

The University of Dhaka  
Faculty of Business Studies  
Department of Accounting and Information Systems

Adoption of Strategic Management Accounting  
Techniques in Bangladesh: An Exploratory Study

Md. Mamunur Rashid

A Thesis Submitted to the University of Dhaka in  
Fulfillment of the Requirements for the Degree of  
Doctor of Philosophy

# Adoption of Strategic Management Accounting Techniques in Bangladesh: An Exploratory Study

## **ABSTRACT**

The aim of this study is to explore the adoption status of a package of SMA techniques, factors influencing the adoption decision, and the impact of their usage on firm performance in the context of a developing economy-Bangladesh. To this end, using a structured questionnaire survey this study collects data from 83 listed public limited companies. Descriptive statistics such as frequencies, mean, median and mode are analyzed to present the current status of SMA usage. Multiple regression analysis is employed to recognize the contingent factors affecting the adoption of SMA techniques. Moreover, using the ground of New Institutional Sociology (NIS), management accounting changes specifically a shift from traditional management accounting techniques to SMA techniques has been addressed in this study by conducting 20 in-depth interviews in the second stage of this research.

The findings show that strategic costing is the most popular SMA technique in the Bangladeshi listed companies followed by competitive position monitoring and strategic pricing. The overall SMA usage rate shows a slightly below average score (3.0403) indicating the awareness of the sample companies with respect to the innovation in the field of management accounting. With respect to the contingent factors, strategic pattern, degree of decentralization, organizational culture, process characteristics, advanced technology, environmental uncertainty, intensity of competition and institutional pressures appear to have significant influence on the adoption of SMA techniques.

With respect to the management accounting change, controlling organizations such as parent company and fund providers (coercive isomorphism) of private sectors companies have substantial impact on the imitation of the best practices in the industry, whereas donor organizations such as the World Bank and International Monetary Fund via the government ministry and agency exert pressures on the state-owned enterprises to adopt rules and structures and MAPs of the most successful companies.

The findings of the study have several implications from a theoretical, practice and policy perspectives. From a theoretical perspective, the findings support the notion of contingency theory and institutional (NIS) theory in many respects. Practitioners can get meaningful insights with respect to an appropriate package of SMA tools compatible to their strategic stance, structure of the organization, preferred cultural values, process characteristics, and the nature of operating technology. Policy makers may contemplate formulating suitable policies to improve the usage of innovative SMA techniques by taking into consideration the role of regulators, top management team, and several other external agents reported by this study.

## **ACKNOWLEDGEMENTS**

All praise belongs to Allah, Lord of all the worlds, the Gracious and the Merciful, for blessing me to complete the thesis within the scheduled time. I am also grateful to my supervisors Professor Dr. Dewan Mahboob Hossain and Dr. Md. Saiful Alam for their intimate and sincere guidance. Without their mentorship, it was not possible for me to prepare the thesis in its present form. In particular, whenever I requested for time and guidance, they have extended their cooperation instantly.

I also express my sincere gratitude to my former supervisor Dr. Mohobbot Ali for his sincere guidance. I am also grateful the anonymous reviewers of the thesis as their comments and suggestions assist to extend the contribution of the thesis to the extant literature. The comments and suggestions of the participants in the proposal defense and year completion seminars also helped me a lot to improve the readability and quality of the thesis. Accordingly, I am indebted to them and expressing my gratefulness.

I must express my sincere gratitude to the respondents who took part in the questionnaire survey and interview. Despite their tight schedule, they have demonstrated their cordial response to fill up the questionnaire and allow me to record their interview. Finally, I am thankful to my family members for their sacrifice of time and support to complete the thesis.

