

Modeling of Optimal Income Tax for Family Farms

Erika Besusparienė

Vytautas Magnus University. Agriculture Academy. Faculty of Bio economy Development. Kaunas, Lithuania

ABSTRACT

The tax policy problem solving is often complex where it needs to find one single decision and take in account interest of different groups. Tax policy has ensured incomes, future savings, investment and viability of family farms. Also, important goal is to ensure revenue collection to the government budget. These different goals are often conflict with each other. Therefore, the main issue is to find good compromises having several objectives. Novel optimization methods for economic can solve complex tax policy problems. This article proposes a novel optimization method application of a multi-objective optimization method to design income tax and applies it on income tax revenue maximization and family farms needs maximization. The results of the research show that mathematical programming using a genetic algorithm can be used to solve the complex problem of tax policy. Genetic algorithm is one of most known artificial intelligence problems solving method which can be used for tax policy design.

Keywords: agriculture; genetic algorithm; multi-objective optimization; optimization method; tax policy