

Dynamics of Multi-level Business-IT Alignment: Insights from Complex Adaptive System

Completed Research Paper

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Abstract

To explore dynamics of Business-IT Alignment (BITA), based on the Complex Adaptive Systems theory, this paper regards BITA as a bottom-up dynamic evolution and emergence process, and builds a multi-level (e.g., individual and strategic level) BITA dynamic evolution model. We also conduct a simulation research using agent-based modeling to examine the impacts of different attributes and behavioral rules of agents at individual level and environmental dynamics on strategic level BITA. The results show that high-cognitive managers can achieve BITA better and faster, and the degree of communication can offset the lack of cognitive ability between business manager and IT manager. Environmental dynamics positively affects the turbulence of BITA, and this influence is more significant when business and IT managers are both low cognitive ability. Through applying CAS theory to BITA, this paper fills the current research gaps regarding BITA's dynamics, which will make significant contributions to both BITA research and practice.

Keywords: Business-IT Alignment, Dynamics, Complex Adaptive System, Simulation