

Antecedents And Consequences Of Supplier Performance Evaluation Efficacy

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Issues with SPEs & CPARS

Purpose & Research Question

Theoretical Frameworks

Methodology

Results

Implications



- 2015: 2.2M SPEs were either conducted, in-process, or required to be conducted (i.e., overdue)
- SPE: “the process of evaluating, measuring, and monitoring supplier performance and suppliers’ business processes and practices for the purposes of reducing costs, mitigating risk, and driving continuous improvement” (Gordon, 2008, p. 4).
- CPARS: 2 purposes:
 1. Inform source selection decisions of the likelihood that a prospective supplier will successfully perform the contract (FASA, 1994) → Future
 2. Motivate performance (OFPP, 2000) → Present



Some SPEs:

- Not timely
- Not accurate
- Lack sufficient information to support ratings
- Omit rating for some performance areas
- Inflated ratings

If PPI is not reliable, and if buyers and evaluators do not (or cannot) use the information to discriminate between competitive proposals (Kelman, 2010), the effort of collecting, reporting, suppliers' selling, and buyers evaluating PPI is wasted.

- Non-trivial transaction costs (man-hours) to generate SPEs
- Supplier ranking validity
- Multiple raters invites dissonance in SPEs



Purpose:

- We do not know the extent to which SPEs validly build the buyer's confidence in its assessment of the risk of doing business with a particular supplier ex ante.
- The impact of SPEs on the industrial supply base is unknown.

Research Questions:

1. What factors decrease the efficacy of SPEs?
2. How do suppliers react to inaccurate SPEs?
3. Do SPEs, in general, motivate suppliers to increase performance?
4. How does the accuracy of SPEs affect relationship quality?
5. Why are SPEs often inaccurate?
6. How many man-hours do suppliers invest in responding to SPEs?
7. What communication tactics do suppliers use to manage the SPE process?
8. To what extent does inter-rater disagreement (i.e., dissonance) affect SPE efficacy?



- Economics of Information theory
- Corporate Reputation theory
- Agency theory
- Organizational Behavior
- Transaction Cost Analysis
- Social Exchange theory
- Channel communication theory
- Power/dependence

- Prior qualitative study



No.	Research Question	*Research Object	**Research Method
1	What factors decrease the efficacy of SPEs?	B & S	Qt & Ql
2	How do suppliers react to inaccurate SPEs?	S	Ql
3	Do SPEs, in general, motivate suppliers to increase performance?	S	Ql
4	How does the accuracy of SPEs affect relationship quality?	B & S	Qt & Ql
5	Why are SPEs often inaccurate?	B & S	Qt & Ql
6	How many man-hours do suppliers invest in responding to SPEs?	S	Ql
7	What communication tactics do suppliers use to manage the SPE process?	S	Ql
8	To what extent does inter-rater disagreement (i.e., dissonance) affect SPE efficacy?	B	Qt

*B=buyer; S=supplier

**Qt=Quantitative; Ql=Qualitative



Qualitative

- Interviewed 8 Suppliers
- Explored effects of SPEs on suppliers

Quantitative

- Online Survey
- Sample:
 - 131 performance assessors, U.S. military
 - PMs, KOs, Egrs, Log, QA
 - \bar{x} exp = 14.75 yrs
 - Contracts: \$62K - \$10B
 - Services; Construction; Supplies/spares; Weapons
 - 36 FSCs/PSCs
 - Even split of SB & LB
 - RR = 5.2%
- Partial Least Squares Structural Equation Modeling + multivariate models

