

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**CONTINGENCY FACTORS, BALANCED SCORECARD  
AND FIRM PERFORMANCE: EVIDENCE FROM IRAQI  
MANUFACTURING INDUSTRIES**



**KHALIS HASAN YOUSIF AL-NASER**

**DOCTOR OF PHILOSOPHY  
UNIVERSITI UTARA MALAYSIA  
OCTOBER 2017**

**CONTINGENCY FACTORS, BALANCED SCORECARD AND FIRM  
PERFORMANCE: EVIDENCE FROM IRAQI MANUFACTURING  
INDUSTRIES**

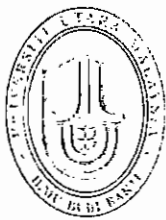
**By**

**KHALIS HASAN YOUSIF AL-NASER**



**UUM**  
**Universiti Utara Malaysia**

**Thesis Submitted to  
Tunku Puteri Intan Safinaz School of Accountancy,  
Universiti Utara Malaysia,  
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy**



**TUNKU PUTERI INTAN SAFINAZ**  
**SCHOOL OF ACCOUNTANCY**  
**COLLEGE OF BUSINESS**  
**Universiti Utara Malaysia**

**PERAKUAN KERJA TESIS / DISERTASI**  
*(Certification of thesis / dissertation)*

Kami, yang bertandatangan, memperakukan bahawa  
*(We, the undersigned, certify that)*

**KHALIS HASAN YOUSIF AL-NASER**

calon untuk Ijazah **DOCTOR OF PHILOSOPHY**  
*(candidate for the degree of)*

telah mengemukakan tesis / disertasi yang bertajuk:  
*(has presented his/her thesis / dissertation of the following title):*

**CONTINGENCY FACTORS, BALANCED SCORECARD AND FIRM PERFORMANCE: EVIDENCE FROM IRAQI  
MANUFACTURING INDUSTRIES**

seperti yang tercatat di muka surat tajuk dan kulit tesis / disertasi.  
*(as it appears on the title page and front cover of the thesis / dissertation).*

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada:  
**22 Oktober 2017.**

*(That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through an oral examination held on:*

**22 October 2017.**

Pengerusi Viva : **Assoc. Prof. Dr. Zaimah Zainol Ariffin**  
*(Chairman for Viva)*

Tandatangan  
*(Signature)*

Pemeriksa Luar : **Assoc. Prof. Dr. Ruzita Jusoh**  
*(External Examiner)*

Tandatangan  
*(Signature)*

Pemeriksa Dalam : **Assoc. Prof. Dr. Che Zuriana Muhammad Jamil**  
*(Internal Examiner)*

Tandatangan  
*(Signature)*

Tarikh: **22 October 2017**  
*(Date)*

Nama Pelajar : Khalis Hasan Yousif Al-Naser  
(Name of Student)

Tajuk Tesis / Disertasi : CONTINGENCY FACTORS, BALANCED SCORECARD AND FIRM  
(Title of the Thesis / Dissertation) PERFORMANCE: EVIDENCE FROM IRAQI MANUFACTURING INDUSTRIES

Program Pengajian : Doctor of Philosophy  
(Programme of Study)

Nama Penyelia/Penyelia-penyelia : Assoc. Prof. Dr. Rapih Mohamed  
(Name of Supervisor/Supervisors)

Tandatangan

Nama Penyelia/Penyelia-penyelia :  
(Name of Supervisor/Supervisors)

Tandatangan

## **PERMISSION TO USE**

In presenting this thesis in fulfillment of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor (s) or in their absence, by the Dean of Tunku Puteri Intan Safinaz School of Accountancy where I did my thesis. It is understood that any copying or publication or use of this thesis or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition given to me and to the UUM in any scholarly use which may be made of any material in my thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of Tunku Puteri Intan Safinaz School of Accountancy  
Universiti Utara Malaysia  
06010 UUM Sintok  
Kedah Darul Aman



## ABSTRACT

This study focused on contingency factors, the balanced scorecard (BSC) and firm performance. Specifically, the study examined the mediating role of BSC on the relationship between contingency factors and firm performance. The research framework was developed based on contingency theory. The population of the study comprised 1,213 companies from manufacturing sector of Iraq. The analysis of data utilised 301 responses that represented 49.38% of the total responses. Data were collected via self-administered questionnaires distributed to top management and were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicated that intensity of competition, political turbulence, corporate culture and total quality management (TQM) had a significant and positive influence on BSC usage. The results also showed that political turbulence had a negative and significant influence on firm performance, whereas intensity of competition, corporate culture and TQM had a positive and significant influence on firm performance. Furthermore, a significant and positive association existed between BSC usage and firm performance. The result of this study indicated that the higher the level of political turbulence the higher the BSC usage; and this is a confirmation of applicability and value of contingency theory. Finally, the results indicated that BSC usage mediated the relationship between exogenous variables (intensity of competition, political turbulence, corporate culture and TQM) and firm performance. The result implies that contingency factors are important antecedents that influence BSC usage, and BSC is a vital strategic management accounting tool to assist in planning and decision making in Iraqi's manufacturing industry. These indicate theoretical and managerial implications of the research. Therefore, managers and government could adopt the technique to improve firm performance. This study has made a solid contribution to the knowledge in theory and practice. Limitations and suggestions for future research were offered.

**Keywords:** BSC, TQM, corporate culture, perceived environmental uncertainty, Iraq

## ABSTRAK

Kajian ini memberi tumpuan kepada faktor kontingensi, kad skor berimbang (*BSC*) dan prestasi firma. Secara khususnya, kajian ini menyelidik peranan pengantaraan *BSC* dalam hubungan antara faktor kontingensi dan prestasi firma. Rangka kerja penyelidikan dibangunkan berdasarkan teori kontingensi. Populasi kajian terdiri daripada 1,213 syarikat dari sektor pembuatan di Iraq. Analisis data menggunakan 301 maklum balas yang mewakili 49.38% daripada jumlah keseluruhan maklum balas. Data dikumpul melalui soal selidik tadbir sendiri yang diedarkan kepada pengurusan atasan, dan dianalisis dengan menggunakan *Partial Least Squares Structural Equation Modelling (PLS-SEM)*. Dapatan kajian menunjukkan bahawa intensiti persaingan, pergolakan politik, budaya korporat dan pengurusan kualiti menyeluruh (*TQM*) mempunyai pengaruh yang signifikan dan positif terhadap penggunaan *BSC*. Dapatan juga menunjukkan bahawa pergolakan politik mempunyai pengaruh yang negatif terhadap prestasi firma, sedangkan intensiti persaingan, budaya korporat dan *TQM* mempunyai pengaruh positif yang signifikan terhadap prestasi firma. Selain itu, hubungan signifikan dan positif wujud antara penggunaan *BSC* dan prestasi firma. Hasil kajian ini menunjukkan bahawa semakin tinggi tahap pergolakan politik, semakin tinggi penggunaan *BSC*; dan ini mengesahkan kebolegunaan dan nilai teori kontingensi. Akhir sekali, dapatan kajian menunjukkan bahawa penggunaan *BSC* telah memantapkan hubungan antara pemboleh ubah eksogen (intensiti persaingan, pergolakan politik, budaya korporat dan *TQM*) dan prestasi firma. Hasilnya menunjukkan bahawa faktor kontingensi adalah pemboleh ubah penting yang mempengaruhi penggunaan *BSC*, dan *BSC* adalah alat perakaunan pengurusan strategik yang penting untuk membantu perancangan dan pembuatan keputusan dalam industri pembuatan di Iraq. Hal ini menggambarkan implikasi teori dan pengurusan penyelidikan. Oleh itu, pengurus dan kerajaan boleh menggunakan teknik ini untuk meningkatkan prestasi firma. Kajian ini telah memberikan sumbangan ilmu yang mantap dalam teori dan amalan. Limitasi dan cadangan untuk penyelidikan pada masa hadapan turut dikemukakan.

**Kata kunci:** *BSC*, *TQM*, budaya korporat, ketidakpastian tanggapan persekitaran, Iraq



## ACKNOWLEDGEMENT

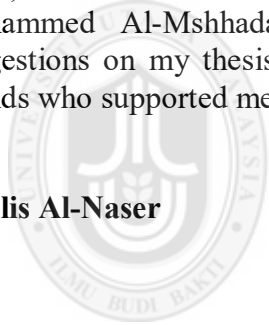
Alhamdulillah, Praise is to ALLAH, Lord of the worlds. May peace and the blessings of ALLAH be upon our prophet Muhammad (SAW) and his family members, companions and followers.

First, I deeply thank and express my sincere gratitude to ALLAH (SWT) WHO out of HIS infinite mercy supported me in completing this PhD thesis. I would like also to express my deep gratitude to my supervisor Associate Prof. Dr. Rapiah Mohamed for her support, guidance and patience throughout my PhD journey, which made my work a great learning experience.

I owe a big personal debt to my family especially to my late father. May Allah have mercy on him and my mother who have been supportive to me with prayers and many other things. Big thanks also are directed to my beloved wife Khamael Al-Naser as well as my wonderful children, Khalid, Lyan and Yousif who accompanied me in this PhD journey.

Furthermore, my gratitude goes to my brothers Yousif, Wael, Masood and all my sisters. My appreciation also goes to Associate Prof. Dr. Che Zuriana Muhammad Jamil, Dr. Zarifah Abdullah, Prof. Dr. Hussein Aljarjary, Prof. Dr. Tariq Shareef, Mohammed Al-Mshhadani and Ban Badawi, for their support and valuable suggestions on my thesis. Last, but not least, I would like to thank my wonderful friends who supported me to complete this PhD journey.

**Khalis Al-Naser**



Universiti Utara Malaysia

## TABLE OF CONTENT

<b>CERTIFICATION OF THESIS WORK</b>	<b>iii</b>
<b>PERMISSION TO USE</b>	<b>v</b>
<b>ABSTRACT</b>	<b>vi</b>
<b>ABSTRAK</b>	<b>vii</b>
<b>TABLE OF CONTENTS</b>	<b>ix</b>
<b>LIST OF TABLES</b>	<b>xiii</b>
<b>LIST OF FIGURES</b>	<b>xiv</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xv</b>
 <b>CHAPTER ONE INTRODUCTION</b>	
1.1 Background of the Study	1
1.2 Problem Statement	5
1.3 Research Questions	13
1.4 Research Objectives	14
1.5 Significance of the Study	14
1.5.1 Theoretical Significance	15
1.5.2 Practical Significance	17
1.6 Scope of the Study	18
1.7 Definition of Key Terms	19
1.8 Organization of the Thesis	20
 <b>CHAPTER TWO LITERATURE REVIEW</b>	
2.1 Introduction	21
2.2 Development of Cost and Management Accounting	21
2.3 The Balanced Scorecard (BSC)	29
2.3.1 Balanced Scorecard Measurement Perspectives	30
2.3.2 Balanced Scorecard in Arab Countries	34
2.3.3 Balanced Scorecard in the Manufacturing Sector	35
2.3.4 Benefits and Advantages of Balanced Scorecard	36
2.4 Contingency Factors	39
2.5 Perceived Environmental Uncertainty (PEU)	42
2.5.1 Political Turbulence	46
2.5.2 Intensity of Competition	50
2.5.3 Perceived Environmental Uncertainty in Arab Countries	54
2.6 Total Quality Management (TQM)	56
2.6.1 Total Quality Management in Arab Countries	60
2.7 Corporate Culture	62
2.7.1 Adaptability	65
2.7.2 Involvement	65
2.7.3 Mission	66
2.7.4 Consistency	66
2.7.5 Corporate Culture in Arab Countries	67
2.8 Firm Performance	70
2.9 Underpinning Theory	72
2.9.1 Contingency Theory	73
2.9.2 Advantages and Disadvantages of Contingency Theory	75

2.10	Chapter Summary	76
<b>CHAPTER THREE THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT</b>		
3.1	Introduction	78
3.2	Theoretical Framework	78
3.3	The Relationship between Contingency Factors (Political Turbulence, Intensity of Competition, Total Quality Management, Corporate Culture) and Balanced Scorecard	82
3.3.1	The Relationship between Political Turbulence and Balanced Scorecard	82
3.3.2	The Relationship between Intensity of Competition and Balanced Scorecard	84
3.3.3	The Relationship between Total Quality Management and Balanced Scorecard	86
3.3.4	Relationship between Corporate Culture and the Balanced Scorecard	89
3.4	The Relationship between Contingency Factors (Political Turbulence, Intensity of Competition, Total Quality Management, Corporate Culture) and Firm performance	92
3.4.1	The Relationship between Political Turbulence and Firm Performance	92
3.4.2	The Relationship between Intensity of Competition and Firm Performance	95
3.4.3	The Relationship between Total Quality Management and Firm Performance	97
3.4.4	The Relationship between Corporate Culture and Firm Performance	99
3.5	The Relationship between the Balanced Scorecard and Firm Performance	100
3.6	The Relationship between Contingency Factors (Political Turbulence, Intensity of Competition, Total Quality Management, Corporate Culture), the Balanced Scorecard and Firm Performance	103
3.6.1	The Mediating Effect of the Balanced Scorecard between Political Turbulence and Firm Performance	104
3.6.2	The Mediating Effect of the Balanced Scorecard between Intensity of Competition and Firm Performance	106
3.6.3	The Mediating Effect of the Balanced Scorecard between Total Quality Management, and Firm Performance	108
3.6.4	The Mediating Effect of the Balanced Scorecard between Corporate Culture and Firm Performance	109
3.7	Summary of Research Objectives and Research Hypotheses	111
3.8	Conclusion	112
<b>CHAPTER FOUR RESEARCH METHODOLOGY</b>		
4.1	Introduction	113
4.2	Research Design	113
4.3	Quantitative Research Approach	115
4.4	Operationalization and Measurement of Variables	115
4.4.1	Firm Performance	116

4.4.2	Balanced Scorecard - Mediating Variables	118
4.4.3	Perceived Environmental Uncertainty – Exogenous Variables	119
4.4.4	Total Quality Management	122
4.4.5	Corporate Culture	123
4.5	Questionnaire Design	125
4.6	Pilot Study	126
4.6.1	Content validity	126
4.6.2	Statistical Validity and Reliability of the Pilot Study	127
4.7	Unit of Analysis	130
4.8	Population of the Study	130
4.8.1	Sample Size	131
4.8.2	Stratified Sampling Technique	132
4.9	Data Collection	133
4.10	Data Analysis Procedures	134
4.10.1	Partial Least Squares Structural Equation Modeling (PLS-SEM)	137
4.11	Chapter Conclusion	141
<b>CHAPTER FIVE RESULTS AND DISCUSSION</b>		
5.1	Introduction	142
5.2	Data Screening and Cleaning	142
5.2.1	Missing Data	142
5.2.2	Removing Outliers	143
5.2.3	Non-response Bias	144
5.3	Analysis of Survey Response	145
5.3.1	Response Rate	145
5.3.2	Profile of Respondents	145
5.4	Descriptive Statistics of the Research Variables	149
5.4.1	Endogenous Variable — Firm Performance	149
5.4.2	Mediating variable – Balanced Scorecard	150
5.4.3	Exogenous variables – Perceived Environment Uncertainty	153
5.4.4	Exogenous variables – Corporate Culture	155
5.4.5	Exogenous variables – Total Quality Management	157
5.5	PLS-SEM Analysis Results	158
5.5.1	Testing the Goodness of the Measurements Model (Outer Model)	158
5.6	Testing the Measurement Model (Outer Model)	159
5.6.1	Assessment of Convergent Validity	160
5.6.2	Assessment of Discriminant Validity	163
5.7	Conclusion of the Measurement Model	168
5.8	Assessment of the Structural Model (Inner Model)	170
5.8.1	Assessment of Coefficient of Determination ( $R^2$ )	170
5.8.2	Assessing the Effect Size	172
5.8.3	Determining the Predictive Relevance	173
5.8.4	Assessing Goodness of Fit (GoF)	174
5.8.5	Hypotheses Testing	175
5.9	Discussion of the Direct Hypotheses	181
5.9.1	The Relationship between Political Turbulence and Balanced Scorecard	181

