Fuzzy logic as a tool for solving economical problems

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Abstract

This paper discusses the problem of fuzzy logic and its application in economics. Market and the behavior of people is influenced by many factors. It is difficult to make future predictions based on imprecise parameters and guesses. The use of precise methods with imprecise variables leads to imprecise results. Fuzzy logic offers multiple ways how to work with imprecise variable and makes the problem solving and decision making easier. This paper sums up the basic information about variables in economics and about fuzzy logic.

Key words

fuzzy logic, solution, problem, decision, economics

Summary

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Fuzzy logic as a tool for solving economical problems

This paper discusses the problem of fuzzy logic and its application in economics. Market and the behavior of people is influenced by many factors. It is difficult to make future predictions based on imprecise parameters and guesses. The use of precise methods with imprecise variables leads to imprecise results. Fuzzy logic offers multiple ways how to work with imprecise variable and makes the problem solving and decision making easier. This paper sums up the basic information about economical variables and about fuzzy logic. Fuzzy logic is a very useful tool that can help researchers and managers to analyze and evaluate various situations that are influenced by factors that cannot be easily quantified. Unlike other sciences economics has many variables and factors that are influenced by human behavior. The market environment is so complex that some of the changes influence customers who then change their behavior and change the situation on the market even more. To use fuzzy logic takes some time and experience. There are various software products that facilitate the use of fuzzy logic. It is necessary to collect enough information and determine which variables will be used. Fuzzy logic enables decision makers to analyze complex situations and solve complex problems. This is a clear advantage of fuzzy logic. There are also several disadvantages. One of the disadvantages is the complexity of the process. It takes certain amount of time to collect enough information to convert the variables and to interpret the results. However the time spent on preparing the information returns as the ability to solve complex problems which are difficult to solve with other methods and approaches. Fuzzy logic has proven to be very useful for solving economical problems due to the nature of these problems a the character of the factors and variables that influence them.