SUMMARY OF MASTER'S DISSERTATION

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Title

An Educational Game for Managing Conflict of Key Performance Indicators of Supply Chains

Abstract

The aim of this research is to develop an educational game to provide supply chain professionals with learnings to foster skills required to manage conflict of key performance indicators (KPIs) for improving supply chain performance.

The board game is designed to present a two-tier supply chain context where two manufacturers source their components from the same pair of suppliers. Given allocation of the suppliers' time as a source of conflict, the manufacturers attempt to influence it, while the suppliers attempt to leverage it, to maximize their performance. To enhance effects of participants' interactions on the individuals' performance, causal loop diagrams are used to verify balancing loops in system dynamics of this game. Progression of the game rules is then designed to contrast participants' experiences when KPI changes.

The experimental results indicate that this game provides learnings to understand importance of managing KPI, and to develop skills required to manage conflict of KPIs to improve supply chain performance.

The originality of this research is in the design of conflict by identifying resource allocation as a source of conflict: design of conflict by identifying time allocation as a source of conflict: use of the system dynamics analysis to verify the basic game design: and induction of system behavioral changes over rounds by changing KPIs and other rules to change participants' capability of controlling leverage points to the system dynamics of the game. Thus, this game is supported as an effective learning tool for supply chain professionals to develop their skills necessary for managing conflict to improve performance.

Key Word(5 words)

Supply chain management; Organizational behavior;

Conflict management; Key performance indicator (KPI); Business game;