## TABLE OF CONTENTS

Abstract.....	iii
Acknowledgements.....	iv
List of Tables.....	xi
List of Figures.....	xiv
List of Abbreviations.....	xv
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the study.....	1
1.2 Motivation of the Study.....	3
1.3 Theoretical consideration.....	5
1.4 Statement of the problem.....	8
1.5 Objectives of the Study.....	8
1.6 Research Questions.....	9
1.7 Research methodology.....	10
1.8 Contribution of the thesis to the literature.....	11
1.9 Structure of the thesis.....	14
<b>CHAPTER TWO: STRATEGIC MANAGEMENT ACCOUNTING: AN OVERVIEW.....</b>	<b>18</b>
2.1 Introduction.....	18
2.2 Background.....	18
2.3 Evolution of Management Accounting.....	20
2.4 Emergence of Strategic Management Accounting.....	23
2.5 Definition of Strategic Management Accounting.....	26
2.6 Strategic Management Accounting Techniques.....	32
2.6.1 Cost management oriented SMA techniques.....	37
2.6.1.1 Activity-based costing/management.....	37
2.6.1.2 Attribute costing.....	40
2.6.1.3 Life cycle costing.....	41
2.6.1.4 Quality costing.....	42
2.6.1.5 Strategic costing.....	44
2.6.1.6 Target costing.....	45
2.6.1.7 Value chain costing.....	47
2.6.2 Competitor accounting based SMA techniques.....	48
2.6.2.1 Competitor cost assessment (CCA).....	49
2.6.2.2 Competitive position monitoring (CPM).....	51
2.6.2.3 Competitor performance appraisal.....	52
2.6.3 Customer accounting based SMA techniques.....	54
2.6.3.1 Customer profitability analysis (CPA).....	55
2.6.3.2 Lifetime customer profitability analysis.....	56
2.6.3.3 Valuation of Customers as assets.....	57
2.6.4 Other SMA techniques.....	59
2.6.4.1 Benchmarking.....	59
2.6.4.2 Integrated performance measurement/ Balanced Scorecard.....	60
2.6.4.3 Strategic pricing.....	63

2.6.4.4 Brand Valuation.....	64
2.7 Chapter Summary.....	66
<b>CHAPTER THREE: LITERATURE REVIEW.....</b>	<b>67</b>
3.1 Introduction.....	67
3.2 Studies conducted in the context of developed economy.....	68
3.2.1 Studies focusing on both traditional and SMA techniques.....	69
3.2.2 Studies focusing exclusively on SMA techniques.....	76
3.2.2.1 Studies focusing on SMA techniques as a package.....	76
3.2.2.2 Studies focusing on a specific group of SMA techniques.....	84
3.2.2.3 Studies focusing on a single SMA technique.....	86
3.3 Studies conducted in the context of developing economy.....	96
3.3.1 Studies focusing on both traditional and SMA techniques.....	96
3.3.2 Studies focusing exclusively on SMA techniques.....	99
3.3.2.1 Studies focusing on SMA techniques as a package.....	100
3.3.2.2 Studies focusing on a particular group of SMA techniques.....	101
3.3.2.3 Studies focusing on a single SMA technique.....	101
3.4 Bangladesh as the research context.....	103
3.5 Theories considered in prior studies (SMA as a package).....	105
3.6 Limitations of previous studies and research gaps.....	106
3.7 Chapter summary.....	107
<b>CHAPTER FOUR: THEORETICAL FRAMEWORK.....</b>	<b>109</b>
4.1 Introduction.....	109
4.2 Theories in Management accounting.....	109
4.3 Theories applied in strategic management accounting.....	112
4.4 Theories considered in this study.....	114
4.4.1 Contingency theory.....	114
4.4.1.1 Historical background.....	114
4.4.1.2 Fundamentals of contingency theory.....	116
4.4.1.3 Contingency framework used in the present study.....	117
4.4.1.3.1 The external environment.....	118
4.4.1.3.2 Process characteristics (Technology).....	121
4.4.1.3.3 Contemporary technology.....	122
4.4.1.3.4 Organizational structure.....	122
4.4.1.3.5 Size.....	123
4.4.1.3.6 Strategy.....	123
4.4.1.3.7 Culture.....	125
4.4.1.3.8 Presence of cost and management accountants.....	125
4.4.1.3.9 Accountant's participation in strategic decision making.....	126
4.4.1.3.10 Market orientation.....	127
4.4.2 Institutional theory.....	128
4.4.2.1 Historical background of Institutional theory.....	128

