

**FACTORS AFFECTING SUCCESSFUL ADOPTION OF
SCRUM IN SOFTWARE COMPANIES**

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DECLARATION

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The above candidate has carried out research for the Masters/MPhil/PhD thesis/ Dissertation under my supervision.

Signature of the supervisor:

Date:

(Dr. Dulani Meedeniya)

ABSTRACT

There are number of software development methodologies such as Waterfall, Rapid prototyping, Spiral, Incremental, Evolutionary Delivery, etc. However, these traditional methodologies were not flexible enough to develop complex and critical software systems with frequently changing requirements. Therefore, alternative software development methodologies gradually emerged and are used in practice.

Agile is the most suitable software development methodology for the frequently requirement changing environment. There are number of variants developed based on the Agile framework. Scrum is the most famous Agile variant with an incremental iterative process.

Main objectives of the project are to identify the factors towards the successful adoption of Scrum software development processes and their relative importance. The research contains three phases. Phase one is based on the literature review, formulation of the theoretical framework and hypothesis development. The theoretical framework is developed based on the literature review. The hypothesis is developed based on the research questions. In second phase a questionnaire is designed. This research examined the validity of the questionnaire based on Cronbach alpha, which is calculated using pilot survey responses. Web based survey was conducted for the collection of data. The research eliminated five questions to improve the validity of the questionnaire on alpha value. Phase three of the research is the data analysis. It is based on Pearson correlation and linear regression. The statistical analysis results show the correlation between identified factors and verify the success of the project.

The results of the study show that the key factors, such as Scrum technology, communication, people, process and organization culture are having positive contribution towards adopting Scrum software development process in Sri Lanka. The study further reveals the percentage importance of each factor towards the success of Scrum. Such as people factor contributes 10%, process factor contributes 7%, technology factor contributes 28%, communication factor contributes 23% and organization culture factor contributes 6%.

Keywords: Agile variants, history, Scrum methodology, Scrum success factors, Software Project success.

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