

# Information Technology Evaluation Practices Among Malaysian Banks

Woon Hooi Shyen

Bachelor of Accounting University of Malaya 1986

Submitted to the Faculty of Business and Accountancy, University of Malaya, in partial fulfillment of the requirements for the Degree of Master of Business Administration

May 2002

Perpustakaan Universiti Malaya

A511211539

#### Abstract

Globalization and liberalization has necessitated the banking industry at large to use information technology (IT) to gain competitive advantage. This is evidence from the increasing expenditure over the last decade on IT. Accompanied by such high investment in IT, there is a demand for measures to evaluate IT in its proper perspective so that it delivers the value it promises. Traditional capital budgeting or accounting methods may not be sufficient to address the complexities of an IT evaluation process. IT evaluation therefore requires a socio-technical framework which sets linkages between the content, process and context within which it is performed. This study was done among the Malaysian local banks, with a total sample size of nine Head/Senior Managers of IS division and 127 stakeholders of ongoing IS/IT projects from the various banks. From the survey results, it was found that all the banks conduct IT evaluation at its feasibility stage and the most popular methods of IT evaluation used are the cost/revenue analysis and the cost-benefits analysis. These methods are basically traditional financial approaches to IT evaluation. Other factors which influence the IT evaluation methods include system characteristics. subjective approaches to IT evaluation is preferred if the system is of strategic nature rather than mandatory type. The study also revealed that stakeholders who are employees with varied qualifications and having different roles in the IT evaluation; have an influence on the usage of the IT evaluation methods. Their perception towards the importance of various IT evaluation methodologies differs. Those with Accounting qualification showed a preference for the use of financial approaches to IT evaluation. Finally, a summary of findings, which includes implications for practice and for further research, was made.

#### Acknowledgement

All praises be to the All Mighty for giving me the wisdom and strength to complete this dissertation.

I would like to thank the management of Bank Negara Malaysia for providing the study leave and scholarship, which enabled me to pursue this degree.

I am greatly indebted to several individuals who have assisted me throughout this research project. Foremost, I wish to express my grateful appreciation to Dr. Ainin Sulaiman, my supervisor, who have provided considerable guidance and advice throughout the writing of this project paper, particularly the many hours spent commenting and correcting the drafts.

Appreciation is also expressed to my colleagues from the Finance and Information System department of Bank Negara Malaysia for their valuable feedback and assistance in this study. A special note of thanks to Encik Mohd Razif Abdul Kadir, Assistant Governor of Bank Negara Malaysia for his support of this study, thus making it possible for the survey to be conducted among the Malaysian banks.

Finally, I wish to express my gratitude to all my family members for their love, patience and support throughout the course of this study, especially my dear husband for being the ever-willing person to undertake the printing part of the job.

TABLE OF CONTENTS		PAGE	
Abstract Acknowledgement List of tables and figures			
Chapter 1: I	ntroduction		
1.1 1.2 1.3 1.4 1.5 1.6 1.7	Research objectives Research questions Significance of the study Theoretical framework	2 3 4 5 7 7	
Chapter 2: l	Literature Review		
2.1 2.2	The importance of IS/IT evaluation Evaluation methodologies 2.2.1 Financial approach (Objective methods) 2.2.1.1 Cost/revenue analysis 2.2.1.2 Return on investment (ROI) 2.2.1.3 Cost-benefit analysis 2.2.1.4 Return on management (ROM) 2.2.1.5 Spending ratios 2.2.1.6 Information economics (IE) 2.2.2 Non-financial approach (Subjective methods) 2.2.2.1 Multi-objective, multi criteria (MOMC) 2.2.2.2 Value analysis 2.2.2.3 Critical success factor (CSF) 2.2.2.4 Experimental	9 10 11 12 13 13 14 14 15 16 16	
2.3	Evaluation as a social process 2.3.1 Content activities 2.3.2 Process activities 2.3.3 Context activities Conclusion drawn from previous studies	17 18 19 20 21	
Chapter 3: f	Research Methodology		
3.1 3.2 3.3	Sampling Instrumentation Data collection	23 24 25	
3.4	Data analysis	26	

## Chapter 4: Results and Analysis

	4.1 4.2 4.3 4.4	Characteristics of the respondents Evaluation Practices 4.2.1 Evaluation methods Choice of evaluation methods for different type of systems Choice of evaluation methods for different groups of stakeholders	29 31 32 33
		TO A - SO DIA - S DIMANDRA MAD - MA	35
Chap	ter 5: C	conclusion and Recommendation	
	5.1 5.2	Suggestion for future research Practical implications of the research findings	43 44
Refer	ences		45
Appei	1220	v Questionnaire	

### LISTS OF TABLES AND FIGURES

Lists of tables		
Chapter 2:		
Table 2.1 Table 2.2	Objective methods Subjective methods	11
Chapter 4:	Subjective methods	15
Onapior 4.		
Table 4.1	Position in the bank (n=9)	29
Table 4.2	Qualification of stakeholders (n=127)	30
Table 4.3	Roles of stakeholders (n=127)	30
Table 4.4	Frequency of evaluation practices	31
Table 4.5	Evaluation practices	31
Table 4.6	Evaluation methods	32
Table 4.7	Financial vs Non-financial methods of evaluation	33
Table 4.8	Methods and system type	34
Table 4.9	Financial vs Non-financial methods for system type	35
Table 4.10	Evaluation methods among stakeholders	36
Table 4.11	Mean scores for financial and non-financial methods	36
Table 4.12	Mean and standard deviations for financial methods	
T-61- 440	among stakeholders with different types of qualification	37
Table 4.13	Mean and standard deviations for non-financial methods	
Table 4 4 4	among stakeholders with different types of qualification	37
Table 4.14	One-way Anova for difference in the mean for financial	
	methods among the three groups of stakeholders	00
Table 4 45	with different qualification	38
Table 4.15	One-way Anova for difference in the mean for non-financial	
	methods among the three groups of stakeholders	00
Table 4.16	with different qualification	38
1 4.10	Mean and standard deviation for financial methods	39
Table 4.17	among stakeholders of different roles  Mean and standard deviation for non-financial methods	39
1 abi <del>0</del> 4. 17		39
Table 4.18	among stakeholders of different roles  One-way Anova for difference in the mean for financial	39
1 4010 4.10	methods among the five groups of stakeholders	
	with different roles	40
Table 4.19	One-way Anova for difference in the mean for non-financial	-10
14/15 7.15	methods among the five groups of stakeholders	
	with different roles	40
	mar and one toles	40 60 500

	,	
List of figures	3	Page
Figure 1 Figure 2	The three rings of the evaluation "onion" (Fabey et al 1993) The Project Ladder (Farbey et al 1993)	6 18
Figure 3	An Internal Stakeholder Map (Farbey et al 1993)	20