4.4.2.2	Fundamentals of Institutional theory.....	130
4.4.2.2.1	Old Institutional Economies (OIE).....	131
4.4.2.2.2	New Institutional Sociology (NIS).....	133
4.4.2.3	Institutional theory used in the present study.....	136
4.4.2.3.1	Coercive (isomorphism) pressures.....	137
4.4.2.3.2	Mimetic pressures.....	138
4.4.2.3.3	Normative pressures.....	139
4.4.2.3.4	Economic pressures.....	140
4.4.3	Triangulation of Theories.....	142
4.5	Chapter summary .....	143
<b>CHAPTER FIVE: RESEARCH METHODOLOGY.....</b>		<b>144</b>
5.1	Introduction.....	144
5.2	Research paradigm.....	144
5.3	Research methodology adopted in this study.....	146
5.3.1	Study period.....	146
5.3.2	Sample of the study.....	147
5.3.2.1	Sample for the questionnaire survey.....	147
5.3.2.2	Sample for the interview.....	151
5.3.3	Sources of data and respondents.....	153
5.3.4	Data collection procedure.....	156
5.3.4.1	Questionnaire survey.....	156
5.3.4.2	Interview.....	157
5.3.5	Methods of data analysis.....	158
5.3.5.1	Quantitative data analysis .....	158
5.3.5.1.1	Descriptive statistics.....	159
5.3.5.1.2	Correlation and regression.....	160
5.3.5.1.3	Validity and reliability analysis.....	160
5.3.5.2	Qualitative data analysis .....	161
5.3.6	Variable definition.....	162
5.3.6.1	Dependent variables.....	162
5.3.6.1.1	Strategic Management Accounting techniques usage.....	162
5.3.6.1.2	Firm performance variables.....	163
5.3.6.2	Independent Variables.....	166
5.3.6.2.1	Business strategy.....	166
5.3.6.2.2	Organizational structures.....	168
5.3.6.2.3	Organizational cultures.....	169
5.3.6.2.4	Process characteristics .....	170
5.3.6.2.5	Other internal organizational variables.....	171
5.3.6.2.2	The external environment.....	172
5.3.6.3	Control variables .....	174
5.3.6.3.1	Size.....	174
5.3.6.3.2	Industry.....	175
5.3.6.3.3	Product Quality.....	175
5.3.7	Hypotheses Development.....	176
5.3.7.1	Business strategy and SMA usage.....	176
5.3.7.1.1	Strategic pattern.....	176
5.3.7.1.2	Strategic mission.....	177
5.3.7.1.3	Strategic positioning.....	178

5.3.7.2	Organizational structure and SMA usage.....	179
5.3.7.3	Organizational culture and SMA usage.....	181
5.3.7.4	Process characteristics and SMA usage.....	184
5.3.7.5	Other internal organizational variables.....	186
5.3.7.6	Environmental uncertainty and SMA usage.....	190
5.3.7.7	Environmental hostility and SMA usage.....	192
5.3.7.8	Environmental complexity, diversity, ecology and SMA usage.....	193
5.3.7.9	Institutional pressures and SMA usage.....	195
5.3.7.10	SMA usage and Firm performance.....	196
5.3.8	Model Specifications for Empirical Analyses.....	200
5.3.8.1	Business strategy and SMA usage.....	200
5.3.8.2	Organizational structure and SMA usage.....	200
5.3.8.3	Organizational culture and SMA usage.....	201
5.3.8.4	Process characteristics and SMA usage.....	201
5.3.8.5	Advanced technology, orientation, accountant participation in strategic decision, and presence of CMA and SMA usage.....	201
5.3.8.6	Environmental uncertainty and SMA usage.....	201
5.3.8.7	Environmental hostility/intensity of competition and SMA usage.....	202
5.3.8.8	Environmental complexity, diversity, ecology and SMA usage.....	202
5.3.8.9	Institutional pressures and SMA usage.....	202
5.3.8.10	SMA usage and firm performance.....	202
5.4	Chapter Summary.....	203
<b>CHAPTER SIX: STATUS OF SMA PRACTICES IN BANGLADESH.....</b>		<b>204</b>
6.1	Introduction.....	204
6.2	General information about the Respondents.....	204
6.2.1	Age, gender, experience and qualification.....	204
6.2.2	Job title of respondents.....	206
6.2.3	General information about the responding companies.....	207
6.3	SMA usage rate.....	210
6.3.1	SMA usage for the full sample.....	210
6.3.2	Comparative SMA usage across the Globe.....	213
6.3.3	Industry wise SMA usage.....	215
6.3.4	Frequency of specific SMA techniques usage.....	219
6.4	Perceived benefits derived from SMA usage.....	229
6.5	Future emphasis on specific SMA techniques.....	231
6.6	Descriptive statistics for variables used in the regression models.....	234
6.7	Chapter summary.....	238
<b>CHAPTER SEVEN: FACTORS CONTINGENT TO SMA ADOPTION DECISION.....</b>		<b>240</b>
7.1	Introduction.....	240
7.2	Correlation matrix.....	240
7.3	Regression results.....	244
7.3.1	Organization-specific variables.....	244



