Abstract

This paper proposes and implements a new approach to simulate an artificial economy. Based on the needs of economists to study the economy, the paper focuses on agent-based methods. First, a literature review of these methods is given and different research requirements are outlined. Then a new proposal is given through the comparison of agent-based modeling techniques and those used in multi-agent systems, from whom the JaCaMo framework was chosen as the implementation platform. The paper continues with the conceptual model of the artificial economy. A description of the economic model is explained in detail and then a detailed analysis is considered to implement the model. The implementation of this simulator is presented and the techniques used to make it are explained in detail. The paper gives some important notes over the methodology used in this implementation and makes some recommendations for future research work.

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Index Terms

Computer Science
Artificial Intelligence

Keywords

multi-agent systems, agent-based modeling, artificial economy, multi-agent oriented programming.