

Electric Vehicles

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Equity

- SOCIAL EQUITY represents the systematic process of assessing and quantifying the **fairness and justice** in the distribution of resources, opportunities, and outcomes within a society or a specific system.
- Equality treats everyone the same, while equity acknowledges that individuals and groups start from different places and may require differentiated support to achieve comparable results.
- This concept is deeply rooted in ensuring that **policies, programs, and practices do not disproportionately burden or benefit** any particular group, especially those historically marginalized or disadvantaged.

Equity

- For instance, providing the same level of funding to two schools in vastly different socioeconomic neighborhoods may perpetuate inequity if one school requires significantly more resources to address pre-existing disadvantages.
- Justice, in this context, is a broader concept that encompasses equity but also includes legal and moral dimensions of fairness and rightness.

Importance of Measuring Equity

- Why is MEASURING SOCIAL EQUITY important?
- The IMPORT lies in its capacity to guide and evaluate efforts towards creating a more just and inclusive society.
- Without measurement, we lack the capacity to understand the extent of existing inequalities, the impact of policies intended to address them, or whether progress is genuinely being made.
- **INTERPRETATION of social equity data allows organizations and governments** to identify areas where disparities are most pronounced, to target interventions effectively, and to hold themselves accountable for promoting fairer outcomes.

Equity and reliability of public electric vehicle charging stations in the United States

- Equitable coverage and reliable operation of electric vehicle charging stations (EVCSs) are crucial for a just transition to a carbon-free future.
- Analysis in [1] finds out -**disadvantaged communities (DACs) have 64% fewer public EVCSs per capita than non-DACs in USA.**
- Additionally, EVCS users in DACs and urban areas experience significantly **more reliability issues** compared to those in non-DACs and rural areas, primarily related to hardware and technical failures.

Pigou-Dalton principle

The Pigou-Dalton principle, also known as the Dalton transfer principle, is a fundamental concept in welfare economics that guides the assessment of income distribution changes.

It states that a "regressive transfer," where income is moved from a poorer individual to a richer individual, should decrease social welfare, while the reverse, a "progressive transfer," should increase it.

Equity Measures

- Gini Index
- Energy Burden
- Rawlsian welfare

Reference

- Equity and reliability of public electric vehicle charging stations in the United States –Nature Communication
- Inequitable access to EV charging infrastructure –The Electricity Journal