

System Thinking and System Dynamics: Modelling, Simulation and Control for Policies Studies

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Abstract

Systems thinking is a term to describe how the complexities of the real world can be explained. This method also includes several formal methodologies. On the other hand, system dynamics is a special model used by practitioners and researchers to describe the complexity of a system. Public policy formulation is a complex series of activities because it involves many parties. A system thinking approach and systems dynamics can be a suitable approach to describe the problem comprehensively. This approach is suitable for top management to formulate long-term policies. System dynamics see problems as a set of interdependent and continuous processes. This approach illustrates how a variable can affect other variables where this phenomenon is called a cause-effect relationship. The results of this system dynamics approach are in the form of scenario models that can be adjusted to the research objectives in order to obtain the expected scenarios for the formulation of public policies.

Keywords: *System Thinking, System Dynamics, Modelling, Simulation*