

Scale invariance and similar invariance conditions for bankruptcy problems

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The errors mentioned in this erratum have been pointed out to me by William Thomson.

1. A term $c_{(1)}/n$ is missing in line 3 of item 3 of Proposition 3, so that Proposition 3 should read as follows

Proposition 3 *A division rule R satisfies Additive Invariance 1 and Limited Consistency if and only if it is recursively defined, for all $N \in \mathcal{N}$ and all $(c, E) \in \mathcal{C}^N$, by*

1. *If $E \leq c_{(1)}$, then $R_i(c, E) = E/n$;*
2. *If $E \geq C - (n-1)c_{(1)}$, then $R_i(c, E) = c_i - \frac{C-E}{n}$;*
3. *If $c_{(1)} \leq E \leq C - (n-1)c_{(1)}$, then*
 - If $c_i = c_{(1)}$, then $R_i(c, E) = c_{(1)}/n$;*
 - If $c_i > c_{(1)}$, then $R_i(c, E) = c_{(1)}/n + R_i(c_{N'} - \bar{c}_{(1)}, E - c_{(1)})$*

where $c_{(1)} = \min_{j \in N} c_j$, $C = \sum_{j \in N} c_j$, $N' = \{k \in N : c_k > c_{(1)}\}$ and $c_{N'} = (c_k)_{k \in N'}$.

2. The same error occurs in the last two lines of the proof of Proposition 3. These two lines should read as follows.
 - For the agents with $c_i > c_{(1)}$, we apply Limited Consistency and we find $R_i(c, E) = c_{(1)}/n + R_i(c_{N'} - \bar{c}_{(1)}, E - c_{(1)})$. \square

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3. The rule characterized by Proposition 3 is the minimal overlap rule introduced by O'Neill (1982).

Reference

O'Neill B (1982) A problem of rights arbitration from the talmud. *Math Soc Sci* 2:345–371