APPENDIX

Major Elements	Subcategories
Sector	Agriculture, Defense, Department of Energy, Healthcare, Manufacturing, Services, Space, Technology, Other, None[1]
Primary Subject	Acquisition/Product Costing, Indirect Activities & Cost, Labor, Life Cycle Cost Estimating, Risk analysis, Mathematical or Statistical Properties, Schedule Analysis, Software Estimating, Other
Research Type	Conceptual/Reconceptualization[2], Exploratory – Empirical Analysis, Hypothesis Testing, "How-to"[3], Other
Research Design	Thought Piece, Case Study, Comparative Study, Survey, Simulation, Interview, Other
Analytic Methodology	Descriptive, Predictive, Prescriptive, Cognitive, Other[4]
Analytic Technique	40 different analytic techniques (e.g. linear regression, data envelopment analysis, time series forecasting)

[1] None represents articles that were sector agnostic and were primarily thought pieces (e.g., Parametric Estimating: Its Present and Future (Otrosa, 1984)) or purely mathematical articles (e.g., Generalized Degrees of Freedom (Hu, 2016)).
[2] Focuses on the concept or theory that explains or describes the phenomenon being studied. Typically, a theoretical or thought-piece format that qualitatively, not quantitatively, analyzes a topic.
[3] These articles were either qualitative or quantitative but were written to describe a specific process (e.g., Parametric Cost Estimating: A Guide (Gasperow, Hackney, & Hudson, 1987)).
[4] *Descriptive* analytics answers the question "What happened?". Provides a representation of knowledge regarding a phenomenon without predicting a specific outcome. *Predictive* analytics answers the question "What could happen?". Knowledge from historic data is extracted and used in such a form that one can apply the resulting model to new situations. The key factor is to predict future trends and possibilities. *Prescriptive* analytics answers the question "What is the best action or outcome?". The key factor is to provide new ways to improve or maximize certain types of performance. Cognitive analytics are qualitative assessments of phenomena. This technique was generally used to categorize qualitative conceptual articles.