7.3.1.1 Business strategy and SMA usage.....	244
7.3.1.2 Firm structure and SMA usage.....	247
7.3.1.3 Organizational culture and SMA usage.....	251
7.3.1.4 Process characteristics and SMA usage.....	253
7.3.1.5 Market orientation, advanced technology, accountants’ participation in strategic decision, and CMA and SMA usage.....	257
7.3.2 External/environmental variables.....	260
7.3.2.1 Perceived environmental uncertainty and SMA usage.....	260
7.3.2.2 Environmental hostility or intensity of competition and SMA usage.....	264
7.3.2.3 External environment and SMA usage.....	268
7.3.2.4 Institutional pressure and SMA usage.....	271
7.3.3 SMA usage and firm performance.....	274
7.3.3.1 SMA usage and perceived firm performance.....	274
7.3.3.2 SMA usage and observed firm performance.....	276
7.4 Validity and reliability analysis.....	278
7.5 Chapter summary.....	284
<b>CHAPTER EIGHT: INSTITUTIONAL EXPLANATION OF MANAGEMENT ACCOUNTING CHANGE.....</b>	<b>289</b>
8.1 Introduction.....	289
8.2 Management Accounting Change.....	289
8.3 Management Accounting Change in Bangladesh.....	291
8.4 Institutional factors.....	297
8.4.1 Coercive isomorphism.....	298
8.4.2 Mimetic isomorphism.....	303
8.4.3 Normative isomorphism.....	309
8.4.4 Economic pressures.....	312
8.5 Discussion.....	319
8.6 Chapter summary.....	323
<b>CHAPTER NINE: DISCUSSION AND CONCLUSION.....</b>	<b>325</b>
9.1 Introduction.....	325
9.2 Summary and Discussion of the research findings.....	326
9.2.1 Findings on the current status of adoption of SMA practices in Bangladesh.....	327
9.2.2 Findings on the factors influencing the adoption of SMA techniques.....	330
9.2.3 Findings on the Institutional Explanation of changes in the MAS.....	337
9.3 Contribution of this research.....	340
9.3.1 Empirical contributions.....	341
9.3.2 Theoretical contributions.....	343
9.3.3 Methodological contributions.....	344
9.4 Implications of the study.....	344
9.5 Limitations of this study.....	347
9.6 Avenues of future research.....	349
References.....	351

Appendices..... 400

## LIST OF TABLES

<u>Table No.</u>		<u>Page No.</u>
1.1	Research plan	9
2.1	Definition of Strategic Management Accounting	27
3.1	SMA usage rates across the globe	80
3.2	Theories employed in SMA research (as a package)	105
4.1	Theories used in SMA research	113
4.2	Drivers of convergence and divergence of management accounting practices	135
5.1	Sample selection procedure	148
5.2	Industry classification of the sample companies as per DSE	149
5.3	Industry classification of the sample companies for interview survey	152
5.4	Definition and measurement of SMA usage variables	163
5.5	Definition and measurement of firm performance variables	165
5.6	Definition and measurement of business strategy variables	168
5.7	Definition and measurement of organizational structures variables	169
5.8	Definition and measurement of organizational culture variables	169
5.9	Definition and measurement of process characteristics variables	170
5.10	Definition and measurement of other organizational variables	172
5.11	Definition and measurement of external environmental variables	174
5.12	Summary of the Hypotheses	197
6.1	Age, gender, experience and qualification of respondents	205
6.2	Job title of respondents	207
6.3	General information of the responding companies as on 31 December 2019	209
6.4	Descriptive statistics of SMA usage	211
6.5	Comparison of SMA usage with previous studies	214
6.6	Industry wise descriptive statistics of SMA usage	217
6.7	ABC usage rate	219
6.8	Attribute costing usage rate	220
6.9	LCC costing usage rate	220