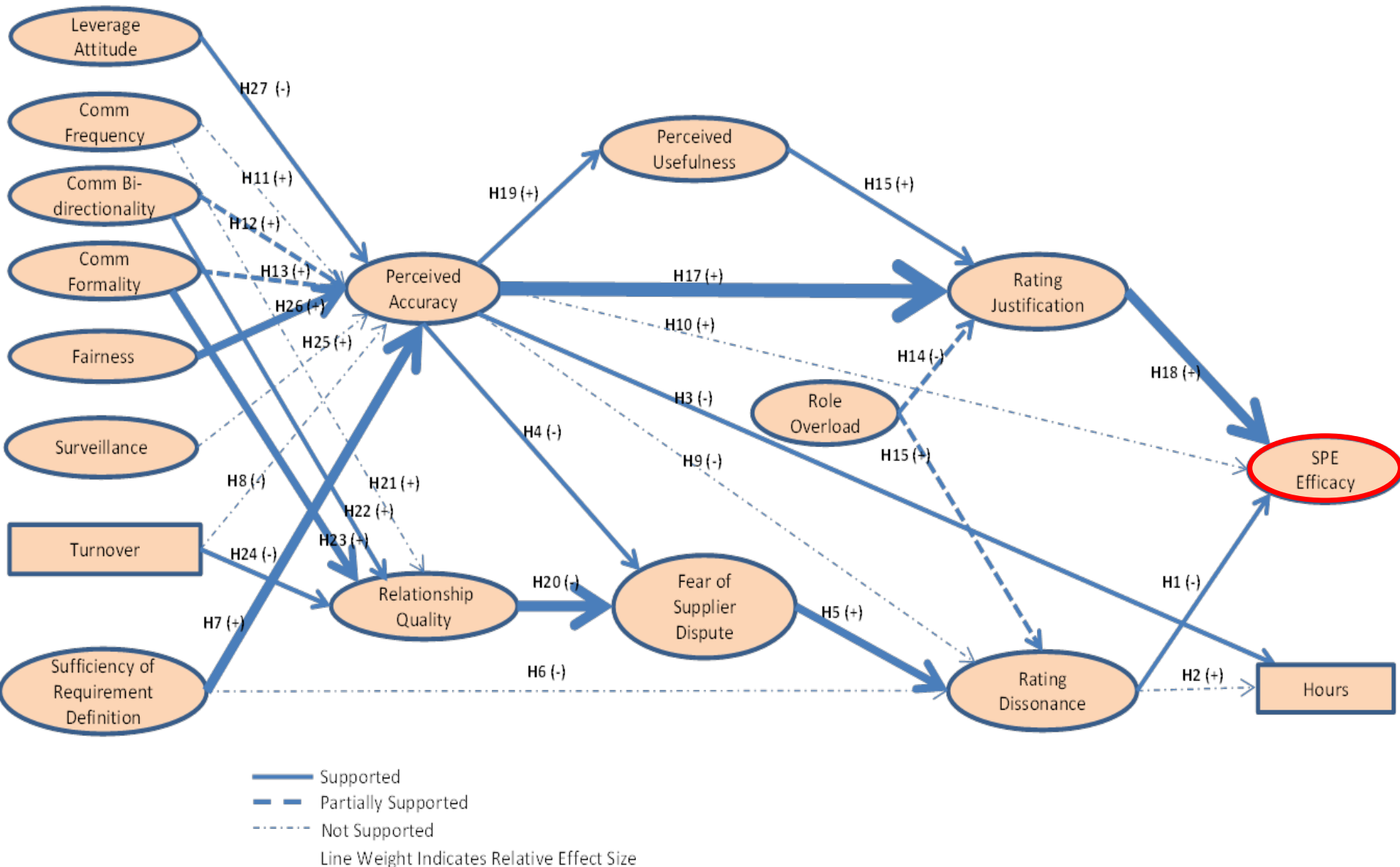


Results

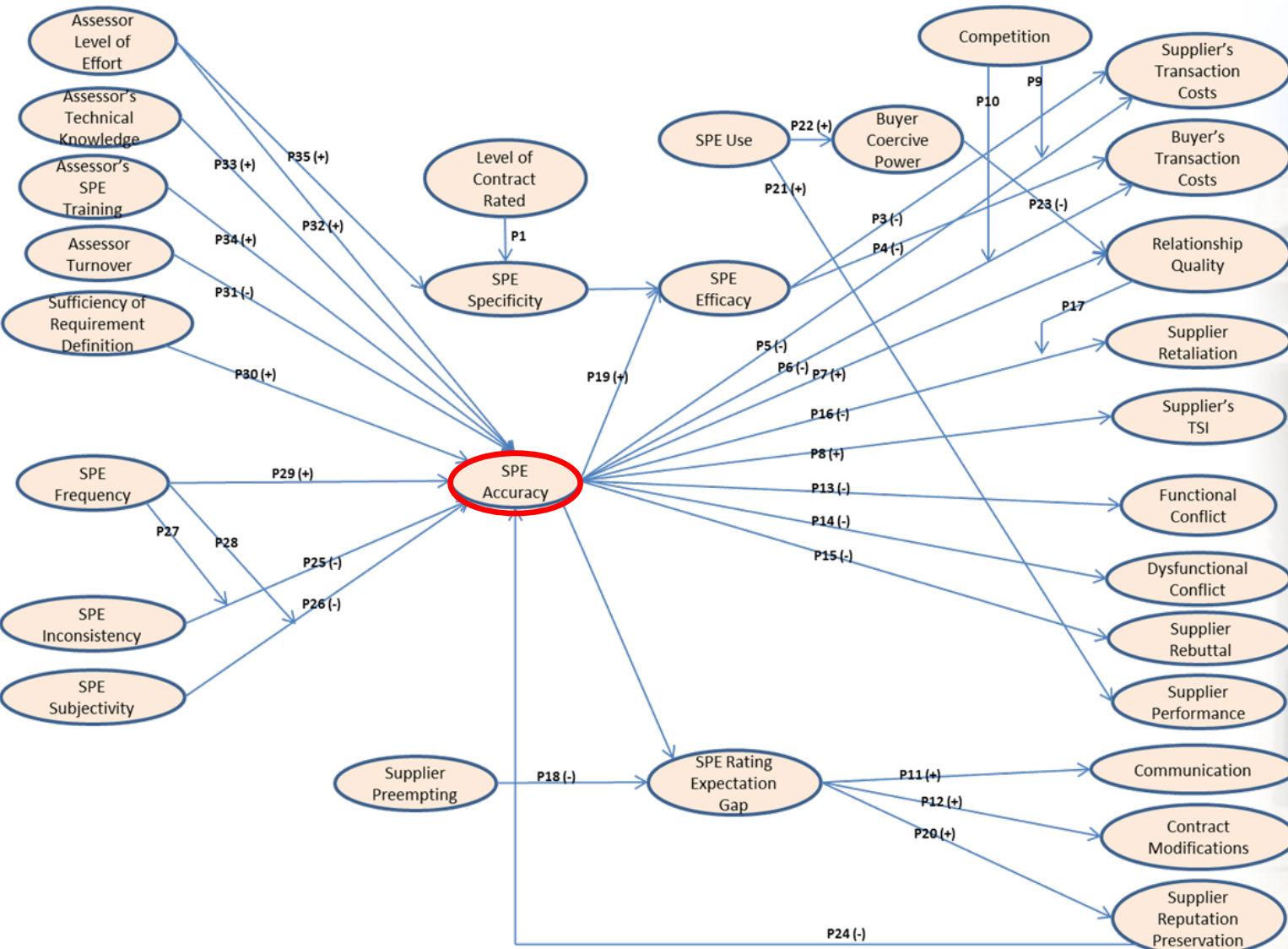
- Overall, SPEs are perceived as *somewhat* accurate ($\bar{x} = 5.57 / 7$)
- Overall, SPEs are perceived as *somewhat* effective at mitigating *adverse selection* ($\bar{x} = 5.47 / 7$)
 - 30.5% doubted SPE efficacy



RQ1 - What factors decrease the efficacy of SPEs?



RQ2 - How do suppliers react to inaccurate SPEs?



RQ3 - Do SPEs motivate suppliers to incr perf?

- Buyers neutral as to whether SPEs motivate supplier performance
- Suppliers were mixed



RQ4 - How does SPE accuracy affect rel qlty?

- Inaccurate SPE ruined one relationship = lost supplier (lower competition)
- Strained relationship; deteriorated trust
- Buyer survey corroborates: direct, positive effect



RQ5 - Why are SPEs often inaccurate?

- Buyers: insufficiently-defined requirement has the greatest impact
 - Suppliers corroborated & added: differences in expectations
- Buyers: Buyer unfairness (supplier received rating other than that deserved)
- Buyers: Leverage attitude
 - Suppliers corroborated the effect of leverage, reporting a hidden agenda in some SPEs
- Buyers: lack of communication formality and communication bi-directionality
- Buyers: some inflated ratings
- Suppliers: infrequent performance evaluations
- Suppliers: recency of SPE to performance
- Suppliers: inconsistency and subjectivity
- Suppliers: evaluator turnover, technical knowledge, & CPAR training





RQ6 - How much time do suppliers spend on SPEs?