5.9.2	The Relationship between Intensity of Competition and Balanced Scorecard	183
5.9.3	The Relationship between Total Quality Management and Balanced Scorecard	186
5.9.4	The Relationship between Corporate Culture and Balanced Scorecard	188
5.9.5	The Relationship between Political Turbulence and Firm Performance	191
5.9.6	The Relationship between Intensity of Competition and Firm Performance	194
5.9.7	The Relationship between Total Quality Management and Firm Performance	197
5.9.8	The Relationship between Corporate Culture and Firm Performance	200
5.9.9	The Relationship between Balanced Scorecard and Firm Performance	203
5.10	Discussion of the Indirect Hypotheses (Mediation Relationship)	206
5.10.1	The Mediating Effect of BSC on the Relationship between Political Turbulence and Firm Performance	206
5.10.2	The Mediating Effect of BSC on the Relationship between Intensity of Competition and Firm Performance	209
5.10.3	The Mediating Effect of BSC on the Relationship between TQM and Firm Performance	212
5.10.4	The Mediating Effect of BSC on the Relationship between Corporate Culture and Firm Performance	214
5.11	Hypotheses Summary	217
5.12	Chapter Conclusion	218
<b>CHAPTER SIX CONCLUSION AND RECOMMENDATIONS</b>		
6.1	Introduction	220
6.2	Summary of the Study	220
6.3	Recapitulation of the Main Findings	221
6.4	Contribution of the Study	223
6.4.1	Theoretical Contributions	223
6.4.2	Managerial Contributions	224
6.5	Research limitations	226
6.6	Future research	227
6.7	Conclusion	229
<b>REFERENCES</b>		231
<b>APPENDICES</b>		283

## LIST OF TABLES

Table	Page
Table 3.1: Summary of Research Objective and its Hypotheses	111
Table 4.1: Firm performance measurement	118
Table 4.2: Balanced Scorecard measurement	119
Table 4.3: Political Turbulence measurement	121
Table 4.4: Intensity of Competition measurement	122
Table 4.5: TQM Measurement	123
Table 4.6: Corporate Culture Measurement	124
Table 4.7: Summary of Survey Questionnaire Contents	126
Table 4.8: Average Variance Extracted (AVE), Composite reliability and Cronbach's alpha values of all Constructs	128
Table 4.9: Correlations of Constructs and Discriminant Validity Assessment	129
Table 4.10: Iraqi industrial companies and its stratified proportional random sample size	132
Table 4.11: Criteria for Assessing Measurement Model (Outer Model)	139
Table 4.12: Criteria of Assessing Structural Models	140
Table 5.1: Test of Non-Respondent Bias	144
Table 5.2: Profile of Respondents	146
Table 5.3: Descriptive Statistics of Firm performance	149
Table 5.4: Descriptive Statistics of Balanced Scorecard – Financial Perspective	150
Table 5.5: Descriptive Statistics of Balanced Scorecard – Customer Perspective	151
Table 5.6: Descriptive Statistics of Balanced Scorecard – Internal Business Process Perspective	152
Table 5.7: Descriptive Statistics of Balanced Scorecard – Innovation and Learning Perspective	152
Table 5.8: Descriptive Statistics of Perceived Environment Uncertainty	153
Table 5.9: Descriptive Statistics of Perceived Environment Uncertainty	154
Table 5.10: Descriptive Statistics of Corporate Culture	155
Table 5.11: Descriptive Statistics of Total Quality Management	157
Table 5.12: Factor Loadings, CR and AVE of all Constructs	160
Table 5.13: Factor Loadings of the filed items	162
Table 5.14: Factor Loadings and Cross-Loadings	164
Table 5.15: Correlations of Constructs and discriminant validity assessment	167
Table 5.16: Results of $R^2$	171
Table 5.17: The Effect Size of the Exogenous Constructs - Second Order	172
Table 5.18: Results of $Q^2$	174
Table 5.19: GoF Baseline Criteria	175
Table 5.20: Summary of Direct Hypotheses Results	176
Table 5.21: Summary of Indirect Hypotheses Results	180
Table 5.22: Summary of Findings	217

## LIST OF FIGURES

<b>Figure</b>		<b>Page</b>
Figure 1.1:	Contribution ratio of the manufacturing sector to GDP for the period 2002-2016	6
Figure 3.1:	Theoretical Framework	81
Figure 4.1:	Design Process	114
Figure 4.2:	Analysis procedures for both measurements model and structural model by using PLS-SEM	141
Figure 5.1:	Reliable and Valid Model by Using SmartPLS Version 2	169
Figure 5.2:	Results of $R^2$	171
Figure 5.3:	The mediating role of BSC between (political turbulence, intensity of competition, TQM, corporate culture) and firm performance	179



## LIST OF ABBREVIATIONS

ABC	Activity Based Costing
Adap	Adaptability
AMT	Advance Manufacturing Technology
AVE	Average Variance Extracted
BPR	Business Process Reengineering
BSC	Balanced Scorecard
CC	Corporate Culture
Cons	Consistency
CP	Costumer Perspective
CR	Composite reliability
$f^2$	Effect size
GoF	Goodness of fit
GDP	Gross Domestic Product
GDSR	General Directorate of Statistics and Research
ICSO	Iraqi Central Statistical Organization
Inv	Involvement
IP	Internal process Perspective
JIT	Just in Time
LCC	Life Cycle Costing
LGP	Innovation and Learning Perspective
FP	Financial Perspective
MIM	Ministry of Industry and Minerals
Mis	Mission
MOP	Ministry of Planning
P	Performance
PEU	Perceived Environmental Uncertainty
PLS	Partial Least Squares
PMS	Performance Measurement System
PT	Political Turbulence
$Q^2$	Predictive Relevance
$R^2$	Coefficient of determination
SCM	Strategic Cost Management
SEM	Structural Equation Modeling
SMA	Strategic Management Accounting
SOEs	State Owned Enterprise
TC	Target Cost
TOC	Theory of Constraints
TQM	Total Quality Management
UNAMI	United Nations Assistance Mission of Iraq



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Nowadays, business environment is a highly competitive area in which many companies, regardless of type and nature, employ management accounting techniques to survive in this competitive world. However, the strategic management accounting has become essential for cost reduction as it facilitates the handling of multiple challenges characteristic of a highly competitive business environment. In this regard, the general improvement of the strategic position of a company via the performance measures process is termed as a strategic management accounting techniques (Modell, 2012; Ojua, 2016).

Strategic management accounting (SMA) is defined as "the provision and analysis of management accounting data about a business and its competitors, for use in developing and monitoring business strategy" (Simmonds, 1981). Management accounting is a key to providing organizations with accurate and relevant information to help them effectively design competitive strategies, resulting in a competitive advantage. Hence, SMA stands upon solid ground for making business decisions that would improve or positively affect firm performance and help them gain a better competitive advantage (Uyar, 2010).

Performance measurement systems (PMS) have also been integrated into SMA, particularly the Balanced Scorecard (BSC) (Ramljak & Rogošić, 2012). This development may result from the rise of the BSC in the world of management

The contents of  
the thesis is for  
internal user  
only

## REFERENCES

- Abdel-Kader, M., & Luther, R. (2008). The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *The British Accounting Review*, 40(1), 2-27.
- Abdel-Maksoud, A., Dugdale, D., & Luther, R. (2005). Non-financial performance measurement in manufacturing companies. *The British Accounting Review*, 37(3), 261-297.
- Abdul-Hamid, O., Agoawike, A., & Odulaja, A. (2013). The OPEC annual statistical bulletin. *OPEC, Vienna*.
- Abdullah, N. H., Shamsuddin, A., Wahab, E., & Hamid, N. A. A. (2014). The relationship between organizational culture and product innovativeness. *Procedia-Social and Behavioral Sciences*, 129, 140-147.
- Abernethy, M. & Stoelwinder, J. (1991). Budget use, task uncertainty, system goal orientation and subunit performance: A test of the 'fit' hypothesis in not-for-profit hospitals. *Accounting, Organizations and Society*, 16(2), 105-120.
- Abernethy, M. & Lillis, A. (1995). The impact of manufacturing flexibility on management control system design. *Accounting, Organizations and Society*, 20(4), 241-258.
- Abugalia, M. (2011). *The influence of business environment on the effectiveness of management accounting practices: Evidence from Libyan companies* (Unpublished doctoral dissertation). University of Huddersfield, Huddersfield, England. Retrieved from [http://eprints.hud.ac.uk/id/eprint/17509/1/Muftah\\_Abugalia\\_-\\_Final\\_Thesis.pdf](http://eprints.hud.ac.uk/id/eprint/17509/1/Muftah_Abugalia_-_Final_Thesis.pdf)

- Abu-Jarad, I. Y., Yusof, N., & Nikbin, D. (2010). A review paper on organizational culture and firm performance. *International Journal of Business and Social Science*, 1(3), 26-46.
- Abushaiba, I. A., & Zainuddin, Y. (2012). Performance measurement system design, competitive capability, and performance consequences-A conceptual like. *International Journal of Business and Social Science*, 3(11) 184-193.
- Acar, A. Z., & Acar, P. (2014). Organizational culture types and their effects on firm performance in Turkish hospitals. *Emerging Markets Journal*, 3(3), 18-31.
- Achrol, R. S., & Stern, L. W. (1988). Environmental determinants of decision-making uncertainty in marketing channels. *Journal of marketing research*, 36-50.
- Adomako, S., & Danso, A. (2014). Regulatory environment, environmental dynamism, political ties, and performance: Study of entrepreneurial firms in a developing economy. *Journal of Small Business and Enterprise Development*, 21(2), 212-230.
- Al-Akra, M., Ali, M. J., & Marashdeh, O. (2009). Development of accounting regulation in Jordan. *The International Journal of Accounting*, 44, 163-186.
- Al-Amal & Al-Iktissad (2015). *Iraqi National Business Council*, 5(2), 12-15
- Al-Dhaafri, H. S., Al-Swidi, A. K., & Yusoff, R. Z. B. (2016). The mediating role of total quality management between the entrepreneurial orientation and the organizational performance. *The TQM Journal*, 28(1), 89-111.
- Al-Fadhel, M. A. & Al-Chlaihawi, M. O., (2015). That is, very little attention has been paid by researchers in corporate culture in developing countries, including Arab

- and Middle Eastern countries, *Qadisiyah Journal of Administrative and Economic Sciences*, 17(2), 131-156.
- Ali, M. K., Christopher, A. A., & Nordin, M. Z. F. B. (2016). Linguistic legitimation of political events in newspaper discourse. *Advances in Language and Literary Studies*, 7(4), 76-83.
- Alkaraan, F., & Northcott, D. (2006). Strategic capital investment decision-making: A role for emergent analysis tools? A study of practice in large UK manufacturing companies. *The British Accounting Review*, 38(2), 149-173.
- Al-Khadash, H. A., & Feridun, M. (2006). Impact of strategic initiatives in management accounting on corporate financial performance: Evidence from Amman stock exchange. *Managing Global Transitions*, 4(4), 299-312.
- Al-Khalifa, N., & Aspinwall, E. M. (2000). The development of total quality management in Qatar. *TQM Magazine*, 12(3), 194-204.
- Al-Naser, K. & Mohamed, R. (2016). The mediating role of balance scorecard between contingent factors and firm performance: A proposed framework. *Australian Journal of Basic and Applied Sciences*, 10(15), 231-241
- Al-Rfou, A. N. (2012). Competition and organizational performance: Empirical evidence from Jordanian firms. *Electrical Appliances*, 3, 9-1.
- Al-Sawalqa, F., Holloway, D., & Alam, M. (2011). Balanced scorecard implementation in Jordan: An initial analysis. *IJEBM*, 9(3), 196-210.
- Al-Swidi, A. K., & Mahmood, R. (2012). Total quality management, entrepreneurial orientation and organizational performance: The role of organizational culture. *African Journal of Business Management*, 6(13), 4717.

- Al-Tameemi, K. S. A., & Alshawhi, M. (2014). The impact of organisational culture and leadership on performance improvement in Iraq. *The Built and Human Environment Review*, 7, 1-15.
- Anderson, P., & Tushman, M.L. (2001). Organizational environments and industry exit: The effects of uncertainty, munificence and complexity. *Industrial and Corporate Change*, 10(3), 671-711.
- Anderson, S. & Lanen, W. (1999). Economic transition, strategy and the evolution of management accounting practices: The case of India. *Accounting, Organizations and Society*, 24(5), 379-412.
- Anthony, R. N. (1965). *Planning and control systems: A framework for analysis*. Boston, Massachusetts: Graduate School of Business Administration, Harvard University.
- Anthony, R. N., & V. Govindarajan (2007). *Management control systems* (12<sup>th</sup> ed.). New York, New York: McGraw-Hill.
- Antony, J. P., & Bhattacharyya, S. (2010). Measuring firm performance and organizational excellence of SMEs - Part 1: A conceptual framework. *Measuring Business Excellence*, 14(2), 3-11.
- Appelbaum, S. H., Deguire, K. J., & Lay, M. (2005). The relationship of ethical climate to deviant workplace behaviour. *Corporate Governance: The International Journal of Business in Society*, 5(4), 43-55.
- Arumugam, V. C., Mojtahedzadeh, R., & Malarvizhi, C. A. (2011). Critical success factors of total quality management and their impact on performance of Iranian Automotive Industry. *International Conference on Innovation, Management and Service* 14(2), 312-316

- Asikhia, O., & Binuyo, O. (2012). Competitive intensity as a moderator in customer orientation–performance relationship in Nigeria. *International Journal of Economic and Management Sciences*, 2(3), 18-24.
- Assiri, A., Zairi, M., & Eid, R. (2006). How to profit from the balanced scorecard: An implementation roadmap. *Industrial Management & Data*, 106(1), 937-952.
- Atkinson, A., Balakrishnan, R., Booth, P., Jeans, M., Cote, T., Grout, T., Mali, H., Roberts, E., Ulan, & Wu. A. (1997). New directions in management accounting research. *Journal of Management Accounting Research*, 9, 80-108.
- Ayedh, A., & Eddine, H. (2015). The impact of advance management accounting techniques on performance: The case of Malaysia. *Middle East Journal of Business*, 10(2), 3-13.
- Bagozzi, R., Yi, Y., & Nassen, K. (1998). Representation of measurement error in marketing variables: Review of approaches and extension to three-facet designs. *Journal of Econometrics*, 89(1), 393-421.
- Baines, A., & Langfield-Smith, K. (2003). Antecedents to management accounting change: a structural equation approach. *Accounting, Organizations and Society*, 28(7), 675-698.
- Banker, R., Potter, G., & Srinivasan, D. (2000). An empirical investigation of an incentive plan that includes nonfinancial performance measures. *The Accounting Review*, 75(1), 65-92.
- Barnett, W. P., & McKendrick, D. G. (2004). Why are some organizations more competitive than others? Evidence from a changing global market. *Administrative Science Quarterly*, 49(4), 535-571.

