

# **An Empirical Investigation of Factors Causing Scope Creep in Agile Global Software Development Context: A Conceptual Model for Project Managers**

## **ABSTRACT**

Scope creep is considered as one of the crucial reasons for the failure of traditional software development projects. The ability to manage and control the change elements on a project, particularly the project scope, is a key to project success. The notion of agile process was introduced to tackle the scope change-related challenges such as scope creep. By adopting an agile-footed process, the development organizations can react to the consistent market changes and client requests. However, continuous change accommodation may negatively impact on the success of the targeted project since the project manager mainly focuses on controlling scope change rather than analyzing its impact on the cost and quality. The agile-process advocates have accepted that this situation could happen even following agile methodology, which prompts on compromising the quality, postponed the plans, increases the cost, plan to modify, and diminished the consumer loyalty. Additionally, the scope-related challenge significantly increases, especially when managing scope creep in Global Software Development (GSD) context. Thus, there is a need to focus on scope creep factors in the context of AGSD. Motivated by this, current work aims at identifying the factors causing scope creep in the context of AGSD. To achieve the targeted objectives, we reported the current state-of-the-art related to existing scope creep models in AGSD context. We performed a systematic literature review and an empirical study to address the formulated research questions. The current study also identifies the additional challenges of scope creep from the industrial perspective. Based on the obtained results, the current work proposes a conceptual model for scope creep to assist the agile practitioners to effectively handle the scope creep, which ultimately increases the project success and forecasts change control effect on a software project. Moreover, the proposed conceptual model's effectiveness is validated through expert judgment and a case study. The obtained promising results ensure the additional aspects of AGSD; hence, the project manager could overcome the project's overall risk by implementing the proposed model.