect substitutability between Goals. Many composite indexes use the geometric mean because it implicitly allows taking into account the heterogeneity of dimensions. Using the new MSI method, we manage to retain the theoretical intuitions associated with the geometric mean, while avoiding its problems related to collapsing to zero for low values. In our study the new approach is tested through a simulation analysis, and its results (scores and ranking) are compared with the standard SDG Index and the geometric mean. A sensitivity analysis is conducted to check the flexibility of our approach. Synergies and trade-offs are also captured analyzing the systemic ‘overlapping’ among goals.

Our study shows that taking into account the various sources of heterogeneity – i.e. among performance in each SDG and among the three dimensions of sustainability – results in relevant differences in the SDGs scores and ranking. Our simulations and results show how the new class of indexes provides a more flexible and integrated approach for the procedure of aggregation, and thus generally for monitoring the SDGs to better capture and visualize the dynamics of sustainable development.

Overall, our methodological proposal and empirical analysis can provide policy-makers with further monitoring tools to shape policies at global and country level for the humanity and its common future.