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B. (1986). Organizational culture (OC): Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656-665.
- Barney, J. B. (1997). *Gaining and sustaining competitive advantage*. Reading, Massachusetts: Addison–Wesley Publishing Company.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bastian, E., & Muchlish, M. (2012). Perceived environment uncertainty, business strategy, performance measurement systems and organizational performance. *Procedia-Social and Behavioral Sciences*, 65, 787-792.
- Baum, J. R., & Wally, S. (2003). Strategic decision speed and firm performance. *Strategic Management Journal*, 24(11), 1107-1129.
- Beersma, B., Hollenbeck, J. R., Humphrey, S. E., Moon, H., Conlon, D. E., & Ilgen, D. R. (2003). Cooperation, competition, and team performance: Toward a contingency approach. *Academy of Management Journal*, 46(5), 572-590.
- Behn, R. D. (2003). Why measure performance? Different purposes require different measures. *Public Administration Review*, 63(5), 586-606.
- Berson, Y., Oreg, S., & Dvir, T. (2008). CEO values, organizational culture and firm outcomes. *Journal of Organizational Behavior*, 29(5), 615-633.
- between organizational culture and knowledge conversion on corporate performance. *Journal of knowledge management*, 14(2), 269-284.



- Bezrukova, K., Thatcher, S., Jehn, K. A., & Spell, C. S. (2012). The effects of alignments: Examining group fault lines, organizational cultures, and performance. *Journal of Applied Psychology*, 97(1), 77-92.
- Bhimani, A. (2003). A study of the emergence of management accounting system ethos and its influence on perceived system success. *Accounting, Organizations and Society*, 28(6), 523-548.
- Birley, S., & Westhead, P. (1990). Growth and performance contrasts between 'types' of small firms. *Strategic Management Journal*, 11(7), 535-557.
- Bititci, U. S., Mendibil, K., Nudurupati, S., Turner, T., & Garengo, P. (2004). The interplay between performance measurement, organizational culture and management styles. *Measuring Business Excellence*, 8(3), 28-41.
- Bititci, U., Mendibil, K., Nudurupati, S., Garengo, P., & Turner, T. (2006). Dynamics of performance measurement and organizational culture. *International Journal of Operations and Production Management*, 26(12), 1325-1350.
- Boaden, R. J. (1997). What is total quality management... and does it matter?. *Total Quality Management*, 8(4), 153-171.
- Bose, S., & Thomas, K. (2007). Applying the balanced scorecard for better performance of intellectual capital. *Journal of Intellectual Capital*, 8(4), 653-665.
- Bourgeois, L. J. (1985). Strategic goals, perceived uncertainty, and economic performance in volatile environments. *Academy of Management journal*, 28(3), 548-573.

- Bourne, M., Neely, A., Mills, J., & Platts, K. (2003). Implementing performance measurement systems: A literature review. *International Journal of Business Performance Management*, 5(1), 1-24.
- Boyne, G. A., & Meier, K. J. (2009). Environmental turbulence, organizational stability, and public service performance. *Administration & Society*, 40(8), 799-824.
- Boyne, G. A., & Walker, R. M. (2002). Total quality management and performance. An evaluation of the evidence and lessons for research on public organizations. *Public Performance & Management Review*, 26(2), 111-131.
- Branine, M. (2011). *Managing Across Culture – concepts, policies and practices*. Thousand Oaks, California: SAGE Publication Inc.
- Brignall, S. (2007). A financial perspective on performance management. *The Irish Accounting Review*, 14(1), 15-29.
- Bromwich, M. (1990). The case for strategic management accounting: the role of accounting information for strategy in competitive markets. *Accounting, Organizations and Society*, 15(1-2), 27-46.
- Bromwich, M., & Bhimani, A. (1994). *Management accounting: Pathways to progress*. London, England: Chartered Institute of Management Accountants.
- Brown, M. G. (2000). *Winning score: How to design and implement organizational scorecards*. New York, New York: Productivity Press.
- Bryman, A. (1984). The debate about qualitative and quantitative research. A question of methods or epistemology. *The British Journal of Sociology*, 35(1): 75-92.
- Bryman, A. (2001). *Social research methods*. Oxford, England: Oxford University Press.

- Bungay, S., & Goold, M. (1991). Creating a strategic control system. *Long Range Planning*, 24(3), 32-39.
- Bureihi, F. (2011). Iraqi economy ... Opportunities and challenges. *Baghdad College of Economic Sciences University Journal*, 27, 21-56.
- Burns, J., & Scapens, R. (2000). Conceptualizing management accounting change: An institutional framework. *Management Accounting Research*, 11(1), 3-25.
- Butler, A., Letza, S. R., & Neale, B. (1997). Linking the balanced scorecard to strategy. *Long Range Planning*, 30(2), 242-153.
- Byrne, B. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2<sup>nd</sup> ed.). New York, New York: Routledge Taylor and Francis Group
- Cameron K., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture: Based on the competing values framework*. Readings, Massachusetts: Addison-Wesley.
- Campanale, C., Cinquini, L., & Tenucci, A. (2010). Do Management Accounting Systems Influence Organizational Change or Vice-Versa? Evidence from a Case of Constructive Research in the Healthcare Sector.
- Carmona, S., Iyer, G., & Reckers, P. M. (2011). The impact of strategy communications, incentives and national culture on balanced scorecard implementation. *Advances in Accounting*, 27(1), 62-74.
- Castillo, J. J. (2009). *Convenience sampling*. Retrieved from <https://explorable.com/convenience-sampling>

- Cavana, R., Delahaye, B., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods*. Richmond, Queensland: John Wiley & Sons Australia.
- Central Bank of Iraq, Annual Report (2013). Statistics & Research Department. Retrieved from <http://www.cbi.iq>
- Central Statistical Organization Iraq (2014). Report on medium industrial plants (Cumulative) for the year 2013. Retrieved from <http://www.cosit.gov.iq/ar/industrial/industrial-larg-mid>
- Chapman, C. (1997). Reflections on a contingent view of accounting. *Accounting, Organizations and Society*, 22(2), 189-205.
- Chapman, R., & Al-Khawaldeh, K. (2002). TQM and labour productivity in Jordanian industrial companies. *The TQM magazine*, 14(4), 248-262.
- Chenhall, R. (1997). Reliance on manufacturing performance measures, total quality management and firm performance. *Management Accounting Research*, 8(2), 187-206.
- Chenhall, R. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organization & Society*, 28(2), 127-168.
- Chenhall, R. H. (2007). Theorising contingencies in management control research. In C. S. Chapman, A. Hopwood & M. D. Shields (Eds.), *Handbook of management accounting research* (pp. 163-206). Oxford, England: Elsevier.
- Chenhall, R. H., & Langfield-Smith, K. (1998). The relationship between strategic priorities, management techniques and management accounting: an empirical

- investigation using a systems approach. *Accounting, Organizations and Society*, 23(3), 243-264.
- Chenhall, R. H., & Langfield-Smith, K. (2007). Multiple perspectives of performance measures. *European Management Journal*, 25(4), 266-282.
- Chenhall, R. H., & Morris, D. (1986). The impact of structure, environment, and interdependence on the perceived usefulness of management accounting systems. *The Accounting Review*, 61(1), 16-35.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 295(2), 295-336.
- Chin, W. W. (2010). How to write up and report PLS analyses. In V.V. Esposito, W. Chin, J., Henseler., & H. Wang (Eds.) *Handbook of partial least squares* (pp. 655-690). Berlin, Germany: Springer Berlin Heidelberg.
- Chong, V. K., & Rundus, M. J. (2004). Total quality management, market competition and firm performance. *British Accounting Review*, 36(2), 155-172.
- Chong, V. K., Eggleton, I. R., & Leong, M. K. (2005). The impact of market competition and budgetary participation on performance and job satisfaction: a research note. *The British Accounting Review*, 37(1), 115-133.
- Chong, V., & Chong, K. (1997). Strategic choices, environmental uncertainty and SBU performance: A note on the intervening role of management accounting systems. *Accounting and Business Research*, 27(4), 268-276.
- Chow, C. W., & Van Der Stede, W. A. (2006). The use and usefulness of nonfinancial performance measures. *Management Accounting Quarterly*, 7(3), 1-8.

- Cingöz, A., & Akdoğan, A. A. (2013). Strategic flexibility, environmental dynamism, and innovation performance: An empirical study. *Procedia-Social and Behavioral Sciences*, 99, 582-589.
- Cobb, I., Helliard, C., & Innes, J. (1995). Management accounting change in a bank. *Management Accounting Research*, 6(2), 155-175.
- Cochran, W. G. (1977). *Sampling techniques* (3<sup>rd</sup> ed.). New York, New York: John Wiley & Sons.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2<sup>nd</sup> ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates
- Cooper, D. R., Schindler, P. S., & Sun, J. (2003). *Business research methods*. New York, New York: McGraw-Hill/Irwin.
- Cooper, R., & Slagmulder, R. (1998a). What is strategic cost management? *Strategic Finance*, 79(7), 14-16.
- Cooper, R., & Slagmulder, R. (1998b). Cost management beyond the boundaries of the firm. *Strategic Finance*, 79(9), 18-20.
- Coyne, K. (1986). Sustainable competitive advantage: What it is and what it isn't. *Business Horizons*, 29(1), 54-61.
- Creswell, J. W. & Poth, (2017). *Qualitative inquiry and research design: Choosing among five approaches* (4<sup>th</sup> ed.). Thousand Oaks, California.: SAGE Publications.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2<sup>nd</sup> ed.). Thousand Oaks, California: SAGE Publications.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed method approaches* (4<sup>th</sup> ed.). Thousand Oaks, California: SAGE Publications.

- Cross, K.F. and Lynch, R.L. (1992). For good measure. *Certified Management Accountants (CMA) Magazine*, 66 (3), 20-24.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. St. Leonards, New South Wales, Australia: Allen & Unwin.
- Curry, A., & Kadasah, N. (2002). Focusing on key elements of TQM-evaluation for sustainability. *The TQM magazine*, 14(4), 207-216.
- Daft, R. L., Sormunen, J., & Parks, D. (1988). Chief executive scanning, environmental characteristics, and company performance: An empirical study. *Strategic management journal*, 9(2), 123-139.
- Dale, B. G. (2003). *Managing Quality* (4<sup>th</sup> Ed.). Oxford, England: Blackwell Publishers.
- Davidson, M. G. (2003). *The relationship between organisational culture and financial performance in a South African investment bank* (Unpublished doctoral dissertation). University of South Africa, Pretoria, South Africa. Retrieved from <https://core.ac.uk/download/pdf/43164476.pdf>
- Davig, W., Elbert, N., & Brown, S. (2004). Implementing a strategic planning model for small manufacturing firms: an adaptation of the balanced scorecard. *SAM Advanced Management Journal*, 69(1), 18-24.
- Davis, D. (2000). *Business research for decision making*. Pacific Gove, California: Brooks-Cole Publishing.
- Dedhia, N. S. (2001). Global perspectives on quality. *Total Quality Management*, 12(6), 657-668.

- Deem, J., Barnes, B., Huizenga, H., Segal, S., & Preziosi, R. (2010). The relationship of organizational culture to balanced scorecard effectiveness. *SAM Advanced Management Journal*, 75(4), 31-39.
- DeGeuser, F., Mooraj, S., & Oyon, D. (2009). Does the balanced scorecard add value? Empirical evidence on its effect on performance. *European Accounting Review*, 18(1), 93-122.
- Demir, A., Özmen, Ö., & Rashid, A. (2014). An estimation of Turkey's export loss to Iraq. *Procedia-Social and Behavioral Sciences*, 150, 1240-1247.
- Demirbag, M., Tatoglu, E., Tekinkus, M., & Zaim, S. (2006). An analysis of the relationship between TQM implementation and firm performance: Evidence from Turkish SMEs. *Journal of Manufacturing Technology Management*, 17(6), 829-847.
- Denison, D. R. (1989). *Corporate culture and organizational effectiveness*. New York, New York: John Wiley & Sons
- Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. New York, New York: John Wiley & Sons.
- Denison, D. R. (2000). Organizational culture (OC): Can it be a key lever for driving organizational change. In S. Cartwright & C. Cooper (Eds.), *The handbook of organizational culture (OC) and climate* (347-376). Chichester, England: Wiley.
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture (OC) and effectiveness. *Organization Science*, 6(2), 204-223.



- Denison, D., Nieminen, L., & Kotrba, L. (2014). Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys. *European Journal of Work and Organizational Psychology*, 23(1), 145-161.
- Deshpande, R., & Farley, J. (2004). Organizational culture (OC), market orientation, innovativeness, and firm performance: An international research odyssey. *International Journal of Research in Marketing*, 21, 3-22.
- Diamantopoulos, A., & Winklhofer, H. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), 269-277.
- Diamantopoulos, A., Riefler, P., & Roth, K. (2008). Advancing formative measurement models. *Journal of Business Research*, 61(12), 1203-1218.
- Dibb, S. (1996). The impact of the changing marketing environment in the Pacific Rim: Four case studies. *International Journal of Retail & Distribution Management*, 24(11), 16-30.
- Dik, R. (2011). *Arab management accounting systems under the influence of their culture* (Unpublished doctoral dissertation). Dortmund University of Technology, Dortmund Germany. Retrieved from <https://d-nb.info/1011569566/34>
- Dobbins, G. H., Cardy, R. L., & Platz-Vieno, S. J. (1990). A contingency approach to appraisal satisfaction: An initial investigation of the joint effects of organizational variables and appraisal characteristics. *Journal of Management*, 16(3), 619-632.
- Donaldson, L. (1995). *American anti-management theories of organization: A critique of paradigm proliferation*. Cambridge, England: Cambridge University Press.

