

# Social Sustainability, Poverty and Income Levels: An Empirical Exploration

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## 1.Intro

As a foundation for a meaningful policy discussion on long-term social sustainability we pose the following question: to what extent are poor countries less socially sustainable than rich countries? While the answer appears obvious, systematic empirical evidence is missing. In order to address this question we need an operational definition of social sustainability. Unfortunately, there is neither an agreed definition of social sustainability nor consensus around how to measure it. To overcome this gap, this article expands the literature in three ways. First, we review the existing definitions of social sustainability and propose a pragmatic definition—instead of providing yet another new definition. Second, we construct a global database capturing the multiple aspects of social sustainability emphasized by the previous literature. Third, we provide empirical evidence on the relationship between countries' poverty headcounts and income levels against a range of social sustainability indices. Based on such correlations we conclude that, as expected, more socially sustainable societies are less likely to be poor—a result that is consistent across choices of social indicators and developmental outcomes. Perhaps less expectedly, these associations are not uniform across components of social sustainability nor across regions worldwide. The evidence, ultimately, supports the notion that social inclusion matters not only on its own right but also instrumentally, when associated with reduced poverty and increasing income.

This article is organized as follows. Section 2 reviews the existing literature defining social sustainability and discusses the challenges in arriving at a consensus definition and measurement. Section 3 proposes an alternative, pragmatic, approach based on an inclusive definition that leads to a global database of social sustainability indicators from which we can measure social sustainability. In section 4, we use those indicators to diagnose how social sustainability is associated with levels of monetary poverty and per capita GDP. Section 5 concludes.

## 2. Literature review on social sustainability concepts

The complexity of social sustainability when it comes to its components, interactions and goals—when contrasted, for example, with the concepts of small fiscal and debt deficits or zero greenhouse-gas emissions—has led to either incomplete definitions, or long lists of principles, attributes and conditions that a country, a city or a community must display to be socially sustainable. Such lists include social equity, intra- and intergenerational wellbeing, quality of life, and satisfaction of basic needs; social interactions and interconnectedness; social integration and participation; freedom; safety and security; access to basic infrastructure and services; among others. Both approaches, either vague or long definitions, are unhelpful in delivering a definition that can be understood, agreed upon and operationalized. This constitutes a missed opportunity. The evolution in the definition and measurement of poverty offers relevant insights: a pragmatic consensus on what constitutes monetary poverty and how to measure it—through the USD 1 per person per day and subsequent updates—has allowed decades of sprawling comparable statistics, monitoring and research.

## 3. Constructing a Global Database on Social Sustainability

Rather than providing yet another contested definition of social sustainability, we propose focusing on meaningful indicators that capture social sustainability comprehensively and flexibly. The result is a global dataset of social sustainability indicators, the Social Sustainability Global Database (SSGD). An initial mapping exercise identifies 10 data sources with fitting indicators. These sources include harmonized living standards and income and expenditure household surveys from the World Bank's Global Monitoring Database (GMD); regional databases such as the Afrobarometer, Arab Barometer, Asian Barometer and Latinobarometer; and global databases such as World Values Survey, the BTI Transformation Index database, World Development Indicators, V-DEM, and Worldwide Governance Indicators. The resulting Social Sustainability Global Database (SSGD) encompasses 193 countries and 42 territories across seven world regions, accounting for 98.7 percent of the global population. This section lists all the variables in the SSGD that correspond to the first, second and third components, respectively.

## 4. Analysis

We cluster selected indicators into three components of social sustainability. While the purpose is not to impose a rigid conceptual organization upon the selected indicators, social sustainability indicators are grouped into the smallest number of categories that bring the maximum number of conceptually similar indicators together. Indicators are clustered in each component based on the review of current literature. The resulting components consist of social inclusion, resilience and social cohesion, and empowerment (carefully defined in the paper). Each of these indices include six equally weighted indicators that together reflect the level of social inclusion, resilience and social cohesion, and empowerment in a given country. Including six indicators per component allows for the largest number of countries in the empirical exercise while meaningfully covering different aspects between and within social sustainability components. Several robustness checks

assess whether the original results change after altering the number and mix of indicators in each component. Constructed indices go from 0 to 100 and are monotonically built in such a way that lower values represent lower social sustainability.

We use country-level data to scatter plot the logarithm of per capita GDP in PPP (international dollars 2017) and each of the social sustainability indices. Additionally, we also plot poverty headcount using national poverty lines of each country's latest year with available information against each of the indices.

## 5. Results and conclusions

Our empirical exploration highlights four main results. First, a given country's social sustainability is positively correlated with per capita income levels and negatively correlated with poverty headcounts. This is also true for each of the three components of social sustainability. Second, these associations are not equally strong. Social inclusion tends to be more strongly associated with income and poverty, the opposite being true for resilience and social cohesion. Third, different regions have different patterns. The above-mentioned associations are strongest and closest to worldwide patterns in East Asia and the Pacific, while they are the weakest in Sub-Saharan Africa. Fourth, results are robust to the choice and number of social indicators and many developmental outcomes (such as the human development index, human capital index, fertility rates, or equality of opportunities—the Gini index being only exception found).