

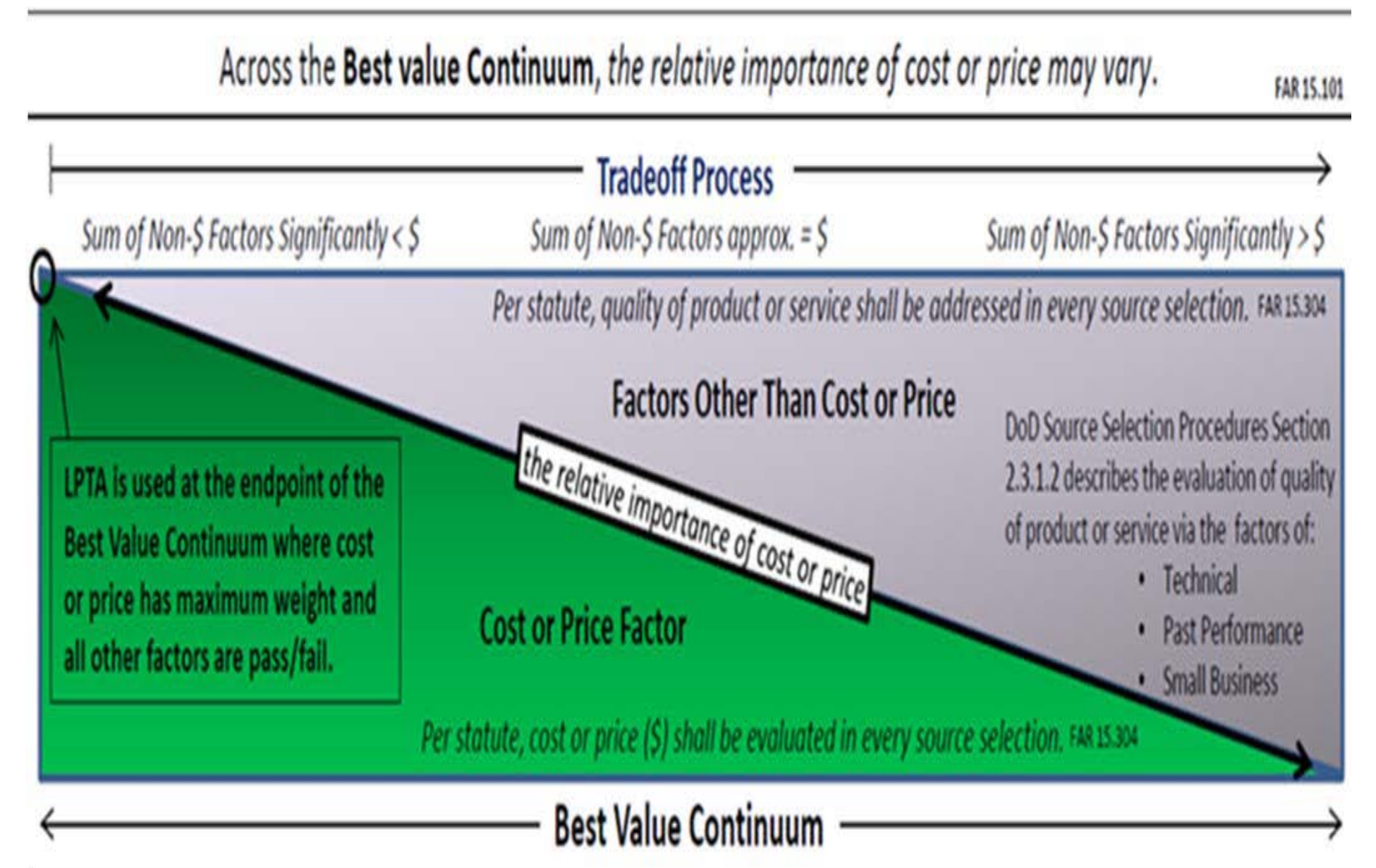
# Analysis of Source Selection Methods and Performance Outcomes: Lowest Price Technically Acceptable vs. Tradeoff in Air Force Acquisitions



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## Overview

As part of procurement planning, government acquisition teams must select a method by which proposals will be evaluated. The two most common methodologies are lowest price technically acceptable (LPTA) and tradeoff. There is a commonly held anecdotal belief that an LPTA approach results in a shorter procurement administration lead time (PALT) but also tends to provide the government with an inferior product or level of service. Conversely, it is believed that a tradeoff approach will yield a better outcome but will also have a longer PALT and demand additional resources. The objective of this research is to analyze whether a relationship exists between source selection methods (LPTA or tradeoff) and the level of resulting contract performance outcomes. Performance outcomes include Contractor Performance Assessment Reporting System (CPARS) ratings, Earned Value Management (EVM) outcomes, and PALT.



