

**THE IMPACT OF THE EFFECTIVE USE OF AGILE
METHODOLOGY FOR THE SUCCESS OF SOFTWARE
DEVELOPMENTS PROJECTS IN SRI LANKA**

By

Hetti Arachcige Sanjeewa

(5266FM2010113)

**A thesis submitted to the University of Sri Jayewardenepura in
partial fulfillment of the requirements for the Degree of Master
of Business Administration (Information Technology) on 05th**

May

2013

Declaration Statement

The work described in this thesis was carried out by me under the supervision of Mr. W. Mahesh N. Fernando (Senior Lecturer, Department of Information Technology, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura), and a report on this has not been submitted in whole or in part to any university or any other institution for another Degree/Diploma.

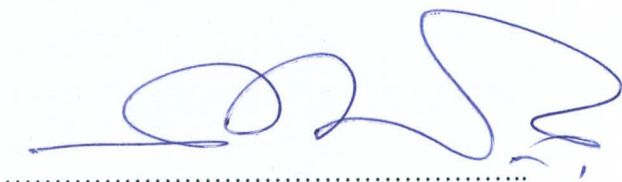


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Hetti Arachchige Sanjeewa

Academic Advisors' Declaration Statement

I certify that the statement made by the candidate is true and that this thesis has been accepted for submission to the University.



.....

Mr. W. Mahesh N. Fernando

(Supervisor)

Senior Lecturer

Department of Information Technology,

Faculty of Management Studies and Commerce,

University of Sri Jayewardenepura,

Gangodawila,

Nugegoda.

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Abbreviations and Nominal Definitions

Abbreviation/ Concept	Definition
Agility	The degree of accurate usage of the agile principles
ASD	Agile Software Development
Causes	Phenomena which directly causes the factors of software development failures to originate in software development projects.
Changing User Requirements	The tendency of the customer to change requirements during the development process.
Communication between Members of the Development Team	Communication mechanism that exists inside the software development team to communicate with each other concerning software development work related matters.
Customer	The Organization the software is built for.
Insufficient Budgets	A specific budget will be allocated to every software development project and this deals with the insufficiency of the allocated budget for the project.
IT	Information Technology
Lack of Commitment of Team Members	This factor deals with the lack of commitment for the successful completion of the software product among the members of the software development team.

Abbreviation/ Concept	Definition
Lack of Skilled Staff	There are certain skills required when developing software and this specifies that these skills are lacking in the software development team.
Lack of Top Management Commitment	Lack of top management commitment in the customer organization.
Misunderstanding User Requirements	This specifies that the needed requirements of the intended software to be developed are misunderstood. This will lead to a software product which does not support the customer's business requirement.
Requirements	Expected functionality of a software product.
SEA	Software Exporters Association
SLASI	Sri Lanka Association for the Software Industry

Acknowledgement

I would like to convey my utmost respect and gratitude to my academic advisor Mr. W. Mahesh N. Fernando (Senior Lecturer, Department of Information Technology, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura) who guided me throughout this study in an exemplary way and helped me great way in every aspect in terms of making this study a success.

Secondly, I would like to extend my deep gratitude and respect to all the lecturers who lectured me on a wide spectrum of topics during the course of this MBA program. The knowledge provided by these lecturers not only improved my academic knowledge but also went a long way in terms of improving my personality to be in line with a master's graduate.

I would also like to express my deep gratitude to Dr. P.D. Nimal, (Coordinator, M.Sc. in Management Program, Faculty of Graduate Studies, University of Sri Jayewardenepura) for all the help and assistance given to me in the process of completing this study. Further I must remind thankfully Dr. Rangika U. Halwathura, senior lecturer, University of Moratuwa, who gave me a great guidance to complete this research successfully.

Finally, I would like to thank my wife and parents and also my son for having the patience and the understanding in helping me complete this study successfully.

Abstract

Software development project success is a commonly discussed topic in literature and also among software development project managers, due to the relatively high failure rate. According to the literature, the high failure rate of software development projects is due to management issues rather technological or other reasons. Software development methodology is mainly related with software development project management, and software project managers have tried number of methodologies from the past. Currently, agile software development methodology is a popular software development methodology in the software industry due to relatively high project success rate of it. This survey based study focuses on measuring the agility of the software development team, which uses agile software development methodology, by considering twelve agile factors defined in agile manifesto and are commonly used in literature. The twelve agile factors are categorized into four areas in literature as Organizational culture, Management style, Knowledge management strategies and Organizational process. This study investigates the impact of the agility of the software development team to the project success and impact of four categories of the agile factors to the software project success, and also the potential causes for inaccurate practices of agile factors. Samples of software development projects were selected from software companies, which belong to the software exporters association and the Sri Lanka Association for the Software Industry, for data collection and the gathered data was analyzed to ascertain the significance to the defined objectives using statistical tools. According to the findings of this study, improved agility of the software development team increases the success rate of software project and also agile factors in all four categories impacts significantly to the project success.