

Probability Models of Income Distribution in Transition Economies

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Income distribution provides a basis for the evaluation of a country's living standards for the population as a whole. Additionally, it provides a comparison for the living standards of different social classes. Income distribution can be used as a relative indicator for living standards when comparing one country to another. Analytical forms of probability models are used to characterize income distribution and to describe differences in income. Basic forms of income models are based on the theory of econometrics and statistics. Knowledge of an analytical model of income distribution in the whole population and in individual social classes, which may be easily updated in time, enable us to acquire complex information about income distribution among population in time and space. Further, this information allows us to conduct multiple parametric analysis of income distribution. The grounds for the choice and construction of a probability model acceptable from the statistics' perspective are thorough statistical analysis of empirical data, resulting from a stochastic process. The basic aim for construction of the theoretic model is its maximum correspondence to the empirical distribution [1]. Consequently, sufficient flexibility and elasticity belongs among conditions for choice of the model.

Income distribution in transition economies has been experiencing significant changes in recent years. The transformation to a market economic system, mainly the formation of new income sources and a significant differentiation of wages in some social classes, is manifested by the increasing number of discrepancies between empirical and theoretical income distribution [2]. These discrepancies cause contamination of the income distribution model especially at very high levels of household income which might be considered as outliers. Further, empirical distribution of incomes in some social classes can no longer be described by unimodal probability models – since it is a mixture. In such cases, first it is necessary to decompose the mixture into its individual elements, which can be modeled by means of unimodal distribution [3].

References

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