

MANAGEMENT OF CAPITAL INVESTMENT PROJECTS – USING AHP/ANP FOR THE PRIORITIZATION OF CRITICAL SUCCESS FACTORS

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Abstract:

Management of capital investment projects (CIP) is of vital relevance for corporations since successful CIPs may lead to strategic or operational benefits, while failed investments entail value destruction. Therefore, long-term corporate performance is highly affected by CIPs. Capital investments and related decisions are of high complexity since they are characterized by irreversibility, uncertainty, and the involvement of significant amounts of capital. However, despite the utmost relevance of CIPs, a myriad of these projects are not considered successful. A literature review shows that past capital investment research mainly focusses on the appraisal and decision phase of CIPs. Thereby, it is disregarded that failures during project implementation also may jeopardize project success and eventually destroy value. Therefore, this study concentrates on the implementation phase and addresses the question how management of CIPs can be improved to increase the likelihood of project management success. To do so, the study builds on critical success factors (CSF), since within research on project success the identification of CSFs is the most widely applied approach. The study's objective is to develop an analytical process for the prioritization of CSFs to support project management and investment control. In a first step, the project management's success criteria are determined and a long list of potentially relevant CSFs is compiled by literature review and interviews. Secondly, CSFs are prioritized with respect to the defined success criteria by applying AHP/ANP to collect in-house experts' opinions. By applying this process, the often universalistic applied CSF approach is customized by considering contingencies, e.g., project characteristics. Further, it is assured that the number of CSFs is reduced to a manageable amount. Consequently, the study contributes both to practice and research since the prioritization process which is demonstrated in case studies does not only support decision-makers, but also addresses research gaps in project management literature.

Keywords: AHP, ANP, Capital Investment Projects, Critical Success Factors, Multicriteria Decision Making, Project Management