

Abstract

This study examines the Constellation-class frigate program, its implementation of the triple constraint model, and any cognitive biases that prevented the delivery of the frigate on time and at a fair and reasonable cost. Using case study analysis and deductive content analysis, the study investigates GAO reports and Congressional Research Service reports to determine the use of the triple constraint model and cognitive biases within the Constellation-class frigate program. The analysis finds evidence of six cognitive biases within the Constellation-class frigate program. These include the anchoring, availability, planning fallacy uniqueness, overconfidence, and optimism biases. The authors suggest using a modified triple constraint model, education programs for program managers, extending program managers' formal networks, and including commercial project management methodologies within MDAPs.

Methods

- Deductive case study analysis of the Constellation-class frigate
- Examination of cognitive biases in defense acquisitions and an assessment using the triple constraint model
- Evaluation of program context and decision-making patterns
- Use of GAO and CRS open-source reports
- Review of program management changes over time



Case Study Analysis Methodology for Constellation-class frigate program.
Anderson, M. 2025.

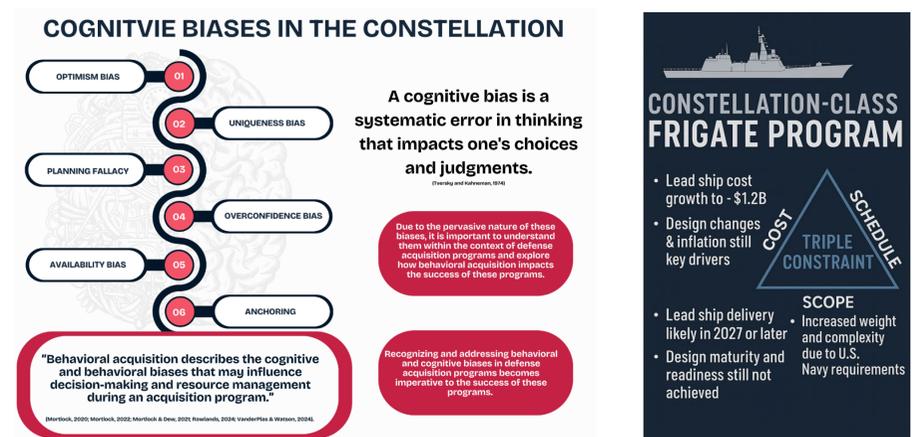
Results & Impact

Cognitive Biases in Defense Program Management

- Expand DoD education programs that specifically address cognitive biases in acquisition decision-making.
- Increase formal efforts to broaden Program Managers' professional networks to reduce insular thinking.
- Introduce standardized methodologies and artifacts designed to identify and mitigate cognitive biases throughout programs.

Superficiality of Triple Constraint

- Acknowledge that the triple constraint model is incomplete because it overlooks key factors beyond cost, schedule, and performance.
- Emphasize that quality, stakeholder needs, team dynamics, and risk are equally critical to program success.
- Improve education on triple constraint theory and related models to give Program Managers a more rigorous and accurate decision framework.



Cognitive Biases and Triple Constraint Theory in Constellation. Anderson, M. 2025.

Future Research

- Conduct deeper analysis of the Constellation-class frigate program using classified programmatic documents to clarify the program manager's decision-making and identify cognitive biases.
- Integrate classified and unclassified information to gain a more complete view of how cognitive biases influence acquisition decisions.
- Examine how program managers apply the triple constraint model when making decisions under varying levels of information.



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