Adapted from: Best value continuum. (n.d.). In ACQuipedia. Retrieved from <https://dap.dau.mil/acquikipedia/Pages/ArticleDetails.aspx?aid=5201f734-3bce-4c5f-a5a3-47551df77ea5>

Variable	Obs	Mean	SD	Min	Max	
PALT (days)	23	317.5652	214.7235	50	878	ALL DATA
	10	203.1	141.6054	50	482	LPTA
	13	405.6154	223.9898	72	878	TRADEOFF
Average CPARS Rating	18	3.766667	.639623	3	5	ALL DATA
	5	3.34	.527257	3	4.2	LPTA
	13	3.930769	.6179733	3	5	TRADEOFF
Number of Evaluation Factors	24	2.666667	.5646597	2	4	ALL DATA
	10	2.1	.3162278	2	3	LPTA
	14	3.071429	.2672612	3	4	TRADEOFF
Number of Reviews	22	3.909091	3.66332	1	18	ALL DATA
	9	2.555556	2.068279	1	7	LPTA
	13	4.846154	4.278749	1	18	TRADEOFF
Number of Offers	24	6.833333	5.329709	2	23	ALL DATA
	10	8.1	7.23341	2	23	LPTA
	14	5.928571	3.452185	2	11	TRADEOFF
Contract Dollar Value	24	\$268,000,000	\$595,000,000	\$1,185,396	\$2,300,000,000	ALL DATA
	10	\$3,947,115	\$2,218,574	\$1,185,396	\$6,500,000	LPTA
	14	\$456,000,000	\$732,000,000	\$1,271,044	\$2,300,000,000	TRADEOFF

Descriptive Statistics

## Research Questions

- What is the relationship between a particular source selection method and the resulting performance outcome of the contractor?
- What is the relationship between a particular source selection method and the PALT?
  - If there is a positive relationship, can the amount of additional resources utilized for that particular source selection method be quantified in terms of man-hours or in dollars?
  - Does the resulting performance outcome merit the use of that particular source selection method?

## Methods

- Data collection was limited to contracts awarded within the Air Force Life Cycle Management Center (AFLCMC) Directorates located at Wright-Patterson AFB.
- A data collection rubric was used to capture up to 98 inputs per observation (contract reviewed). The data inputs fell within five broad categories related to the pre-award and post-award contract management phases. The categories are: (1) Basic Information, (2) Acquisition Complexity, (3) Environmental Factors, (4) Outcome Variables, and (5) Other.
- Multivariate and univariate analysis of covariance (MANCOVA and ANCOVA) techniques were used to determine if there are differences in resulting performance outcomes based on source selection methodology.

MANCOVA Results						
DV: PALT and CPARS Rating						
	Coeff	SE	t	P> t	95% CI	
<b>PALT</b>						
LPTATO	.4635959	.3353186	1.38	.188	-.255591	1.182783
# Offers	.0856102	.2357787	0.36	0.722	-.4200848	.5913052
Constant	5.336645	.5807349	9.19	0.000	4.091093	6.582198
<b>CPARS</b>						
LPTATO	.2347992*	.0885981	2.65	0.019	.0447753	.4248231
# Offers	.1194312*	.0622976	1.92	0.076	-.0141838	-.2530462
Constant	.9350972	.1534421	6.09	0.000	.6059967	1.264198
* p<.10 ** p<.05 *** p<.01						
Number of Observations = 17						
Root Mean Squared Error: PALT = .57 CPARS = .15						
R <sup>2</sup> : PALT = .1231 CPARS = .3585						

## Conclusions

- Source selections conducted under the tradeoff method produced higher performance outcomes as measured by CPARS.
- There is a positive relationship between the number of offers submitted and the performance outcome of the contractor as measured by CPARS. In other words, the more competitive the acquisition, the better the performance outcome of the selected contractor.
- Analysis does not support a relationship between a particular source selection method and the PALT.
- Since PALT is not affected by the source selection method, there is no reason to shy away from the use of the tradeoff method to achieve better contractor performance.

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