Student: Mykloa Oleksyn
Student: Tony Kook
Advisor: Dr. Maria Jesus Saenz, Dr. Mehdi Farahani
Sponsor: FMCG Company ACME

Better Contract – Better 3PL Performance

MIT GLOBAL SCALE NETWORK

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Motivation

Fast-Moving Consumer Goods Companies (FMCG)

- Spend **7.5% of revenue** on 3PL services
- Face **low margin**, highly **competitive** businesses

Well-designed contracts promote **value-driven relationship** by

- Proactive **continuous improvements**
- **Alignment of goals** between 3PL and buyer
- Increased **accountability** and **ownership** of 3PLs

Background

Acme, our sponsor, operated under PSGS Contract model. Acme developed a new contract, VPA, with greater **incentives** on **cost-performance**

Goal: To improve the efficiencies of 3PL operations

Key Question / Hypothesis

What is the **impact on cost performance** of switching from PSGS to the VPA contract for Acme?

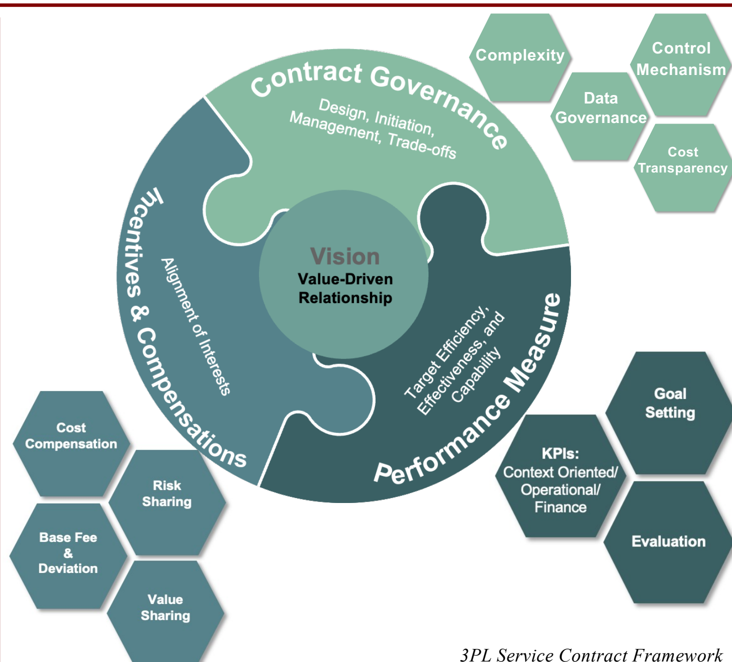
What are the **key elements** and **trade-offs** of designing a **value-driven** 3PL service contract?

Relevant Literature

Belotserkovskiy, R., Lietke, B., Sewak, J., & Teodorian, A. (2018a). Contracting for Performance: Unlocking additional value. McKinsey & Company.

Cachon, G. P. (2003). Supply Chain Coordination with Contracts. Handbooks in Operations Research and Management Science, *Elsevier.* Vol. Volume 11 (pp. 227–339).

Hwang, D. (2011). *Performance Measurement System Design for Supply Chain Organizations* [Master's thesis, Massachusetts Institute of Technology]. Dspace



3PL Service Contract Framework

Methodology

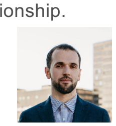
Results

Parameter of Comparison	Real VPA Treatment	Dummy Treatment Version 1	Dummy Treatment Version 2
Treatment Effect on CPP*	\$0.85	\$0.66	\$0.98
95% Confidence Interval	\$0.46-1.24	\$0.14-1.19	\$0.62-1.34
Standard Error	\$0.20	\$0.27	\$0.18
p-value	0.000	0.014	0.000
Adjusted R Squared	0.823	0.791	0.817

- Our econometrics model suggests that the new contract increased cost-per-pallet (**CPP***) spending by \$0.85
- However, after using the treatment period randomization test, we determined that the increase is likely due to exogenous factors
- **The new contract model is likely not the reason for the deterioration of efficiencies**

Contribution

1. Placing high rewards or penalties to improve a specific attribute of supplier performance might not always be the most effective way to achieve performance improvement.
2. The key structural elements of a value-driven service contract are **performance measurements**, **compensation structure**, and **governance process**. All three components are part of an interconnected system that includes trade-offs and defines the buyer-supplier relationship.

Mykola Oleksyn 

Tony Kook