- Donaldson, L. (2001). *The contingency theory of organizations*. Thousand Oaks, California: SAGE Publications.
- Duarte, P. A. O., & Raposo, M. L. B. (2010). A PLS model to study brand preference: An application to the mobile phone market. In *Handbook of partial least squares* (pp. 449-485). Springer, Berlin, Heidelberg.
- Duke II, J., & Edet, G. H. (2012). Organizational culture as a determinant of non-governmental organization performance: Primer evidence from Nigeria. *International Business and Management*, 4(1), 66-75.
- Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, 17(3), 313-327.
- Ebrahimi, B. (2000). Perceived strategic uncertainty and environmental scanning behavior of Hong Kong Chinese executives. *Journal of Business Research*, 49, 67-77.
- Eker, M., & Eker, S. (2009). An empirical analysis of the association between the organizational culture and performance measurement systems in the Turkish manufacturing sector. *Journal of Economic & Social Research*, 11(2), 43-76.
- El Sawah, S., Tharwat, A. A., & Rasmy, M. H. (2008). A quantitative model to predict the Egyptian ERP implementation success index. *Business Process Management Journal*, 14(3), 288-306.
- Elijido-Ten, E. (2010). Public disclosure of strategic performance measurement system: An Australian investigation. *International Handbook of Academic Research and Teaching*, 13, 38-48.

- Englund, H., & Gerdin, J. (2008). Structuration theory and mediating concepts: Pitfalls and implications for management accounting research. *Critical perspectives on accounting*, 19(8), 1122-1134.
- EQUIS. (2012). *European quality improvement system accreditation standards and criteria*. European Foundation for Management Development (EFMD). Retrieved from [www.efmd.org/images/stories/efmd/downloadables/EQUIS](http://www.efmd.org/images/stories/efmd/downloadables/EQUIS)
- Eriksson, H., & Hansson, J. (2003). The impact of TQM on financial performance. *Measuring Business Excellence*, 7(1), 36-50.
- Evans, J. R. (2004). An exploratory study of performance measurement systems and relationships with performance results. *Journal of Operations Management*, 22(3), 219-232.
- Fadaly, D (2008) *Contingent framework for management accounting practices in Egyptian pharmaceutical organizations* (Unpublished doctoral dissertation). De Montfort University, Leicester, United Kingdom.
- Farooq, A., & Hussain, Z. (2011). Balanced scorecard perspective on change and performance: A study of selected Indian companies. *Procedia-Social and Behavioral Sciences*, 24, 754-768.
- FBSA Journal of Auditor General, (2014). Republic of Iraq, Federal Board of Supreme Audit. Retrieved from [http://www.d-raqaba-m.iq/pdf/journalbsa\\_part1\\_4.pdf](http://www.d-raqaba-m.iq/pdf/journalbsa_part1_4.pdf)
- Fisher, J. (1998). Contingency theory, management control systems and firm outcomes: Past results and future directions. *Behavioral Research in Accounting*, 10, 47-64.

- Fisher, J. G. (1995a). Contingency-based research on management control systems: categorization by level of complexity, *Journal of Accounting Literature*, 14, 24-53.
- Flynn, B. B., Schroeder, R. G., & Sakakibara, S. (1994). A framework for quality management research and an associated measurement instrument. *Journal of Operations Management*, 11(4), 339-366.
- Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, 19(4), 440-452.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(4), 382-388.
- Foster, D. (1992). *Bargaining across borders: How to negotiate business successfully anywhere in the world*. New York, New York: McGraw-Hill.
- Franco-Santos, M. (2007). *The performance impact of using measurement diversity in executives' annual incentive systems* (Unpublished doctoral dissertation). Cranfield University, Cranfield, United Kingdom. Retrieved from <https://dspace.lib.cranfield.ac.uk/handle/1826/2305>
- Galbraith, J. (1973). *Designing complex organizations*. Reading, Massachusetts: Addison-Wesley.
- Garengo, P., & Bititci, U. (2007). Towards a contingency approach to performance measurement: an empirical study in Scottish SMEs. *International Journal of Operations & Production Management*, 27(8), 802-825.

- Garland, R. (1991). The mid-point on a rating scale: Is it desirable. *Marketing Bulletin*, 2(1), 66-70.
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, 101-107.
- Gerdin, J. (2005). Management accounting system design in manufacturing departments: an empirical investigation using a multiple contingencies approach. *Accounting, Organizations and Society*, 30(2), 99-126.
- Gerdin, J., & Greve, J. (2004). Forms of contingency fit in management accounting research: A critical review. *Accounting, Organizations and Society*, 29(3-4), 303-326.
- Gerdin, J., & Greve, J. (2008). The appropriateness of statistical methods for testing contingency hypotheses in management accounting research. *Accounting, Organizations and Society*, 33(7), 995-1009.
- Gerloff, E., Muir, N. & Bodensteiner, W. (1991). Three components of perceived environmental uncertainty: An exploratory analysis of the effects of aggregation. *Journal of Management*, 17(4), 749-768.
- Gharakhani, D., Rahmati, H., Farrokhi, M. R., & Farahmandian, A. (2013). Total quality management and firm performance. *American Journal of Industrial Engineering*, 1(3), 46-50.
- Ghosh, S., Bhowmick, B., & Guin, K. (2014). Perceived environmental uncertainty for startups: A note on entrepreneurship research from an Indian perspective. *Technology Innovation Management Review*, 4(8), 27-35.

- Gordon, G., & DiTomaso, N. (1992). Predicting corporate performance form organizational culture. *Journal of Management Studies*, 29(6), 783-798.
- Gordon, L., & Narayanan, V. (1984). management accounting systems, perceived environmental uncertainty and organization structure: An empirical investigation. *Accounting, Organizations and Society*, 9(1), 33-47.
- Gosselin, M. (2005). An empirical study of performance measurement in manufacturing firms. *International Journal of Productivity and Performance Management*, 54(5/6), 419-437.
- Govindarajan, V. (1984). Appropriateness of accounting data in performance evaluation: An empirical examination of environmental uncertainty as an intervening variable. *Accounting, Organizations and Society*, 9(2), 125-135.
- Govindarajan, V. (1988). A contingency approach to strategy implementation at the business-unit level: integrating administrative mechanisms with strategy. *Academy of management Journal*, 31(4), 828-853.
- Govindarajan, V. (1988). A contingency approach to strategy implementation at the business-unit level: integrating administrative mechanisms with strategy. *Academy of management Journal*, 31(4), 828-853.
- Granlund, M. (2001). Towards explaining stability in and around management accounting systems. *Management Accounting Research*, 12(2), 141-166.
- Grundy, T. (1996). Cost is a strategic issue. *Long range planning*, 29(1), 58-68.
- Guidara, R., & Khoufi, W. (2014). Balanced scorecard and performance in a competitive environment. *International Journal of Accounting and Economics Studies*, 2(1), 40-45.

- Gul, F. (1991). The effects of management accounting systems and environmental uncertainty and decentralization on managerial performance. *Accounting and Business Research*, 21 (85), 57-61.
- Gul, F., & Chia, Y. (1994). The effects of management accounting systems, perceived environmental uncertainty and decentralization on managerial performance: A test of three-way interaction. *Accounting, Organizations and Society*, 19(4-5), 413-426.
- Gupta, K. M., & Gunasekaran, A. (2005). Costing in new enterprise environment: A challenge for managerial accounting researchers and practitioners. *Managerial Auditing Journal*, 20(4), 337-353.
- Haedr, A. R. and Mehafdi, M. (2017). Accounting for management control in large Libyan companies. *Athens Journal of Business & Economics*, 3(3), 279-303.
- Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, 3(4), 283-297.
- Hair Jr, J, Hult, G., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. London, England: SAGE Publications.
- Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective* (7<sup>th</sup> ed.) Upper Saddle River, New Jersey: Pearson Education.

- Hair, J. F., Wolfinbarger, M. F., Ortinau, D. J., & Bush, R. P. (2008). *Essentials of marketing research*. New York, New York: McGraw-Hill/Higher Education.
- Hair, J., Black, W., Babin, B., Anderson, R. & Tatham, R. (2006). *Multivariate data analysis* (6<sup>th</sup> ed.). Upper Saddle River, New Jersey: Pearson Prentice Hall.
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (1998). *Multivariate data analysis* (5<sup>th</sup> ed.). Upper Saddle River, New Jersey.
- Hair, J., Ringle, C., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
- Hair, J., Sarstedt, M., Pieper, T., & Ringle, C. (2012b). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long Range Planning*, 45(5), 320-340.
- Hair, J., Sarstedt, M., Ringle, C., & Mena, J. (2012a). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.
- Hajjawi, O. (2009). Reflection on the integration of ethics teaching into a Palestinian undergraduate management degree programme. *European Journal of Economics, Finance and Administrative Sciences*, (15), 163-173.
- Haldma, T., & Laats, K. (2002). Contingencies influencing the management accounting practices of Estonian manufacturing companies. *Management Accounting Research*, 13(4), 379-400.
- Hall, E. T. (1976). *Beyond culture*. New York, New York: Knopf Doubleday Publishing Group.



- Hall, E. T., & Hall, M. R. (1990). *Understanding cultural differences- German, French and American*. Yarmouth, Maine: Intercultural Press, Inc.
- Hall, R. W., Johnson, H. T., & Turney, P. B. (1991). *Measuring up: Charting pathways to manufacturing excellence*. Burr Ridge, Illinois: Irwin Professional Publishing.
- Hammad, S. A., Jusoh, R., & Ghazali, I. (2013). Decentralization, perceived environmental uncertainty, managerial performance and management accounting system information in Egyptian hospitals. *International Journal of Accounting and Information Management*, 21(4), 314-330.
- Hamza, M., & Al-Kassar, T. A. (2015). Studying the accounting information role for the industrial companies' attitudes towards the implementation of total quality management system (Syrian Case). *Accounting and Finance Research*, 4(2), 34-49.
- Hansen, D. R., Mowen, M. M., Senkow, D. W., & Pollanen, R. M. (2004). Strategic performance evaluation and management. In *Management Accounting* (6<sup>th</sup> Canadian ed.). Scarborough, Ontario: Nelson Thompson Learning.
- Harrison, G. L., & McKinnon, J. L. (1999). Cross-cultural research in management control systems design: a review of the current state. *Accounting, Organizations and Society*, 24(5), 483-506.
- Harrison, G. L., McKinnon, J. L., Panchapakesan, S., & Leung, M. (1994). The influence of culture on organizational design and planning and control in Australia and the United States compared with Singapore and Hong Kong. *Journal of International Financial Management & Accounting*, 5 (3), 242-261.

- Hayes, R. H., & Wheelwright, S. C. (1984). Restoring our competitive edge: Competing through manufacturing. *Administrative Science Quarterly*, 30(2), 307-307.
- Henri, J. F. (2006). Organizational culture and performance measurement systems. *Accounting, Organizations and Society*, 31(1), 77-103.
- Henseler, J., Ringle, C.M., & Sinkovics, R.R. (2009). The use of partial least squares path modeling in international marketing. In R. Rudolf, P. Sinkovics, P., & N. Ghauri (Eds.), *New challenges to international marketing: Advances in International Marketing*, 20 (pp. 277-319). Bingley, United Kingdom: Emerald Group Publishing Limited.
- Herath, T., Herath, H., & Bremser, W. G. (2010). Balanced scorecard implementation of security strategies: A framework for IT security performance management. *Information Systems Management*, 27(1), 72-81.
- Hertati, L., & Sumantri, R. (2016). Just in time, value chain, total quality management, part of technical strategic management Accounting. *International Journal of Technology Enhancements and Emerging Engineering Research*, 5(4), 180-191.
- Hertati, L., (2015). Total quality management as technics on strategic management accounting, *International Journal of Recent Advances in Multidisciplinary Research*, 2(11), 942-949.
- Heskett, J. L., & Kotter, J. P. (1992). Corporate culture and performance. *Business Review*. Vol, 2(5), 83-93.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Washington: DC: SAGE Publications.

- Hofstede, G. (1982). Intercultural co-operation in organisations. *Management Decision*, 20(5), 53-67.
- Hofstede, G. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4), 4-22.
- Hofstede, G., & Bond, M. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4), 5-21.
- Hopwood, A. G. (1987). The archaeology of accounting systems. *Accounting, Organizations and Society*, 12(3), 207-234.
- Hoque, M. A. (2011). An optimal solution technique to the single-vendor multi-buyer integrated inventory supply chain by incorporating some realistic factors. *European Journal of Operational Research*, 215(1), 80-88.
- Hoque, Z. (2003). Total quality management and the balanced scorecard approach: A critical analysis of their potential relationships and directions for research. *Critical Perspectives on Accounting*, 14(5), 553-566.
- Hoque, Z. (2004). A contingency model of the association between strategy, environmental uncertainty and performance measurement: Impact on firm performance. *International Business Review*, 13(4), 485-502.
- Hoque, Z. (2005). Linking environmental uncertainty to non-financial performance measures and performance: A research note. *The British Accounting Review*, 37(4), 471-481.
- Hoque, Z. (2014). 20 years of studies on the balanced scorecard: Trends, accomplishments, gaps and opportunities for future research. *The British Accounting Review*, 46(1), 33-59.

- Hoque, Z., & Hopper, T. (1997). Political and industrial relations turbulence, competition and budgeting in the nationalized Jute Mills of Bangladesh. *Accounting and Business Research*, 27(2), 125-143.
- Hoque, Z., & James, W. (2000). Linking balanced scorecard measures to size and market factors: Impact on firm performance. *Journal of Management Accounting Research*, 12(1), 1-17.
- Hoque, Z., Mia, L., & Alam, M. (1997). *Competition, new manufacturing practices, changes in MAS and managerial choice of the balanced scorecard" approach to performance measures: An empirical investigation*. Paper presented at the 20<sup>th</sup> European Accounting Association Annual Congress, Graz, 23-25 April.
- Hoque, Z., Mia, L., & Alam, M. (2001). Market competition, computer-aided manufacturing and use of multiple performance measures: An empirical study. *British Accounting Review*, 33(1), 23-45.
- Horngren, C. T. (2009). *Cost accounting: A managerial emphasis* (13<sup>th</sup> ed.). New Delhi: Pearson Education India.
- Horngren, C., Foster, G., & Datar, S. (1994). *Cost accounting: A managerial emphasis* (8<sup>th</sup> ed.). Upper Saddle River, New Jersey: Prentice Hall.
- Housni, H. & El Abbadi, B., (2016). The balanced scorecard approach within Moroccan industrial firms: A contingency variables analysis. *Scholars Journal of Economics, Business and Management*, 3(9), 456-462
- Huang, C., Tayles, M., & Luther, R. (2010). Contingency factors influencing the availability of internal intellectual capital information. *Journal of Financial Reporting and Accounting*, 8(1), 4-21.

