PERFORMANCE MEASUREMENT FOR THE DEVELOPMENT OF EMERGING SMART CITIES: THE CASE OF SRI LANKA

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Thesis submitted in partial fulfilment of the requirements of the requirements for the degree Master of Science by Research

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May 2020

DECLARATION

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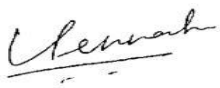

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DEDICATION

To my parents and Gayan

ACKNOWLEDGEMENT

This research wouldn't have been a success without guidance and help of numerous people. I take this opportunity to express my sincere gratitude to all of them for their valuable time and support.

First and foremost, I would like to express my deepest gratitude to my supervisors Dr. Udayangani Kulatunga and Dr. H.M.N. Dilum Bandara for the priceless guidance, assistance and encouragement provided to me throughout the research. I am greatly indebted to them for their great mentoring and advices throughout the research journey.

Further, I extend my heartiest gratitude to all the staff members of the Department of Building Economics, University of Moratuwa for their immense assistance which has always been the source of strength to enhance my research potential. It is my duty to pay gratitude to all the academics including my external experts and those who have conducted research workshops.

My grateful acknowledgment is made to all the professionals in the industry who contributed to this study by sparing their immeasurable time for data collection and for sharing their valuable knowledge despite their busy schedules. Specially, my sincere thanks delivered to Mr. Amila Cabral and Mr. Isuru Biyanwela for their kind support.

I also wish to extend my sincere appreciation to Senate Research Committee of University of Moratuwa for providing funding to undertake this research under the grant number SRC/LT/2018 & SRC/MT/2018.

Last but not least, I express my heartfelt gratitude to my beloved parents, fiancé, brother and friends for willingly giving me their utmost support, advice and continuously motivating me to carry out the work successfully.

Samarakkody A. L.

May 2020

ABSTRACT

Performance of a Smart City can be measured in terms of the smartness which in turn is defined by means of smart characteristics. Suitable smart characteristics for a particular context can be identified by means of performance measures and the Performance Measurement System prepared as such, can provide means for the emerge of Smart Cities in that context. Thus, this research aims at enhancing the emerging city development projects in Sri Lanka through an appropriate and holistic Smart City Performance Measurement Systems. The objectives of this study were accomplished with a mixed method approach and data were collected through preliminary interviews, case study interviews and questionnaire surveys. Findings were analysed with content analysis using cognitive maps and with statistical analysis using Battelle scoring approach.

As the major findings of this study, a list of Performance Measures for Smart Cities from literature, the appropriate list of Performance Measures for the proposed Smart City project in Colombo Port City and a scoring system as part of the Performance Measurement System for a Sri Lankan Smart City context are produced. The Performance Measurement System includes the themes Smart Mobility, Smart People, Smart Environment, Smart Living, Smart Economy and Smart Governance, embedded in critical success factors in a Smart City project and shows interrelationships between themes. Findings revealed that availability of ICT infrastructure as the most significant Performance Measure while the Smart Mobility was the most significant theme in the scoring system. The researchers in designing the Performance Measurement System have given an equal importance to Smart People theme as well. Additionally, the reasons to proceed with emerging Smart City development projects, barriers to proceed with the developed Performance Measurement System to Smart Cities in Sri Lanka and the recommended solutions to overcome the barriers are discussed.

Key words: *Performance Measurement System, Performance Measures, Scoring System, Smart Cities, Sri Lanka*

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ABBREVIATIONS

API	Application Programming Interface
CPC	Colombo Port City
EMC	Estate Management Company
ICT	Information and Communication Technology
SMCPC	Smart City Project in Colombo Port City
	Application Programming Interface