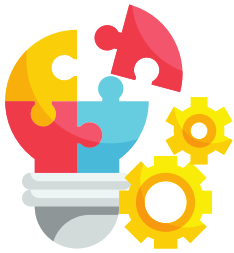


# NPS ABSTRACTS

The abstract is like a classified ad for your work. An NPS thesis abstract is no more than 1,500 characters, including spaces (around 200 words). It should briefly state the background, research problem, purpose, methods, results, and recommendations.

## Include these elements:



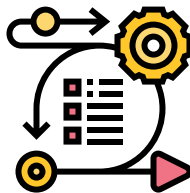
### Background & Research Problem

What problem or gap in understanding exists that your research helps address?



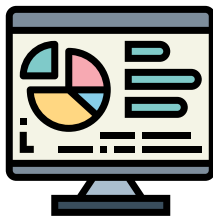
### Purpose

What does your research aim to do?



### Methods

How did you collect and analyze evidence to answer your research question?



### Results

What did you discover? How do your findings help solve the problem?



### Recommendations

How can your readers or stakeholders use your research? What comes next?



If using citation-worthy outside information, mention the source in your sentence. Do not use citations.

# Ship Design and Production Facilities: Cost-effectiveness Analysis of Achieving a 355-ship Fleet

Master of Business Administration

The current goal for the United States Navy is to achieve a 355-ship fleet by 2034 and 500 ships by 2045, according to the March 2020 Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2020. To achieve this goal, ship service lives will need to be extended and shipbuilding will need to occur. Given the current budgetary constraint, this project explores the cost effectiveness between four approaches to vessel construction: 1) U.S. naval designs built at U.S. yards, 2) commercial and foreign designs built at U.S. yards, 3) foreign designs built at partner foreign yards, and 4) commercial U.S. designs built at foreign yards. The cost effectiveness analysis took into account the need to preserve the U.S. naval industrial base as well as economic benefits and other advantages and disadvantages of U.S. shipbuilding as opposed to foreign shipbuilding for various design types. Based on the Constellation Class Frigate design, analysis indicates that the United States produces warships at a greater cost than its fellow European NATO member states. The United States is also less productive and maintains a lower capacity to produce warships. This analysis provides reasonable evidence to shift production of warships overseas, but it must be done in a balanced way that maximizes the cost savings and allows the United States to continue to lead the way in next-generation technology.

Bradley M. Herzig, Lieutenant, United States Navy  
Stuart M. Helme, Lieutenant, United States Navy

Advisor: Ryan S. Sullivan, Financial Management  
Co-Advisor: Simon Veronneau, GSDM

## Sample Abstract #1

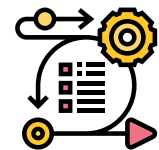
### Background & Research Problem



### Purpose



### Methods



### Results



### Recommendations



# Acquisitions Above the Stratus: Procuring Consumption-based Solutions for a Modern DOD

Master of Science in Contract Management

When procuring information technology requirements for systems such as cloud-based services, acquisition professionals often choose from outdated and misaligned categories of supplies or services established by Department of Defense (DOD) Acquisition regulations. Current contract structures constrain scalability, and it is imperative that the DOD revise its contract types to permit new solutions that enable commercial goods to be procured on a consumption basis. **This Capstone Applied Project evaluates the impact of procuring modern DOD capabilities as consumption-based solutions by applying relevant policy analysis, cost effectiveness analysis, and case study analysis.** The findings indicate that a consumption-based approach to acquiring cloud-based solutions is the most beneficial method for obtaining fair and reasonable prices while minimizing costs associated with contract administration. The authors recommend that cloud computing be placed into a new category within the DOD Taxonomy for the Acquisition of Services and Supplies & Equipment to enable greater flexibility in implementing a newly proposed contract type, consumption-based variable pricing, which must be supported by the revision of language contained in FITARA and 31 U.S.C. §1341 and an extension of FAR Clause 52.241-8.

William S. Parkin, Civilian, Department of the Air Force  
Katherine D. Bukowski, Civilian, Department of the Air Force

Advisor: Robert F. Mortlock, Graduate School of Defense Management  
Second Reader: Raymond D. Jones, Graduate School of Defense Management

## Sample Abstract #2

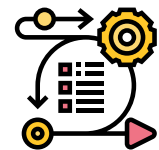
### Background & Research Problem



### Purpose



### Methods



### Results



### Recommendations



# Forecasting Inventory Levels with Markov Models for the Acquisition and Contracting Subspecialty (I306) in the Supply Corps

Master of Business Administration

The U.S. Navy Supply Corps consists of officers with subspecialties (SSP) that are required to fill certain billets. Manpower planners are tasked with ensuring that the community trains and qualifies officers in each SSP to keep the Supply Corps healthy and able to fill all critical billets. Navy Supply Systems Command Office of Personnel has stated that the Acquisition and Contracting SSP (I306) is the most “at risk” for not having enough qualified personnel to fill the O-6 billets. This MBA project develops and employs Markov models to create a 10-year I306 inventory forecast for FY22 through FY31. We use a fixed inventory model to determine the number of accessions needed to achieve I306 end-strength goals, a fixed recruitment model that determines a projected end-strength by an accession policy, and a steady-state model that shows inventory levels of each state when the system reaches equilibrium. Finally, we demonstrate how changing transition rates and accessions can help manpower planners develop courses of action to meet manpower requirements. Through the employment of the Markov models, we find that if the average number of accessions continue with the current transitions rates, then the SC will never be able to meet their planning goals. The models prove to be a useful tool for manpower planners; therefore, we recommend using the models to forecast the I306 inventory.

Traci L. Irby, Lieutenant Commander, United States Navy  
Justin N. Higgins, Lieutenant Commander, United States Navy  
Justin C. Tinsley, Lieutenant Commander, United States Navy

Advisor: Chad W. Seagren, Graduate School of Defense Management  
Second Reader: Kenneth H. Doerr, Graduate School of Defense Management

## Sample Abstract #3

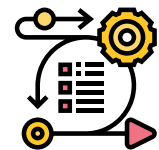
### Background & Research Problem



### Purpose



### Methods



### Results



### Recommendations

