

Equivalence scales sensitivity

Philippe Van Kerm
University of Luxembourg and LISER

LIS 2020 (e-)Summer Workshop
August 2020

Comparing living standards when household composition varies

Comparing living standards when household composition varies

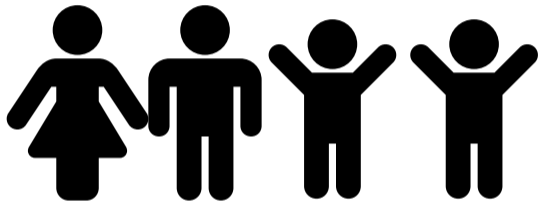


€2000

Comparing living standards when household composition varies



€2000



€4000

Equivalence scales, formally

Find the level of income \tilde{y} that would bring the same living standard for an alternative, reference household composition, e.g., an adult living alone:

$$u(\tilde{y}, \mathbf{1}) = u(y, h)$$

where $u(y, h)$ captures the living standard of a household of composition h with total income y (and usually $u(y, \mathbf{1}) = y$).

So,

$$\tilde{y} = u_1^{-1}(u(y, h))$$

Common equivalence scales

The '**square root scale**' (sometimes called to LIS scale):

$$\frac{y}{\sqrt{(Ad + Ch)}}$$

More generally:

$$\frac{y}{(Ad + Ch)^\theta} \quad \theta \in [0, 1]$$

(The UK's McClements' scale.)

The **Oxford scale** (OECD scale):

$$\frac{y}{1 + 0.7(Ad - 1) + 0.5Ch}$$





The **modified OECD scale** (Eurostat):

$$\frac{y}{1 + 0.5(Ad - 1) + 0.3Ch}$$

A more general 3-parameters scale:

$$\frac{y}{(1 + \alpha(Ad - 1) + \beta Ch)^\gamma}$$

Examples

	Household income	Per capita	'LIS'	Oxf'd	modified OECD
	800	800	800	800	800
	1200	600	849	706	800
	1500	500	866	682	833
	1800	450	900	667	857

Equivalence scales for wealth comparisons?

Equivalence scales for wealth comparisons?

Wealth is not income...

- Wealth is *not* consumed immediately: indicator of future private consumption, so future composition matters (and discard children? but what about bequests?)
- 'Service value' of real assets: strong economies of scale in housing
- Wealth may not only be relevant for consumption but for 'power' or 'family prestige' ('household prestige')?
- Total wealth as a measure of (national) stock of capital? No economies of scale appropriate

Choice depends on context. Common to ignore economies of scale and consider distribution across households.