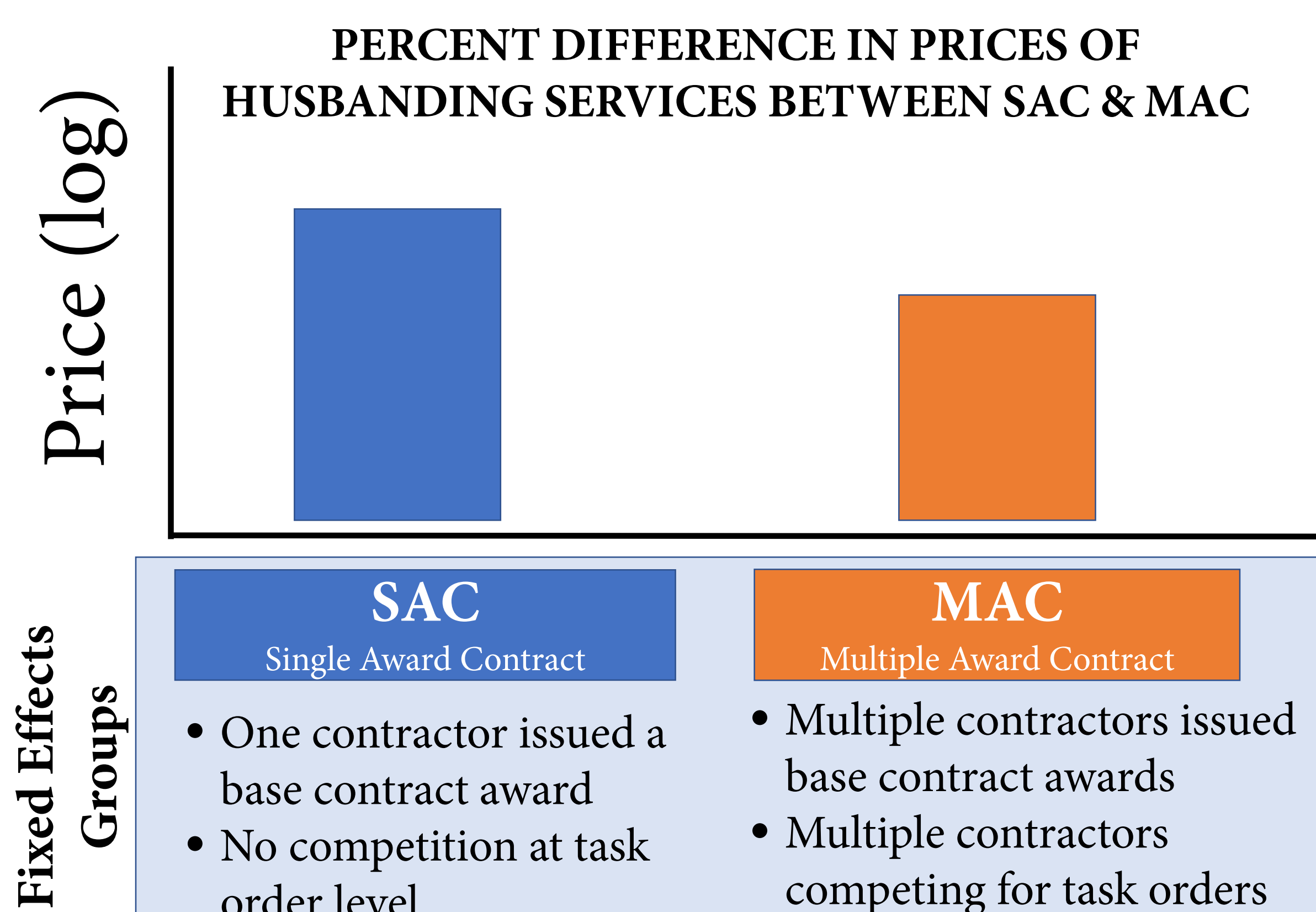


## Abstract

In 2016, the U.S. Navy transitioned from Single Award (SAC) to Multiple-Award (MAC) Indefinite-Delivery-Indefinite-Quantity (IDIQ) husbanding service contracts. Recent port services pricing data suggests that some services or ports may cost more under a MAC compared to SAC. The objective of this study is to identify whether there is a statistically significant difference in price for U.S. Navy husbanding port services and estimate the relationship of price between these two competitive husbanding service provider (HSP) contracting strategies. A price comparison between both contract types was performed using three fixed-effects regression models. The results show a statistically significant difference in price between SAC and MAC. The model estimated that for a given port and given ship type, the average price for HSP services was less for a MAC compared to SAC. Additionally, the MAC had an effect on price changes based on the port and service category. However, the effect of contract strategy on price could be marginally under- or overstated based on the unmeasurable effects of nonmonetary qualitative factors. Further research will be required to understand the true cost-benefit of MACs and the overall best value to the government.

## Methods

- Developed three fixed effects linear regression models to analyze the effect of MAC on price, holding all other factors constant. Controlled for ship type, exhibit line item number, port, and quantity.
- More than 80,000 observations of price data from 2016 to 2019 were retrieved from HS Portal (formerly LogSSR).
- Panel data over a three-year period included both SAC and MAC executed husbanding services from all Numbered Fleets.
- The effect of inflation rate was excluded from the model due to quasi-omitted variables bias, but exchange rate was included.



## Results

### Question 1: Are the average prices for services different between SAC and MAC?

Yes. Model 1 revealed the difference in average prices for SAC and MAC was statistically significant.

### Question 2: What is the estimated effect of the MAC on price?

Model 1 showed that the average price, for a given port/service/ship, is 17.7% less expensive for MAC.

### Question 3: Does the effect of the MAC change based on the port location or type of service category?

Yes, Models 2 and 3 showed port-specific and service-specific criteria changed the effect of the MAC on price. The preponderance of the statistically significant coefficients for the MAC were negative.

## Recommendations

- Continue utilizing MAC strategy to obtain lower prices, but improve accuracy of recorded price data.
- Conduct additional research to identify an optimal number of MAC awardees and consider utilizing on-ramp and off-ramp contracting procedures.
- Include additional standardized measurements of quality factors (via the contracting Quality Assurance Surveillance Program) in order to conduct a full cost-benefit analysis.