PROJECT VALUE-ADDDRING OPTIMIZATION OF PROJECT-BASED SUPPLY CHAIN UNDER DYNAMIC REPUTATION INCENTIVES

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Abstract

On the basis of equal cooperation between project-based enterprises, the project-based supply chain cross-organizational dynamic reputation incentives model was established in consideration of the implicit reputation factors to the contractor’s incentive influence, and the impaction between control objective effect level, bargaining power and project value-adding was detailed analysed, especially the effective equilibrium condition for reputation incentive effects. Thus compared the analysis conclusions with project-based supply chain incentive model which single considering explicit benefit incentive, and verified the rationality and applicability of the project-based supply chain cross-organizational dynamic reputation incentives model through related digital simulation. The results reflects that, whether the linear relationship between duration and quality exists or not, the project management enterprise resorting to adjust project object objective incentive intensity and implementing reputation incentive strategy could not only achieve project value-adding maximization, but also realize net earnings Pareto improvement.

Key Words: Project-Based Supply Chain, Reputation Incentives, Project Control Objective, Project Value-Adding

1. INTRODUCTION

Compared with general manufacturing industry, construction industry has the features of high discreteness, low efficiency, over cost and duration, and remarkable conflicts [1-3]. As an innovative project management mode, Project-based Supply Chain, based on system theory, provides a new way of solving the above problems [4]. The cross-organizational cooperative innovation of project-based supply chain is an effective method of improving project performance and realizing project value-adding. However, due to the immanent features of construction projects, cross-organizational cooperative innovation of project-based supply chain tends to present temporality, dynamics and frequentations [5]. The success of cross-organizational cooperative innovation of project-based supply chain not only depends on internal factors of project-based organizations, including their level of effort and aptitude, but also is under influence of interactive decision making factors, such as the trust among project-based organizations and their reputation and control power [6]. In practice of cross-organizational cooperative innovation of project-based supply chain, project-based organizations always gain more earnings but block the realization of project value adding if they adopt fraud or abstain from an act strategy instead of focusing on reputation when neither effective incentive mechanisms nor market credit system exists [7]. Graafland (2004) studied construction projects in Netherland and found that reputation incentives help to avoid those behaviors lowering project value-adding within fierce market competition [8]. In areas of venture capital, online exchange, public management and wireless ad-hoc networks, similar...


