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NON-ADOPTION OF CMMI SOFTWARE PROCESS IMPROVEMENT METHODOLOGY

BY

SRI LANKAN SOFTWARE COMPANIES

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DECLARATION

I confirm that, except where indicated through the proper use of citations and references, this is my own original work. I also confirm that my work included in this dissertation in part or whole has not been submitted for other academic qualification at any institution. Further, I confirm that subject to final approval by the Board of Examiners of University of Moratuwa, a copy of this dissertation may be circulated as required.

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ABSTRACT

In the domain of software process improvement, CMMI has been recognized as one of the leading standards of process improvement methodologies. However, over the years the literature reveals that only a few Sri Lankan software companies have managed to successfully implement CMMI and obtain Level 3 certification. This research investigates the reasons as to why CMMI has failed to manifest within the Sri Lankan software industry as a popular choice for process improvement. In view of realising this objective, this research provides an outlook on strategies used by CMMI non-certified companies to improve their processes. Further, this study propose a model framework, which can be used by the IT policy makers in deciding whether CMMI implementation can be justified or whether existing company specific software process improvement strategies are comprehensive enough to address the requirements of the stakeholders.

In this study a theoretical framework is used which consists of a set of variables identified as factors affecting non-adoption of CMMI from the literature in a similar domain. Applicability of this framework within the prevalent conditions in the Sri Lankan software industry is evaluated based on an empirical study carried out using data collected from Sri Lankan IT export companies which do not have the CMMI level-3 certification. This research revealed significant correlations between non-adoption of CMMI and variables such as demand for CMMI, benefits of CMMI, applicability of CMMI, financial consideration in CMMI implementation, involvement of CMMI consultant and organization process improvement priority.

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LIST OF ABBREVIATIONS

Abbreviations	Description
CMMI	Capability maturity model integration
EDB	Export Development Board
SPI	Software process improvements
ROI	Return on investment
SPIM	Software process improvement method
IT	Information technology
ICTA	Information communication technology agency
ISO	International Standard Organization
ICT	Information communication technology
SDLC	Software development lifecycle
CMMI certified companies	Companies who have CMMI level 3 or above level of CMMI accreditation