

Abstract for “Searching for a Consistent Equivalence Scale across Countries”

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The seminal paper by Buhmann et al (1988) yielded an increase in international comparisons of inequality in which a common equivalence scale is used to make the comparisons. The most commonly used scale is the square root of family size, one of the constant elasticity family of scales. Buhmann et al (1988) claimed that one needs to understand the different family arrangements in countries when choosing a scale, and they demonstrated that the choice of scale can even change the relative ranking of the inequality across countries.

With differences in the economies of scale across countries, it might improve the comparability of well-being by using different equivalence scales. As Coulter, Cowell and Jenkins (1992) find (and Buhmann et al. (1988) suggest), the scale elasticity creates a U-shaped relationship between measures of inequality and the elasticity. Johnson (2004) and Banks and Johnson (1994) show that the scale can also affect the changes in inequality over time. Johnson and Torrey (2004) suggest that for international comparisons one could use the scale elasticity that minimizes inequality as a measure of the differences in family size across countries. Using the Luxembourg Income Study (LIS) database, Bönke and Schröder (2007) show that the ranking of inequality across countries can change with the elasticity of the scale. In addition, Okamoto (2012) shows that the elasticity that minimizes inequality varies across countries. Both suggesting that economies of scale differ across countries. Moreover, Bradbury and Jantti (2001), among others, demonstrate that the relative well-being, as measured by relative poverty risk, of the elderly and children within countries, and the country rankings of these groups, are sensitive to the choice of scale.

This paper uses the LIS database to estimate the elasticity that minimizes the Gini coefficient and other measures of inequality for a variety of countries. Similar to Buhmann et al. (1988) and others, we evaluate the impact that the scale elasticities have on both the inequality and the poverty ranking of countries. We also use this method to evaluate the change in inequality and poverty over time by conducting the analysis for multiple time periods. Not only could the elasticity vary across countries but it could also vary across time within countries.

References

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