- Huang, H. C., Lai, M. C., & Lin, L. H. (2011). Developing strategic measurement and improvement for the biopharmaceutical firm: Using the BSC hierarchy. *Expert Systems with Applications*, 38(5), 4875-4881.
- Hulland, J., (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195–204.
- Hussain, M., & Gunasekaran, A. (2002). An institutional perspective of non-financial management accounting measures: A review of the financial services industry. *Managerial Auditing Journal*, 17(9), 518-536.
- Hussain, M., & Hoque, Z. (2002). Understanding non-financial performance measurement practices in Japanese banks: A new institutional sociology perspective. *Accounting, Auditing & Accountability Journal*, 15(2), 162-183.
- Hwang, Y. (2005). Investigating enterprise systems adoption: Uncertainty avoidance, intrinsic motivation, and the technology acceptance model. *European journal of information systems*, 14(2), 150-161.
- Ibrahim, S., Sukeri, S. & Abd-Rashid, M. (2014). Factors influencing the diffusion & implementation of management accounting innovations (MAIS), Malaysian manufacturing industries in Northern Region. *Advances in Environmental Biology*, 8(9), 504-512.
- Innes, J., & Mitchell, F. (1995). A survey of activity-based costing in the UK's largest companies. *Management Accounting Research*, 6(2), 137-153.
- Iraq News Network, 2015 <http://www.imn.iq/>
- Iraqi Central Statistical Organization, 2014 <http://cosit.gov.iq/ar/>

- Iselin, E. R., Mia, L., & Sands, J. (2008). The effects of the balanced scorecard on performance: The impact of the alignment of the strategic goals and performance reporting. *Journal of General Management*, 33(4), 71-85.
- Islam, M., & Kantor, J. (2005). The development of quality management accounting practices in China. *Managerial Auditing Journal*, 20(7), 707-724.
- Ismail, T. H. (2007). Performance evaluation measures in the private sector: Egyptian practice. *Managerial Auditing Journal*, 22(5), 503-513.
- Institute of Chartered Accountants in England and Wales. (2011). *Reporting business risks: Meeting expectations*. London: ICAEW.
- International Monetary Fund, & Baunsgaard, T. (2012). *Fiscal Frameworks for Resource Rich Developing Countries (IMF Staff Discussion Note)*. International Monetary Fund
- Ittner, C. D., & Larcker, D. F. (1998). Innovations in performance measurement: Trends and research implications. *Journal of Management Accounting Research*, 6, 205-238.
- Ittner, C. D., Larcker, D. F., & Rajan, M. V. (1997). The choice of performance measures in annual bonus contracts. *The Accounting Review*, 72(2), 231-255.
- Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society*, 28(7-8), 715-741.
- Jacobs, R., Mannion, R., Davies, H. T., Harrison, S., Konteh, F., & Walshe, K. (2013). The relationship between organizational culture and performance in acute hospitals. *Social Science & Medicine*, 76(1), 115-125.

- Jänkälä, S. (2007). Management control systems (MCS) in the small business context. Linking effects of contextual factors with MCS and financial performance of small firms.
- Johannessen, J. A., Olaisen, J., & Olsen, B. (1999). Strategic use of information technology for increased innovation and performance. *Information Management & Computer Security*, 7(1), 5-22.
- Johnson, H. T., & Kaplan, R. S. (1987). The rise and fall of management accounting. *IEEE Engineering Management Review*, 3(15), 36-44.
- Jusoh, R. (2008). Environmental uncertainty, performance, and the mediating role of balanced scorecard measures use: Evidence from Malaysia. *International Review of Business Research Papers*, 4(2), 116-135.
- Jusoh, R., Ibrahim, D., & Zainuddin, Y. (2008). The performance consequence of multiple performance measures usage: Evidence from the Malaysian manufacturers. *International Journal of Productivity and Performance Management*, 57(2), 119-136.
- Kalagnanam, S. S., & Lindsay, R. M. (1998). The use of organic models of control in JIT firms: Generalizing Woodward's findings to modern manufacturing practices. *Accounting, Organizations & Society*, 24(1), 1-30.
- Kaplan, R. (1984). The evolution of management accounting. *The Accounting Review*, 59(3), 390-418.
- Kaplan, R. S. (1983). Measurement Manufacturing Performance: A New Challenge for Management Accounting Research. *The Accounting Review*, 63, 156- 193.

- Kaplan, R. S., & Cooper, R. (1998). *Cost and effect: Using integrated cost systems to drive profitability and performance*. Boston, Massachusetts: Harvard Business School Press.
- Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard-measures that drive performance. *Harvard Business Review*, 70(1), 71-79.
- Kaplan, R. S., & Norton, D. P. (1993). Putting the balanced scorecard to work. *Harvard Business Review*, 71(5), 134-147.
- Kaplan, R. S., & Norton, D. P. (1996a). Linking the balanced scorecard to strategy. *California Management Review*, 39(1), 53-79.
- Kaplan, R. S., & Norton, D. P. (1996b). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74(1), 75-85.
- Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part 1. *Accounting Horizons*, 15(1), 87-104.
- Kaplan, R. S., & Norton, D. P. (2001a). The strategy focused organization how balanced scorecard companies thrive in the new business environment. Boston, Massachusetts: Harvard Business School Press.
- Kaplan, R. S., & Norton, D. P. (2004). Measuring the strategic readiness of intangible assets. *Harvard Business Review*, 82(2), 52-63.
- Kaplan, R.S., & Norton, D.P. (1996). *The balanced scorecard: Translating strategy into action*. Boston, Massachusetts: Harvard Business School Press.
- Kaplan, R.S., & Norton, D.P. (2000), *The strategy-focused organization*. Boston, Massachusetts: Harvard Business School Press.



- Kaskey, V. L. (2008). *The balanced scorecard: A comparative study of accounting education and experience on common measure bias and trust in a balanced scorecard* (Unpublished doctoral dissertation). Capella University, Minneapolis, Minnesota.
- Kattan, F., Pike, R., & Tayles, M. (2007). Reliance of management accounting under environmental uncertainty: The case of Palestine. *Journal of Accounting and Organisational Change*, 3(3), 229-247.
- Kaynak, H. (2003). The relationship between total quality management practices and their effects on firm performance. *Journal of Operations Management*, 21, 405-435.
- Keim, G. D., & Zeithaml, C. P. (1986). Corporate political strategy and legislative decision making: A review and contingency approach. *Academy of management review*, 11(4), 828-843.
- Kerlinger, F. N. (1986). *Foundation of behavior research*. San Francisco, California: Holt, Rinehart and Winston.
- Khalaf, M. (2011). The application of quality principles in organizations to achieve competitive advantage An Empirical Study of the General Company for Electrical Industry. *Journal of Baghdad College of Economic Sciences*. 28, 167-190.
- Khan, H., Halabi, A. K., & Khan, R. (2011). Non-financial performance measures-organizational performance relationship in the Bangladeshi firms: the moderator role of environmental uncertainty and corporate culture. Working paper. <https://doi.org/10.2139/ssrn.1965612>

- Khandwalla, P. N. (1977). *Design of organizations*. New York, New York: Harcourt Brace Jovanovich.
- Khandwalla, P.N. (1972). The effect of different types of competition on the use of management controls. *Journal of Accounting Research*, 10, 275-285.
- Koseoglu, M. A., Topaloglu, C., Parnell, J. A., & Lester, D. L. (2013). Linkages among business strategy, uncertainty and performance in the hospitality industry: Evidence from an emerging economy. *International Journal of Hospitality Management*, 34, 81-91.
- Kreitner, R. (2001). *Management* (8<sup>th</sup> ed.). Boston, Massachusetts: Houghton Mifflin Harcourt.
- Krejcie, R., & Morgan, D. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Kuivalainen, O., Sundqvist, S., Puumalainen, K., & Cadogan, J. (2004). The effect of environmental turbulence and leader characteristics on international performance: Are knowledge-based firms different? *Canadian Journal of Administrative Sciences*, 21(1), 35-50.
- Kumar, V., Choinsne, F., de Grosbois, D., & Kumar, U. (2009). Impact of TQM on company's performance. *International Journal of Quality & Reliability Management*, 26(1), 23-37.
- Kuratko, D. F., & Welsch, H. P. (2004). *Strategic entrepreneurial growth* (2<sup>nd</sup> ed.). Mason, Ohio: Thomson South-Western.

- Lallo, N., & Selamat, M. (2014). The impact of information technology knowledge components on accounting information system course development: The Iraqi perspective. *Research Journal of Finance and Accounting*, 5(1), 99-112.
- Langfield-Smith, K. (1997). Management control systems and strategy: A critical review. *Accounting, Organizations and Society*, 22(2), 207-232.
- Langfield-Smith, K. (2008). The relations between transactional characteristics, trust and risk in the start-up phase of a collaborative alliance. *Management Accounting Research*, 19(4), 344-364.
- Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative science quarterly*, 1-47.
- Lay, T., & Jusoh, R. (2012). Business strategy, strategic role of accountant, strategic management accounting and their links to firm performance: An exploratory study of manufacturing companies in Malaysia. *Asia-Pacific Management Accounting Journal*, 7(1), 59-94.
- Lee, C. L., & Yang, H. J. (2011). Organization structure, competition and performance measurement systems and their joint effects on performance. *Management Accounting Research*, 1(22), 84-104
- Lee, C., Folami, L. B., & Chung, Y. (2014). An Evaluation of the Impact of Strategic Linkage on BSC Usage and Performance. *Global Review of Accounting and Finance*. 5(2), 36-55
- Lee, L., Petter, S., Fayard, D., Robinson, S., 2011. On the use of partial least squares path modeling in accounting research, *International Journal of Accounting Information Systems* 12(4), 305-328.

- Lee, S.K.J., Yu, K., 2004. Corporate culture and organizational performance. *Journal of Management Psychology*, 19(4), 340–359.
- Lewis, B. P., Burge, C. B., & Bartel, D. P. (2005). Conserved seed pairing, often flanked by adenosines, indicates that thousands of human genes are microRNA targets. *cell*, 120(1), 15-20.
- Li, H., & Atuahene-Gima, K. (2001). Product innovation strategy and the performance of new product ventures in China. *Academy of Management Journal*, 44, 1123-1134.
- Libby, T., & Waterhouse, J. (1996). Predicting change in management accounting systems. *Journal of Management Accounting Research*, 8, 137-150.
- Limayem, M., Hirt, S., & Chin, W. (2001). *Intention does not always matter: the contingent role of habit on IT usage behavior*. Paper presented at Global Cooperation in the New Millennium, the 9th European Conference on Information Systems Bled, Slovenia, June 27-29. Retrieved from <https://pdfs.semanticscholar.org/bf0c/c6c3ee543068d99521627d2688e8c85e9cc1.pdf>
- Locke, E. A., & Schweiger, D. M. (1979). Participation in decision-making: One more look. *Research in Organizational Behavior*, 1(10), 265-339.
- Lord, B. R. (1996). Strategic management accounting: the emperor's new clothes? *Management Accounting Research*, 7(3), 347-366.
- Luther, R. G., & Longden, S. (2001). Management accounting in companies adapting to structural change and volatility in transition economies: A South African study. *Management Accounting Research*, 12(3), 299-320.

- Maiga, A. S., & Jacobs, F. A. (2003). Balanced scorecard, activity-based costing and company performance: an empirical analysis. *Journal of Managerial Issues*, 15(3), 283-301.
- Malleret, V., (2015). *Revisiting 30 years of SMA literature: A focus on cost, price and value*. Communication to the 38<sup>th</sup> EAA Annual Congress Glasgow 28-30.
- Maltz, A. C., Shenhar, A. J., & Reilly, R. R. (2003). Beyond the balanced scorecard: Refining the search for organizational success measures. *Long Range Planning*, 36(2), 187-204.
- Marane, B. M. O. (2012). *The influence of organizational culture, innovation drivers, and information technology capability on innovation capability of manufacturing firms in Iraq*. (Unpublished doctoral Dissertation). Universiti Utara Malaysia, Sintok, Malaysia.
- Marr, B., & Schiuma, G. (2003). Business performance measurement—past, present and future. *Management Decision*, 41(8), 680-687.
- Martins, E., & Terblanche, F. (2003). Building organizational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, 6(1), 64-74.
- Maxwell, J. (2005). *Qualitative research design: An interactive approach* (2<sup>nd</sup> ed.). Thousand Oaks, California: SAGE Publications.
- Mazrui, A. A. (1999). Globalization and cross-cultural values: The politics of identity and judgment. *Arab Studies Quarterly*, 21(3), 97-109.

- Mehralian, G., Nazari, J. A., Nooriparto, G., & Rasekh, H. R. (2017). TQM and organizational performance using the balanced scorecard approach. *International Journal of Productivity and Performance Management*, 66(1), 111-125.
- Merchant, K. A. (1990). The effects of financial controls on data manipulation and management myopia. *Accounting, Organizations and Society*, 15(4), 297-313.
- Merchant, K. A., Chow, C. W., & Wu, A. (1995). Measurement, evaluation and reward of profit center managers: A cross-cultural field study. *Accounting, Organizations & Society*, 20(7), 619-638.
- Meyer, M. W. (2003). *Rethinking performance measurement: Beyond the balanced scorecard*. Cambridge: Cambridge University Press.
- Mia, L. (1993). The role of MAS information in organizations: An empirical study. *British Accounting Review*, 25(3), 269-285.
- Mia, L., & Clarke, B. (1999). Market competition, management accounting systems and business unit performance. *Management Accounting Research*, 10(2), 137-158.
- Mia, L., & Winata, L. (2008). Manufacturing strategy, broad scope MAS information and information and communication technology. *The British accounting review*, 40(2), 182-192.
- Michael, O. B. (2013). Strategic cost management as a recession survival tool in the Nigerian manufacturing and financial service industries. *Journal of Finance and Accounting*, 4(11), 71-81.
- Miculescu, C., & Miculescu, M. (2012). Strategic management of costs — The main tool of competitive advantage in the current economic environment. *Anale. Seria Științe Economice. Timișoara*, 18, 863-869.

- Miles, R. E., & Snow, C. C. (1978). *Organizational strategy. Structure and process*. New York, New York: McGraw-Hill.
- Miller, D. (1987). The structural and environmental correlates of business strategy. *Strategic Management Journal*, 8(1), 55-76.
- Miller, D. (1993). The simplicity of competitive repertoires: An empirical analysis. *Academy of Management Proceedings*, 1, 32-36.
- Miller, G. A., & Sharda, B. D. (2000). Organizational structure in the Middle East: A comparative analysis. *International Journal of Comparative Sociology*, 41(3), 315-329.
- Modell, S. (2012). Strategy, political regulation and management control in the public sector: institutional and critical perspectives. *Management Accounting Research*, 23(4), 278-295.
- Mohamed, R., Wee, S. H., Abdul Rahman, I. K., & Abdul Aziz, R. (2010). Strategic performance measurement system, organizational capabilities and competitive advantage. *Asian Journal of Accounting and Governance*, 7(1), 27-50.
- Mohammed, K. (2012). Impact of organizational culture in adopting the environmental management system: A practical study in the state company for glass and ceramic industry. *AL-Anbar University Journal of Economic and Administration Sciences*, 4(8), 204-240.
- Mushref, A. M. (2014). The moderator role of organizational culture between intellectual capital and business performance: An empirical study in Iraqi industry. *Net Journal of Social Sciences*, 2(3), 82-91.

