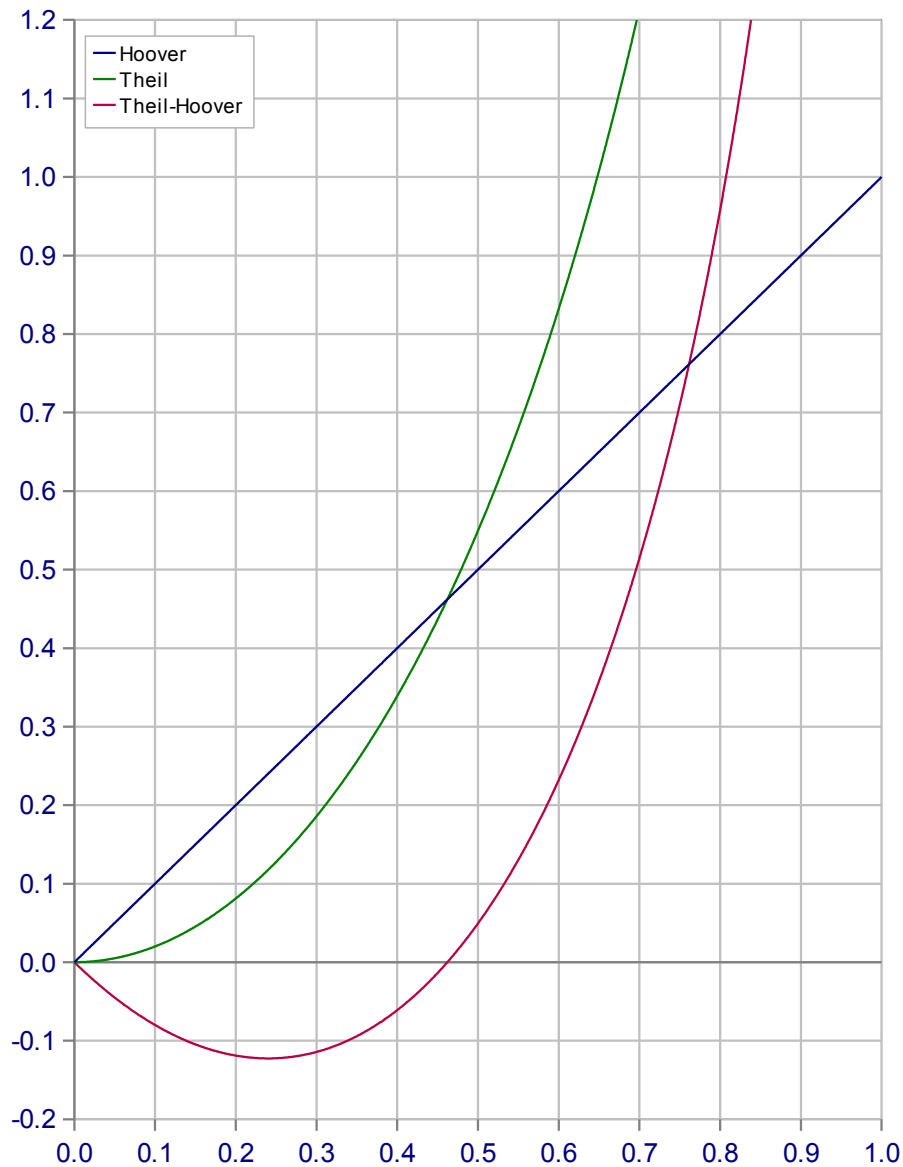


Inequality Issuization



For $i = 1$ to n fractiles the E_i (all incomes per fractile) and the A_i (all earners per fractile) are used to compute the *Hoover* Index and the symmetric Theil Index. The Hoover Index applies to minimum effort redistribution towards equilibrium. The Theil Index applies to stochastic redistribution towards equilibrium. I interpret the difference as "inequality issuization".

$$\begin{aligned}
 Z_{\text{Hoover}} &= \sum_{i=1..n} (\text{abs}(E_i/E_{\text{total}} - A_i/A_{\text{total}})) / 2 \\
 Z_{\text{symmetricTheil}} &= \sum_{i=1..n} (\ln(E_i/A_i) * (E_i/E_{\text{total}} - A_i/A_{\text{total}})) / 2 \\
 Z_{\text{inequalityIssuization}} &= Z_{\text{symmetricTheil}} - Z_{\text{Hoover}}
 \end{aligned}$$

The graphics refers to an income distribution of societies divided into two a-fractiles. Example: For a Hoover Index of 0.6 (or 60%), 80% earn 20% in the 1st a-fractile and 20% earn 80% in the 2nd a-fractile. In that case the Hoover Index is similar to the Gini Index and $Z_{\text{symmetricTheil}} = 2 * Z_{\text{Hoover}} * \text{atanh}(Z_{\text{Hoover}})$ applies.