

## UNIVERSITI TEKNOLOGI MARA

# KNOWLEDGE SHARING MODEL FOR FACILITIES MANAGEMENT OF PRIVATE FINANCE INITIATIVE PROJECTS PERFORMANCE

### IRWAN BIN MOHAMMAD ALI

**PhD** 

September 2019

#### **ABSTRACT**

An effective approach for knowledge retention within the Private Finance Initiative (PFI) project during the Facilities Management (FM) stage has become a flourishing and critical concern. The presence and development of several Higher Learning Institutions (HLI) that implement the PFI scheme encounter many issues and problems, particularly at the FM stage. Through group brainstorming, it shows that the performance problems are explicitly related to the knowledge issues. It is not easy to manage problems associated with the performance management of the FM-PFI project. Therefore, an effective initiative must be executed to ensure that the performance of FM-PFI projects is reflected as in the contract. Previous studies show that Knowledge Sharing (KS) has significant influences on organisation performance. Hence, this research suggests that the implementation of effective KS has the potential in improving the performance management of FM-PFI projects. The research aim is to propose a KS model that can improve FM of the PFI projects performance. Therefore, the first research objective is to identify the determinant factors for KS in improving FM of the PFI projects performance. The second research objective is to examine the relationship between the identified determinant factors with KS towards performance management of FM of the PFI projects. Then, the third research objective is to develop a model for KS in improving the performance of the FM-PFI projects. This quantitative research is conducted using two questionnaire surveys via an online web-based self-administrative survey (Google form survey). This two set of questionnaire surveys is to differentiate the respondents from the strategic level and the operational level in FM. The first survey (Survey 1) is purposely to answer the first research objective. Therefore, responses from a population sampling of 50 respondents among the top management and experts in FM-PFI projects under HLI are collected. The data was initially analysed using SPSS statistical software for factor analysis. From the analysis, 22 out of 34 items of the independent variables remained, and 5 out of 8 items of the dependent variables remained. These results then form the basis of the research conceptual model consisting of the determinant factors towards KS in FM-PFI projects which are working culture; staff attitude; motivation to share; nature of knowledge to share; and opportunities to share. The second survey (Survey 2) is purposely to answer the second research objective. Therefore, responses from a population sampling of 151 FM practitioners in PFI projects under HLI are collected. The respondents for this survey is generally from the 16 PFI campuses. Further analysis with structural equation modelling using the partial least squares path modelling method (SmartPLS) discovered that from these five determinant factors; only four factors have a significant relationship with knowledge sharing towards performance management of FM-PFI projects. Later, the third research objective is achieved by suggesting the KS model that significantly will improve the performance management of FM-PFI projects. The KS model comprises of four significant determinant factors consisting of working culture; staff attitude; motivation to share; and opportunities to share. Hopefully, through this KS model, both top-down and bottom-up management will be utilising the KS approach since it has a significant contribution to the continuous improvement of the performance management of FM-PFI projects under HLI, especially in Malaysia.

#### **ACKNOWLEDGEMENT**

In the Name of Allah, The Most Beneficent, The Most Merciful.

Firstly, I wish to thank Allah SWT for allowing me to embark on my PhD and for completing this long and challenging journey successfully.

My gratitude and thanks go to my supervisor Sr. Dr. Mohd Azian bin Zaidi, co-supervisor Sr. Dr. Kharizam binti Ismail and Dr. Mohamed Imran bin Mohamed Ariff.

My appreciation goes to Pejabat Pembangunan Infrastruktur dan Infostruktur, Universiti Teknologi MARA, Malaysia; Development and Facility Management Office of PFI Campuses; and Faculty of Architecture, Planning, and Surveying, Department of Building Surveying, Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus who provided the facilities and assistance in my research. Special thanks to my colleagues and friends for helping me in completing this research.

Finally, this thesis is dedicated to my beloved parents and my wife my son Muhammad my daughter all my family members; and not forgotten the residents of Kampung Lembaga Padi; thank you for the sacrifices, patience and understanding for the past 16 years.

This piece of achievement is dedicated to all of you.

ALHAMDULILLAH.

## TABLE OF CONTENTS

		Page			
CO	NFIRMATION BY PANEL OF EXAMINERS	i			
AUTHOR'S DECLARATION		ii			
ABSTRACT ACKNOWLEDGEMENT TABLE OF CONTENTS LIST OF TABLES LIST OF FIGURES LIST OF SYMBOLS LIST OF ABBREVIATIONS		iv V X Xii Xiv			
			CHAPTER ONE: INTRODUCTION		1
			1.1	Introduction	1
			1.2	Background of the Study	1
			1.3	Problem Statement	2
			1.4	The rationale of the Study	3
1.5	Research Aim and Objectives	5			
1.6	Research Questions	5			
1.7	Research Hypotheses	6			
1.8	Research Methodology	7			
	1.8.1 Definition Phase	7			
	1.8.2 Exploratory Phase	8			
	1.8.3 Confirmatory Phase	8			
1.9	Limitation and Scope of Research	8			
1.10	Contributions of the Research	9			
1.11	Outline of the Thesis Structure	9			
CH	APTER TWO: LITERATURE REVIEW	11			
2.1	Introduction	11			
2.2	Private Finance Initiative (PFI)	11			

# CHAPTER ONE INTRODUCTION

#### 1.1 Introduction

This chapter introduces and discusses the background of the study, which examines and justifies the foundation for the research area. The discussion begins with the justification of the study, the critical issues and problems of Knowledge Sharing (KS) in Facilities Management (FM) of the Private Finance Initiative (PFI) projects. Then, the establishment of research aim, research objectives, and research questions are described, followed with an outline of the adopted research methodology and the expected contributions of the research discussed. This chapter also provides a brief outline of the research structure and as guidance on the overall direction of the thesis.

#### 1.2 Background of the Study

A competitive and advanced nation can witness through the development of infrastructure that can benefit the community continuously. This constant development requires careful and organised planning since the cost involved is very expensive. The major problem in implementing the various type of government projects is the financial capabilities to support new development for public facilities. Several programs and initiatives have been proposed, planned, and implemented in the pursuit of sustainable development, despite the limited financial ability.

As the management and procurement of infrastructure construction have changed significantly in recent years, new practices introduced for reasons of efficiency, accountability for performance, productivity, and monetary policy (Syuhaida, 2009). One of the most current initiatives in dealing with such situations is by implementing development projects through Public Private Partnership (PPP) or known in Malaysia as Private Finance Initiative (PFI) schemes (UKAS, 2009).

Generally, PFI schemes are a means of implementing wide-ranging government projects to meet the needs of the public through infrastructure development at a faster rate than conventional projects. Besides, the PFI projects involve many sectors in