# Necessary axioms and characterization of an index to measure the 'Leave No One Behind' principle

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**Abstract**

'Leave no one behind' has become an important principle of the entire 2030 Sustainable Development Agenda and the Sustainable Development Goals that brings inequality to the centre stage. Although a precise definition of what it is to lag behind is essential to assess sustainable economic growth and social progress a discussion on the desirable properties of such a measure is absent in the literature. This paper fills that gap by proposing and discussing a number of normative and analytical properties a measure of the `Leave no one behind´ principle should satisfy. The axioms proposed are necessary and sufficient to characterize the fuzzy measure by Garcia-Pardo et al. (2021) and together with other additional axioms make the structure of this measure more transparent.

**Keywords:** axiomatic characterization, fuzzy sets, 'to leave no one left behind' principle, economic growth and social progress

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