UNIVERSITI TEKNOLOGI MARA

THE PERCEPTIONS OF HEALTHCARE ADMINISTRATIVORS ON THE ADOPTION OF HOME GROWN MEDICAL TECHNOLOGY IN MALAYSIAN HOSPITALS

MAILUD ABDULLAH HAMED BALAL

Thesis submitted in fulfillment of the requirements for the degree of **Doctor of Philosophy** (Business and Management)

Faculty of Business and Management

January 2018

ABSTRACT

This research attempts to create a model that establishes the crucial aspects that affect the adoption decision of home grown medical technology (HGRMT) in developing countries. In this study, the proposed integrated model includes four key groups of factors: organizational factors, technological innovation factors, environmental factors based on TOE model Tornatzky et al (1990) enhanced with IDT theory Roger (1983), and individual factors based on intention based theories, particularly, TAM by Davis et al. (1989). This model proposes that there is a direct relationship between the mentioned factors and the adoption of HGMT in healthcare firms. A quantitative research methodology was applied in this research, with SEM as a tool of data analysis. Some of 40 Malaysian hospitals where randomly selected to collect the data using questionnaire. The empirical findings obtained from this study revealed that five out of eight suggested variables in the model namely, organizational readiness, compatibility, social networks, government support, manager's attitude were significant contributors to the adoption of HGRMT. The results concluded that there were no significant relationships between top management support, perceived ease of use, perceived relative advantages and adoption of home grown medical technology. Moreover, the mediating effect of manager's attitude upon the technological attributes was tested and the findings revealed that the manager's attitude mediates the relationship between the compatibility and the adoption of home grown medical technology. Similarly, the moderating effect of hospital size upon the relationship between manager's attitude and the adoption of home grown medical technology was investigated and the findings showed that hospital size has no effect on the relationship between the two mentioned variables. This research provides critical theoretical and practical efforts within the field of technology adoption on developing counters by concentrating on the effect of technological, organizational, environmental and personal factors to the adoption locally produced medical technology.

ACKNOWLEDGEMENT

In the name of Allah, the completion of this thesis would not have been possible without the wise support and guidance of my main supervisor, Dr. Zarina Denan, who provided her wholehearted assistance and inspiration, intuition, knowledge, and generosity that have brought me comfort and assurance during my graduate experience at Universiti Teknologi Mara (UiTM). I can never express how grateful I am for both her support and her faith in my abilities. I would also like to thank my associate supervisor, Dr. Nor Zanah Mat Nor, for her assistance in this study. Her enthusiastic support and comprehensive comments made this study so much better. Her detailed reviews helped to round off the rough edges of my work.

I would also acknowledge all respondents, and interviewees who took the trouble to contact me and complete the interviews, suggestions and contributions during my data collection. I am thankful to Dr. Mohammed Bashir, who has been a good supporter of my statistical analysis and has provided me with useful advice regarding my research, I would also like to thank all the librarians especially at the main library in UiTM and Universiti Kebangasn Malaysia for their assistance throughout my study time there.

I would also like to thank my wife, and our three children, Sief, Emad, and Islam, who have have been my inspiration and motivation to complete this thesis.. I can never repay my wife for her unceasing support, endless slove and encouragement during the difficult times of my thesis writing. To them, I can only say that I love you all. Lastly, I would like to extend my appreciation to everyone who supported and encouraged me to complete my doctoral program, although his or her names are not acknowledged here.

TABLE OF CONTENTS

CONFIRMATION BY PANEL OF EXAMINERS	
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENT	vi
LIST OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv

CHAP	TER ONE: INTRODUCTION	1			
1.1	Introduction				
1.2	Background Of The Study				
1.3	Medical Technology				
1.4	Progression Of Medical Technology				
1.5	Technical Advancements In Medical Technology				
1.6	The Significance Of Medical Technology				
1.7	Problem Statement				
1.8	Main Objectives	9			
	1.8.1 Specific Objectives	9			
1.9	Research Questions	10			
1.10	The Scope Of Research	10			
1.11	Definitions				
1.12	Significance Of The Study	11			
1.13	Organization Of The Study	12			
СНАР	TER TWO: MALAYSIAN MEDICAL TECHNOLOGY INDUSTRY	13			
2.1	Medical Device Industry	13			
2.2	Global Medical Devices Market	15			
2.3	Malaysian Medical Devices Market	16			

	2.3.1	Imports	17
	2.3.2	Exports	18
2.4	Malay	sian Healthcare Industry	18
	2.4.1	Malaysia and its Healthcare System	21
	2.4.2	An Analysis of the Sector's Overall Business Climate	24
	2.4.3	Privatization of Healthcare in Malaysia	25
	2.4.4	The Malaysian Government Policies Supporting Health Industries	28
	2.4.5	Regulations Pertaining to Healthcare Services and Healthcare	
		Products in Malaysia	31
	2.4.6	Pharmaceutical Regulations	31
	2.4.7	Medical Device Regulations in Malaysia	31
	2.4.8	Public and Private Sector Medical Equipment Purchases	32
	2.4.9	Intellectual Property Protection	33
2.5	Review	w Of The Healthcare Sector In Malaysia	34
	2.5.1	The public health care sector	35
	2.5.2	Private Healthcare	36
2.6	Conclu	usion	36
CHAI	PTER: T	HREE ADOPTION MODEL	38
3.1	Introdu	action	38
3.2	Adopti	ion Factors	38
	3.2.1	Organizational Adoption Factors	39
	3.2.2	Cultural Adoption Factors	41
	3.2.3	Technological Adoption Factors	44
3.3	Adopti	ion Timing	46
3.4	Model		
3.5	Conclu	ision	49
CHAI	PTER: F	OUR ADOPTION THEORIES	51
4.1	Introdu	action	51
4.2	Organi	izational Technology Adoptions Models	52
	4.2.1	Definitions	52
	4.2.2	Technology Adoption and Innovation Diffusion Research	53
	4.2.3	The Theoretical Bases of the TAM and UTAUT	54
	4.2.4	Technology Acceptance Model (TAM)	54
	4.2.5	Unified Theory of Acceptance and Use of Technology Model	
		(UTAUT)	58
		vii	