

An agent-based framework to improve coordination in the process of urban infrastructure provision in Iran

ABSTRACT

Urban infrastructure systems are basic requirements for civilized societies all over the world. The ever increasing reliance of modern society on these interconnected urban sub-systems triggers great attention about the provision of urban infrastructure systems. In turn, coordination between different agencies, who are involved in the process of urban infrastructure for new areas, plays a prominent role in the success of the process. The essential need for coordination in the process of urban infrastructure provision is derived from three different sources, complex nature of infrastructure systems, the existence of multiple interdependencies between these systems, and triple role of human beings in the process. To this end, based on findings of coordination context of urban infrastructure provision in Iran, coordination theory, and agent-based modeling approach, this paper presents an agent-based modeling framework in order to improve coordination between different urban infrastructure agencies in the context of service provision for new residential areas.

Keyword: Urban infrastructure provision; Coordination; Interdependency; Agent-based modeling