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Process integration of computer driven wargames in support of fiscal policy decisions

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This paper presents a wargaming methodology that translates strategic budget policy decisions into terms of military effectiveness that better inform policy makers. We develop a decision support system through a systems engineering approach, integrating computer science, economics, and operations research. Leaders at every level need the combined power of these disciplines to meet the challenges that austere fiscal environment present. The 2013 sequestration saw defense budgets absorb the majority of all cutbacks. This recent history put leaders on notice that future debates must be built on cost positions grounded in operational terms. Budget-based wargames provide decision makers with quantifiable, value-based options that result from credible, repeatable, and defensible analyses.

Biography

Alejandro S Hernandez is an Associate Professor in the Systems Engineering Department at Naval Postgraduate School (NPS). He holds a BS in Civil Engineering from the United States Military Academy, an MS and PhD in Operations Research from NPS, and a Masters in Strategic Studies from the US Army War College. He is a retired military officer with over twenty-six years of command and staff experience. He teaches courses in modeling and simulation, mathematical models, capabilities engineering, and strategic management of innovation and technology. His research focuses on a systems engineering approach to design and analysis of simulation based events, design of experiments for computer simulations, and wargaming analysis. In 2013, he led a post-war game analysis for US Forces engaged in Afghanistan.

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