

Applied Data Analytics

Statistics — Miscellaneous topics

Equivalence scales

Hans-Martin von Gaudecker and Aapo Stenhammar

Distribution of economic resources

- Consumption vs. income
- People live in households of different sizes
- Still want to compare everyone
 - Equivalence
 - Scales

Public goods / economies of scale

- Dwelling
- Appliances
- Food
- Vacations
- Mobility
- ...

Equivalence scales

$$\text{weight}(\text{HH}_i) = f(N_i^{\text{adults}}, N_i^{\text{kids}})$$

Properties

- $f(1, 0) = 1$
- $0 < \Delta f / \Delta N < 1$
- $\Delta^2 f / \Delta N \Delta N \leq 0$
- $\Delta f / \Delta N^{\text{adults}} \geq \Delta f / \Delta N^{\text{kids}}$

The "new" OECD scale

Description	Weight
First adult	1.0
Each further person aged 14+	0.5
Each child	0.3