

TABLE OF CONTENTS

ABSTRACT	Page ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
 CHAPTER ONE: INTRODUCTION	
Science and Technology Policy in Malaysia	1
Information Technology in Malaysia	3
Overview of National Research and Development	8
Statement of Problems	13
Objective of the Study	13
Research Questions	14
Importance of the Study	14
Limitations	14
 CHAPTER TWO: REVIEW OF RELATED LITERATURE	
Introduction	15
Methodology Used to Evaluate Research Productivity	18
Factors Influence Publication Productivity	27
Research Productivity in the Fields of Computer Science and Information Technology	31
Research Productivity in Southeast Asian (ASEAN) Countries	33
Summary	34
 CHAPTER THREE: METHODOLOGY	
Research Method	35
Data Collection	35
Malaysian Research and Development Classification System	36
Database Design	38
Bibliometrics and Statistics Analysis	40
Summary	41
 CHAPTER FOUR: DATA ANALYSIS	
Total Number of Malaysian Research Publications in Computer Science and Information Technology	42
Malaysian Authors Who Published in the Fields of Computer Science and Information Technology during 1990 to 1998	44
Authors' Affiliations in the Field of Computer Science and Information Technology	49
Channels of Research Communication Used by Malaysian Authors	54

References Cited in Malaysian Research Publications in Computer Science and Information Technology	65
Research Subjects of Malaysian Researches in Computer Science and Information Technology	67
Summary	76
 CHAPTER FIVE: CONCLUSION AND DISCUSSIONS	
Findings and Discussions	77
Conclusion	86
 REFERENCES	87
 APPENDIX: LIST OF AUTHORS WHO CONTRIBUTED ONE TO THREE PUBLICATIONS	93

LIST OF TABLES

Table	Page
1.1 Comparison of Sectoral Research by Year (Top 3 Fields)	10
1.2 Ranking and Percentage Share of Publication on S&T by ASEAN Countries	12
1.3 Average Annual Growth Rate of Publication Output in ASEAN Countries	12
2.1 Distribution and Percentage of Journal Articles on Research Productivity	17
2.2 The Top Ten Most Productive Authors in the Field of Publication Productivity	17
3.1 Structure of Database	40
4.1 Malaysian Research Publications in Computer Science and Information Technology from 1990 to 1998	43
4.2 Publication Productivity of Individual Author	45
4.3 Research Production by Individual Author	46
4.4 Chronological Status of Authorship Patterns	48
4.5 Publication Productivity by Authors' Affiliation	50
4.6 Malaysian Research Production by Institutions	50
4.7 Chronological Distribution of Publications of Universiti Teknologi Malaysia, Universiti Malaya and Universiti Sains Malaysia	52
4.8 Distribution of Conference Paper by Proceedings	55
4.9 Conference Paper Publication by Proceedings	57
4.10 Distribution of Conference Paper by Country of Publisher	58
4.11 Publication Distribution by Conference Paper	60
4.12 Distribution of Journal Titles Publishing Malaysian Articles	61
4.13 Journal Titles Involved in Publishing Malaysian Articles	62
4.14 Geographical Distribution of Journal Titles	63
4.15 Publication Distribution by Journal Article	64
4.16 Distribution of References by Type of Publication	66
4.17 Research Publications by Subject	68
4.18 Research Publications by Affiliations and Subjects	70

LIST OF FIGURES

Figure		Page
1.1	Researchers by Main Field of Research (Top 4 Sciences)	10
2.1	Distribution of Publications Since 1974	16
3.1	Distribution of Bibliographic Records Collected	36
4.1	Chronological Distribution of Total Publications Retrieved	43
4.2	Chronological Cumulative Publication Productivity	44
4.3	Authorship Patterns	48
4.4	Production of Universiti Teknologi Malaysia During 1990 to 1998	53
4.5	Production of Universiti Sains Malaysia During 1990 to 1998	53
4.6	Production of Universiti Malaya During 1990 to 1998	53
4.7	Bibliograph of Cumulative Number of Proceedings	55
4.8	Nine-Year Trend of Conference Paper Productivity	60
4.9	Nine-Year Trend of Journal Article Productivity	65
4.10	References Cited in Publications	67