- Nabiha, A. K., & Scapens, R. W. (2005). Stability and change: an institutionalist study of management accounting change. *Accounting, Auditing & Accountability Journal*, 18(1), 44-73.
- Nadkarni, S., & Narayanan, V. K. (2007). Strategic schemas, strategic flexibility, and firm performance: The moderating role of industry clockspeed. *Strategic management journal*, 28(3), 243-270.
- Nagar, V., & Rajan, M. V. (2001). The revenue implications of financial and operational measures of product quality. *The Accounting Review*, 76(4), 495-513.
- Naranjo-Valencia, J. C., Jiménez-Jiménez, D., & Sanz-Valle, R. (2016). Studying the links between organizational culture, innovation, and performance in Spanish companies. *Revista Latinoamericana de Psicología*, 48(1), 30-41.
- Neely, A. D. (1999). The performance measurement revolution: Why now and where next. *International Journal of Operations and Production Management* 19(2), 205-228.
- Neely, A. D., Mills, J., Platts, K., Gregory, M., & Richards, H. (1994). Realizing strategy through measurement. *International Journal of Operations & Production Management*, 14(3), 140-152.
- Neely, A., Adams, C., & Kennerley, M. (2002). *The performance prism: The scorecard for measuring and managing business success*. London, England: Financial Times-Prentice Hall.
- Neely, A., Gregory, M., & Platts, K. (2005). Performance measurement system design: A literature review and research agenda. *International journal of operations & production management*, 25(12), 1228-1263.



- Neuman, W. L., & Robson, K. (2012). *Basics of social research: Qualitative and quantitative approaches*. Toronto, Canada: Pearson.
- Nickell, S. (1995). *The performance of companies-the relationship between the external environment, management strategies and corporate performance*. Oxford, United Kingdom: Blackwell.
- Nitzl, C., Nitzl, C., Roldan, J., Roldan, J., Cepeda, G., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, 116(9), 1849-1864.
- Niven, P. R. (2002). *Balanced scorecard step-by-step: Maximizing performance and maintaining results*. New York, New York: John Wiley & Sons.
- Niven, P. R. (2006). *Balanced scorecard step-by-step: Maximizing performance and maintaining results*. New York, New York: John Wiley & Sons.
- Norreklit, H. (2000). The balance on the balanced scorecard: A critical analysis of some of its assumptions. *Management Accounting Research*, 11(1), 65-88.
- Norreklit, H., Norreklit, L., Mitchell, F., & Bjornenak, T. (2012). The rise of the balanced scorecard! Relevance regained? *Journal of Accounting & Organizational Change*, 8(4), 490-510.
- Oakes, L. S., & Miranti, P. J. (1996). Louis D. Brandeis and standard cost accounting: A study of the construction of historical agency. *Accounting, Organizations and Society*, 21(6), 569-586.
- Obasan, K. (2012). Organizational culture and its corporate image: A model juxtaposition. *Business and Management Research*, 1(1), 121-132.

- O'Cass, A., & Weerawardena, J. (2010). The effects of perceived industry competitive intensity and marketing-related capabilities: Drivers of superior brand performance. *Industrial Marketing Management*, 39(4), 571-581.
- Ogbonna, E., & Harris, L. (2000). Leadership style, organizational culture (OC) and performance: Empirical evidence from UK companies. *International Journal of Human Resource Management*, 11(4), 766-788.
- Oghuvwu, M. E., & Omoye, A. S. (2016). Mergers, acquisitions and corporate performance: The balanced scorecard approach. *Accounting and Finance Research*, 5(4), 75-63
- Ojra, J. (2014). *Strategic management accounting practices in Palestinian companies: Application of contingency theory perspective* (Unpublished doctoral dissertation). University of East Anglia, Norwich, England.
- Olson, E., & Slater, S. (2002). The balanced scorecard, competitive strategy, and performance. *Business Horizons*, 45(3), 11-16.
- Olve, N., Roy, J., and Wetter, M. (2000). *Performance drivers: A practical guide to using the balanced scorecard*. Chichester, West Sussex: John Wiley & Sons, Ltd.
- Ong, T. S., & Teh, B. H. (2009). Factors influencing the design and use of performance measurement systems in the Malaysian electrical and electronics industry. *International Journal of Economics and Management*, 2(2), 437-457.
- Otley D. (2003). Management control and performance management: Whence and whither? *The British Accounting Review* 35(4), 309-326.
- Otley, D. (1980). The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society*, 5(4), 413-428.

- Otley, D. (1999). Performance management: A framework for management control systems research. *Management Accounting Research*, 10(4), 363-382.
- Otley, D. (2016). The contingency theory of management accounting and control: 1980–2014. *Management Accounting Research*, 31, 45-62.
- Otley, D. T. (1978). Budget use and managerial performance. *Journal of Accounting Research*, 16(1), 122-149.
- Otley, D.T., (2005). Performance management framework. In A. Berry, J. Broadbent, & D. Otley (Eds.), *Management control: Theories, issues and performance* (2<sup>nd</sup> ed.). New York, New York: Palgrave MacMillan.
- Özmen, O., Demir, A., & Celepli, M. (2013). An analysis of Iraq's pre-import inspection, testing & certification program: A SWOT analysis. *Procedia-Social and Behavioral Sciences*, 99, 85-93.
- Paranjape, B., Rossiter, M., & Pantano, V. (2006). Insights from the balanced scorecard performance measurement systems: Successes, failures and future — A review. *Measuring Business Excellence*, 10(3), 4-14.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic management journal*, 14(3), 179-191.
- Peters, L. H., Hartke, D. D., & Pohlmann, J. T. (1985). Fiedler's Contingency Theory of Leadership: An application of the meta-analysis procedures of Schmidt and Hunter. *Psychological Bulletin*, 97(2), 274.
- Phusavat, K., Anussornnitisarn, P., Helo, P., & Dwight, R. (2009). Performance measurement: Roles and challenges. *Industrial Management & Data Systems*, 109(5), 646-664.

- Pimentel, L., & Major, M. J. (2014). Quality management and a balanced scorecard as supporting frameworks for a new management model and organisational change. *Total Quality Management & Business Excellence*, 25(7-8), 763-775.
- Pollanen, R. M. (2001). *Management controls and their organizational and environmental context: A review with managerial emphasis*. Paper presented at the 5th International Management Control Systems Research Conference, London, United Kingdom, July 4-6.
- Porter, M. (1980). *Competitive strategy*. New York, New York: The Free Press.
- Porter, M. (2001). Strategy and the internet. *Harvard Business Review*, 79(3), 63-78.
- Porter, M. E. (1979). How competitive forces shape strategy. *Harvard Business Review* 57(2), 137-145.
- Powell, T. C. (1995). Total quality management as competitive advantage: A review and empirical study. *Strategic Management Journal*, 16(1), 15-37.
- Prajogo, D. I., & Brown, A. (2004). The relationship between TQM practices and quality performance and the role of formal TQM programs: An Australian empirical study. *The Quality Management Journal*, 11(4), 31-42.
- Preacher, K., & Hayes, A. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Psomas, E. L., & Jaca, C. (2016). The impact of total quality management on service company performance: Evidence from Spain. *International Journal of Quality & Reliability Management*, 33(3), 380-398.

- Rababah, A., & Bataineh, A. (2016). Factor's influencing balanced scorecard implementation. *Research Journal of Finance and Accounting*, 7(2), 204-212.
- Ramezani, A. R., & Beiglou, D. R. (2014). Balanced scorecards: comprehensive indicator of long term performance measurement. *Academic Journal of Research in Business & Accounting*, 2(7), 55-65.
- Ramljak, B., & Rogošić, A. (2012). Strategic management accounting practices in Croatia. *Journal of International Management Studies*, 7(2), 93-100.
- Reid, R. D., & Sanders, N. R. (2007). *Operation management*. Hoboken, New Jersey: John Wiley & Sons.
- Ringle CM, Wende S, Will A. (2005). SmartPLS 2.0 (M3) beta, Hamburg, <http://www.smartpls.de>.
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's Comments: A Critical Look at the Use of PLS-SEM in "MIS Quarterly". *MIS quarterly*, iii-xiv.
- Tseng, S. M. (2010). The
- Robbins, S., & Decenzo, D. (2001). *Fundamentals of management* (3<sup>rd</sup> ed.). Upper Saddle River, New Jersey: Prentice-Hall.
- Rodrik, D. (1991). Policy uncertainty and private investment in developing countries. *Journal of Development Economics*, 36(2), 229-242.
- Saizarbitoria, I. H. (2005). How quality management models influence company results – conclusions of an empirical study based on the Delphi method. *Total Quality Management & Business Excellence*, 17(6), 775-794.

- Salaheldin, S. (2009). Critical success factors for TQM implementation and their impact on performance of SMEs. *International Journal of Productivity and Performance Management*, 58(3), 215-237.
- Salaheldin, S. I. (2003). The implementation of TQM strategy in Egypt: A field-force analysis. *The TQM Magazine*, 15(4), 266-274.
- Samson, D., & Terziovski, M. (1999). The relationship between total quality management practices and operational performance. *Journal of Operations Management*, 17(4), 393-409.
- Sandström, J., & Toivanen, J. (2002). The problem of managing product development engineers: Can the balanced scorecard be an answer? *International Journal of Production Economics*, 78(1), 79-90.
- Schein, E. H. (1990). Organizational culture. *American Psychologist*, 45(2), 109-119.
- Schonberger, R. J. (1986), *World class manufacturing: The lessons of simplicity applied*. New York, New York: Free Press.
- Schreuder, H. T., Ernst, R., & Ramirez-Maldonado, H. (2004). *Statistical techniques for sampling and monitoring natural resources*. General Technical Report. RMRS-GTR-126. Fort Collins, Colorado: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. Retrieved from [https://www.fs.fed.us/rm/pubs/rmrs\\_gtr126.pdf](https://www.fs.fed.us/rm/pubs/rmrs_gtr126.pdf)
- Schuler, R. S. (2000). The internationalization of human resource management. *Journal of International Management*, 6(3), 239-260.
- Schulz, A., Wu, A., & Chow, C. (2010). Environmental uncertainty, comprehensive performance measurement systems, performance-based compensation, and

- organizational performance. *Asia-Pacific Journal of Accounting & Economics*, 17(1), 17-40.
- Sekaran, U. (2003). *Research methods for business* (4<sup>th</sup> ed.). Hoboken, NJ: John Wiley & Sons.
- Sekaren, U., & Bougie, R. (2010). *Research methods for business* (5<sup>th</sup> ed.). Hoboken, New Jersey: John Wiley & Sons.
- Senge, P. M. (1990). *The fifth discipline. The art & practice of the learning organization*. New York, New York: Doubleday Currency.
- Shah, H., Malik, A., & Malik, M. (2011). Strategic management accounting — A Messiah for management accounting? *Australian Journal of Business and Management Research*, 1(4), 1-7.
- Shahzad, F., Luqman, R. A., Khan, A. R., & Shabbir, L. (2012). Impact of organizational culture on organizational performance: An overview. *Interdisciplinary Journal of Contemporary Research in Business*, 3(9), 975-985.
- Shank, J. K. (1989). Strategic cost management: New wine, or just new bottles? *Journal of Management Accounting Research*, 1(Fall), 47-65.
- Sharma, A. (2009). Implementing balance scorecard for performance measurement. *ICFAI University Journal of Business Strategy*, 6(1), 7-16.
- Sharma, S. (2000). Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management journal*, 43(4), 681-697.
- Shea, J. E., & Kleinsorge, I. K. (1994). TQM: Are cost accountants meeting the challenge? *Strategic Finance*, 75(10), 65-67.

- Sholihin, M., & Laksmi, A. C. (2009). Total quality management, balanced scorecard and performance. *Journal Akuntansi dan Auditing Indonesia*, 13(1), 13-28.
- Shubik, M. (1983). *Game theory in the social sciences*. Cambridge, Massachusetts: MIT Press.
- Shurafa, R., & Mohamed, R. (2016) Management control system, organizational learning, and firm's performance: An empirical study from developing economy, *International Journal of Advanced and Applied Sciences*, 3(10) 2016, 79-88
- Sila, I. (2007). Examining the effects of contextual factors on TQM and performance through the lens of organizational theories: An empirical study. *Journal of Operations Management*, 25(1), 83-109.
- Sila, I., & Ebrahimpour, M. (2002). An investigation of the total quality management survey based research published between 1989 and 2000: A literature review. *International Journal of Quality & Reliability Management*, 19(7), 902-970.
- Sim, K. L., & Koh, H. C. (2001). Balanced scorecard: A rising trend in strategic performance measurement. *Measuring Business Excellence*, 5(2), 18-26.
- Simmonds, K. (1981). Strategic management accounting, *Management Accounting*, 59(4), 26-29
- Simons, R. (2000). *Performance measurement and control systems for implementing strategy*. Upper Saddle River, New Jersey: Prentice Hall.
- Simons, R. (2013). *Performance measurement and control systems for implementing strategy: Text and Cases: Pearson New International Edition*. Upper Saddle River, New Jersey: Pearson Higher Education.



- Smart, C., & Vertinsky, I. (1984). Strategy and the environment: A study of corporate responses to crises. *Strategic Management Journal*, 5(3), 199-213.
- Soheilirad, S., & Sofian, S. (2016). A proposed model of the mediating effect of strategic management accounting on the relationship between perceived environmental uncertainty and firm performance. *International Journal of Research–Granthaalayah*, 4(1), 231-239.
- Šoljaková, L. (2012). Strategic management accounting development during last 30 years. *European Financial and Accounting Journal*, 7(2), 24-35.
- Stone, M. (1974). Cross-validators choice and assessment of statistical predictions. *Journal of the Royal Statistical Society. Series B (Methodological)*, 111-147.
- Suh, W. (2016). National culture and management control systems: An explanatory study on the implementations of foreign MCS in Japan. *Asia-Pacific Management Accounting Journal*, 9(1), 25-44.
- Sureshchandar, G., Rajendran, C., & Anantharaman, R. (2001). A holistic model for total quality service. *International Journal of Service Industry Management*, 12(4), 378-412.
- Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. *Computational Statistics & Data Analysis*, 48(1), 159-205.
- Thompson, K. R., & Mathys, N. J. (2008). The aligned balanced scorecard: An improved tool for building high performance organizations. *Organizational Dynamics*, 37(4), 378-393.