6.10	QC costing usage rate	221
6.11	Strategic costing usage rate	221
6.12	Target costing usage rate	222
6.13	Value-chain costing usage rate	222
6.14	Competitor cost assessment usage rate	223
6.15	Competitive position monitoring usage rate	223
6.16	Competitor performance appraisal based on published financial statements usage rate	224
6.17	Customer profitability analysis usage rate	225
6.18	Lifetime customer profitability analysis usage rate	225
6.19	Valuation of customers as assets usage rate	226
6.20	Benchmarking usage rate	227
6.21	Brand valuation usage rate	227
6.22	Balanced scorecard usage rate	228
6.23	Strategic pricing usage rate	229
6.24	Descriptive statistics of SMA benefits	230
6.25	Descriptive statistics of SMA future emphasis	232
6.26	Descriptive statistics of all variables used in the regression models	235
7.1	Pearson correlation matrix	241
7.2	OLS regression results of strategy type and SMA usage	244
7.3	OLS regression results of strategy type and specific group of SMA usage	246
7.4	OLS regression results of organizational structure and SMA usage	248
7.5	OLS regression results of organizational structure and specific group of SMA usage	250
7.6	OLS regression results of organizational culture and SMA usage	252
7.7	OLS regression results of organizational culture and specific group of SMA usage	253
7.8	OLS regression results of process characteristics and SMA usage	254
7.9	OLS regression results of process characteristics and specific group of SMA usage	256
7.10	OLS regression results of market orientation and advanced technology and SMA usage	257
7.11	OLS regression results of market orientation and advanced technology and specific group of SMA usage	260

7.12	OLS regression results of environmental uncertainty and SMA usage	261
7.13	OLS regression results of environmental uncertainty and specific group of SMA usage	263
7.14	OLS regression results of environmental hostility and SMA usage	265
7.15	OLS regression results of environmental hostility and specific group of SMA usage	267
7.16	OLS regression results of external environmental and SMA usage	268
7.17	OLS regression results of external environmental and specific group of SMA usage	270
7.18	OLS regression results of institutional pressure and SMA usage	271
7.19	OLS regression results of institutional pressure and specific group of SMA usage	273
7.20	OLS regression results of SMA usage and firm (perceived) performance	274
7.21	OLS regression results of SMA usage and firm (market-based) performance	276
7.22	Summary of hypotheses accept/reject status	285
A1	Effect of SMA usage on performance	400
A2	Survey Questionnaire	402
A3	Interview Questionnaire	410
A4	Profiles of the Interviewee	416

## LIST OF FIGURES

<u>Figure No.</u>		<u>Page No.</u>
1.1	Structure of the Thesis	15
2.1	Emergence of Strategic Management Accounting	24
2.2	Criteria of separating SMA techniques from traditional MAPs	35
2.3	Strategic Management Accounting Techniques	36
3.1	Structure of literature review on SMA practices	68
4.1	Contingent factors influencing the adoption of Strategic Management Accounting Techniques	128
4.2	Institutional factors influencing the adoption of Strategic Management Accounting Techniques	141
5.1	Industry classification of the sample	150
5.2	Distribution of sample for interview	153
6.1	Comparative usage of specific SMA technique	213
6.2	Industry wise SMA usage	218
6.3	Perceived benefits from SMA usage	231
6.4	Future emphasis on the use of specific SMA technique	233
6.5	Present usage vs. future emphasis of specific SMA technique	234
7.1	The linearity of relationship between IV (organizational culture) and DV (SMA usage)	279
7.2	The linearity of relationship between IV (process characteristics) and DV (SMA usage)	280
7.3	The linearity of relationship between IV (environmental uncertainty) and DV (SMA usage)	280
7.4	The linearity of relationship between IV (institutional pressures) and DV (SMA usage)	281
7.5	The linearity of relationship between IV (intensity of competition) and DV (SMA usage)	281
7.6	The normality of the distribution of residuals	282
7.7	The homoscedasticity of the regression models	283

