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Firm-Level IT Outsourcing Decision Making: A Balanced Scorecard-Based Analytic Network Process Model

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ABSTRACT

We combine the Analytic Network Process (ANP) and the Balanced Scorecard (BSC) to build a cohesive decision model for determining firm level IT outsourcing strategy. Although prior research has confirmed the existence of interactions among BSC indicators and the potential impact of those interactions on firm level performance, interactions have hitherto not been fully understood and implemented, due to lack of adequate tools. In this paper, we take advantage of the strength of the ANP technique to address the interaction issues between indicators when applying the BSC. The ANP establishes the interactions among the indicators, prioritizes the indicators under the four BSC perspectives, and then identifies the best outsourcing strategy through synthesis. A case company is used to study the feasibility of our approach at firm level outsourcing decision making. Finally, we examine the robustness of the model through sensitivity analysis, and demonstrate the importance of incorporating indicator interactions when operationalizing BSC. Managerial insights and implications derived through model analysis are discussed.

Keywords: outsourcing, balanced scorecard, ANP, decision support, robustness and sensitivity analysis

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