- Ting, W. (1988). *Multinational risk assessment and management*. Westport, Connecticut: Greenwood Press.
- Trochim, W., & Donnelly, J. (2006). The research knowledge methods base. *Cincinnati, OH: Atomic Dog Publishing*.
- Tymon Jr, W. G., Stout, D. E., & Shaw, K. N. (1998). Critical analysis and recommendations regarding the role of perceived environmental uncertainty in behavioral accounting research. *Behavioral Research in Accounting*, 10, 23-46.
- UN Assistance Mission for Iraq (UNAMI) (2010). *The Iraq briefing book*. December 2010. Retrieved from <http://www.refworld.org/docid/4d4fc6c02.html>
- Uyar, A. (2010). Cost and management accounting practices: A survey of manufacturing companies. *Eurasian Journal of Business and Economics*, 3(6), 113-125.
- Van de Ven, A. H., & Drazin, R. (1984). The concept of fit in contingency theory. *Research in Organizational Behavior*, 7, 333-367.
- Van den Berg, P. T., & Wilderom, C. P. (2004). Defining, measuring, and comparing organisational cultures. *Applied Psychology*, 53(4), 570-582.
- Van der Stede, W., Young, S. M. & Chen, X. (2006). Doing Management Accounting Survey Research, In: C. S. Chapman, A. G. Hopwood & M. D. Shields (Eds), *Handbook of Management Accounting Research (Vol. 1)*. Oxford: Elsevier.
- Venkatraman, N. (1989). The concept of fit in strategy research: Toward verbal and statistical correspondence. *The Academy of Management Review*, 14(3), 423-444.
- Verma, S. (2016,). Management styles and effective organizational response to PEU during economic crisis in India. In *Academy of Management Proceedings*, 16(1). Available at <http://proceedings.aom.org/content/2016/1/17515.short>

- Walton, M. (1986). *The Deming management method*. London, England: Mercury.
- Wang, S. F., Jou, Y. J., Chang, K. C., & Wu, K. W. (2014). Industry Competition, Agency Problem, and Firm Performance. *Journal for Economic Forecasting*, (4), 76-93.
- Waterhouse, J., & Tiessen, P. (1978). A contingency framework for management accounting systems research. *Accounting, Organizations and Society*, 3(1), 65-76.
- Waweru, N. M., Hoque, Z., & Uliana, E. (2004). Management accounting change in South Africa: Case studies from retail services. *Accounting, Auditing & Accountability Journal*, 17(5), 675-704.
- Weber, K., Otto, B., & Österle, H. (2009). One size does not fit all---a contingency approach to data governance. *Journal of Data and Information Quality (JDIQ)*, 1(1), 4.
- Wei, Y. S., Samiee, S., & Lee, R. P. (2014). The influence of organic organizational cultures, market responsiveness, and product strategy on firm performance in an emerging market. *Journal of the Academy of Marketing Science*, 42(1), 49-70.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33(1), 177-195.
- Wheeler, D. (1984). Sources of stagnation in sub-Saharan Africa. *World development*, 12(1), 1-23.

- Widener, S. (2006). Associations between strategic resource importance and performance measure use: The impact on firm performance. *Management Accounting Research*, 17(4), 433-457.
- Wilkinson, A. (1998). Empowerment: theory and practice. *Personnel review*, 27(1), 40-56.
- Wilkinson, A., Marchington, M., Goodman, J., & Ackers, P. (1992). Total quality management and employee involvement. *Human Resource Management Journal*, 2(4), 1-20.
- Wilson, C., Hagarty, D., & Gauthier, J. (2004). Results using the balanced scorecard in the public sector. *Journal of Corporate Real Estate*, 6(1), 53-64.
- Woodley, P. M. (2006). *Culture management through the balanced scorecard: A case study* (Unpublished doctoral dissertation). Cranfield University, Cranfield, United Kingdom. Retrieved from <https://dspace.lib.cranfield.ac.uk/bitstream/handle/1826/2056/p%20m%20woodley%20phd%20thesis.pdf;jsessionid=1132107B32C8D47CC3697FF58B24AAD2?sequence=1>
- Worley, J. M., & Doolen, T. L. (2006). The role of communication and management support in a lean manufacturing implementation. *Management Decision*, 44(2), 228-245.
- Xenikou, A., & Simosi, M. (2006). Organizational culture and transformational leadership as predictors of business unit performance. *Journal of Managerial Psychology*, 21(6), 566-579.
- Yasai-Ardekani, M., & Haug, R. (1997). Contextual determinants of strategic planning processes. *Journal of Management Studies*, 34, 729-767.

- Yasir, S. (2015). The Political Economy of the budget in 2015 in Iraq, *Way of the people Journal*, 154(80). Retrieved from <http://www.iraqicp.com/index.php/sections/objekt/25848-2015-03-06-13-27-20>
- Yesil, S., & Kaya, A. (2013). The effect of organizational culture on firm financial performance: Evidence from a developing country. *Procedia-Social and Behavioral Sciences*, 81, 428-437.
- Yeung, C. L., & Chan, L. Y. (1998). Quality management system development: Some implications from case studies. *Computers & industrial engineering*, 35(1-2), 221-224.
- Young, S. M., & Selto, F. H. (1991). New manufacturing practices and cost management: a review of the literature and directions for research. *Journal of Accounting Literature*, 10(1), 265-298.
- Yusr, M. M. (2013). *The influence of TQM, K=knowledge management and innovation capability on innovation performance of Malaysian manufacturing companies* (Unpublished doctoral dissertation). Universiti Utara Malaysia, Sintok, Malaysia.
- Zainy, M. A. (2011). *Iraqi economic: Past, present and future options* (3<sup>rd</sup> ed.). London, England: Dar Almalak for Arts and Publishing.
- Zakari, M., Poku, K., & Owusu-Ansah, W. (2013). Organizational culture and organisational performance: Empirical evidence from the banking industry in Ghana. *International Journal of Business, Humanities and Technology*, 3(1), 95-107
- Zikmund, W. G. (2003). *Business research methods* (7<sup>th</sup> Ed.). Australia: South-Western.

Zuriekat, M. (2007). Total quality management, just in time production and non-financial performance measures: An empirical investigation. *The Scientific Journal of Faculty of Commerce, Assiut University Press*, 42, 1-25.

Zuriekat, M. I. K. (2005). *Performance measurement systems: An examination of the influence of the contextual factors and their impact on performance with a specific emphasis on the balanced scorecard approach* (Doctoral dissertation) University of Huddersfield.



## **APPENDICES**

### **APPENDIX 1**

#### **UNIVERSITI UTARA MALAYSIA**



**Othman Yeop Abdullah Graduate School of Business**

**Sintok- Malaysia**

**Survey**

#### **CONTINGENCY FACTORS, BALANCED SCORECARD AND FIRM PERFORMANCE: EVIDENCE FROM IRAQI MANUFACTURING INDUSTRIES**

Dear respondents, this questionnaire is a requirement for the PhD thesis and aims to determine the impact of situational factors of integration (environment of uncertainty, corporate culture, TQM) and strategic techniques of cost management on improving the performance of industrial enterprises. It is hoped that the results of this study will be useful in improving the performance of industrial firms in Iraq. Your answer definitely plays a significant role in the success of this study, in addition these data will be treated with confidentiality and for research purposes only. Your effort in filling this questionnaire is highly appreciated to achieve research quality.

For any inquiries about the study or any help in completing the questionnaire, please contact:

Khalkis Hasan Yousif Al-Naser  
Email: [alnaser7171@Yahoo.com](mailto:alnaser7171@Yahoo.com)  
Phone: 0060182865404  
Phone: 009647504936888

Thank you for your time and kind assistance  
Sincerely

## SECTION I

This section contains two parts. The first part contains information about the respondents, while the second part contains information about the company.

### Part I: Information about the respondents

Please tick (✓) where applicable

---

**1. Gender**

Male ( )

Female ( )

**2. Age**

21 – 30 ( ), 31 – 40 ( ), 41 – 50 ( ), 51 – 60 ( ), Above 60 ( )

**3. Occupation**

Chief Executive Officers ( ), Chief Financial Officers ( ), Chief Management Accountants ( ), Chief Controller ( ).

**4. Working experience in industry**

Less and equal to 5 years ( ), 6 -10 years ( ), 11-15 years ( ), 16-20 years ( )

( ) More than 20 years.

---

### Part II: Information about the company

---

**1. Types of company**

Food and beverage ( ), Textile and wearing apparel ( ), Wood and wood products ( ), Electrical and electronic ( ), Non-metallic mineral ( ), Paper and paper products ( ), Chemical products ( ), Plastic products ( ), Iron and steel ( ), Machinery products ( ), Others ( ). (please specify)

**2. The approximate number of employees in your company**

Less than 30 ( ), 30 – 100 ( ), 100-500 ( ), More than 500 ( )

**3. The total assets of your company (Iraqi Dinar)**

Less than 100 Million ( ), 100 Million -150 Million ( ), More than 150 Million ( ).

**4. The average annual revenue of company (Iraqi Dinar) for the past three years**

Less than or equal to 50 Million ( ), 51 Million – 250 Million ( ), 251 Million – 450 Million ( ), 451 Million – 650 Million ( ), More than 651 Million ( ).

---



## SECTION II

This section consists of five subsections. (A) Balanced scorecard; (B) performance of company; (C) environment of uncertainty, including: political turbulence and the intensity of competition; (D) corporate culture; and (E) total quality management (TQM).

### A: BALANCED SCORECARD (BSC)

This subsection contains questions related to the financial and non-financial performance measurement adopted by the company to evaluate its performance. Please refer to the usability of the mentioned measures by choosing 1 = not at all to 5 = to a greater extent.

	1	2	3	4	5
	Not at all	To a minimum extent	To some extent	To a large extent	To a greater extent

No.	Items	1	2	3	4	5
<b>Financial perspective</b>						
F1	Operating income	1	2	3	4	5
F2	Sales growth	1	2	3	4	5
F3	Cash flows	1	2	3	4	5
F4	Sales Revenue	1	2	3	4	5
<b>Customer perspective</b>						
C1	Market share	1	2	3	4	5
C2	On-time delivery	1	2	3	4	5
C3	Number of customer's complaint	1	2	3	4	5
C4	Survey of customer's satisfaction	1	2	3	4	5
C5	Customer's response time	1	2	3	4	5
C6	Cycle time from order to delivery	1	2	3	4	5
C7	Percent shipments returned due to poor quality	1	2	3	4	5
<b>Internal process perspective</b>						
IP1	Manufacturing lead time /cycle time	1	2	3	4	5
IP2	Rate of material scrap loss	1	2	3	4	5
IP3	Labor efficiency variance	1	2	3	4	5
IP4	Material efficiency variance	1	2	3	4	5
IP5	Ratio of good output to total output	1	2	3	4	5

<b>Innovation and learning perspective</b>						
IL1	Number of new patents	1	2	3	4	5
IL2	Number of new product launches	1	2	3	4	5
IL3	Time to market new products	1	2	3	4	5
IL4	Employee's satisfaction	1	2	3	4	5
IL5	Employee's training	1	2	3	4	5

## **B: PERCEIVED ENVIRONMENTAL UNCERTAINTY**

In this study, the environmental uncertainty is divided into two dimensions; the first one is the political turbulence and the other is the intensity of competition.

### **PART ONE: POLITICAL TURBULENCE**

In this part, we are interested in understanding the impact of political turbulence on the company in order to ensure the company's ability to implement its plans and achieve its objectives. Please choose (1 = very low influence to 5 = very high influence).

	1	2	3	4	5
	Very low influence	Low influence	Average influence	High influence	Very high influence
No.	Items				
PT1	The political instability in Iraq influences our business				
	1	2	3	4	5
PT2	The interventions by national politicians interrupt our performance				
	1	2	3	4	5
PT3	Our business can be greatly affected by trade union links with political parties				
	1	2	3	4	5
PT4	Work stoppages and workers' violence are serious issues that influence the operation of business.				
	1	2	3	4	5
PT5	Our work environment undergoes continuous change due to the political instability				
	1	2	3	4	5

## PART TOW: INTENSITY OF COMPETITION

Please indicate the degree of your agreement with the following statements, which describe the company's competitive position compared with their counterparts in the Industrial sector.

Please choose (1 = strongly disagree to 5 = strongly agree).

	1	2	3	4	5
	Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree
No.	Items				
C1	Our company faces high degree of price competition on products.				
C2	There is a high degree of market competition in the new products development faced by our company.				
C3	There is a high degree of competition in marketing the products that faced by our company.				
C4	Company faces a high degree of competition to gain market share in products.				
C5	Behaviours of competing companies are taking a great threat to our company.				
C6	The level of competition in the market for the major products of our company is extremely intense.				

## C: CORPORATE CULTURE

To what extent do the following statements apply to your company? Please indicate the validity of the following statements. Please choose (1 = strongly disagree to 5 = strongly agree).

	1	2	3	4	5
	Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree
No.	Items				
OC1	In our company, most employees are highly involved in their work.				
OC2	Information in our company is widely shared so that everyone can get the information s/he needs when it is needed.				
OC3	Teams are the primary building blocks in our company.				
OC4	Work is organized so that each person can see the relationship between his/her job and the goal of our company.				
OC5	In our company, there is continuous investment in the skills of employees.				
OC6	In our company, the capabilities of people are viewed as an important source of competitive advantage.				
OC7	In our company, there is a clear and consistent set of values that governs the way we do business.				
OC8	In our company, there is a clear agreement about the right way and the wrong way to do things.				
OC9	In our company, there is a good alignment of goals across levels.				
OC10	In our company, we respond well to competitors and other changes in the business environment.				
OC11	Different parts of our company often cooperate to create change.				
OC12	In our company, customers' input directly influences our decisions.				
OC13	In our company, we encourage direct contact with customers by our people.				
OC14	In our company, we view failure as an opportunity for learning and improvement.				
OC15	In our company, innovation and risk taking are encouraged and rewarded.				
OC16	In our company, there is a clear mission that gives meaning and direction to our work.				
OC17	In our company, employees understand what needs to be done for us to succeed in the long run.				
OC18	Our vision creates excitement and motivation for our employees.				

#### **D: TOTAL QUALITY MANAGEMENT (TQM)**

Over the past three years, the extent to which your company has implemented programs to improve the quality of products and processes, improve efficiency, decrease waste and cost, involve employees in the philosophy of continuous improvement. (These programs are sometimes referred to as total quality management (TQM). Please indicate the degree of your agreement with the following quality activities carried out by the company. Please choose (1 = strongly disagree to 5 = strongly agree).

	1	2	3	4	5
	Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree
No.	Items				
TQM1	Programs to improve the quality and reliable delivery of materials and components provided by suppliers.				1 2 3 4 5
TQM2	Programs to reduce waste or non-value-added activities throughout the production process				1 2 3 4 5
TQM3	Programs to reduce time delays in manufacturing and designing products (i. e. improve cycle time(				1 2 3 4 5
TQM4	Involvement of employees in quality improvement programs				1 2 3 4 5
TQM5	Involvement of functional personnel (manufacturing, marketing, R & D) in strategy formulation				1 2 3 4 5
TQM6	Developing close contact between manufacturing and customers				1 2 3 4 5
TQM7	Programs to co-ordinate quality improvements between parts of the organisation				1 2 3 4 5

#### **E: FIRM PERFORMANCE**

The following statements are to evaluate the company's performance in which you are working. Please evaluate the company's performance during the past three years and refer to data contained in the table by choosing (1 = strongly disagree to 5 = strongly agree).