- Suppliers: 15-800 hours (mean 202, median 80)
- Buyers: 0.5 – 100 hours (mean 18.1, median 8)
- SPEs consume a day of effort by buyers to conduct the SPE and two weeks by suppliers to react to them.
- SPEs will require the full effort of **26,512** FTEs & cost **\$3B annually**.
 - Assuming: (1) a consistent number of SPEs annually, (2) a rate of pay of government evaluators and contractor employees equivalent to a GS-13, step 5, (3) a fringe benefit rate of 36.25% (OMB, 2008), (4) that 19% of SPEs will be rebutted, (4) that contractors spend 2 hours on non-rebutted SPEs and 80 hours on rebutted SPE, and (5) that buyers spend 8 hours on each SPE – each as found in this research (medians)



RQ7 - What communication tactics used by suppliers?

- Supplier providing quarterly inputs of performance to the government customer
- Supplier provides the customer a draft SPE report prior to the end of the period of performance
- Supplier ensure that the self-assessment is coordinated with all of the customer's functional performance assessors at the lowest level
- Supplier increased qty & frequency of communication
- Supplier increasing documentation (to rebut)
- No supplier mentioned SPEs as part of the post-award orientation agenda.



RQ8 - Does rater dissonance affect SPE efficacy?

- Rating dissonance decreases SPE efficacy, but not very strongly

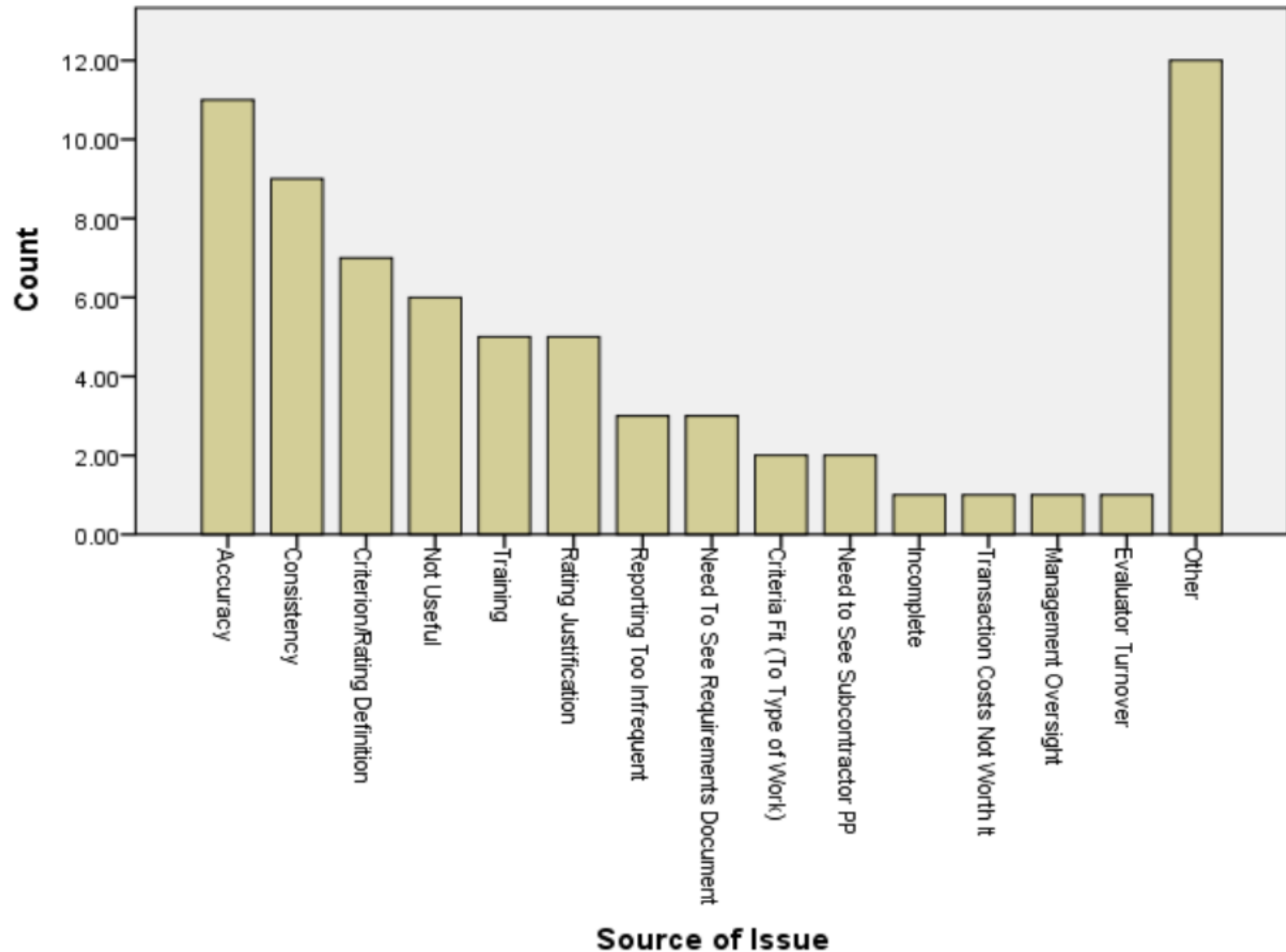


Implications

- Given high transaction costs of SPEs, would expect higher accuracy and stronger evidence of efficacy
- SPE accuracy and rating justification are critical
 - Inaccuracy = more disputed SPEs
 - Future buyers have to believe the SPE to mitigate risk
 - Suppliers have to believe the SPE before altering perf
- Rating dissonance weakly decreases SPE efficacy
 - May be attributed to a lack of a common meaning of performance criteria and of rating definitions
- Buyer-supplier relationships matter (satisfaction; trust)
 - Poor relationship = more disputed SPEs
- Communication matters (formality; bi-directionality)
- Insufficient reqmts definition is a culprit



Assessing Officials' Issues Needing Attention



- Variance in SPE quality allowed by process and system – despite recent focus on improving weaknesses
- Infuse more automation into the SPE IT system
