Title: *The concept of the stochastic equivalence scales: theory and applications.*
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In the paper, the stochastic equivalence scales (*SES*) are defined on the background of the theory of welfare distribution which has been presented by author elsewhere. Let the two dimensional random variable (X,M) with the distribution function F(x,m) describe the household income X and demographic attribute M.. Let the random variable X_m, with the conditional distribution function $F(x|m) = P(X = x| M=m) = F_m(x)$, denote the incomes of the households with the attribute M=m. Similarly, the random variable X_0, with the conditional distribution function $F(x|m_0) = P(X = x| M=m_0) = F_0(x)$, will denote the incomes of the reference households with the attribute $M = m_0$. *Any real value function $r(\times)$ will be called the stochastic equivalence scale if and only if $r(X_m) = X_0$.* In other words, the *SES* transforms the income distribution $F_m(x)$ of the households with the attribute M = m into the income distribution $F_0(x)$ of the reference households (with the attribute $M = m_0$). The conditional distribution function F(x|m) can be derived by the *randomisation* of F(x,m), for certain parametric class of the income distribution and then the parametric forms of the *SES* can be obtained. The parameters of the *SES* can be estimated by the maximum likelihood method. In the paper, the proposed methods are applied to estimate the SES for Poland, using HBS microdata for the years 2000 – 2003.