	1	2	3	4	5
	Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree
No.	Items				
P1	Our costs of production have reduced during the last 3 years				
P2	Our return on investment has improved during the last 3 years				
P3	We have received considerable cash flow from our operations during the last 3 years				
P4	During the last 3 years we have enjoyed sales growth rate				
P5	Our operating profits have increased during the last 3 years				
P6	Our waste costs reduced during the last 3 years				
P7	During the last 3 years we have enjoyed revenue growth rate				
P8	Net profits have increased during the past three years				
P9	Ratio of profit to total revenue has increased during the past three years				
P10	Return on assets has improved during the past three years				



**UUM**  
Universiti Utara Malaysia

**جامعة اوتارا الماليزية**



## استبيان طروحة دكتوراه

عريزي لاشارلفسي استيجان هذه استمارة موططب روحه لفتوراهي مدف لاى سحدي دشر لتكاملهين لالعوامل  
الامقية لالمططب. بيهة عدم لتكد بتفلة للشركات , ادارة لاجودة الشالمة (وتقويات ادارة للغة استريحية في  
تحيين أداء للشركات الصنعية لالعريفة. من لالمومل ان تلفون لتلج لالدرلة ذات فلةة لغيرهيت تحين اداء  
الشركات الصنعية في لالعراق. ان جوبلا كولعب دورا هامين جاح هذه لالدرلة، فحلملأن هذه لاليلات هيتم لتعامل  
مع هلبسري قتامة و غراضبشي فقوط، ج موكففي لمئ استمارة مي موضعيق يورعال لالدى لباحث من أجل  
تتحقيق جودة لباحث .

ليرفصار عن الدرس أو اذا لقيت بحاجة الى أي من اعددي لتكتمل استبيان يرجى اتصال :

للإحاث : خلاص من نبي وسف للنصر

ایہیل: Alnaser7171@Yahoo.com

009647504936888 - 0060182865404 : مؤلف

شكرا لكم على تعاونكم

القسم ١ ول: -يضموي هذا القسم غري جزيين.يضموي الجزء ١ ول غري مغمومات عن الشخص الهمؤول عن تهيئة  
الستدارة بيمينم الجزء لثلييضموي غري مغمومات عن الشركة.

#### الجزء ١ ول

##### 1- الجنس

( فخر ) ( فخر )

##### 2- العمر

( 30 - 21 ) ( 40 - 31 ) ( 50 - 41 ) ( 60 - 51 ) ( فخر من 60 ) .

##### 3- الموقع الوظيفي ؟

مدير عام ) ( لاميير لمللي ) ( مدير حريبات ) ( ميري لوقيلة ) .

##### 4- عدد سنوات الخبرة في الموقع الوظيفي الحالي ؟

5 سنوات أو أقل ) ( 6 - 10 سنوات ) ( 11 - 15 سنة ) ( 16 - 20 سنة ) ( فخر من 20 سنة ) .

#### الجزء الثاني

##### 1- نوع الصناعة ؟

غذائية وشرروبات ) ( لئسة وشرروبات ) ( اشباب ) ( كمطبات والشرروبات ) ( معادن ) ( لورق والشرروبات الورقية ) ( شرابات لئليي ) ( شرابات سيلي ) ( ليدي والشرب ) ( شراب  
ات ومعدات ) ( اخرى ) .....يرجى التحديد .

##### 2- ما هو العدد التقريبي للموظفين في الشركة؟

( 29 - 10 ) ( 100 - 30 ) ( 100 - 500 ) ( فخر من 500 ) .

##### 3- ما هو مجموع ا صول في الشركة (دينار عراقي)؟

قل من 100 لليون ) ( ميين 100 لليون - 150 لليون ) ( فخر من 150 لليون ) .

##### 4- ما هو متوسط ا يراد السنوي للشركة (دينار عراقي) في السنوات الـ ث الماضية؟

قل اوييس اوي 50 لليون ) ( 51 لليون - 250 لليون ) ( 251 لليون - 450 لليون ) ( 451 لليون - 650 لليون ) ( فخر من 651 لليون ) .

القسم الثاني: يتكون هذا القسم من خمسة فصول فرعية. القسم (أ) بطاقة اء لئوازن ميينم القسم (ب) يتحقق بيهية  
عدم لتأكد و مييتلكون من جزيين )اضطرابات اليريلرية وشدة لئفلسة ( القسم ج) يتحقق بيهية الشركة ميينم  
القسم د) يتحقق بأدارة لئجودة لئالمية يتحقق القسم م) مبادئ الشركة



القسم أ : بطاقة ١

يضيوي هذا القسم قوى الملوك وتتفوق بـ **فيليس** اء الملوكي وغير الملوكي التي تصعد هذا الشركة لتقيم اطاها. يرجى اشارة الى مدى لتخدم كل **فيليس** انواه من ل اعني ارك  $= 1$  قوى ا لى  $= 5$  لى حد لغير جدا

1	2	3	4	5
على ا ق	الى حد ضئيل	الى حد ما	الى حد كبير	الى حد كبير جدا
ت	البيان			
<b>المحور المالي</b>				
F1	الدخل للتشغيلي			
F2	نموذجيات			
F3	للفترات الزمنية			
F4	تغيرات التغيرات			
<b>محور الزبائن</b>				
C1	الحصة السوقية			
C2	التعليقي الوقت المحدد			
C3	عدد شركاء العمل			
C4	مخطط عرض العمل			
C5	زمن استجابة العمل			
C6	الوقت المتغير للتسليم			
C7	نسبة إعادة الطلبات بسبب عيوب في التصنيع			
<b>محور العمليات الداخلية</b>				
IP1	الوقت المتغير للتصنيع/ دورة الزمن			
IP2	نسبة تلف المواد			
IP3	لحرق انكفاء العمل			
IP4	لحرق انكفاء المواد			
IP5	نسبة انتاج المحيد الى انتاج المحلي			
<b>محور التعلم والنمو</b>				
IL1	عديرات الاقتراحات الجيدة			
IL2	عدد المنتجات الجيدة التي تم اطلاقها			
IL3	الوقت الذي يحتاجه المنتج الجيد			
IL4	رضا الموظفين			
IL5	تدريب الموظفين			

## القسم ب : بيئة عدم التأكد

في هذه الدرلة تم تقسي بيئة عدم التأكد إلى جزئين، اول مؤا ضطرابات البيئية، واخر موشدة اليفلس.

### الجزء ا ول : ا ضطرابات السياسية

في هذا القسم، نحن مقدمون فيف مؤتيار ا ضطرابات البيئية مؤى شركتك من اجل للتأكد من قدره الشركة مؤى

قنيذ خططه وتحيق أهله الراجاء اختيار واحدة من (1=تؤيىر واطى جءألى 5=تؤيىر غلى جءا).

1	2	3	4	5
تأثير واطى جءا	تأثير واطى	تأثير متوسط	تأثير عالى	تأثير عالى جءا
ت	البيان			
PT1	ا ضطرابات وثقوبات البيئية فى الاعراقى مؤى اءاعش رلقنا			
PT2	تءءخ البيئية فى الاعراقى مؤى اءاعش رلقنا			
PT3	اءاعش رلقنا لئىشرىكل مؤىر من ءل ع قات رقبىات الاعمال مع ا ءزاب البيئية			
PT4	للتقىف عن الاعمل وأعمال الءرفضء الءل مؤىر بسبب ا ضطرابات البيئية مؤى القضىا الءظيرة للئى			
	تؤىر مؤى الءلقىات للش ءظيرة			
PT5	بسبب لثقات البيئية مؤىر ا عم الل مؤىر لئى ءفنر لا مؤىر			

### الجزء الثانى : شءة المنافسة

من فضل لك، وضء مءى مؤلقىات لءعارات التالىة ولئىت وضء لوضع للتفلسى للشركة قارنة مع مؤى تفى لقطاع

للمناعمى، للراجاء اختيار واحدة من (1= اءلق بشءة لى 5= اءلق بشءة).

1	2	3	4	5
اوافق بشءة	اوافق	اوافق الى ءءما	اوافق	اوافق بشءة
ت	البيان			
IC1	تواءش رلقنا ءرءة علقىة من اليفلس لئى عى ءل ءتءات			
IC2	تواءش رلقنا ءرءة علقىة من اليفلس فى ءطىر الءتءات الءءة			
IC3	تواءش رلقنا ءرءة علقىة من اليفلس فى مء التسىق الءتءات			
IC4	تواءش رلقنا ءرءة علقىة من اليفلس فى لئىب ءس فى سوق الءتءات			
IC5	لئىلوكىات من الشركات اليفلس ءشركت مؤى ءالءىر الشركة			
IC6	مئوى اليفلس فى سوق الءتءات لئىلوكىات مؤى ءل ءل ءل ءل			

### القسم ج : ثقافة الشركة

لى أى ءرءة تنطبق لءعارات التالىة مؤى شركتك مؤىر ءى اشارة لى مءى صءة لءعارات التالىة. للراجاء اختيار

واءة من (1= اءلق بشءة لى 5= اءلق بشءة).

3 2 1

جامعة الكويت

هبة الى اي مدي فذت شرفنا بام جرحين

5 4 3 2 1

جامعة الكويت

5 4 3 2 1

جامعة الكويت

### القسم هـ : أداء الشركة

للإشارات التالية تقييم أداء الشركة لتتبع مفعليها. يرجي تقييم أداء الشركة في السنوات التالية الماضية، والرجوع إلى الليكيات الواردة في الجدول، للرجاء اختيار واحدة من 1 = اقل قبشدة إلى 5 = اقل قبشدة (.)

1	2	3	4	5
اوافق بشدة	اوافق	اوافق الى حد ما	اوافق	اوافق بشدة
ت	البيان	البيان	البيان	البيان
P1	تخفيضت التكاليف	احتاج ل	سنوات الماضية	
P2	تسجلت اعداد	تجدي مدي	سنوات الماضية	
P3	تسجلت اعداد	تجدي مدي	سنوات الماضية	
P4	في	سنوات الماضية	سنوات الماضية	
P5	زادت	سنوات الماضية	سنوات الماضية	
P6	تخفيضت التكاليف	سنوات الماضية	سنوات الماضية	
P7	في	سنوات الماضية	سنوات الماضية	
P8	زاد صافي	سنوات الماضية	سنوات الماضية	
P9	زاد نسبة الربح	سنوات الماضية	سنوات الماضية	
P10	تسجلت اعداد	سنوات الماضية	سنوات الماضية	



**UUM**  
Universiti Utara Malaysia

### APPENDIX 3

#### *Outliers Results (Mahalanobis)*

ID	MAH	ID	MAH	ID	MAH	ID	MAH	ID	MAH	ID	MAH	ID	MAH
1	6.34	50	5.23	99	9.50	148	10.15	197	4.66	246	5.87	295	3.93
2	8.32	51	5.50	100	4.14	149	9.30	198	2.74	247	5.54	296	1.41
3	5.78	52	7.10	101	4.25	150	7.11	199	10.60	248	7.25	297	5.99
4	4.90	53	2.18	102	4.34	151	18.08	200	4.71	249	0.39	298	3.67
5	4.03	54	4.97	103	2.22	152	5.10	201	6.48	250	5.79	299	5.49
6	5.87	55	2.72	104	2.46	153	4.54	202	4.38	251	2.73	300	2.54
7	5.71	56	5.33	105	2.05	154	6.97	203	5.07	252	10.23	301	4.01
8	4.97	57	8.94	106	1.53	155	10.12	204	4.72	253	4.79	302	2.28
9	5.78	58	5.03	107	1.65	156	3.85	205	3.70	254	4.74	303	2.93
10	7.00	59	2.06	108	5.11	157	3.91	206	4.03	255	5.60		
11	5.69	60	4.38	109	2.90	158	6.83	207	5.49	256	4.96		
12	5.27	61	2.43	110	2.58	159	5.46	208	7.24	257	4.13		
13	4.37	62	9.32	111	1.66	160	5.50	209	4.12	258	7.42		
14	5.87	63	2.48	112	4.59	161	6.21	210	9.38	259	5.43		
15	15.08	64	2.69	113	2.58	162	7.10	211	8.26	260	3.18		
16	5.13	65	12.37	114	4.79	163	2.18	212	9.14	261	2.26		
17	2.50	66	2.54	115	2.56	164	2.72	213	13.56	262	2.64		
18	2.45	67	1.27	116	2.03	165	1.88	214	9.17	263	5.89		
19	6.04	68	1.18	117	3.54	166	8.15	215	7.05	264	1.85		
20	3.73	69	3.52	118	4.23	167	5.80	216	6.16	265	4.30		
21	4.65	70	11.19	119	2.43	168	8.14	217	3.23	266	2.52		
22	5.90	71	2.89	120	2.45	169	6.98	218	8.05	267	3.65		
23	4.82	72	3.77	121	7.60	170	2.09	219	4.49	268	2.45		
24	2.27	73	2.35	122	3.98	171	6.42	220	1.91	269	9.20		
25	7.46	74	2.38	123	9.12	172	1.94	221	5.97	270	8.08		
26	2.33	75	4.31	124	4.78	173	2.38	222	3.31	271	6.68		
27	3.52	76	2.52	125	3.69	174	2.53	223	2.19	272	2.88		
28	4.02	77	5.78	<b>126</b>	<b>21.60</b>	175	2.89	224	3.71	273	3.07		
29	4.35	78	3.29	127	1.62	176	6.73	225	2.31	274	4.61		
30	0.75	79	4.25	128	1.30	177	3.05	226	3.01	275	4.14		
31	6.58	80	2.57	129	6.81	178	1.60	227	2.40	276	6.10		
32	6.63	81	7.32	130	4.09	179	8.94	228	6.86	277	3.01		
33	5.06	82	2.82	131	2.80	180	3.31	229	4.41	278	1.34		
34	5.30	83	5.87	132	1.46	181	3.25	230	3.20	279	2.11		
35	1.89	84	2.10	133	5.97	182	8.15	231	8.26	280	4.35		

Appendix 3 (continued)

***Outliers Results (Mahalanobis)***

36	2.71	85	6.26	134	3.26	183	1.28	232	9.12	281	11.85
37	3.76	86	2.64	135	1.08	184	5.73	233	4.72	282	4.39
38	9.30	87	5.34	136	4.09	185	9.78	234	3.53	283	5.70
39	5.72	88	3.79	137	1.91	186	4.93	235	1.52	284	3.19
40	6.67	89	3.97	138	10.01	187	2.45	236	2.67	285	8.78
41	4.65	90	6.17	139	3.10	188	2.51	237	4.44	286	6.98
42	4.06	91	3.26	140	0.97	189	2.43	238	4.57	287	2.63
43	5.50	92	4.92	141	3.11	190	10.19	239	2.78	288	7.46
44	10.12	93	1.93	142	20.17	191	3.33	240	3.28	289	2.00
45	4.70	94	3.96	143	5.25	192	3.92	241	10.45	290	1.92
46	3.26	95	3.41	144	5.69	193	5.14	242	6.34	291	6.25
47	6.56	96	4.32	<b>145</b>	<b>28.94</b>	194	7.63	243	6.21	292	4.26
48	3.88	97	3.64	146	3.19	195	2.48	244	5.26	293	3.43
49	6.83	98	3.29	147	1.86	196	5.08	245	9.13	294	4.93



**UUM**  
Universiti Utara Malaysia