 - i.e., reduce the amount of effort required to produce a sufficiently justified rating
- Infuse more discipline into rqmts definition:
 - More clear link between levels of performance and performance ratings (sets expectations, reduces dissonance, reduces transaction costs)
- Develop SPE quality index and periodically audit



- 37%, suppliers wrote their own SPEs (48 cases)
 - non-independently-derived performance information is suspect
 - supplier marketing material
 - billable to customer on non-FP contracts?
- *Halo effect* confirmed (i.e., rating inflation)
 - Attributed to a fear of supplier dispute.
 - 25 respondents (19%) reported that someone on the buyer team either changed or influenced a change to the SPE
 - Evaluators and reviewing officials increase ratings to: (1) avoid conflict, (2) protect a program, (3) preserve the supplier relationship, (4) gain leverage over the supplier, and (4) avoid harming a supplier's future business opportunities.



- Some ok with use of SPE rating as leverage—either (or both) as a threat to a supplier during performance and prior to a SPE or as a means to extract concessions post hoc from a supplier in exchange for a more favorable SPE rating.
 - few respondents acted on those beliefs
 - unintended uses of SPEs as leverage should be explicitly addressed in training and policy
- Suppliers questioned the utility and accuracy of SPEs that are conducted at a parent-contract level (e.g., IDIQ) versus a task-order level.
 - Lose fidelity of data to inform future SS. Why allow it?
- Limit assessor turnover (61/131, 46.5%, avg 2.9x)
- Limit assessor work overload



- Why does the government restrict the purpose of its SPE system (i.e., CPARS) to informing future source selections?
- Is it worthwhile to integrate past performance with a system to manage contractor performance during the contract (versus after contract performance, or once per year)?
 - Compliance mindset vs. continuous supplier performance management?



- Limitations
 - Low Response Rate
- Future Research
 - Confirmation study
 - Survey suppliers & test propositions
 - Quasi-experiments of commercial SPM systems vs. CPARS
- Conclusions
 - Sky is not falling, but resources are consumed
 - Improvements are possible, and this study shows where to look