## LIST OF ABBREVIATIONS

ABC	Activity-based costing
ABC/M	Activity-based costing/Management
ABM	Activity-based management
AGM	Assistant General Manager
AMT	Advanced manufacturing technology
ANT	Actor-network theory
AVP	Assistant Vice President
A&F	Accounts and Finance
BB	Bangladesh Bank
BCAS	Bangladesh Cost Accounting Standard
BDT	Bangladeshi Taka
BSC	Balanced scorecard
BSEC	Bangladesh Securities and Exchange Commission
CA	Chartered Accountant
CBA	Central Bargaining Agent
CCA	Competitor cost assessment
CEO	Chief executive officer
CFO	Chief financial officer
CIMA	Chartered Institute of Management Accountants
CMA	Certified Management Accountants/ Cost and Management Accountant
CORE	Context (C), overview (O), ratio (R), evaluation (E)
CPA	Customer profitability analysis
CPD	Continuous professional development
CPM	Competitive position monitoring
CPAFS	Competitor performance appraisal based on financial statements
CSPA	Customer segment profitability analysis
DGM	Deputy General Manager
DMD	Deputy Managing Director
DSE	Dhaka Stock Exchange
DV	Dependent variable
ED	Executive Director
EPA	Environmental Protection Agency
ERP	Enterprise Resource Planning
EU	European Union
FAVP	First Assistant Vice President
EVP	Executive Vice President
FM	Flexible manufacturing
FRC	Financial Reporting Council
FVP	First Vice President
GDP	Gross Domestic Product
GHG	Greenhouse gas
GM	General Manager
GOVT	Government
GOB	Government of Bangladesh
ICAB	Institute of Chartered Accountants of Bangladesh
ICMAB	The Institute of Cost and Management Accountants of Bangladesh
IFAC	International Federation of Accountants
IMA	Institute of Management Accountant

IMF	International Monetary Fund
IPM	Integrated performance measurement
IPMS	Integrated performance measurement systems
IS	Information system
IT	Information technology
IV	Independent variable
JIT	Just-in-time
LCC	Life-cycle costing
LTCPA	Lifetime customer profitability analysis
MA	Management accounting
MAPs	Management accounting practices
MAS	Management accounting system
MBA	Master of Business Administration
MCOM	Master of Commerce
MCS	Management control system
MD	Managing Director
MNCs	Multinational companies
MNEs	Multinational enterprises
MTB	Market-to-book
N-11	Next Eleven
NA	Not applicable
NBFI	Non-bank financial institution
NIS	New Institutional Sociology
NPV	Net present value
OIE	Old institutional economies
OLS	Ordinary Least Squares
P-A-F	Prevention-Appraisal-Failure
PEU	Perceived environmental uncertainty
PMS	Performance measurement system
PwC	PricewaterhouseCoopers
QC	Quality costing
RJSC	Registrar of Joint Stock Companies and Firms
RMG	Readymade Garments
RO	Research objective
ROA	Return on asset
ROE	Return on equity
R&D	Research and Development
RQ	Research questions
SAP	Systems Applications and Products
SAVP	Senior Assistant Vice President
SCM	Strategic cost management
SD	Standard deviation
SEO	Senior Executive Officer
SEVP	Senior Executive Vice President
SM	Senior Manager
SMA	Strategic Management Accounting
SMEs	Small and medium-sized enterprises
SOE	State-owned enterprise
SPO	Senior Principal Officer
SVP	Senior Vice President



TC	Target costing
TMT	Top management team
TOBINQ	Tobin's Q
TQM	Total quality management
UK	United Kingdom
UN	United Nations
USA	United States of America
VCA	Valuation of Customers as assets
VCC	Value chain costing
VIF	Variance inflation factor
VP	Vice President
WB	World Bank