DISCUSSION:
“Regression-Based Decompositions of Rank-Dependent Indicators of Socioeconomic Inequality of Health”
by G. Erreygers and R. Kessels

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In particular, authors:

1. compare six regression-based decompositions of generalized concentration index;

2. illustrate differences using data from Ethiopia 2011 DHS\(^1\);

3. show that there are many ways of decomposing RaDISH, potentially leading to arbitrary results.

\(^1\)Demographic and health survey.
Socioeconomic Inequality of Health

To what extent are inequalities in health systematically related to socioeconomic status?

⇒ Use indices for socioeconomic inequality of health

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2 Taken from Erreygers (2006) who takes it from Rowntree (1901).

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<tr>
<th></th>
<th>Boys</th>
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<td></td>
<td>Very good</td>
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Figure: Poverty and Health in York (1901)²
Rank-Dependent Indices of Socioeconomic Inequality of Health (’RaDISH’)

- RaDISH are weighted sums of health levels with the weights determined by socioeconomic ranks;
- Generalized health concentration index: $GC = \frac{2}{n} \sum_{i=1}^{n} h_i d_i$ with $h_i$ the health variable and $d_i$ related to socioeconomic rank$^3$;
- Regression based decompositions allow for understanding determinants underlying socioeconomic inequality of health ⇒ Which factors explain (i) health, and, (ii) socioeconomic rank;
- Authors investigate underlying factors of socioeconomic inequality of stunting in Ethiopia and find that different decompositions lead to different results.

$^3$’Fractional rank-deviation’
Four Remarks

- Interesting field of research, interesting paper (several);
- Application taken from Wagstaff et al. (2003) who do not use model selection criteria. Possible to include that for RaDISH decomposition analyses?
- Part of application results might be plagued by endogeneity (explaining 'income-based rank' with 'residence type' and 'safe drinking water');
- How about making an application to China? Income is rising hand in hand with inequalities. Could one add some intertemporal dimension to a Chinese RaDISH analysis?\(^4\)

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\(^4\)Data exist (China Health and Nutrition Survey) and crave advanced technology in decomposition.
Authors’ Important Finding

- One needs to carefully choose/develop appropriate decomposition (TBD);
- Outcome of analyses can be driven by author’s choice of decomposition, robustness requires transparency and possibly multiple decomposition results;
- More research is needed, find appropriate decomposition via axiomatic approach.
